

Edited by Steven Were Omamo, Ugo Gentilini and Susanna Sandström

Foreword by Josette Sheeran

Revolution: From Food Aid to Food Assistance

**Innovations
in Overcoming
Hunger**



World Food Programme

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Foreword

With a landmark strategic plan unveiled in 2008, the World Food Programme (WFP) moved from a food aid to a food assistance agency that delivers in emergencies and empowers the hungry to overcome food insecurity. Never before has the need for innovative and tested hunger solutions been greater, with conflict, natural disasters and economic crises pushing the number of hungry and malnourished people to historically high levels. With a deep field presence in more than 70 countries, and 40 years of working with nations to build resiliency and responding to the world's most challenging disasters, WFP is one of the foremost incubators of innovation in designing and testing programmes that deliver results for hungry people. Taking proven solutions to the field, scaling up what works and constantly innovating to improve is essential if we are to reverse the backslide in the fight against hunger.

Globalization has generated opportunities for hundreds of millions of people around the world. Basic services have been digitalized and high-powered technology made affordable. Locations that were never wired for land lines are now connected to every corner of the world via cell phones. Yet the distribution of benefits from this process has often been uneven. Marginalized populations are often left further behind and the range of vulnerabilities is amplified for many.

Twenty-first century food assistance must meet a dual objective: firstly, to deploy safety nets to sustainably and comprehensively beat hunger and cushion vulnerable populations from inevitable shocks; secondly, to respond to emergencies, so disasters like hurricanes, droughts and earthquakes do not turn into humanitarian tragedies. These programmes, when designed right, can also help connect individuals, communities and nations to the ladder of opportunity, building resilience against disaster, providing jobs, education, nutrition, health and moving nations to sustainable food security.

This book documents a compilation of state-of-the-art food assistance innovations by WFP. It lays out both new tools and traditional responses that provide life-saving relief, improve nutrition, enhance human capital and

strengthen food markets, while supporting country-led food security strategies.

Providing essential food assistance, and continuously improving it through innovations, not only helps people in need, it is an excellent investment in more sustainable, equitable and shared prosperity around the globe. By capturing best practices, we can sustain innovation and improvement and, together, work to build a world free of hunger.

A handwritten signature in black ink that reads "Josette Sheeran". The signature is written in a cursive, flowing style.

Josette Sheeran

Executive Director

World Food Programme

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The Editors

Steven Were Omamo, Ugo Gentilini and Susanna Sandström

Contributors

Blake Audsley holds an MA in International Relations with a specialization in Development Economics from The School for Advanced International Studies at Johns Hopkins University. He is currently a visiting Mickey Leland International Hunger Fellow and Market Analyst at WFP Malawi Country Office.
Contact: Blake.Audsley@wfp.org

Raoul Balletto is Head of the Programme and Public Policy Unit in the WFP Regional Bureau for Latin America and the Caribbean. He comes with more than 15 years of professional experience in WFP in Latin America, the Caribbean, the Balkans and Africa. He holds a degree in Economics from Universite Lausanne HEC, Switzerland.
Contact: Raoul.Balletto@wfp.org

Niels Balzer is a Policy Officer with the Climate Change and Disaster Risk Reduction Unit at WFP in Rome. His fields of expertise include risk financing mechanisms, local economic development and conditional cash transfers. He holds a MAS in Development Cooperation from the Swiss Federal Institute of Technology in Zurich, Switzerland.
Contact: Niels.Balzer@wfp.org

Charlotte Bienfait has recently been graduated in Food Industry Engineering from the University of Lille, France, after receiving a BA in Biology with special emphasis on biochemistry. She recently joined WFP's Food Quality and Safety Unit in the Procurement Division in Rome.
Contact: Charlotte.Bienfait@wfp.org

Martin Bloem is Chief for Nutrition and HIV/AIDS Policy at WFP, and has more than two decades of experience in nutrition research and policy. He holds a MD from the University of Utrecht, a PhD from the University of Maastricht, and has joint faculty appointments at both Johns Hopkins University and Tufts University.

Contact: Martin.Bloem@wfp.org

Dominique Bounie is associate professor in food engineering and process at University of Lille1, France. He teaches project and quality management, and plant design and engineering, with a main focus on food unit operations. He has been advising different NGOs on technology issues and has been collaborating with WFP for more than 6 years.

Contact: dominique.bounie@univ-lille1.fr

Henk-Jan Brinkman is Chief of the Policy, Planning and Application Branch at the UN Peacebuilding Support Office. He previously held positions in WFP in New York and Rome, the Office of the UN Secretary-General, and the UN Secretariat. He holds a PhD in Economics, and has written on topics such as the impact of high food prices on nutrition and economic adjustment in Africa.

Contact: Brinkman@un.org

Marco Cavalcante holds a PhD in Development Economics with a thesis on the impact of the liberalization programmes on poverty. He is the author of seven publications on poverty and hunger-related topics. He is currently the Special Assistant to the Country Director of the WFP Uganda Country Office.

Contact: Marco.Cavalcante@wfp.org

Nicholas Crawford is Chief of Humanitarian Policy and Transitions at WFP. He leads WFP's efforts to integrate human rights in humanitarian settings, including through WFP's Protection Project. Together with Gina Pattugalan, he is editing and contributing to a book on protection in WFP operations to be published in late 2010. He has a MS from Georgetown University's School of Foreign Service.

Contact: Nicholas.Crawford@wfp.org

Kjersti Dale is a programme officer with WFP's Gender Service in Rome. Before she joined WFP she worked on protection issues with the International Committee of the Red Cross in Angola and the Ivory Coast. She holds an MA in African Studies with the School of Oriental and African Studies, University of London.

Contact: Kjersti.Dale@wfp.org

Ken Davies is the Coordinator of the WFP Purchase for Progress Initiative and has been WFP Representative/Country Director in Mozambique, Uganda and Swaziland. He has also served in India and Cambodia for WFP and in Sudan with various NGOs. He holds bachelors and masters degrees in Agriculture from Cornell University and a mid-career MPA from the JFK School of Government at Harvard.

Contact: Ken.Davies@wfp.org

Saskia de Pee has worked in international nutrition for more than 15 years, including 5 with WFP. Her areas of expertise are nutrition, micronutrient deficiencies, health, and program monitoring and evaluation. She is also assistant Professor at Tufts University and holds a PhD in Nutrition from Wageningen University, the Netherlands.

Contact: depee.saskia@gmail.com

Francesca Erdelmann is a nutritionist with 15 years of experience, 11 of which working with HIV/AIDS and nutrition in Eastern and Southern Africa. She holds an MSc from Wageningen University, the Netherlands. Currently, she heads the HIV technical support team in WFP's Regional Bureau for Southern, Eastern and Central Africa.

Contact: Francesca.Erdelmann@wfp.org

Tarek Elguindi worked with the United Nations System for the past thirty years at HQs, regional and country levels. Since 1990, he supported WFP's food assistance operations in a number of complex environments, including Afghanistan, Iraq and more recently in assessing and monitoring the WFP voucher system in Syria.

Contact: Tarek.Elguindi@wfp.org

Caterina Galluzzi has nine years experience in emergency and development assistance in Africa, Asia and the Middle East. She holds a degree in Anthropology from the University of Siena and a MSc in Peace Keeping and Security from Roma Tre University, Italy. She is currently the Head of WFP oPt West Bank Operations.

Contact: Caterina.Galluzzi@wfp.org

Fithanegest Gebru has worked over the past 24 years in the areas of program formulation and management in humanitarian assistance. He holds a BA in Sociology and Social Administration and an MA in Rural Development. Currently, he's Deputy Head of MERET and Safety Nets Section in the WFP Ethiopia Country Office.

Contact: Fithanegest.Gebbru@wfp.org

Ugo Gentilini serves as Policy Adviser with WFP's Policy, Planning and Strategy Division. His interests encompass social protection and food assistance policy, implementation and evaluation. He holds a PhD in Development Economics and has published on various issues related to food security, safety nets and food/cash-based transfers.

Contact: Ugo.Gentilini@wfp.org

Riikka Halme has a BSc in Economics, Politics and International Relations from University of Warwick, UK and an MSc in Development Economics from Sciences-Po, France. Currently, she is a Programme Officer in the Food Security and M&E Section, WFP Malawi Country Office.

Contact: Riikka.Halme@wfp.org

Ulrich Hess is Senior Economist at the World Bank and has been with WFP as Chief of Risk Reduction and Disaster Mitigation Policy in from 2006 to 2009. He holds a MSc in Economics from Bocconi University in Milan and a MA in Political Science from Freie Universität Berlin. He has worked and published extensively on risk management and innovative financing issues.

Contact: Uhess@worldbank.org

Paul Howe holds a PhD in Development Studies. His publications have focused primarily on famine and hunger-related issues, on which he has published extensively. Prior to his current position as WFP Deputy Country Director in Laos, he was the Head of Programme of the WFP Uganda Country Office.

Contact: Paul.Howe@wfp.org

Annmarie Isler is a Policy Officer in the Nutrition and HIV/AIDS Policy Unit at WFP, and has been working in the field of development and humanitarian assistance for a decade. She holds an MES from York University and she is currently pursuing an MPH from London School of Hygiene and Tropical Medicine, UK.

Contact: Annmarie.Isler@wfp.org

Joyce Kanyangwa Luma is the Chief of WFP's Food Security Analysis Service in HQ. Her previous positions in WFP include regional advisory roles on vulnerability analysis and mapping in Asia, the Caucasus and Southern Africa. Before joining WFP, she worked with FAO, and the University of Zambia. She holds a PhD in Human Nutrition and Agricultural Economics from Texas Tech.
Contact: Joyce.Luma@wfp.org

Zahid Majeed is a Senior National Programme Officer and Head of Livelihood Sector in WFP's Country Office in Pakistan. He has more than 30 years of professional experience in food assistance operations. He holds an MSc in Economics and has been deeply involved in implementing WFP's voucher scheme in Pakistan.

Contact: Zahid.Majeed@wfp.org

Nicole Menage is the Director of WFP's Procurement Division in HQ. With WFP since 1983, she held senior management positions as well as serving in Malawi, Togo, Zimbabwe and Tanzania and with the UN Capital Development Fund in Burundi. She has a BA in Political Science and French from Union College and an MA in International Affairs from George Washington University.

Contact: Nicole.Menage@wfp.org

Luca Molinas is an Economist with WFP's School Feeding Unit in the Policy, Planning and Strategy Division in Rome. His research interests include poverty, inequality, agriculture and demography. He holds a PhD in Development Studies, and since 2008 has been involved with the economic analysis of school feeding-related activities.

Contact: Luca.Molinas@wfp.org

Sahar Natsheh has seven years of experience in humanitarian aid and is an expert in cash & voucher management. She holds a MSc in Public Administration and Policy from Hebrew University of Jerusalem and is part-time lecturer in Public Policy at Beirzeit University in Ramallah. She is currently the WFP oPt Programme Officer for the food voucher project.

Contact: Sahar.Natsheh@wfp.org

Betru Nedessa is a conservation agronomist with Ethiopia's Ministry of Agriculture and Rural Development. For over 25 years, he supported activities related to land husbandry, productivity improvement and income diversification from agriculture. He holds a BSc in Agriculture from Addis Ababa University and an MSc in Agriculture from University of Queensland, Australia. Currently, he is the MERET National Project Coordinator.

Contact: betrunb@yahoo.com

Mary Njoroge has over 20 years experience of humanitarian and development assistance. She holds an MSc in Management in Rural Development and an MSc in Population Health from the London School of Economics. A former Programme Officer with the Nutrition, MCH and HIV & AIDS Unit in Rome, she's currently Programme Officer in WFP's Ethiopia Country Office.

Contact: Mary.Njoroge@wfp.org

Steven Were Omamo is Deputy Director of WFP's Policy, Planning and Strategy Division in Rome. Prior to joining WFP, he held senior research positions with IFPRI in Uganda and the United States. He holds a PhD in Agricultural Economics from Stanford University, and has published extensively on agriculture, markets and food security.

Contact: Stevenwere.Omamo@wfp.org

Baton Osmani joined WFP's Country Office in Namibia in February 2006 as the Head of Programme Unit. Since 2008, he served as Officer in Charge in the same duty station. Previous to this assignment, he worked in several WFP operations around the globe, including major programmes in Sudan, Afghanistan, North Korea and Kosovo.

Contact: Baton.Osmani@wfp.org

Ali Ouattara is a Programme Officer in the WFP Burkina Country Office in Ouagadougou. Currently, he is in charge of the coordination and oversight of the voucher programme implemented in urban areas in the country. He holds an MSc in Economics and a BA in Sociology.

Contact: Ali.Ouattara@wfp.org

Gina Pattugalan is a policy officer with the Humanitarian Policy and Transition Service of WFP, and co-manages WFP's Protection Project. She specialises in human rights, protection of civilian and human security issues and worked with several international organisations, academic institutions, think tanks and government agencies. She is also a trainer in protection of civilian in humanitarian work. She holds an MA in Political Science from McGill University in Montreal.

Contact: Gina.Pattugalan@wfp.org

Shane Prigge is a Food Technology and Commodity Quality Control Officer based in WFP's Asia Regional Bureau in Bangkok. He has been working with WFP in various capacities for the past five years. He completed his MSc in Public Health with a focus on nutrition epidemiology. He also has BA degrees in Microbiology and Geography.

Contact: Shane.Prigge@wfp.org

Emma Quinn is a Senior Logistics Officer with 10 years experience with the Logistics Division of WFP, particularly in the areas of logistics emergency preparedness and response. Prior to this, she worked as an international lawyer in Paris, London and Sydney. She holds a BA and an LLB from the University of Queensland, Australia.

Contact: Emma.Quinn@wfp.org

Marc Regnault de la Mothe holds an MA in International Relations and worked in the area of humanitarian assistance for 12 years in Africa, Central America, Eastern Europe and the Middle East. Currently, he is Policy Adviser with WFP's School Feeding Unit in the Policy, Planning and Strategy Division in Rome.

Contact: Marc.RegnaultdelaMothe@wfp.org

Bertrand Salvignol is a Food Technologist with more than 13 years of field experience in food processing, engineering, safety and quality. He holds an MSc in Public Health Nutrition from London School of Hygiene and Tropical Medicine, UK. He is currently head of the Food Quality and Safety Unit in the Procurement Division of WFP.

Contact: Bertrand.Salvignol@wfp.org

Stanlake Samkange is a lawyer by profession, and currently the Representative and Country Director of the WFP Uganda Country Office. Previously he served as WFP Director of Policy, Strategy and Programme Support. He has also worked in the Office of the UN Secretary-General and the UN Department of Political Affairs.

Contact: Stanlake.Samkange@wfp.org

Susanna Sandström is a Policy Officer at WFP's Policy Planning and Strategy Division in Rome. She has previously held a position at the World Institute for Development Economics Research of the United Nations University (UNU-WIDER). Her fields of interest are in the areas of aid efficiency and project impact evaluations.

Contact: Susanna Sandstrom@wfp.org

Issa Sanogo is an economist with about 15 years of professional experience in government, development and humanitarian institutions. He holds a PhD in Development Economics and has published articles on food security and markets issues. He is currently leading the Market Analysis Section in WFP's Food Security Analysis Service in Rome.

Contact: Issa.Sanogo@wfp.org

Levan Tchatchua is a food security and livelihood advisor with over 15 years of experience in humanitarian work. With extensive expertise in cash transfer programming, he served as project manager for WFP's cash pilot in Sri Lanka. Currently, he is Programme Officer with WFP's Cash and Vouchers Unit in Rome.

Contact: Levan.Tchatchua@wfp.org

Tina van den Briel is an expert in human nutrition with more than 30 years of professional experience in development cooperation and humanitarian assistance. She holds an MSc and PhD from Wageningen University, the Netherlands. She is currently Chief of Nutrition, MCH and HIV & AIDS in the Programme Division of WFP.

Contact: Tina.Vandenbriel@wfp.org

Joris van Hees has over 7 years of experience in nutrition program management with a focus on formative research and social marketing. His area of expertise includes technical guidance to micronutrient powder programs. He holds an MA in Southeast Asian Studies from Leiden University, the Netherlands, and has been working with WFP since.

Contact: joris.v.hees@gmail.com

Stephanie Wertheimer has worked with WFP for the past 4 years in the area of emergency preparedness and information management for Latin America and the Caribbean. She holds two degrees in Latin American and Caribbean Studies and International Affairs from Florida State University, United States.

Contact: Stephanie.Wertheimer@wfp.org

Sonali Wickrema has a background in economics and during the past 20 years has worked in the areas of trade economics, development banking, policy formulation and humanitarian assistance. She holds a BSc from the London School of Economics and an MA from Sussex University in the UK. She is currently Head of Programme for WFP's Country Office in Ethiopia.

Contact: Sonali.Wickrema@wfp.org

Arega Yirga is an Agricultural Engineer with 30 years of experience in soil and water conservation and project management. A former MERET National Project Coordinator, he's National Programme Officer with WFP Ethiopia. He holds a BSc in Agricultural Engineering and an MSc in Rural Development and Natural Resources Management from Russe University of Technology, Bulgaria.

Contact: Arega.Yirga@wfp.org

Edgardo Yu has 20 years of professional experience in deploying information technology solutions for international development organizations. He has extensive consulting experience with United Nations agencies, and served as Chair of the UNDG's ICT Task Team. He is a certified IT service manager, holds BSc degrees in physics and computer engineering, and is a past fellow of Reuter's Digital Vision Program at Stanford University. He is currently the Chief of IT policy, strategy and architecture for WFP.

Contact: Edgardo.Yu@wfp.org

Acronyms

ACF	<i>Action Contre la Faim</i>
ACTESA	Alliance for Commodity Trade in Eastern and Southern Africa
Admarc	Agricultural Development and Marketing Corporation
AGRA	Alliance for the Green Revolution in Africa
AJK	Azad Jammu and Kashmir
AMS	agricultural and marketing support
ART	antiretroviral therapy
BMI	body mass index
CAA	Catholic Aids Action
CAADP	Comprehensive African Agricultural Development Policy
CAAS	Chinese Academy of Agriculture Sciences
CAC	Central American Agriculture Council
CAFFG	Central America Flash Flood Guidance
CARICOM	Caribbean Community
CARW	Creating Assets for Rural Women Programme
CATHALAC	Water Centre for the Humid Tropics of Latin America and the Caribbean
CBO	community-based organization
CBPWD	community-based participatory watershed development
CCI	Complementary Community Investments

CCO	Committee of Co-sponsoring Organizations
CD4	cluster difference 4
CDEMA	Caribbean Disaster Emergency Management Agency
CELAH	Logistics Centre for Food Assistance
CEPREDENAC	Centre for the Coordination for the Prevention of Natural Disasters in Central America
CFA	African Financial Community
CFLP	Cash and Food for Livelihoods Pilot
CFPU	containerized food production unit
CHS	community and household surveillance
CIDA	Canadian International Development Agency
CIF	cost, insurance, freight
COMPAS	Commodity Movement Processing and Analysis System
COP	Conference of the Parties
COPECO	Permanent Commission for Contingencies
CRRH	Regional Centre for Humanitarian Response
CRS	Catholic Relief Services
CSB	corn-soya blend
CTPP	cash transfer pilot project
CWG	Child Welfare Grant
DFID	Department for International Development
DRC	Democratic Republic of the Congo
DS	divisional secretariat
DSC	direct support costs
DWG	donor working group
EADI	Ethiopia Agricultural Drought Index
EB	Executive Board
ECOWAS	Economic Community of West African States

EFSA	emergency food security assessment
EGS	Employment Guarantee Scheme
EI	Emmanuel International
ELCIN	Evangelical Lutheran Church in Namibia
EMOP	emergency programme
ENSO	El Niño Southern Oscillation
EPIC	Emergency Preparedness Information Centre
EPR	emergency preparedness and response
EPWeb	Emergency Preparedness and Response Web
ERP	enterprise resource planning
FANTA	Food and Nutrition Technical Assistance
FAO	Food and Agriculture Organization of the United Nations
FBF	fortified blended food
FBP	Food by Prescription
FCR	full-cost recovery
FCS	food consumption score
FDP	final distribution point
FEWS	Famine Early-Warning System
FEWS-NET	Famine Early-Warning System Network
FF	fortified food
FFA	food for assets
FFT	food for training
FFW	food for work
FGD	focus group discussion
FLA	field-level agreement
FOB	free on board
FSCD	Food Security Coordination Directorate

GAIN	Global Alliance for Improved Nutrition
GBV	gender-based violence
GDP	gross domestic product
GESMAAP	General Establishment for Storing and Marketing of Agricultural and Animal Products
GFB	general food basket
GFD	general food distribution
GIEWS	Global Information and Early Warning System on Food and Agriculture
GIS	Geographic Information System
GNI	gross national income
GPS	Global Positioning System
GTZ	German Agency for Technical Cooperation
GVH	group village head
HABP	Household Asset Building Programme
HBC	home-based care
HEB	high-energy biscuit
HFA	Hyogo Framework for Action
HRC	Hydrologic Research Center
HRD	humanitarian response depot
IASC	Inter-Agency Standing Committee
ICRC	International Committee of the Red Cross
ICT	information and communications technology
IDP	internally displace person
IESDA	Institute of Environment and Sustainable Development in Agriculture
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
ILO	International Labour Organization

IMF	International Monetary Fund
IRD	Institut de recherche pour le développement
IRI	International Research Institute for Climate and Society
ISC	indirect support costs
JFFLS	Junior Farmer Field and Life School
JOF	Joint Outcome Framework
LACERN	Latin American and Caribbean Emergency Preparedness and Response Network
LEAP	Livelihood, Early Assessment, Protection
LET	logistics emergency team
LLPPA	local-level participatory planning approach
LNS	lipid-based nutrient supplement
LRP	local and regional procurement
LTSH	landside transport, storage and handling
LTTE	Liberation Tigers of Tamil Eelam
M&E	monitoring and evaluation
MCH	mother-and-child health
MCHN	mother-and-child health and nutrition
MCH	Munich Climate Insurance Initiative
MDG	Millennium Development Goal
MERET	Managing Environmental Resources to Enable Transition
MFEWS	Mesoamerican Famine Early Warning System Network
MNP	micronutrient powder
MPCI	multi-peril crop insurance
MSB	Malawi Savings

NASA	National Aeronautics and Space Administration
NBP	National Bank of Pakistan
NEPAD	New Partnership for Africa's Development
NGO	non-governmental organization
NISCO	Nyala Insurance Company
NMA	National Meteorological Agency
NMC	national management committee
NOAA	National Oceanic and Atmospheric Administration
NPCC	National Project Coordination Committee
NPSU	National Project Support Unit
NRCS	Namibia Red Cross Society
OCHA	Office for the Coordination of Humanitarian Affairs
ODA	official development assistance
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
OECD/DAC	OECD Development Assistance Committee
OHCHR	Office of the United Nations High Commissioner for Human Rights
OSS	open-source software
OVCs	orphans and vulnerable children
P4P	Purchase for Progress
PA	peasants' association
PASS	Payroll Attendance Sheet System
PBM	Pakistan Bait-ul-Mal
PC	personal computer
PCB	Programme Coordinating Board
PDA	personal digital assistant

PDM	post-distribution monitoring
PDR	(Lao) People's Democratic Republic
PEPFAR	President's Emergency Plan for AIDS Relief
PIM	Programme Implementation Manual
PLHIV	people living with HIV and AIDS
PMTCT	prevention of mother-to-child transmission
PMTF	proxy means testing formula
PRONAA	National Programme for Food Assistance
PRRO	protracted relief and recovery operation
PSNP	Productive Safety Net Programme
R2P	Responsibility to Protect
RCHR	Regional Centre for Hydraulic Resources
REDLAC	Risk, Emergency and Disaster Task Force
RFID	radio frequency identification
RMC	regional management committee
RNI	recommended nutrient intake
RPSU	Regional Project Support Unit
RTEM	ready-to-eat meal
RUF	ready-to-use food
RUFC	ready-to-use food for children
RUSF	ready-to-use supplementary food
RUTF	ready-to-use therapeutic food
SADA	Advanced System for Warning Dissemination
SAFE	Safe Access to Fuel and Alternative Energy
SATCAweb	Central America Early Warning System
SDC	Swiss Agency for Development and Cooperation
SEA	sexual exploitation and abuse
SICA	Central American Integration System

SIDA	Swedish International Development Cooperation Agency
SMS	short message services
SNAP	Supplemental Nutrition Assistance Program
SNET	National Service for Territorial Studies
SO	Strategic Objective
SRAC	Strategic Resource Allocation Committee
TA	Traditional Authority
TASO	The AIDS Support Organization
TB	tuberculosis
THR	take-home ration
TVP	texturized vegetable protein
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDAF	United Nations Development Assistance Framework
UNDOC	United Nations Office of Drugs and Crime
UNDP	United Nations Development Programme
UNESCO	Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UNGASS	United Nations General Assembly Special Session
UNHAS	United Nations Humanitarian Air Service
UNHCR	Office of the United Nations High Commissioner for Refugees
UNHRD	United Nations Humanitarian Response Depot
UNICEF	United Nations Children's Fund
UNISDR	United Nations International Strategy on Disaster Reduction

UNRWA	United Nations Relief and Works Agency for Palestinian Refugees in the Near East
UNU-EHS	United Nations University Institute for Environment and Human Security
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USGS	United States Geological Service
UVP	urban food voucher programme
VAM	vulnerability analysis and mapping
VFT	vouchers for training
VFW	vouchers for work
VGf	vulnerable group feeding
WFP	World Food Programme
WHO	World Health Organization
WINGS	WFP Internal Network and Global System
WRMF	Weather Risk Management Facility
WRS	warehouse receipt system(s)
WRSI	Water Requirement Satisfaction Index
WSB	wheat-soya blend
WVI	World Vision International
ZAMACE	Zambia Agricultural Commodity Exchange

Overview

1

Innovations in food assistance: issues, lessons and implications

Steven Were Omamo, Ugo Gentilini and Susanna Sandström

1. Introduction

This is a testing moment for the world. New drivers of food insecurity, such as globalization and climate change, are combining with older ones, such as civil strife, inequality and weak governance, to expose ever-increasing numbers of people to sudden plunges into severe hunger. The high food price crisis came and went; the global economic crisis is abating. But the effects of the ravage wrought by these crises on livelihoods around the world will linger, most likely for decades.

Governments responded admirably to the crises, but public interventions are increasingly stretched while the demand for safety net measures is increasing (Timmer, 2010; Ravallion, 2009; von Braun, 2007). Many citizens in the world's richer countries, long accustomed to lifestyles built in no small part on generous public transfers and services, are finding themselves newly vulnerable to the poverty and food insecurity typically associated with life in far poorer countries. Rich countries' seemingly insatiable demand for goods, gadgets and groceries – a demand that supported livelihoods in far-flung lands – remains anaemic at best. In the many lower-income countries where foreign demand looms large in gross domestic product (GDP), prospects for export-led growth and employment generation are less bright. So too are those for cutting poverty and hunger. The new hardships and vulnerabilities are deep, global in scope and expanding.

It is now clear that under this dynamic, the world is losing hard-won ground in the fight against hunger – a fight that until recently it was winning. Millennium Development Goal number 1 to halve extreme poverty and hunger by 2015 is moving rapidly out of sight for countries where its attainment is most urgent. The

proportion of undernourished people around the world declined from 20 to 17 percent in the first half of the 1990s. Since then, however, progress has come to a halt, and there have even been reversals in the past three years. At the same time, the number of undernourished people has increased by almost 20 percent since 2005–2007. In 2009, more than a billion people were undernourished (FAO, 2010), and more than 1.3 billion people were living on less than US\$1.25 a day per capita, with almost half the world's population on less than US\$2 a day (World Bank, 2010a). About 23 percent of children under 5 years of age are stunted, 178 million children in total, and nearly 11 percent are wasted (UNICEF, 2009).

Governments, communities and households are under immense and growing pressure. For governments in countries as different as Greece and Chad, the United States and Kenya, France and Peru, there is pressure to do something about the food and nutrition insecurity facing growing numbers of their people. The immediate pressure on communities and households is to cope with crises, and to prepare the next generation for the complex challenges it will face.

This book is about a revolution in responses to these kinds of pressures – responses by the World Food Programme (WFP) and its many partners around the world.

A book about responses to overcome hunger is relevant and timely because the dominant narrative of global hunger and food insecurity can lead to the conclusion that the challenges are too daunting to be dealt with, while the facts – as seen from WFP's standpoint – are very different. There are many interventions against hunger that do work, in many contexts, and very well. However, the existence of these operationally feasible and effective food assistance initiatives, designed and implemented in the real world, is often forgotten or ignored, leading either to apathy or to a sense of powerlessness in the face of a seemingly intractable problem.

So this is a book about a revolution in food assistance. WFP has a dual mandate: to avert starvation in humanitarian crises through food assistance, delivered not only within emergency operations that fill food gaps in the short term, but also within programmes that promote long-term development and thereby break the deeply rooted hunger-poverty cycle. This is a book about food assistance across the full spectrum of contexts in which WFP works.

Most of all, this is a book about innovation in food assistance.

For WFP, innovation in food assistance is essential. WFP's success as a food assistance agency is based on its ability to identify: who are the hungry and vulnerable; where they are; why they find themselves hungry and vulnerable; what they are doing to combat hunger and vulnerability; whether they would benefit from food assistance; and how such assistance can best be delivered and in which form. Crucially, WFP backs this analysis with the capacity to implement

programmes, often in areas and under conditions where few other agencies are able or willing to operate.

Herein lies the fundamental imperative for innovation in food assistance. How does WFP secure its commodity supply chain in a rebel-held area? How does it procure grain of acceptable quality from dispersed smallholder farmers operating in high-cost, high-risk markets? How does it build and manage an information base with both global coverage and local relevance? How does it strengthen national institutions while working at speed? How does it draw the private sector into areas where there are few incentives for operating?

For WFP, innovation is often not only necessary, but is typically the only practical option. Hunger and food insecurity are driven by myriad complex factors, which can be overcome effectively only through innovation at a fundamental level. Such innovation can only emerge from practice – from responsible judgements in complex worlds of action. This book is about the results of such innovation.

Another important motive for WFP's innovation in food assistance is its Strategic Plan for 2008–2013 (WFP, 2008e). The plan has transformed WFP not only into a front-line catalyst of innovation in the humanitarian domain, but also into an agency that offers an expanded set of food assistance tools for addressing hunger, and thereby promoting growth and development within a rapidly changing global environment. Under the plan, WFP's interventions should be provided in ways that meet hunger needs, strengthen local markets, foster small farmers' productivity, and build national capacities. Success in this endeavour will require not only the visionary leadership and strong partnerships that helped develop launch this new strategic direction, but also considerable innovation across the board. In other words, modern WFP not only delivers food – it delivers hunger solutions. It is not instrument-based, but problem-based. This historical shift – the revolution – has positioned WFP as a catalyst of practical hunger innovations with fundamental changes in the way WFP implements programs, shapes key policy debates, and engages strategically with actors and partners.

This book captures the range and depth of WFP's innovation agenda as it undergoes the required transition. The ultimate aims of the book are to identify and document innovative interventions from WFP's work around the world, draw lessons from these initiatives, yield further advancements in food assistance knowledge and practice, and thereby enhance evidence-based food assistance policy-making and programming.

This chapter is organized as follows. The next section lays out the definitions of food assistance and innovations adopted in the book; section 3 presents the structure of the book, including its sections and chapters; section 4 draws key lessons emerging from the chapters; and section 5 sets out implications.

2. Innovations in food assistance

“Innovation” and “food assistance” mean different things to different people. In generic terms, an innovation is an idea, object or practice that is perceived as new by a social system in which actors invest cash, labour or learning (Mahajan and Peterson, 1985). Innovation may include: (i) creation of new products and processes, such as the invention of mobile phones; (ii) application of new products in other domains, such as the use of mobile phones to deliver food vouchers in humanitarian assistance; and (iii) enhancement of the routines and procedures associated with these applications, such as the development of new contractual arrangements with food retailers based on electronic verification of beneficiary identities. This book focuses on the latter two forms of innovation – the sweeping changes generated by the application of novel products and processes within WFP’s action arena, and refinements in existing routines.

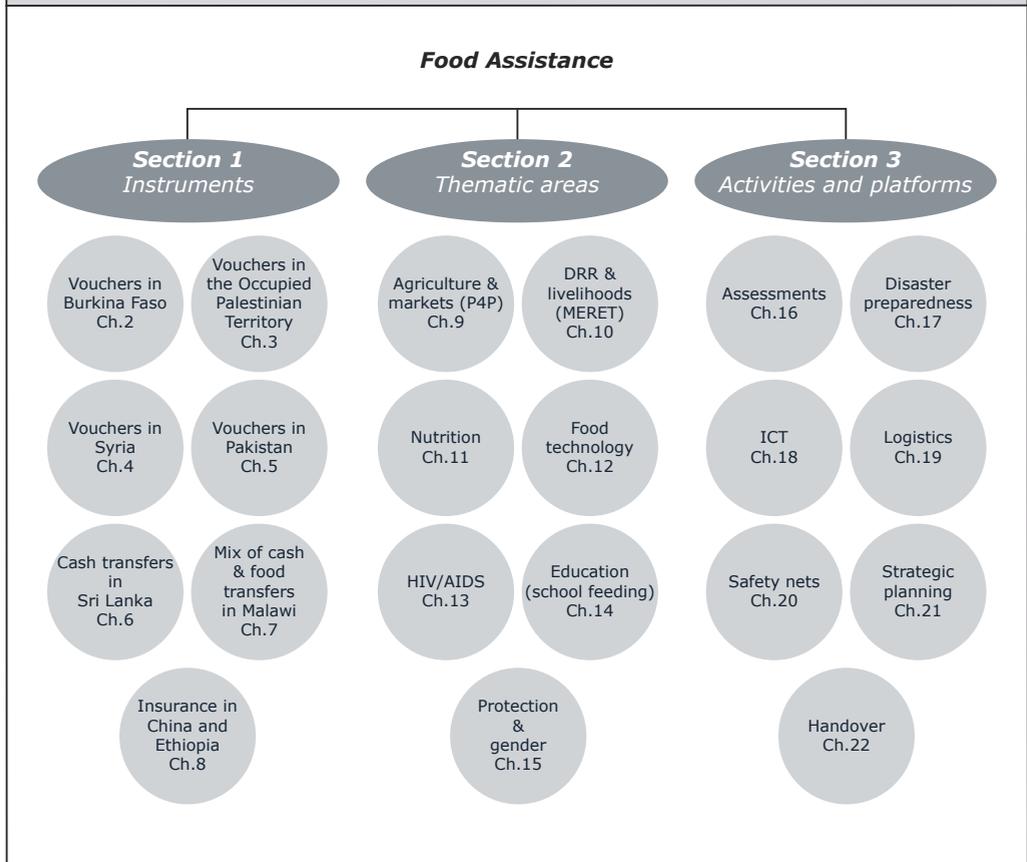
Several definitions of food assistance exist in the literature, ranging from broad conceptualizations that encompass all food security interventions to narrower approaches that focus on specific tools and partnerships (Harvey et al., 2010; Maxwell et al., 2010). In this book, food assistance refers to the set of interventions designed to provide access to food to vulnerable and food insecure populations. Included in the definition are instruments, such as in-kind food, voucher or cash transfers, to assure access to food of a given quantity, quality or value. These instruments can be used to pursue specific objectives, such as nutrition, education or disaster risk reduction. Several supportive activities and institutional platforms render the instruments successful and sustainable relative to the objectives, such as needs assessments, logistics, information management, or engagement in national safety nets and strategies for hand-over. Each of these three dimensions is covered in the book.

3. Organization of the book

The book is organized around the three attributes of food assistance presented in the previous section (Figure 1.1).

3.1 Section 1: Instruments

The first section addresses the evolving nature of food assistance and its diverse modalities by presenting how WFP has applied a number of instruments in a range of contexts across the globe. The primary focus is on vouchers and cash transfers, which – depending on circumstances – can be provided as alternatives or complements to food transfer programmes. Since 2008, WFP has expanded its toolbox to include these instruments alongside traditional in-kind programmes. Also presented are insurance-based tools for disaster risk reduction.

Figure 1.1 The organization of the book

DRR = disaster risk reduction.

In Chapter 2, Ouattara and Sandström describe WFP's food voucher operation in Burkina Faso, the first of its kind in Africa. This initiative was set up to respond to high food prices, and features two areas in which WFP has only recently started to gain experience: fairly large-scale voucher programmes, and operations in urban areas. These two aspects pose a host of new operational challenges such as managing beneficiary targeting in urban areas where "everybody is poor", and dealing with constraints caused by fragile markets. The pilot in Burkina Faso illustrates that carefully designed and implemented voucher programmes can be successful in low capacity contexts.

In Chapter 3, Galluzzi and Natsheh provide a review of the operational aspects and initial impacts of a voucher programme in the Occupied Palestinian Territory. The programme was set up to mitigate the impact of high food and

fuel prices on food-insecure households already negatively affected by conflict. Operating in an economy weakened by restricted movements and trade, the voucher intervention seeks to achieve a dual objective: (i) to improve dietary diversity and nutrition of urban households; and (ii) to stimulate local business and farming sectors. These objectives are pursued by providing beneficiaries with a voucher basket including mainly locally produced protein-rich food items.

In Chapter 4, Brinkman, Gentilini and Majeed derive insights from Asia's longest-standing voucher programme, in Pakistan, set up in 1994 to address the high logistics costs associated with direct food transfers. Although the voucher programme has been running for several years there are still opportunities to be explored, including scaling up, joint programming, extending intra-community support, testing vouchers in other WFP programmes, using index-based vouchers, participating in national social protection initiatives, and undertaking a rigorous impact evaluation.

In Chapter 5, Elguindi's analysis of an electronic voucher scheme in the Syrian Arab Republic demonstrates that innovative delivery mechanisms provide opportunities for efficient and secure management of programmes, and prompt reporting and monitoring. The programme – which was the first in the world to be delivered through mobile phones – operates among Iraqi refugees who have access to markets but no legal income-generating opportunities. The first phase of the pilot confirmed that the voucher programme reduces the resale of food items – a perennial challenge facing in-kind distribution.

In Chapter 6, Sandström and Tchatchua examine a cash transfer initiative in post-tsunami Sri Lanka. In one of WFP's first cash-based interventions in the aftermath of an emergency, an important question was whether cash transfers would meet key food security objectives. An evaluation carried out as part of the pilot, comparing the impacts of cash and food transfers, provided important insights into this issue, particularly on changes in households' consumption patterns and gender-related control and preferences.

In Chapter 7, Blake, Halme and Balzer consider a combined food and cash transfer initiative in Malawi. At issue is the cost efficiency versus the cost effectiveness of the different transfer modalities. A detailed cost/benefit analysis reveals that while in the context of rural Malawi food is cheaper to deliver than cash, households receiving cash transfers show considerable improvements in food consumption and dietary diversity.

In Chapter 8, Balzer and Hess detail the rationale and initial outcomes of WFP's experience with weather-index insurance products in China and Ethiopia. Designing and implementing ex-ante interventions is crucial to both emergency risk financing and development programming. In the short term, these instruments – which are growing in importance under the threat of global

climate change – seek to build resilience against the effects of extreme weather events that displace or wipe out the assets defining food security, and thus to prevent the negative coping strategies that provoke plunges into mutually reinforcing poverty and hunger traps. In the long term, climate risk insurance can stimulate behavioural adjustments that allow individuals, communities and countries to accommodate changes in climate patterns, thereby protecting key natural, ecological, human and economic assets from degradation and displacement, and thus safeguarding food security.

3.2 Section 2: Thematic areas

The second section of the book examines innovations in food assistance in terms of WFP's engagement in various thematic areas of work, or sectors. Agricultural development, disaster risk reduction, nutrition, health, education and protection, especially of women, throw up challenges as diverse as their implied objectives, requiring an equally varied a set of innovations.

In Chapter 9, Davies and Menage review Purchase-for-Progress (P4P), a flagship programme in which WFP uses its purchasing power in new ways to develop agricultural markets and support smallholder farmers' engagement in those markets. Having WFP as a committed buyer reduces the risks smallholder farmers face, and provides an incentive for them to increase productivity, raise quality and diversify crops. Farmers benefit from the support of a wide range of partners, allowing them to take advantage of new market opportunities and to meet new standards. Under P4P, WFP is identifying mechanisms that help develop secure markets for small-scale farmers, and solutions that are country-specific. The best practices identified will be mainstreamed into WFP's long-term policies and programme practices. The lessons drawn will be shared as a model for national governments and other public and private players in the agriculture sector.

In Chapter 10, Nedessa and Wickrema detail WFP's multiannual experience with the Managing Environmental Resources to Enable Transition (MERET) programme in Ethiopia. Experiences from MERET illustrate how food assistance can support effective disaster risk reduction at scale. While meeting the immediate needs of food-insecure populations, the programme strives to address the causal factors of vulnerability by supporting sustainable land management and increased productivity. MERET, widely praised recently in climate change forums, shows how watershed management, participatory approaches and technical rigour can enhance communities' livelihoods and resilience.

In Chapter 11, de Pee, van den Briel, van Hees and Bloem show how WFP uses new ways to prevent and treat malnutrition. Specially formulated foods have revolutionized the field, but a thorough understanding of the causes of malnutrition is crucial, as are continuing advances in food technology. WFP is

continuously developing, improving and adding food commodities to the food basket, to meet more effectively the nutritional needs of its beneficiaries. Recent developments include addressing the needs of specific target groups, including children under 2, moderately malnourished children, pregnant and lactating women and people living with HIV/AIDS or TB. New strategies, such as home-fortification to address micronutrient deficiencies, ready-to-use supplementary foods (RUSFs) for treating children with moderate acute malnutrition, and food supplements to complement the diets of young children aged 6 to 23 months and prevent malnutrition, are also being implemented.

In Chapter 12, Bounie, Bienfait, Prigge and Salvignol describe how advances in food technology enable WFP continuously to improve the quality, taste, convenience and safety of its food basket. Although they vary in technological complexity, fortified foods, fortified blended foods and ready-to-use food for children can be prepared according to local habits and taste, and many can be produced using basic technologies that demand low technical capacity. A recent challenge is to develop ready-to-eat meals to complement fortified biscuits during the first days of emergencies. In this area of continuous development and innovation, WFP's food technologists cooperate with universities and the food industry to track promising technological innovations that may be transferred to humanitarian contexts: new processes, new equipment, new regulations, new technological skills, and evolving scientific theories.

In Chapter 13, Erdelmann, Njoroge and Isler review the evolution of food assistance for HIV/AIDS care and treatment, paying special attention to the institutional innovations and scientific advances that have taken place in this area and that shape programme directions and approaches. The history of HIV programming in WFP reflects a decade of evolution and innovation, responding to rapid scientific, epidemiological and political developments, while contributing to global and national priority setting.

In Chapter 14, Molinas and Regnault de la Mothe summarize the growing empirical evidence for the multiple impacts of school feeding, and show how programmes could be leveraged to foster national ownership and country-led approaches. In its new school feeding approach, WFP is seeking to change its role from direct implementation to that of enabler, capacity builder, adviser and repository of best practices. The ultimate aim is to align programmes more closely with national development strategies, education policies and financing frameworks.

In Chapter 15, Crawford, Pattugalan and Dale examine how food assistance programmes – including distributions, communication campaigns, advocacy, and staff and partner presence – might be retooled to improve beneficiaries' safety and protection and, ultimately, their food security. Working in complex

emergencies and conflict situations, WFP is confronted by protection concerns ranging from violence during food distributions to rights abuses faced by crises-affected populations. Violence against women is a recurring theme; food assistance can empower women, thereby constituting a tool for protection, but it can also put women at risk of violence. Although WFP's experience with protection is relatively new, interventions in a range of countries and contexts have demonstrated that WFP can use its food assistance activities to address protection concerns.

3.3 Section 3: Supportive activities and institutional platforms

The third section examines innovations in several areas, comprising supportive activities and institutional platforms for food assistance. Activities in these areas provide essential “hard” and “soft” foundations for application of the instruments in thematic areas, including the strategic and policy foundations for food assistance operations, and technical platforms for programme design and implementation, aiming ultimately to achieve effective and efficient hand-over of interventions and programmes to national governments and other actors. Technical support and capacity building are seldom provided in isolation. Engagement in multi-actor platforms shows that coordinated, synergistic and integrated partnerships are key to sustainable approaches and results.

In Chapter 16, Sanogo and Luma demonstrate the results of cutting-edge methods used by WFP to gather, analyse and interpret macro- and micro-level data on the impact of global economic crises, and outline the findings and lessons learned from these studies. The objectives of these assessments were to determine country-specific transmission channels of the impacts of the global food, fuel and financial shocks, changes in the food security status of households, and mitigating responses that might be appropriate. In-depth studies of food markets were central because, in most contexts, key impacts are mediated through these markets.

In Chapter 17, Balletto and Wertheimer focus on the ways in which information is managed and organized when preparing for emergencies in Central and Latin America. Innovations in this area centre on preparedness tools and response capacities in the region, including the pre-positioning of food and non-food items in subregional depots, decision support tools based on Geographic Information Systems (GIS), early warning, targeted training, enhanced coordination, and South-South cooperation mechanisms.

In Chapter 18, Yu details how WFP uses state-of-the-art information and communications technology (ICT) to support its food assistance activities. ICT not only supports food assistance initiatives, it also changes their very nature, enabling entirely new capabilities. Innovations span the full range of food

assistance activity – from individual action to system-wide coordination and integration, often across the globe.

In Chapter 19, Quinn describes WFP's central role in humanitarian logistics, demonstrated by its leadership mandate in logistics operations whenever an emergency requires a joint response from United Nations and other agencies. Complex operating environments and increasingly sophisticated food assistance demand logistics operations that are dynamic and multi-modal, ranging from the management of complex pick-up networks from multiple remote locations as required by the P4P initiative, to handling large-scale unpredictable emergencies such as earthquakes or tsunamis.

In Chapter 20, Gebru, Gentilini, Wickrema and Yirga lay out the evolution, achievements and challenges emerging from WFP's engagement in the largest safety net scheme in Africa – Ethiopia's Productive Safety Net Programme (PSNP). The innovations and principles that define the PSNP approach and have shaped its design and implementation include its multi-actor platform, strong government ownership and guidance, multi-annual approach, and integration within a broader food security framework.

In Chapter 21, Samkange, Howe and Cavalcante lay out key steps undertaken by WFP's Uganda Country Office to contextualize and operationalize WFP's corporate Strategic Plan at the country level. A path-breaking consultative process for priority setting, forging partnerships, establishing institutional linkages, and formulating a programme portfolio resulted in an internally consistent, relevant and widely embraced strategy that brings together previously disparate investments in Uganda's food system in an operationally feasible manner.

Finally, in Chapter 22 Osmani describes the modalities, arrangements and steps for effective hand-over of food assistance interventions from international actors to the Namibian government. A programme for orphans and vulnerable children (OVCs) was designed with an exit strategy entailing the integration of beneficiaries into the national social safety net.

4. Lessons

WFP's practical experience with action against hunger and food insecurity, day-in day-out, across the globe, is at once humbling and inspiring. It is humbling because WFP and its partners are reaching barely one-tenth of the people who need such assistance – so much more needs to be done. However, it is also inspiring because from its experience WFP is constantly acquiring a firmer sense of what is possible in the fight against hunger: what works well, how and why; what can be sustained; and what could be scaled up to reach more people. Several lessons about the kinds of initiative the world needs so badly emerge from the chapters in this book.

Lesson 1: Innovation is fundamental to successful and sustainable food assistance

The factors driving vulnerability and hunger are diverse and dynamic. Food assistance must be constantly on guard against stagnating. Viewed together, the chapters demonstrate that both the adaptation of existing tools in new arenas and the development of new routines play important roles at different stages in innovation processes. At times, there is greater pressure for adaptation, as is currently the case for cash and vouchers in many contexts, or for ICT capacity across the board (chapter 18). At other times, the impetus is towards developing new routines, as was the case for needs assessment and vulnerability analysis during the previous decade, and for logistics since the late 1990s (chapter 19).

Lesson 2: Innovations in food assistance are context-specific

Food assistance must accommodate a wide range of operational constraints imposed by geography, demography, economic relations, institutions and politics. Successful innovations in food assistance ease these binding constraints, increasing the scope for reducing costs, enhancing benefits, or both. Just as there are no universally applicable food assistance interventions, there can be no blueprint innovations in food assistance. For instance, each of the seven cash-and voucher-based innovations described in Section 1 was designed and implemented through the judicious analysis of beneficiary needs and preferences, market conditions, and financial system capacity. Each differed from the others. Were they to be designed and implemented today, months or years later, even in the same places and serving the same communities, they would differ in crucial details. In some contexts, humanitarian protection is the backbone of effective food assistance (chapter 15). Context appears to be especially critical to the expansion of initiatives via replication or scale-up. Several chapters suggest that prospects for sustainable expansion are enhanced by effective management of the adaptation process, proactive investment to

anticipate and accommodate the new bottlenecks invariably created by success, deliberate cultivation of strategic partnerships, and careful monitoring and assessment of impacts.

Lesson 3: Innovation in food assistance requires strong leadership and deliberate and sustained investment

Successful innovations do not crop up overnight, nor do they come for free. They spring from farsighted leadership and continuous, iterative efforts to improve products, processes and outcomes. Some innovations focus on specific operational tasks, others cover cross-cutting functions, a few are strategic and policy-oriented. All require relevant installed capacity. Such capacity is costly and time-consuming to build, with set-up costs typically swamping initial returns by several orders of magnitude. WFP's ability to move rapidly into cash and voucher programming (chapters 2 to 7) rests on decades of investment in vulnerability analysis and monitoring, needs assessment, and community-level action undertaken in tandem with skilled partners. The P4P initiative builds directly on broad-based expertise in food procurement and market analysis (chapter 9). The introduction of new nutritious products is based on expertise in nutrition sciences and food technology and processing (chapters 11 and 12). Institutional innovations in school feeding are made possible by years of successful operation of "traditional" school feeding programmes in scores of countries across the globe (chapter 14). The chapters show that costly experimentation correctly reconciled with available capacities, balances risks against expected benefits, and is therefore a key ingredient for success.

Lesson 4: Markets are central determinants of the outcomes and impacts of many innovations in food assistance but cannot be relied on as the sole guide for innovation

Several of the chapters illustrate very clearly that markets discipline action, delineate possibilities, generate and mitigate risk, provide new skills and novel products, and signal and facilitate rewarding partnerships in food assistance. However, these chapters also demonstrate that the impacts of food assistance innovations often depend on developments in the public domain. Especially important are public investments in agricultural development, food system strengthening, and social protection. In many of the fragile environments in which food assistance is undertaken, markets are fraught with risks and difficulties, but WFP's experience shows that even in these settings markets can serve crucial functions (chapters 2 and 6). More important for this book, WFP's experience with innovating in these settings demonstrates that success often depends on private action undertaken through markets (chapter 8). Deliberate

investment in market development is almost always required, particularly for innovations with strong public good dimensions, as is often the case for food assistance innovations.

Lesson 5: Innovation in food assistance requires strong and dynamic partnerships

Innovation in food assistance raises major paradoxes for partnerships. Grasping the opportunities for innovation typically requires strong partnerships spanning public, private and civil society sectors. For example, vouchers can be redeemed by beneficiaries in private shops (chapters 2 and 3), or be delivered through private partners but redeemed in public shops (chapter 5); fortification of foods includes collaboration with the private sector (chapters 11 and 12); and the management of transportation and communication technology is based on an array of partnerships with public and private actors (chapters 18 and 19). However, almost by definition, partnerships are constantly under pressure to adjust to the new demands unearthed by successful innovations. Furthermore, innovation destroys value in one domain even as it creates value elsewhere, so partnerships based on innovation processes are built on particularly unstable foundations. As illustrated in the MERET initiative in Ethiopia (chapter 10), HIV/AIDS care and treatment (chapter 13), strategic planning in Uganda (chapter 21) and hand-over in Namibia (chapter 22), strong and sustained institutional commitment is crucial.

Lesson 6: Globalization implies both opportunities and threats for food assistance innovations

Many innovations in food assistance depend on global processes for their full expression and impacts, such as those in vulnerability analysis (chapter 16) and emergency preparedness (chapter 17). This is a logical upshot of threats to food security that are global in scope, such as climate change, financial market instability and pandemics. It is also a logical upshot of the many opportunities for enhancing food security thrown up by globalization, such as those linked to ICT (chapter 18). For example, food systems are more closely interconnected; new institutional and contractual forms largely govern food standards and commercialization; and supermarket chains are rapidly emerging in all continents (Reardon et al., 2009, McCullough, Pingali and Stamoulis, 2008). However, the smallest, marginalized farmers may not be well positioned to seize those opportunities. Programmes such as P4P (chapter 9) may help bridge the divide by providing tailored support to connect vulnerable farmers to markets. Food-insecure households are also less insured against shocks, so insurance products (chapter 8) may help farmers to enhance productivity while reducing

risks. The challenge for innovation in food assistance relates to managing risks in ways that limit exposure but improve efficiency and promote learning.

5. Implications

Looking ahead, and returning to the core challenge of how to maximize the impacts of food assistance interventions in the fight against hunger, the most obvious aspects are, first, the tremendous scope of food assistance as an area of work and, second, its inherent dynamism. Its ability to respond to these features has clearly been a major plus for WFP throughout its history, especially over the last decade. It will be crucial for going forward.

However, even a much larger and more rapidly innovating WFP could address only a small part of the hunger problem. Capacity for effective food assistance design and implementation and for innovations in these areas must be distributed widely. Every country or agency has potential for generating innovations in food assistance, but innovation is the reserve of the expert. National food assistance structures and processes require targeted investments to build expertise in relevant areas. As clearly demonstrated in several chapters, the nature of innovation in food assistance is such that with prudent investment, countries should be able to bypass several previously obligatory technical stages and organizational forms on the road to achieving expertise and excellence in food assistance design and implementation.

It may be easy to forget that many of the innovations reported in this book occurred in emergency contexts, under extremely difficult circumstances. This is the first time that many of the innovations have been systematically documented outside standard project and programme reports. It could be argued that this makes the book an even more important contribution to the literature than it might otherwise have been. It also almost certainly implies lost opportunities for building an evidence base to inform and support decision-making at all levels. Such opportunities should be more systematically and strategically grasped in the future.

With a few exceptions, the book's contributors did not undertake full assessments of the interventions they were describing. But a central message emerging from the book is that food assistance is generating major impacts across a wide array of contexts. The food assistance community must do much more to fill the gap in impact evaluation. A book such as this one can only scratch the surface, but it makes clear that rigorous impact evaluations are crucial to good decision-making in food assistance (Deaton, 2009; Duflo and Kremer, 2009; Rodrik, 2008).

According to Ravallion (2007: 2), "... without research, the conceptual

foundations for policy-making will be weak; there will be very little new knowledge or data to inform policy decisions; [and] there will be little or no innovation.” This book is built on real-world food assistance practice. A call for heavy empirical research on the minutiae of food assistance techniques and processes would be inappropriate, but as Rosenberg (1976: 125) observed, “If we would like to understand the kinds of problems to which technically competent personnel are likely to devote their attention, we must come to grips with their inevitable preoccupation with day-to-day problems.... If we pay more attention to the cues thrown out by this daily routine, we may gain a clearer understanding of the process of technical change.”

For WFP – as a large food assistance agency seeking constantly to accommodate the vicissitudes of a volatile world – the imperative to change and innovate within its daily routine is strong and enduring. The lessons that have emerged from the comprehensive self-examination summarized in this book are profound and challenging, but deeply inspiring.

section **I**
Instruments

2

Responding to high food prices: evidence from a voucher programme in Burkina Faso

Ali Ouattara and Susanna Sandström

1. Introduction¹

In February 2009, WFP launched its first food voucher operation in Africa, to address food security in an urban environment where food is available but beyond the reach of many because of high food prices. Vulnerable segments of the population, who were spending most of their budgets on food, risked falling into destitution as their purchasing power was weakened by increasing food prices. The voucher programme is currently targeting more than 200,000 beneficiaries in Burkina Faso's two main cities – the capital Ouagadougou and the commercial centre Bobo-Dioulasso. The aim of this emergency operation is to compensate people for lost purchasing power due to higher food prices and fewer employment opportunities. The first part of the programme ran until the end of 2009, but a budget revision with increased commitments and beneficiaries for six additional months was approved.

Given WFP's limited experience with cash and vouchers, the programme is innovative in at least two respects: it is a fairly *large-scale* voucher programme, and it operates in *urban* areas. These two aspects pose challenges. Targeting in urban areas with heterogeneous and mobile, but predominantly poor, populations is not a straightforward task, and it becomes even more complicated when the programme is large.

This chapter starts with a review of the context for the voucher programme and its current status, describing its design and implementation. This is followed by insights into the use of vouchers and beneficiaries' perceptions of the programme. The chapter then looks at the challenging task of targeting and

reviews the results of an evaluation of the targeting exercise. Discussion of the challenges in implementing a voucher programme in a low-capacity context rounds off the analysis.

2. Context, design and implementation

2.1 Urban safety net programme to respond to high food prices

In February 2008, people went out on to the streets of Ouagadougou and Bobo-Dioulasso, as in many other African cities, in violent demonstrations to protest against high food prices and loss of purchasing power. In June the same year, an assessment by the government, with United Nations agencies and non-governmental organizations (NGOs), showed that vulnerable segments of the urban population risked falling into destitution as their purchasing power weakened owing to higher prices. Between January and February 2008, prices had increased by 44 percent for the main staple maize, 30 percent for meat, and 50 percent for cooking oil. Negative coping strategies such as reducing the quantity and quality of food and removing children from school were found to be common.

Given this situation, WFP held discussions with key stakeholders, including the Ministry of Social Affairs, the World Bank, the International Monetary Fund (IMF) and major bilateral donors. These resulted in the setting up of Burkina Faso's first large-scale urban safety net programme. Under this agreement, the Ministry of Social Affairs would cater for the most destitute households, usually one-member households of elderly and disabled people, by providing in-kind assistance. WFP and its partners would assist very poor and poor households by distributing fortified food to both groups and unconditional vouchers to the very poor. A market assessment (WFP, 2008a) found a voucher programme to be feasible, as the long-standing political stability in Burkina Faso guarantees a stable operating environment with relatively well-functioning markets and reasonably good agricultural production. Nevertheless, the market assessment also revealed that there would be considerable challenges. As very little was known about the functioning of markets in peripheral urban areas, where most of the poor people in Ouagadougou live, and no secondary data were available, primary data had to be collected. Restricted capacity of shopkeepers in these areas and weak competition made clear that much attention would have to be paid to this aspect of the programme.

Voucher programmes are a novelty in Burkina Faso, not only for WFP but also for implementing partners. Although one of the main implementing partners, the Red Cross, had experience of large-scale programmes and of

operating in the two cities, it had never implemented a voucher programme. The other main implementing partner, Catholic Relief Services (CRS), had experience of a small voucher programme, but not of large-scale operations.

2.2 Design and implementation

To set up the programme and target households as successfully as possible, the Red Cross carried out a huge data collection exercise covering 142,000 households from pre-selected poor areas in the two cities. The targeting steps for the identification census were: (i) pre-select poor areas, drawing mostly on quantitative information of the Red Cross based on its long-standing experience in the two cities; (ii) approach households according to the quality of the dwelling and whether or not the household had a car or modern equipment; and (iii) collect information on the households, based on a two-step questionnaire in which the first part assessed whether or not the household was potentially vulnerable, and the second part was to be filled in only if the first part indicated such vulnerability.

Data collection started in August 2008, and final data were available in November. Households were selected for the programme on the basis of a vulnerability score calculated from the demographic profile of each household, its main income source, number of meals per day and food sources, characteristics of the dwelling, means of transport, use of health centres, and sources of medication. The 31,500 most vulnerable households – 200,000 individuals – were identified as very poor and selected for the voucher programme; of these households, 21,300 are in Ouagadougou and 10,225 in Bobo-Dioulasso. An additional 70,000 households identified as poor receive Plumpy Doz™ or locally fortified flour if they have children aged 6 to 24 months. Pregnant and lactating women also receive in-kind assistance – corn-soya blend (CSB) – during the lean season of June to September.

The local micro-finance company MICROFI, in cooperation with the Ministry of Trade, undertook a census of 250 shops in the relevant geographical areas, to assess their capacity and willingness to participate in the programme. The programme targeted small retailers, as these had been the most severely affected by the high food price crisis. In Ouagadougou, 100 shops were selected and in Bobo-Dioulasso, 50.

The voucher distributions started in February 2009 in Ouagadougou and March 2009 in Bobo-Dioulasso. The voucher distributions are administered by CRS in Ouagadougou, and the Red Cross in Bobo-Dioulasso. Households are given paper vouchers worth 1,500 CFA francs (US\$3), which they use in shops that have signed a contract with WFP. Depending on its size, each household receives a maximum of six vouchers. This amounts to an average of 45 percent

of the household's monthly income. In exchange for the voucher, people receive locally produced maize, cooking oil and soap, and imported sugar and salt. Prices are set by WFP and correspond to the current market prices of the products. The retailer redeems the vouchers through WFP's arrangement with MICROFI, under which MICROFI visits the shopkeepers regularly to collect the vouchers, checks them and reports to WFP. WFP reimburses MICROFI with a "just-in-time transfer" based on the exact value of the vouchers collected; MICROFI uses this to reimburse the shopkeepers. This process normally takes five days. Almost all the vouchers distributed – 99.95 percent – have been collected and reimbursed by MICROFI.

Several security measures have been taken to avoid misuse and duplication of the vouchers. Each beneficiary has a beneficiary card that must be shown when the vouchers are exchanged. Each voucher has an alpha-numeric serial number in which two letters are changed every month. The beneficiary card numbers and voucher serial numbers are registered during the voucher distribution, entered into a database, and checked by MICROFI after it collects the vouchers and before it reimburses the shopkeepers. The colour of the vouchers is changed every distribution period, and each voucher has an irremovable WFP hologram sticker and the stamp of the implementing partner. Vouchers also have an expiry date that is known only by the WFP project manager and stamped on the voucher immediately before distribution.

Figure 2.1 Shop exchanging WFP vouchers in Ouagadougou



2.3 Use of vouchers and perceptions about the programme

Discussions with stakeholders confirm the importance of the programme in preventing social unrest and mitigating some of the tension created by high food prices. A mid-term evaluation (WFP, 2009c) and post-distribution monitoring (PDM) (WFP, 2009j; 2009k) carried out in both cities give insights into how beneficiaries, retailers and supervisors view the voucher programme and how the vouchers are used.²

Findings from the mid-term evaluation suggest that living conditions have worsened since the start of the programme, owing to deteriorating employment opportunities and continuing high food prices. For beneficiaries, the voucher programme is the main source of resources for food. PDM results show that nearly 100 percent of beneficiaries in both cities exchange their vouchers immediately or the day after receipt, using the whole value at once. This does not seem to be owing to mistrust in the programme or to shortages of goods in the shops, as almost 94 percent of the beneficiaries say that retailers have enough of the items they want to purchase. The reason for this behaviour is believed to be that the need is very great.

Beneficiaries tend to use their vouchers on all the items in the voucher basket, but although no exact figures are available, both retailers and beneficiaries confirm that about 80 percent of the voucher value is used on the main staple maize. Only 9 percent of the beneficiaries in Ouagadougou and 4 percent in Bobo-Dioulasso report problems with using the vouchers; those mentioned relate to queuing, long distances to the shops and the quality of products.

PDM confirms that beneficiaries would like more items in the basket; 95 percent of retailers confirm that beneficiaries would like to exchange their vouchers for other products, and a third report that beneficiaries would like to exchange vouchers for money. However, the majority of beneficiaries report that they are happy with the products available: 84 percent in Ouagadougou and 68 percent in Bobo-Dioulasso. Almost all the beneficiaries who would like other products included in the basket mention rice.³

Table 2.1 Beneficiaries' views on how they benefit from the programme		
Perceived impact	Ouagadougou	Bobo-Dioulasso
	%	
Better access to food	99.5	99.2
Better nutrition status	70.5	69.0
Able to keep children in school	27.6	8.8
No change	1.0	1.2
Number of respondents	200	261

Source: PDM surveys in Ouagadougou and Bobo-Dioulasso.

Beneficiaries' self-assessment of the programme impact (Table 2.1) reveals that almost all perceive that their access to food has improved. This is expected, as the voucher value corresponds to an average of 45 percent of beneficiaries' needs. Two-thirds think that their nutrition status has improved and, especially in Ouagadougou, a fair number of beneficiaries report that the programme helps them keep their children in school. Only 1 percent of respondents report no impact at all.

A majority – 93 percent – of the shopkeepers report that the programme has improved their business situation. Shopkeepers' main concerns regarding the programme relate to the fluctuating prices of commodities, especially maize; pressure from beneficiaries to supply products that are not included in the voucher basket; occasional delays in reimbursement from MICROFI,⁴ which create problems for small retailers; and some shopkeepers' infringement of the voucher programme rules through selling rice or other products not in the basket. The few shopkeepers concerned have been either warned or suspended from the programme.

3. Innovations pose challenges – targeting in urban contexts

The Burkina Faso voucher programme demonstrates that innovations often pose challenges. The urban context entails remarkable challenges for a large-scale programme, especially regarding targeting. In spite of the careful targeting exercise, a later survey by the *Institut de recherche pour le développement* (IRD) showed that there were significant exclusion and inclusion errors (IRD, 2009). The mid-term evaluation in July 2009 confirms that this has been the programme's major challenge. The issue was brought up in semi-structured

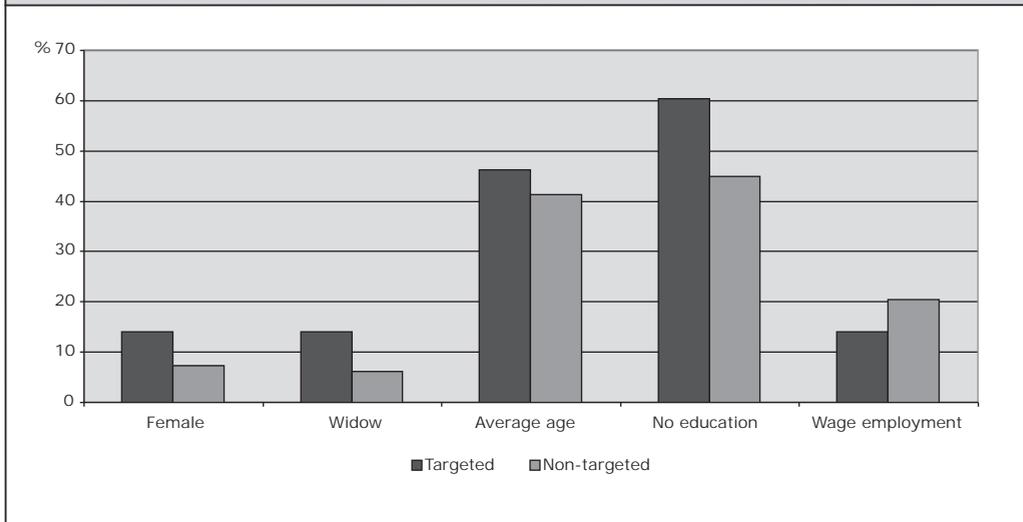
interviews and focal group discussions with key stakeholders such as local authorities, social service and health agents, representatives of different professions, and representatives of beneficiary and non-beneficiary households. While some poor households had been excluded from the programme, some non-poor households had been included. As Coady, Grosh and Hoddinott (2004) demonstrates in a survey of targeted antipoverty interventions in developing countries, targeting problems are by no means unusual. Targeting is especially challenging in societies where “everybody is poor”.

To evaluate the targeting exercise, in April and May 2009, IRD undertook a sample survey in Ouagadougou among households covered by the Red Cross identification census. A random sample was drawn from the list of households in the census, and 2,273 households interviewed, of which 577 were targeted as beneficiaries. To evaluate the performance of the vulnerability score used for beneficiary targeting, the household’s total food consumption was used as the reference measure. This was held to be the most appropriate measure for evaluating the quality of the targeting because the goal of the programme is to increase households’ purchasing power for food. Although this is probably true, it is worth bearing in mind that consumption data typically suffer from substantial measurement errors. Comparing the vulnerability score used for targeting with the food consumption measure therefore gives only an *indication* of the targeting error.

As the results of the survey would not be comparable with those of the identification census eight months earlier, a restricted set of the questions used in the census was repeated in the evaluation survey to create a restricted vulnerability score. The most important results, presented in the following paragraphs, indicate that although the beneficiaries are on average poorer than the non-beneficiaries, rather large exclusion and inclusion errors have occurred.

The results of the survey indicate that the characteristics of targeted and non-targeted households in the sample are statistically significantly different. As shown in Figure 2.2, twice as many targeted as non-targeted households have female heads, at 13.9 versus 7.2 percent, and more than twice as many have widow heads, with 14.0 versus 6.0 percent. The average age is also higher for the heads of targeted households. The education level of the heads of targeted households is significantly lower, with 60.3 percent without education versus 44.8 percent among the non-targeted households. The professions of the heads of targeted households also indicate greater vulnerability; as shown in Figure 2.2, wage employment is lower among targeted household heads.

Figure 2.2 Characteristics of household heads of targeted and non-targeted households in the identification census for the voucher programme



Source: Calculated from Table 1 in IRD, 2009.

However, the results also indicate that there is a weak correlation between the vulnerability score used for identification and the food consumption level. In other words the vulnerability score is a weak proxy for food insecurity. In Ouagadougou, of the 89,835 households visited for the census, 25,000 – or 27.8 percent – were targeted based on the vulnerability score.⁵ When the 27.8 poorest households in the survey are instead identified based on their food consumption score, less than half of these were actually targeted. Using IRD's calculations and taking into account that errors during data handling resulted in additional problems, the final *exclusion* error was calculated to be 22 percent. In total, 33.2 percent of the households were badly classified according to the food consumption measure.

To shed further light on this, the population can be ordered according to its food consumption and then divided into ten groups to obtain food consumption deciles. If the most vulnerable 27.8 percent are to be targeted, the two lowest deciles and 78 percent of the third decile should be identified. With the vulnerability score, however only about 40 percent of each of the three lowest food consumption deciles were selected, while other households from even the highest decile were also selected. This can be compared with the results of Coady, Grosh and Hoddinott (2004) which show that on average 60 percent of the poorest 40 percent were covered in interventions where means testing or proxy-means testing were used.

Vulnerability analysis and mapping (VAM) covering the whole of Ouagadougou provides a broader view of the situation, allowing further conclusions about the targeting to be drawn. Based on VAM in Ouagadougou between 2007 and 2009, an economic score was calculated for the households. Such a score is calculated using principal components analysis, based on information about each household's dwelling, assets, and access to water and electricity. By construction, the score had an average of zero for all households in 2007. Table 2.2 provides details of the score's evolution since 2007. In 2009, when the survey coverage was enlarged to cover the whole periphery of Ouagadougou – rather than only the administrative areas as in 2007 and 2008 – the score dropped to -3.04. The average score of households in the voucher programme identification census was -4.67, with targeted households scoring -7.04 and non-targeted -3.75. Thus, the households in the census are on average poorer, and the targeted households have an economic score that is twice as low as the non-targeted.

Table 2.2 Economic scores of all households in Ouagadougou and of households in the voucher census	
VAM in Ouagadougou*	Economic score
2007	0
2008	+0.29
2009	-3.04
Voucher census (2009)	
All households	-4.67 +/- 3.10
Targeted	-7.04 +/- 1.62
Non-targeted	-3.75 +/- 3.05

* This score has by construction an average of zero for the base year 2007. In 2009, the survey was enlarged to the whole of Ouagadougou, so the results of 2008 and 2009 are not comparable.

Source: IRD, 2009.

However, if the households are divided into five equal groups, each containing 20 percent of the population ordered by their economic score, it turns out that only 45 percent of the two poorest quintiles of Ouagadougou were visited in the identification census. This shows that the initial geographic targeting was not very efficient in identifying poor households. If random geographic targeting had been used, theoretically, 40 percent of the two poorest quintiles would have been covered.

Although the vulnerability score was not very efficient in targeting food-insecure households, there is no obvious alternative. The study tests the economic score, a food security index, a coping strategy index and a food diversity index, but finds that none of them substantially improve the targeting. It therefore concludes that targeting may only be substantially improved by more precise geographic targeting that identifies very limited geographic areas; by testing community-based targeting, by using easily measureable objective targeting criteria, such as pregnant women, and households with children under 2; by introducing conditionalities whereby poor people self-select into the programme; or by a combination of these. The main message is that targeting in urban areas with heterogeneous populations is extremely demanding. Time is a major issue; an in-depth assessment would be likely to identify the most vulnerable households, but cannot be undertaken if people need rapid assistance.

To explore the challenge of targeting further, a team from the World Bank is analysing the data to try to identify a more efficient solution. For the time being, WFP has decided to address the exclusion error in the latest budget revision, by including the very poor households that had initially been excluded.

4. Implementing a voucher programme in a low-capacity context

4.1 Key issues identified

Implementing a fairly large-scale voucher programme in a low-capacity context entails overcoming a number of hurdles. Some of these are described in the following paragraphs.

Finding targeted households

A major challenge in the programme was retracing the targeted households when implementation began. The identification census was carried out in August and September 2008, but the process of finding the targeted households did not start until January 2009. Rapid urbanization is the main cause of this problem: a large number of temporary shelters without proper addresses have been set up, making it difficult to return to the same dwellings; households are mobile and change homes frequently; and lack of employment opportunities makes people migrate for work. In future, global positioning system (GPS) devices will be used to facilitate this process. The problem of retracing the targeted households amplified the targeting error, because those that were not found are likely to be the most vulnerable and were replaced by less poor households.

Finding retailers with sufficient capacity

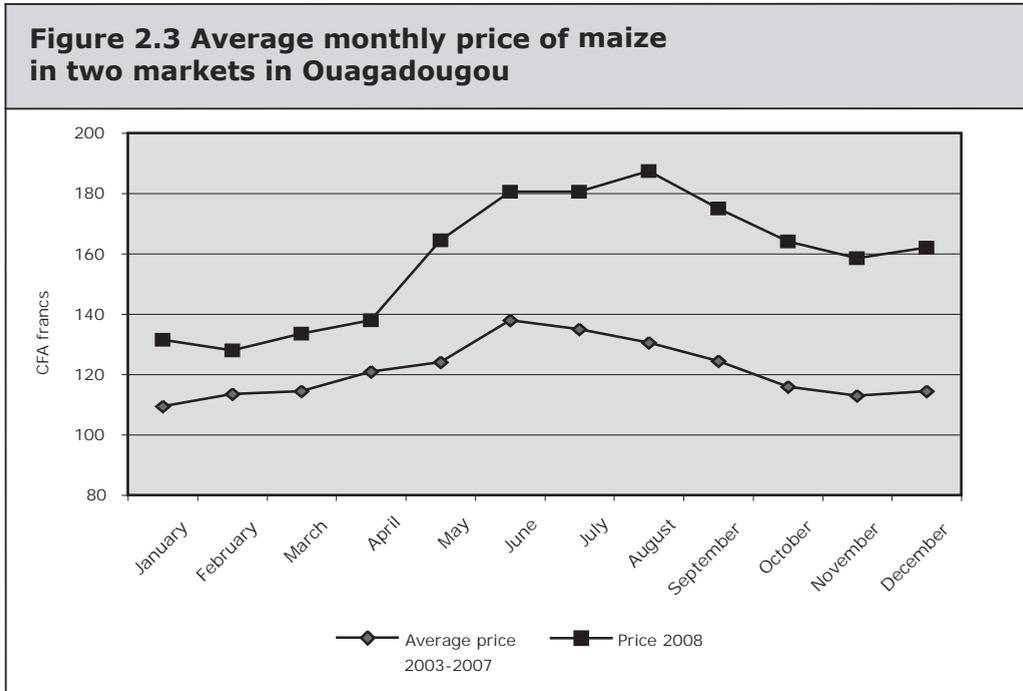
WFP wanted to target small shopkeepers who had been severely affected by the high food price crisis. Although the use of paper vouchers did not demand any major technological requirements of the shopkeepers, it proved challenging to find retailers who were close to beneficiaries, had sufficient capacity and were willing to participate in the programme. First, retailers had to be able to read and write to manage the voucher programme, but during the market analysis it was estimated that 50 percent of the shopkeepers were illiterate. Second, many shopkeepers did not sell all the products in the WFP basket, and had to be convinced to include them for the programme. The main cause of this problem is that most cereals are sold by specialized cereal traders; in addition, WFP wanted to include local rather than imported products in the voucher basket. Third, retailers needed the financial capacity to order sufficient stocks for responding to beneficiary needs, without being paid immediately; this often entails access to credit. Retailers also needed sufficient storage capacity to respond to the additional demand from voucher beneficiaries.

To ensure that beneficiaries had sufficient access to stores and that individual shopkeepers had the capacity to meet beneficiary needs, 100 shops were needed in Ouagadougou and 50 in Bobo-Dioulasso. To begin with, too few retailers were willing to participate, because they foresaw potential problems with their suppliers owing to not being reimbursed on time. To ensure that there were enough retailers to serve the beneficiaries, sensitization meetings were held to convince them to participate. A sign of the programme's success is that retailers are now queuing up to be chosen for the programme. Nevertheless, many of the shopkeepers have such low capacity that they are constantly indebted to their suppliers.

Dealing with fragile markets and protecting consumers from fluctuating voucher value

A major challenge for the programme is the fluctuating price of the main staple maize throughout the year, resulting in variable purchasing power for the vouchers. This is exacerbated by the fact that most beneficiaries use a major part of their vouchers to purchase maize. Figure 2.3 shows the average monthly prices of maize in two markets in Ouagadougou for 2008 and a five-year average for 2003 to 2007. It appears that the high food price crisis resulted in even greater intra-seasonal price fluctuations and that fluctuations are particularly pronounced in peripheral urban areas, where most beneficiaries live, especially in Ouagadougou. This latter phenomenon is due to weak competition among retailers. A further weakness of the market is that only one local producer of

cooking oil and soap has a stable supply. To avoid collusion among retailers resulting in high prices for beneficiaries, WFP sets the prices for the food basket products according to prevailing market prices. Regular monitoring of the shops is therefore necessary.



Source: Calculated from Table 2.4 in WFP, 2008a.

Dealing with scale issues

Discussions with stakeholders reveal that the scale of the programme entails challenges. A voucher programme of this scale and limited use of technology requires a lot of manual work, and is therefore very resource- and labour-intensive.⁶ The scale of the programme also increases the risk of misuse. WFP has used notable efforts to deal with this issue.

The identification census was carried out by 250 volunteers from the Red Cross. For the voucher distribution and data entry, CRS employs 55 people in Ouagadougou and the Red Cross 40 in Bobo-Dioulasso. MICROFI has 13 people handling voucher collection and the reimbursement of shopkeepers. In addition to its regular staff, WFP employs a full-time monitoring person to ensure that the shopkeepers respect the rules, do not charge higher prices than agreed and sell only the items in the voucher basket.

Scale also has repercussions for targeting. Given that the programme covers 10 percent of the population in Ouagadougou and 13 percent in Bobo-Dioulasso, people are well aware of it, which makes the issue of targeting particularly sensitive. A major challenge for personnel throughout the implementation of the programme has been how to deal with non-beneficiaries seeking to become part of the programme. As not all poor households were targeted, this has been a difficulty.

Sensitization is also more important because of the programme's scale. Actors at many levels, including local leaders, shopkeepers and both beneficiaries and non-beneficiaries, have had to be informed about the programme, the targeting and how the voucher exchange works. This is done at public events and through radio and newspapers.

Finally, the scale of the programme may lead to market distortions, especially in peripheral areas where competition among shopkeepers is low. The mid-term evaluation suggests that although most participating shopkeepers perceive that the programme has improved their business, there has been a negative impact for non-participating shopkeepers close to a "WFP shop". This issue will require careful attention as the project moves on.

Adapting to changing circumstances

The high food price emergency programme (EMOP) was planned to reduce the number of beneficiaries gradually and to close by the end of 2009. Persistent high food prices, increased urbanization – which reduces land availability for peri-urban small-scale farming – and reduced employment opportunities all contributed to a need to continue the EMOP. In addition, extensive flooding in Ouagadougou in September 2009 completely destroyed 25,000 dwellings and rapidly worsened the situation for already vulnerable households. Flood victims were initially assisted by a different EMOP, but as a large part of them already received assistance under the voucher programme, it was decided to integrate the two programmes into one. To ensure full coverage of their food needs during the reconstruction period, and to avoid altering the way the voucher programme functions, flood victims received a cash transfer, in addition to vouchers for four months, from December 2009.

Building capacity

As this is a joint WFP-government programme, capacity building is a major aspect. So far, this component has been implemented to only a minor extent. The vision for the future is that the voucher programme will be part of a large safety net programme *run* by the government. This will entail training of government staff, as they currently have low capacity to implement such a

programme. The planned government activities to care for destitute households have not yet taken place, owing to lack of resources. If partial hand-over is to occur, co-financing of the programme will probably be necessary. So far, the Ministry of Social Affairs has been trained in the distribution of Plumpy Doz™ and fortified flour and is handling that part of the programme. WFP has hired a consultant from the NGO *Action Contre la Faim* (ACF) to develop a toolkit that documents experience of the voucher programme, for use by government counterparts (ACF, 2009). In January 2010, all the stakeholders involved in social protection in Burkina Faso gathered for a workshop to discuss lessons learned and plans for the future.

4.2 Concluding remarks

This chapter has shed light on the kind of issues that can be envisaged when running a large-scale voucher programme in a low-capacity urban context. Although these have been handled as carefully as possible in Burkina Faso, challenges remain. Until now operational challenges have been a key concern. When the programme runs smoothly second-generation issues such as impacts on markets, exit-strategies for beneficiaries and continuing capacity building will have to be given more space. As new modalities of food assistance are rolled out in an increasingly urbanized world, the lessons learned from the voucher programme in Burkina Faso are important for WFP and other organizations.

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- ¹ The authors wish to thank Annalisa Conte, Country Director in Burkina Faso, and Zahid Majeed, Senior Programme Officer in Pakistan.
 - ² The mid-term evaluation was a qualitative undertaking carried out in June 2009. Data were collected through semi-structured interviews and focus group discussions with local authorities, social services and health sector agents, religious leaders, participating and non-participating shopkeepers, and beneficiaries and non-beneficiaries. PDM was carried out in Ouagadougou in March 2009, two months after the programme started. The sample included 201 beneficiaries, 45 shops and five supervisors. In Bobo-Dioulasso, PDM was carried out in June 2009, three months after the start, and included 261 beneficiaries, 50 shops and three supervisors.
 - ³ Despite beneficiaries' preferences, WFP has been reluctant to include rice in the voucher basket because it is an imported commodity and one of the main goals of the programme is to stimulate local production.
 - ⁴ This problem relates especially to May 2009, when changes in the way WFP releases funds to MICROFI resulted in temporary payment delays.
 - ⁵ While 21,300 households from Ouagadougou are currently included in the programme, 25,000 were targeted to allow for the expectation that not all households would be retraceable when the programme started.
 - ⁶ WFP is currently piloting a project that will allow shopkeepers to manage food vouchers by text messages.

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Market-based food assistance in protracted crisis: vouchers in the Occupied Palestinian Territory

Caterina Galluzzi and Sahar Natsheh

1. Introduction

Significant increases in food and fuel prices during 2007 and the first half of 2008, combined with economic hardship and conflict have contributed to food insecurity in the Occupied Palestinian Territory. Between the end of 2008 and the beginning of 2009, the WFP Occupied Palestinian Territory Country Office designed an urban food voucher programme (UVP) to provide food assistance to beneficiaries in four urban centres of the West Bank. This followed a joint rapid food security assessment, carried out in 2008 to assess the impact of the significant price increases for basic food commodities.

The findings of the assessment showed that 38 percent of the assessed population was food-insecure, 14 percent was vulnerable to food insecurity, 12 percent was marginally food-secure, and 36 percent was food-secure. Food insecurity in the Gaza Strip was more widespread, reaching 61 percent.

The root causes of food insecurity in urban areas are high competition for jobs, massive retrenchment of the private sector in the Gaza Strip, low daily wages, and salaries that are not adjusted to inflation. Domestic prices in the Occupied Palestinian Territory remain high owing to lack of control over import taxation, high dependency on imported goods, high internal transportation costs due to the border closure and back-to-back procedures, movement and trade restrictions, and additional import restrictions on moving commodities into the Gaza Strip.

This chapter has four main sections. The following section describes the main steps for setting up a voucher project, outlining the principal criteria for

selecting beneficiaries and shops, how to estimate the appropriateness of the voucher value and the commodities it gives access to, the role of cooperating partners, and monitoring requirements. Section 3 gives the initial results of the voucher project, by comparing results from the baseline against those from the mid-term review. Section 4 identifies some of the major pros and cons of the voucher project; these are specific to the Occupied Palestinian Territory but also applicable to similar contexts. Section 5 outlines the direction for future voucher interventions in the Occupied Palestinian Territory, focusing on the transition to an electronic voucher system and the introduction of conditionality to the voucher programme, through vouchers-for-work/-training activities. A final section 6 draws conclusions from the experience.

2. UVP set up and implementation methodology

2.1 Objectives of the programme

The West Bank UVP aims to improve the food security of urban households and to increase their dietary diversity by supplying them with the economic means to purchase a broad mix of commodities. It also seeks to ease the pressure on households' limited cash resources by providing a diverse range of foods.

In addition to the benefits accrued by the beneficiaries, the programme stimulates local businesses as well as local dairy and farming sectors. These objectives are in line with WFP's comprehensive strategy to increase agricultural production.

The objectives of the food voucher programme are to:

- 1 provide beneficiaries with access to bread and animal protein-rich food, especially locally produced dairy products and eggs;
- 2 use local shops as a procurement and distribution mechanism to ensure that cash is injected directly into the local economy at the micro level, so as to support local production, employment and the resilience of small business;
- 3 provide beneficiaries with choice and flexibility regarding the days, times and food items to be redeemed;
- 4 release part of the financial resources that beneficiaries are currently using on items included in the voucher scheme, allowing them to use the resulting savings on other items, such as fish and meat, or to pay back debts, etc.

2.2 Programme design and implementation

The UVP began in April 2009, aiming to provide assistance to 5,457 families in urban area of Hebron, Yatta, Nablus and Qalqiliya, totalling about 31,119 individuals. In the West Bank, WFP's cooperating partners are *Action Contre la*

Faim (ACF Spain) and Catholic Relief Services (CRS).

In the Gaza Strip, WFP Occupied Palestinian Territory started implementing the UVP within the framework of the WFP emergency operation (EMOP) for Gaza in October 2009, after a post-conflict feasibility study in May 2009, four months after the end of operation Cast Lead. WFP is working with Oxfam GB to implement the UVP as a pilot programme reaching about 2,335 families.

Table 3.1 shows the distribution of beneficiaries in West Bank and Gaza Strip.

Table 3.1 Distribution of UVP beneficiaries				
Region	Location	Partner	Households	Individuals
West Bank	Nablus	ACF Spain	2 077	10 384
	Qalqiliya	ACF Spain	776	4 247
	Hebron	CRS	1 857	11 331
	Yatta	CRS	747	5 157
West Bank Total			5 457	31 119
Gaza Strip	North Gaza	Oxfam GB	821	5 337
	Khan Younis	Oxfam GB	443	2 880
	Gaza City	Oxfam GB	1 071	6 962
Gaza Strip Total			2 335	15 179
Total			7 792	46 298

The main problem in securing food of sufficient quality and quantity in the Occupied Palestinian Territory is not related to availability but rather to the lack of economic access to food. The presence of a functioning market network therefore makes the voucher system an appropriate assistance response.

In the Gaza Strip, the Cast Lead operation in January 2009 temporarily destabilized the market network. This led to the postponement of the voucher programme, in spite of the higher food insecurity levels and worsening of poverty and employment figures that resulted from the war.

With cessation of the conflict in January 2009, the country office's Vulnerability Analysis and Mapping (VAM) Unit carried out a post-conflict feasibility study to assess the resilience of the market network in May 2009. Results from this study, along with regular market price monitoring, provided

assurance that the market infrastructure could support a voucher programme. To discourage procurement through illegal channels, WFP Occupied Palestinian Territory took steps to ensure that commodities that are commonly sourced through the tunnels were excluded from the programme.

2.3 Cooperating partners

At the outset of the programme, WFP Occupied Palestinian Territory signed a field-level agreement (FLA) with ACF and CRS, based on an evaluation of the in-country expertise for cash and voucher projects among international and national non-governmental organizations (NGOs). The FLA stipulated the division of roles and responsibilities, and the cooperating partners committed themselves to implementing the programme in accordance with the guidelines developed by WFP. The partners are responsible for the initial beneficiary identification and ongoing verification of eligibility according to the programme's criteria, selecting shops, distributing food vouchers, monthly monitoring of beneficiaries and shops, reconciling vouchers, and paying shops.

As the programme concept was new to the cooperating partners, WFP Occupied Palestinian Territory conducted two training sessions prior to implementation: one on the methodology for implementation and identification of potential beneficiaries; and the second on how to conduct baseline surveys, carry out household visits and complete monitoring forms.

2.4 UVP food basket and monetary value of the voucher

Under the UVP, beneficiaries receive monthly vouchers worth NIS 200 (about US\$56), divided into four equal paper vouchers worth NIS 50 each. The vouchers are date-specific, providing one per week. Beneficiaries in urban centres can exchange the vouchers for commodities at retail shops close to their places of residence. Food commodities include bread, milk, lebaneh, yogurt, white cheese and eggs.

Selection of the commodities to include in the voucher food basket was based on the results of the food security survey and on local habits. For example, the commodities had to be: (i) readily available in local markets; (ii) locally produced by authorized manufacturers, to guarantee food safety; (iii) an important part of the local diet; and (iv) among the food items that the target group was sacrificing because of high food prices.

The monetary value of the vouchers depends largely on the objectives of the programme, the availability of additional complementary assistance, and food consumption expenditure patterns among the beneficiary population. The objective of the UVP was to reduce the effects of high food prices on the urban population segment that is vulnerable to food insecurity. When determining the

value of the voucher, the monetary value that other humanitarian interventions were providing and the average monthly family expenditure on dairy products and staple food were taken into account.

Beneficiaries can exchange their vouchers for any of the sanctioned food items, without quantity restrictions, but the whole value of the voucher must be spent during the week of the voucher's validity, and cannot be carried over to the following week.

The value of the vouchers in Gaza is slightly higher, at NIS 256 (US\$64) per month. The commodity basket has also been expanded to include rice, pulses, wheat flour and vegetable oil, in addition to the commodities included in the West Bank UVP. This increased value and commodity base was to align the voucher value with the value of the commodities delivered under WFP's general food distribution programmes.

2.5 Selection of shops

An appropriate and accurate shop selection process is key to the success of the UVP. An internal discussion was held to identify the methodology and criteria for shop selection.

Large shops have the capacity to supply the necessary goods, but they already have regular customers and participating in the UVP would not have had a noticeable financial added value for them. On the other hand, small shops have low capacity to stock and store food items, especially fresh ones.

Medium-sized shops were found to meet most of the criteria for delivering commodities to beneficiaries. The shops should be close to the beneficiaries' catchment areas and at reasonable walking distance from beneficiaries' households.

To avoid bias in selecting the shops, a ranking system was designed to assign a score to each surveyed shop. The ranking was based on several predetermined criteria including: (i) the shop's supply and stock capacity for meeting the additional UVP demand; (ii) shopkeepers' readiness to participate in the programme; (iii) hygiene conditions for the storage and handling of food items; (iv) availability of sufficient cold storage for perishable dairy products; (v) willingness and ability to stock dairy products produced by local companies that meet food and health regulations; and (vi) possession of a valid trading licence and a bank account.

In the West Bank UVP, 50 shops were contracted and have benefited from the programme. An average of 90 beneficiaries is assigned to each shop. A complaint form has been designed for beneficiaries who face problems with their shops.

2.6 Targeting of beneficiaries

Households' eligibility was established using a combination of geographical targeting, community-based targeting and a proxy means test formula (PMTF). This three-phased targeting approach focused on socio-economic indicators that estimate income, expenditure and asset ownership using the PMTF. The geographical targeting was based on identifying the most food-insecure urban areas with high unemployment rates, and community involvement ensured that the population's needs and priorities were adequately reflected in the final list of beneficiaries.

To minimize the exclusion error during selection, in the urban areas selected as having the highest levels of food insecurity and unemployment, community-based targeting was followed by the administration of a beneficiary's application form, based on the PMTF. The community-based approach ensured that the community was aware of the programme, and allowed a first screening of the application forms submitted. The PMTF included in the application form estimated household poverty indicators. Proxy indicators, such as age, gender, state of housing, access to land and labour availability were used to identify households' socio-economic status. The final list of beneficiaries was extracted by uploading the data from the application forms into a special database, and running the PMTF to define applicants' eligibility.

Targeting people in need is frequently more complex in urban than in rural settings, so the beneficiary selection process was complicated and challenging. Some UVP local committees were more supportive than others.

To ensure transparency, cooperating partners verified the targeted recipients after all the beneficiaries' applications had been entered into the database and the PMTF had determined their eligibility. A random sample of 30 percent of beneficiary households was visited to verify their eligibility. If more than 10 percent of the sample was found to be ineligible, all the identified beneficiaries in the cluster area were verified.

As the selection criteria are based on economic indicators, regular updating of the list of beneficiaries is important in ensuring that beneficiaries are still eligible for the voucher assistance. The beneficiary list was updated after the mid-term review, using the monitoring forms as a verification tool. The forms were entered into the database, and the PMTF was run again; beneficiaries whose socio-economic conditions had improved by more than the value of the assistance provided were deleted and replaced by new beneficiaries.

2.7 Monitoring of beneficiaries and shops

In addition to the cooperating partners' monthly monitoring, WFP conducts independent monitoring of the beneficiaries and shops. This is of crucial importance in determining partners' compliance with programme guidance. By visiting shops and checking their registries, WFP field monitors identify suspicious households that might not satisfy the UVP criteria and visits these households to check that they are eligible. Suspicious cases can include beneficiaries who obtain only one of the six voucher commodities, who work or own a business, or who hold a United Nations Relief and Works Agency for Palestinian Refugees in the Near East (UNRWA) card.

Cooperating partners are required to monitor 10 percent of beneficiaries, 5 percent at the programme shops and 5 percent in their households. The purposes of monitoring are to: (i) ensure that the beneficiaries on the list fit the programme criteria; and (ii) check the UVP's progress. Ongoing monitoring enables adjustments to be made in the course of the programme.

Based on monitoring findings, WFP Occupied Palestinian Territory has been able to improve some aspects of the project. For example, in the initial stage, the voucher booklet was divided into eight vouchers, and beneficiaries were able to redeem the vouchers twice a week. However, because the monetary value of a single voucher was very small, beneficiaries tended to redeem both on the same day, so the voucher booklet has been modified to include only four vouchers – one per week worth twice the value of the old vouchers.

The cooperating partners are required to monitor 100 percent of the shops, which they do during voucher redemptions, to ensure that beneficiaries are treated with respect, are not being sold expired products, and are offered a reasonable variety of goods at prices that are within the ceiling.

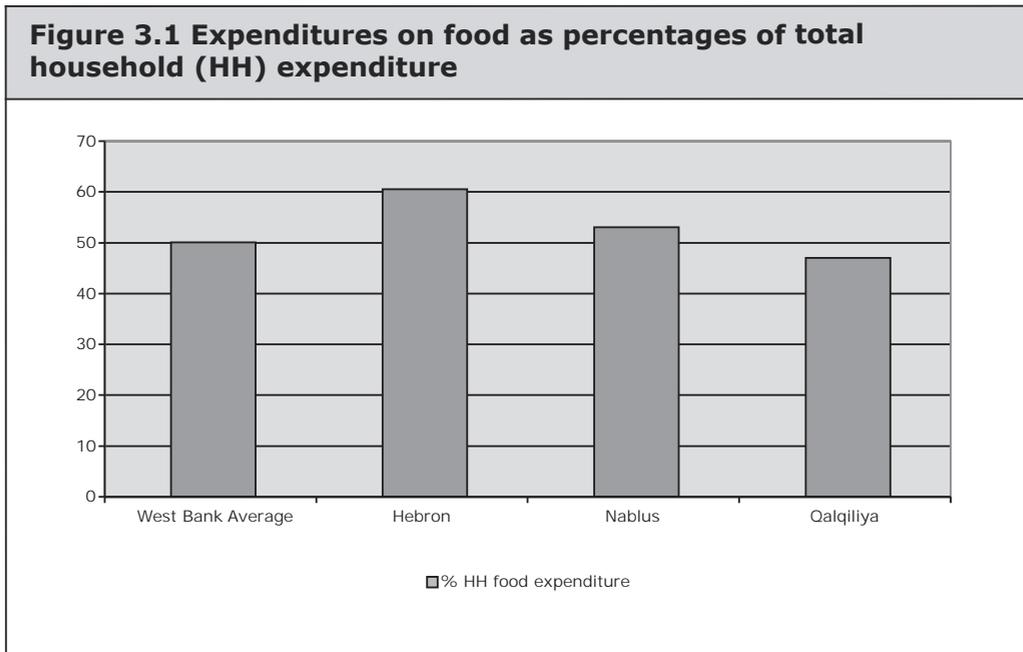
3. Evidence-based learning: comparative results from the UVP baseline and mid-term review¹

As part of the country office learning process for using vouchers as a complementary mechanism for delivering food assistance, and to build evidence for the use of cash as a means of promoting food security in the West Bank, a baseline study was carried out at the onset of the UVP, and was followed by a mid-term review in October/November 2009, approximately six months after the programme's inception.

The baseline showed an average household size of seven members for the sample, compared with a national average of 5.5. Household size by governorate indicated a slightly higher average household size in Hebron, at 8.2 members, compared with Nablus, at 5.6, and Qalqiliya, at 6.4.

Households in the survey sample dedicated 55 percent of their total monthly

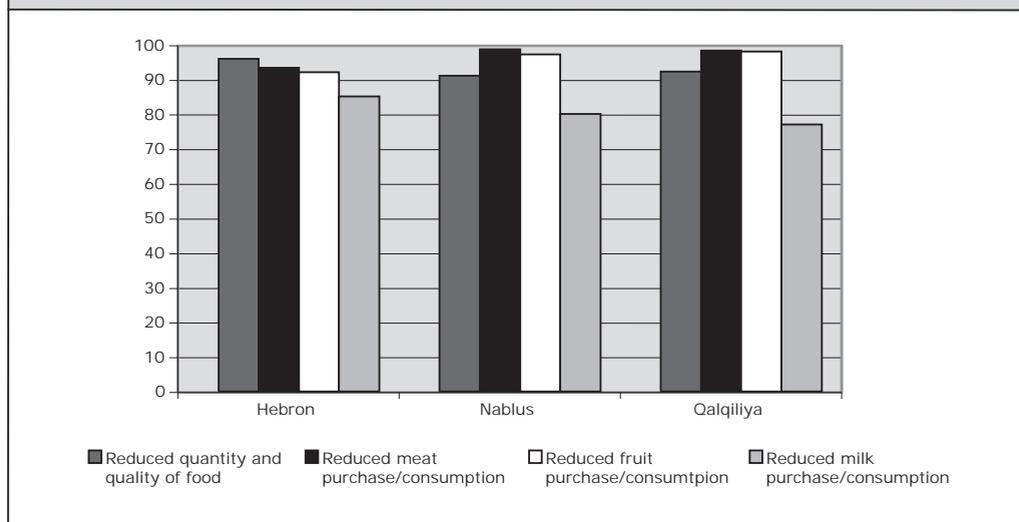
expenditures to food, compared with a West Bank average of almost 50 percent. As indicated in Figure 3.1, the percentages of survey samples' expenditures dedicated to food items were 60.5 percent in Hebron, 53 percent in Nablus and 47 percent in Qalqiliya. Regarding gender, 56 percent of total expenditures were spent on food items in male-headed households and 50.6 percent in female-headed households.



Source: WFP, 2010c.

At the household level, nearly all respondents in the baseline study reported decreased quantity and quality of the food they consumed, as shown in Figure 3.2: the quantity was reduced for 91 percent of households in Nablus, 92.2 in Qalqiliya, and 89.6 percent in Hebron; and the quality for 95.9 percent in Nablus, 100 percent in Qalqiliya, and 97 percent in Hebron.

The quantity of meat purchased/consumed was reduced for 98.6 percent of households in Nablus, 98.3 percent in Qalqiliya, and 93.3 percent in Hebron. The quantity of fruit purchased/consumed was reduced for 97.2 percent in Nablus, 98 percent in Qalqiliya, and 92 percent in Hebron. Milk quantities were reduced for 80 percent in Nablus, 77 percent in Qalqiliya, and 85 percent in Hebron.

Figure 3.2 Reductions in food purchases or consumption

Source: WFP, 2010c.

To measure progress towards meeting the programme's objectives through comparison with the baseline data, the mid-term review used existing sources of information – baselines, food security surveys, monitoring and evaluation – combined with key informant interviews and focus group discussions to examine the appropriateness of the approach, including in terms of beneficiary preferences; the effectiveness of the programme, including the value and composition of the voucher; and progress towards meeting the UVP's goals as a cash transfer modality for protecting livelihoods in a fragile urban setting.

The mid-term review was preceded by a month of primary data collection carried out by WFP's cooperating partners. Approximately 500 of the total 5,454 households were interviewed. For this, the WFP Occupied Palestinian Territory Monitoring and Evaluation (M&E) Unit adapted the M&E forms used by the cooperating partners for their monthly monitoring by including specific questions for ascertaining the level of satisfaction with the programme and the immediate effects on livelihoods.

The partners' monitors then entered the primary data they had collected into the online database shared with WFP and cooperating partners. This approach made the best use of cooperating partners' human resources, thereby avoiding additional spending on external enumerators, capitalizing on the monitors' knowledge of beneficiaries and project areas, and ensuring that primary data were to-hand for the consultants' fieldwork.

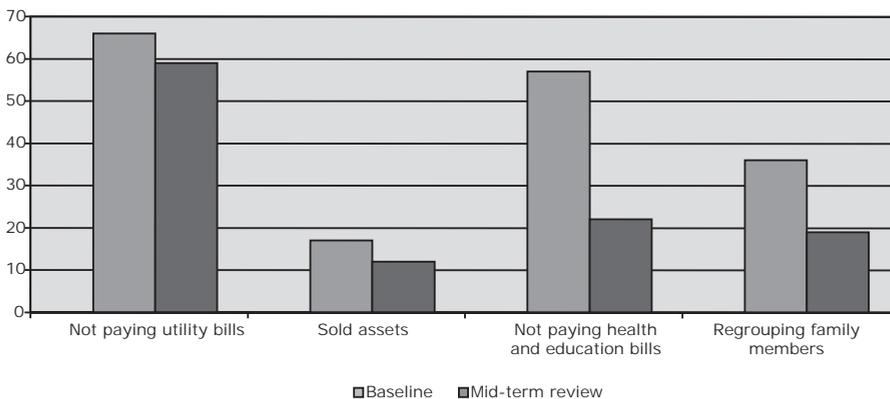
3.1 Initial impact of food voucher assistance on beneficiaries' livelihoods

The UVP proved successful both in changing participating households' eating habits in respect to animal proteins and in redistributing family expenditure allocations on food and non-food items.

Baseline data reveal that before project implementation, 30 and 15 percent of surveyed households were eating dairy products and eggs, respectively, less than once a week. At the time of the mid-term review, fewer than 1 percent of beneficiaries showed inadequate consumption of these items. While 24 percent of beneficiaries had poor consumption at the baseline, six months later this figures had declined to 5 percent, while good consumption increased from 47 to 83 percent.

Regarding substitution effects, the programme proved effective in reducing beneficiaries' food expenditure in favour of increased spending on utility, health and education bills, by 12 to 17 percent. Of even greater interest, the UVP also contributed to decreased use of detrimental coping mechanisms, as shown in Figure 3.3. The percentage of households not paying utility bills decreased from 66 to 59 percent, while those selling assets declined from 17 to 12 percent. Significantly fewer households were not paying health and education bills, at 22 compared with 57 percent, and fewer households were regrouping family members than at the time of the baseline, at 19 instead of 36 percent.

Figure 3.3 Comparison of coping mechanisms at baseline and the mid-term review



Source: WFP, 2010c.

The project also ranked high in beneficiary satisfaction, especially the greater choice of quantities that could be redeemed, the inclusion of perishable food items such as dairy products, and the flexibility in timing and procedures for redeeming the vouchers.

The regular monitoring report suggests that 98 percent of interviewed beneficiaries consumed the food they obtained with the vouchers, 1.3 percent shared part of it, and 0.63 percent traded it for other food; 26 percent of UVP customers asked to exchange the vouchers with other food commodities, but this was not allowed.

These results suggest that sales of food aid are much reduced when food is provided through vouchers, as beneficiaries are entrusted and empowered to purchase according to their specific household food needs.

Some 93 percent of beneficiaries rated the quality of the food obtained with the vouchers as good, 6 percent rated it as fair, and only 1 percent were dissatisfied. Regarding the availability of food at the shops, 98 percent rated this as good, 1.4 percent fair, and only 0.16 percent were dissatisfied.

Almost all – 99 percent – of the beneficiaries rated the waiting time and voucher verification at the shops as good, 1 percent fair, and none of them were dissatisfied.

These findings demonstrate that users' satisfaction with the quality and quantity of food obtained with the vouchers is consistently high; as both beneficiaries and other consumers use the same market supply network, problems such as long storage or low-quality food items – for example, infested or contaminated wheat flour – are less likely to occur.

Nevertheless, in the West Bank programme, some beneficiaries complained about the limited value of the voucher and the low number of sanctioned food commodities. Some would have preferred traditional food aid or cash, if the list of commodities provided by the vouchers could not be expanded to include more basic food items.

3.2 Effects on the micro-economy and local production

Although these were secondary objectives, the UVP had very positive effects on both participating retail shops and dairy production.

The mid-term review results show that sales of dairy products increased, leading to profit increases of 10 to 20 percent for all the shops interviewed. Some shopkeepers reported being able to increase their trade volumes, diversity of stocks, equipment and even the size of their shops. Nearly all shops increased the number of people they employed, temporarily or permanently: about 43 percent hired an additional 1.1 permanent workers, and 52 percent an additional 1.3 temporary workers for the first days of voucher distribution. Many shops reported

expanded or new credit lines with suppliers, and discounts on dairy products.

Under the programme, each beneficiary is assigned to a single shop for exchanging vouchers. This model could lead to monopolistic behaviour by shopkeepers, as the vouchers are worthless outside their shops. Abandoning the model could allow more shops to participate in the programme, thereby increasing competition and using the normal market network for auto-regulation of prices. However, the resulting trade-offs between greater competition/consumer benefits and increased administrative costs would have to be taken into account. A compromise may be to allow beneficiaries to exchange their vouchers at a few shops in their own areas, rather than in the full list of participating shops. This may be sufficient to foster healthy competition among shops while remaining manageable administratively.

The programme also indirectly helped to regulate the fiscal situation of some participating shops, which acquired trading licences in order to participate.

Figure 3.4 Some of the commodities in the voucher basket



According to monitoring reports, more than 90 percent of dairy products purchased with the vouchers are produced locally, compared with roughly 80 percent of dairy products purchased by non-beneficiaries. The impact of the programme on dairy producers was mixed, depending on the producer's scale of operations.

The largest benefits went to medium- and large-scale dairy factories managing 35 mt/day, which attribute the processing of an additional 2 mt of milk per day to the project. This is largely due to increased sales of white cheese, a relatively expensive product that is not a major part of poor households' diets. Small-scale dairy factories managing less than 400 litres/day have not benefited significantly, as they were already producing at capacity and could not increase their output in response to the project.

The largest factory in the Occupied Palestinian Territory produces 75 mt/day and has been able to absorb the increased demand into its normal production levels, so it has not been affected by the programme at its current scale. The effects of the UVP do not seem to have trickled down to small-scale milk suppliers, but this might be partly owing to the small scale of the pilot.

The market supply chain responded well to the increased demand, and regular price monitoring, combined with the price ceilings imposed on participating shops, averted any possible inflation directly attributable to the programme. The small scale of the pilot could have compounded any harm done to the economy, especially for non-participating shops.

The programme's positive results at both the household and the economy levels, as shown by the mid-term review, reinforce the country office's belief in the value of using food vouchers where markets are functioning, food is largely available, and poor economic access is the missing element in the food security equation.

3.3 Lessons learned

- For transferring food vouchers, information technology such as bar-code stickers or pre-paid cards might be preferable to hard-copy vouchers, because it would ease the financial reconciliation process and reduce handling and future storage needs.
- Alternative modalities for food voucher transfers could increase accountability and reduce the administrative burden on shopkeepers, although most shopkeepers in the Occupied Palestinian Territory UVP have kept registers and verified beneficiaries' data efficiently.
- The PMTF ensures far more transparency and objectivity than traditional targeting criteria, but its strict cut-off points limit flexibility in forecasting the incomes of households that are close to the poverty line.

- The food voucher programme promotes regulation and accountability in the private sector, for example, by encouraging shopkeepers and suppliers to obtain valid trading licences and pay any arrears to the government.

4. Risks, opportunities and challenges of the UVP

The prolonged military occupation of the West Bank and the economic embargo on the Gaza Strip have severely reduced the territory's prospects for economic development and self-sufficiency. Nevertheless, despite high dependency on imports through and from Israel, markets are functioning and food is largely available in the shops.

This section analyses the economic, financial and managerial opportunities, risks and challenges involved in carrying out a food voucher programme in contexts similar to that of the Occupied Palestinian Territory.

4.1 Economic, financial and managerial risk

Most of the risks identified are external and covariate. Although some are directly associated with the nature of the conflict, their effects are likely to arise in other contexts similar to the Occupied Palestinian Territory.

The West Bank closure regulates the mobility of goods and people and the functioning of the market network. Suppliers face delays at checkpoints, back-to-back procedures, damage to perishable products such as vegetables and fruit, and reduced marketing opportunities due to low purchasing power, all of which put market integration at risk.

Wholesalers, intermediaries and retailers are all affected differently by the effects of high transportation costs, high losses and long detours. The costs of these are transferred to end-consumers as price mark-ups.

Financial risks are related to the sudden inflation that could be triggered by such factors as international market price surges, tightening of the border closure, sieges of urban centres and recurrent climatic shocks. A surge in inflation would have immediate effects on any food voucher scheme, reducing the vouchers' value to beneficiaries.

If the rate of inflation is confined within a certain range – the range would depend on specific conditions in the country – the programme could include a financial contingency buffer² for increasing the value of the vouchers to offset devaluation of the assistance provided to beneficiaries. For example, if inflation is sustained over a set number of months, the country office should provide traditional food aid assistance to the target group. In most cases, the complementarities between food aid and food voucher assistance allow the country office to have both transfer mechanisms in place; this ensures that if

either mechanism fails, the other can be increased to avoid breaks in food assistance.

Regarding inflationary pressure as a direct effect of the UVP, the mid-term review showed that the scale of the pilot did not translate into price increases; on the contrary, some retailers were able to obtain discounts from suppliers because of their increased orders.

Managerial risks include the higher risks of fraud and mismanagement associated with any cash transfer. Hard-copy paper vouchers are easy to forge; to deter this risk several security variables – a serial number, the beneficiary's name and ID, the shop's name, the validity period, etc. – should be printed on each voucher. The design of a multi-variable cliché increases the cost of printing, and any changes to the variables in the cliché come at a cost.

To reduce the risk of voucher misuse, such as the exchange of vouchers for non-food items or food commodities not included in the voucher food basket, sanctions could include the removal of offending beneficiaries from the programme and contract foreclosure for shops not adhering to the criteria.

4.2 Opportunities in the West Bank

Despite these risks, a number of opportunities make voucher transfers in the West Bank a viable mechanism for providing food assistance, relieving cash-stripped populations, and supporting livelihoods and the local economy.

Economic, financial and managerial opportunities

The West Bank's infrastructure and transportation system are very good. The supply chain of wholesalers, intermediaries, retailers and importers is integrated, despite the constraints of the closure, and food is physically on the market. The restrictions on movement imposed by the closure reduce the importance of market hubs in the main urban centres, but have also led to the formation of cluster markets in peri-urban and rural areas. This makes consumers' physical access to food less problematic, and allows goods to reach more distant locations. The inclusion of local products in the voucher scheme supports local production, especially in the dairy sector but also at the food processing and manufacturing levels. Project recipients exchanging their vouchers for sanctioned basic commodities have an immediate improvement in their purchasing capacity, and can purchase other basic necessities, both food and non-food, thus injecting the saved income into the economy.

Financial opportunities include the availability of good infrastructure and information technologies in the Occupied Palestinian Territory, which can be used for the financial transactions associated with the voucher programme, such as bank transfers for repaying shops and payments by cheque; ultimately, this

will also allow the migration to electronic voucher delivery, as discussed in section 5.1.

Sectoral literature shows that cash and voucher transfers are generally more cost-efficient than food transfers, which require intensive logistics support as outlined in the next section, 4.3.

The comparative advantages of managing food vouchers over food aid assistance include the avoidance of intermediate steps such as transportation of food, customs clearance, insurance, warehouse and storage costs. The risk of pipeline breaks, due to delays in shipments, the testing of commodities and/or infestation or poor-quality consignments, is also avoided.

However, although food voucher programmes are generally easier to manage, they require intensive monitoring, especially at the shop and market levels.

4.3 Start-up challenges

The country office faced a number of obstacles during the first months of implementing the UVP; a one-day workshop was organized with cooperating partners four months into the programme's life, to allow learning from these early challenges. The results of this workshop are summarized in Box 3.1.

Box 3.1 Results of initial UVP review

Assessment and feasibility

1. An exact cost comparison between traditional food distribution and food vouchers was not carried out, because the high volatility in food and fuel prices during 2008 might have distorted the findings.
2. The accuracy of cost comparisons between in-kind and cash transfers is limited by the different objectives and food baskets of general food distributions compared with food vouchers.
3. The lack of lessons learned and consultative options from existing or previous voucher programmes in the Occupied Palestinian Territory – such as those by the International Committee of the Red Cross (ICRC) and Oxfam – made appraisal of WFP's UVP more challenging.

Programme design

1. Urban targeting proved challenging, as the main selection criteria were based on poverty level and unemployment. Pilot use of the PMTF using assets as a proxy for income was useful in the West Bank, where economic conditions are more stable, but less appropriate in the Gaza Strip.

Box 3.1 Results of initial UVP review (cont.)

2. The voucher programme budget was calculated in United States dollars, while the vouchers' nominal price was calculated in the local currency; discrepancies between the currencies owing to monthly fluctuations of the dollar exchange rate increased the costs for WFP.
3. In the Gaza Strip, many of the selected shops did not have bank accounts and faced difficulties in opening them. This problem was solved by making payments with cheques.
4. The budget underestimated the cooperating partners' costs for carrying out the voucher reconciliation and payments to shops. This process requires the photocopying of all supporting forms, vouchers, registries, etc., which adds to the human resources, printing and storage costs.
5. The risk of commodities entering through the tunnels between Egypt and the Gaza Strip led to the removal of some food items from the voucher list in Gaza.

Service providers

1. Fewer than 10 percent of shops in the West Bank did not maintain their registry books properly.
2. Fewer than 10 percent of shopkeepers in the West Bank did not properly check the voucher information against the registry book information.
3. Approximately 60 percent of shops in the West Bank and 90 percent in the Gaza Strip did not possess valid trading licences at the onset. To be selected, these shops renewed their licences.
4. Fewer than 10 percent of shops in the Gaza Strip did not have electricity generators in place.

Monitoring and evaluation

1. The monitoring requirements for this type of programme are time-intensive: the monitoring of beneficiaries through interviews in the shops sometimes entails waiting for long periods before a beneficiary comes to the shop.
2. Fluctuations/seasonality in prices of food commodities require increased monitoring of market prices so that voucher values can be adjusted when inflation exceeds 10 percent.

5. Evolution of the UVP

5.1 E-vouchers: migrating to an electronic transfer mechanism

Since the outset of the programme, WFP Occupied Palestinian Territory has used paper vouchers to transfer the cash value to beneficiaries. From April to November 2009, it printed a total of 36,922 voucher booklets, each including four vouchers. As part of the ongoing UVP lessons learned process, the country office is exploring the available technologies for electronic voucher transfers, such as those using mobile phones, swipe cards, computers or telephone lines. The main goal of switching to an electronic delivery system is to ease, improve and control the delivery of assistance, as well as reducing the total cost of the process without affecting the value of the assistance.

The country office established a technical committee to study the different options available in the Occupied Palestinian Territory. This committee has recommended using magnetic cards – swipe cards – to deliver assistance electronically by providing beneficiaries with cards to use at selected shops for obtaining weekly amounts of selected food items. The magnetic cards will be issued and distributed only once. The WFP Occupied Palestinian Territory Finance Unit will issue a serial number/pin code for each card, and the country office will periodically load e-values on to the magnetic cards. Each beneficiary will be able to redeem the food commodities by showing her/his swipe card and identity card to the shopkeeper, who will verify the data by swiping the card in the terminal at the shop; the value of the goods obtained will be debited from the magnetic card, and a receipt printed showing the latest transaction details and the balance left on the card.

A database will be designed to control the whole process and connect the shops to the WFP server, thereby allowing WFP and its partners to repay shops easily and extract the required monitoring forms electronically instead of calculating the amounts manually. The whole UVP process could be controlled electronically, including records of the redeemed and unredeemed e-values, and the prices and quantities of commodities obtained with them.

5.2 Vouchers for work/training: moving to rural areas

As part of the next cycle of assistance in the West Bank, WFP intends to introduce conditional food vouchers, such as vouchers for work/vouchers for training (VFW/VFT). Through VFW and VFT, WFP Occupied Palestinian Territory aims to promote the long-term resilience and protection of farming livelihoods, increase agricultural productivity, and build the capacity of women farmers by providing them with income-generating opportunities through food processing

and conservation training modules.

Implementation of a voucher programme in rural areas will need further assessment and analysis of the market system. However, the mid-term review found that markets in rural areas are integrated and could respond to an increase in consumer demand. In addition, the infrastructure and transport system in rural areas are developed, allowing goods to move smoothly along the supply chain from producer to consumer. The rural voucher pilot will target approximately 25,000 beneficiaries in its first year, with the possibility of expanding to 40,000 in the second year, based on a review of the progress indicators and programme implementation.

6. Conclusions

The first year of implementing the food voucher pilot programme produced positive results in both meeting the programme's food security objectives and spurring the micro-economy. The mid-term review results served to guide design of the next phase of food voucher interventions and objectives, by providing information about the areas and expansion of the caseload. The Occupied Palestinian Territory UVP has proved effective in meeting WFP food consumption objectives while supporting the local economy, in line with country office strategic objectives and WFP's Purchase for Progress (P4P) policy. Both beneficiaries and the Palestinian Authority see the provision of food vouchers in lieu of food aid as a sign of trust and empowerment. This dimension has contributed to WFP's reputation, increasing its visibility and recognition from officials in the Palestinian Authority. Adopting this new food assistance transfer modality seems a good way for WFP to assume a role in the Occupied Palestinian Territory.

The voucher programme is designed not only to provide an additional food transfer, but also to: (i) promote national production, through its inclusion of food products of Palestinian origin, such as dairy products, eggs and olive oil, and food products that are manufactured/processed in the West Bank, including bread and milled wheat flour; and (ii) to support the micro-economy, such as through participating local grocery stores. Both these objectives have an impact on supporting livelihoods and employment. Given the encouraging progress of the UVP, the country office is contributing to WFP's learning process on cash and voucher assistance and will promote new initiatives to strengthen corporate expertise, such as by including conditionality in the voucher assistance scheme through VFW and VFT activities.

- ¹ The figures in this section are excerpted from the UVP mid-term review report.
- ² A financial contingency buffer can be calculated as 10 percent of the total voucher value.

4

Climbing mountains and crossing deserts: insights from a multi-annual voucher programme in Pakistan

Henk-Jan Brinkman, Ugo Gentilini and Zahid Majeed

1. Introduction¹

The use of vouchers as an instrument for food assistance has been receiving renewed attention in recent years. Together with food subsidies, vouchers were a particularly popular safety net instrument in the 1980s, especially in the Middle East and South Asia (Pinstrup-Andersen, 1988). Since then, concerns about their political economics, effectiveness and efficiency have discouraged wider application (Alderman, 2002; Castaneda, 2000).

However, they still play an important role as a safety net in some Organisation for Economic Co-operation and Development (OECD) countries. For example, its budget of about US\$53.5 billion and nearly 33.7 million beneficiaries in 2009 make the United States' Food Stamp Program – now called the Supplemental Nutrition Assistance Program (SNAP) – the largest voucher scheme in the world.² More recently, some European countries have introduced vouchers to mitigate the impact of the financial crunch.³ Compared with cash transfers, however, international experience of vouchers remains limited (World Bank, 2009b). In developing countries, recent experience revolves primarily around seed vouchers (CRS, 2004) and fertilizer vouchers (Dorward *et al.*, 2008), rather than vouchers for food commodities. It is therefore intriguing, and to some extent refreshing, to learn that a WFP-supported voucher scheme has been implemented in Pakistan since 1994. This chapter documents this multi-annual experience.

The next section provides a brief overview of basic issues regarding vouchers. Section 3 gives an overview of the origins and evolution of the Pakistan

voucher programme, and implementation features and outputs are described in section 4. The concluding section 5 outlines opportunities and challenges for future voucher approaches in Pakistan.

2. Basics on vouchers

In general, vouchers can be either commodity-based or value-based. Commodity-based vouchers are provided for predefined quantities of food in weight or volume, while value-based vouchers provide access to food of a predetermined monetary value. There are several differences between these modalities, and they are both quite different from cash transfers, especially in terms of intended objectives, expected impacts and implementation arrangements. The pros and cons of different voucher modalities and cash transfers are illustrated in Table 4.1.

Table 4.1 Voucher modalities and cash transfers

Transfer	Pros	Cons
Commodity-based vouchers	<ul style="list-style-type: none"> - Direct link to food consumption and nutrition-related objectives - Shield beneficiaries from inflation - Expand local food markets (through contractual agreements with retailers) - Easy to trace households' use (data from retailer, serial number on coupons) - Verifiable food quality and hygiene standards - May be more gender-friendly 	<ul style="list-style-type: none"> - Retailers must be willing to participate - Expose people to risk of supply failures - Significant administration needs (e.g. retailer selection, possible high degree of informality) - Provide no choice for beneficiaries - Partners often have relatively little implementation experience - Must have a set time frame
Value-based vouchers	<ul style="list-style-type: none"> - Link to food consumption and nutrition-related objectives - Provide some choice to beneficiaries (restricted to goods in selected shops) - Expand local food markets (through contractual agreements with retailers) - Easy to trace households' use (data from retailer, serial number on coupons) - Verifiable food quality and hygiene standards - May be more gender-friendly 	<ul style="list-style-type: none"> - Retailers must be willing to participate - Expose people to risk of supply failures - Significant administration needs (e.g. retailer selection, possible high degree of informality) - Value erodes through inflation - Partners often have relatively little implementation experience - Must have a set time frame

Table 4.1 Voucher modalities and cash transfers (cont.)

Transfer	Pros	Cons
Cash transfers	<ul style="list-style-type: none"> - Provide full choice to beneficiaries (on where, what and when to buy) - Expand local food markets (but no contractual agreement with suppliers) - Relatively light administration (efficient in delivery cost, response time) - Partners often have implementation experience - Often preferred as wages in labour-intensive works 	<ul style="list-style-type: none"> - Possible greater security risks - Expose people to risk of supply failures - May not be used for food consumption and nutrition objectives - More difficult to verify and trace households' use (no coupons and contracts) - Value of transfer erodes through inflation - May not be gender-friendly

Sources: Based on WFP, 2008d; Gentilini, 2007a; 2007b.

Unlike cash transfers, vouchers must be used at selected outlets and are supported by an entitlement certificate, either in the form of paper coupons (Burkina Faso, chapter 2) or in electronic format (Syrian Arab Republic, chapter 5). The evidence for comparing the impacts and effectiveness of cash versus vouchers is limited, especially in developing countries. The bulk of existing quantitative evidence comes from SNAP in the United States, and shows that vouchers have significantly higher impacts on nutrition and food consumption than equivalent cash transfers⁴ (Barrett, 2002). The issue of impacts and applied research needs is discussed further at the end of this chapter.

3. Origins and evolution

The voucher programme in Pakistan has evolved remarkably over the years. The chief rationale for introducing vouchers in 1994 was to address the high logistics costs associated with direct food transfers. In addition, markets were functioning and crop production figures were favourable. In remote areas of the country, internal assessments estimated that transport costs were about 25 to 30 percent of the food value, and distribution and storage operations were challenging (WFP, 2007d; 2006a; 2005a).

In partnership with the government body Pakistan Bait-ul-Mal (PBM), which is involved in various social protection programmes, the voucher scheme was launched in 1994 in the Azad Jammu and Kashmir (AJK) and North-West

Frontier Province regions; it was phased out of the latter in 2000 (WFP, 2004d). Vouchers were originally financed through the monetization of food transfers (WFP, 2009e), including WFP's sales of food transfers to the government at the port. Proceeds were used to finance the various mechanisms and arrangements. The practice of monetization has not been used since 2000, and vouchers are now financed through direct cash support from donors. Currently, vouchers are implemented in three regions – Balochistan, Sindh and AJK – as part of the Creating Assets for Rural Women Programme (CARW), which is enshrined in WFP's development portfolio in Pakistan. CARW is a vouchers-for-assets programme, with vouchers provided to participants as wage compensation for creating assets such as nurseries, forestry, access roads, water harvesting structures, latrines and water tanks, and for training activities.

The implications of cash transfers for gender and intra-household dynamics are becoming the subject of careful empirical scrutiny (Schady and Rosero, 2008). However, whether and how the gender implications of vouchers – value- or commodity-based – differ from those of cash or food transfers remains an underexplored question. By design, beneficiaries of the Pakistan voucher programme are primarily vulnerable rural women. Qualitative assessments have shown that women have a strong preference for vouchers, because they are more likely to control vouchers than cash transfers at the household level (DRN, 2004; WFP, 2004a). This point is explored further in section 5.

4. Design, implementation and outputs

Vouchers require an enabling environment, including functioning markets, financial institutions and sustained incentives for shopkeepers to participate. In Pakistan, reduced implementation capacity and development funding meant that these conditions could not be ensured in the aftermath of the 2005 earthquake. In 2006, vouchers were therefore interrupted in earthquake-affected areas (WFP, 2009e; 2006d).

In stable conditions, vouchers have proved to be an appropriate, effective and efficient instrument for food assistance (DRN, 2004), but they entail investments. The Pakistan voucher programme demanded a relatively long three to six months for setting up basic project cycle components and arrangements, thus emphasizing the need for stable conditions for planning purposes. A voucher scheme also requires good implementation and monitoring capacities. In Pakistan, partners have six staff members fully dedicated to the programme – five in PBM are paid for by the government, and one at the partnering bank in Sindh is paid for by WFP. These investments are relatively small, compared with the size and length of the programme, and total implementation costs are an

average of about 5 percent of the voucher value.

As noted in Table 4.1, erosion by inflation is an important risk and requires appropriate mitigation measures. In the wake of high food prices in 2008, voucher denominations were increased by about 25 percent to maintain purchasing power. Figure 4.1 illustrates the different voucher coupon formats.

Figure 4.1 Pakistan voucher coupons



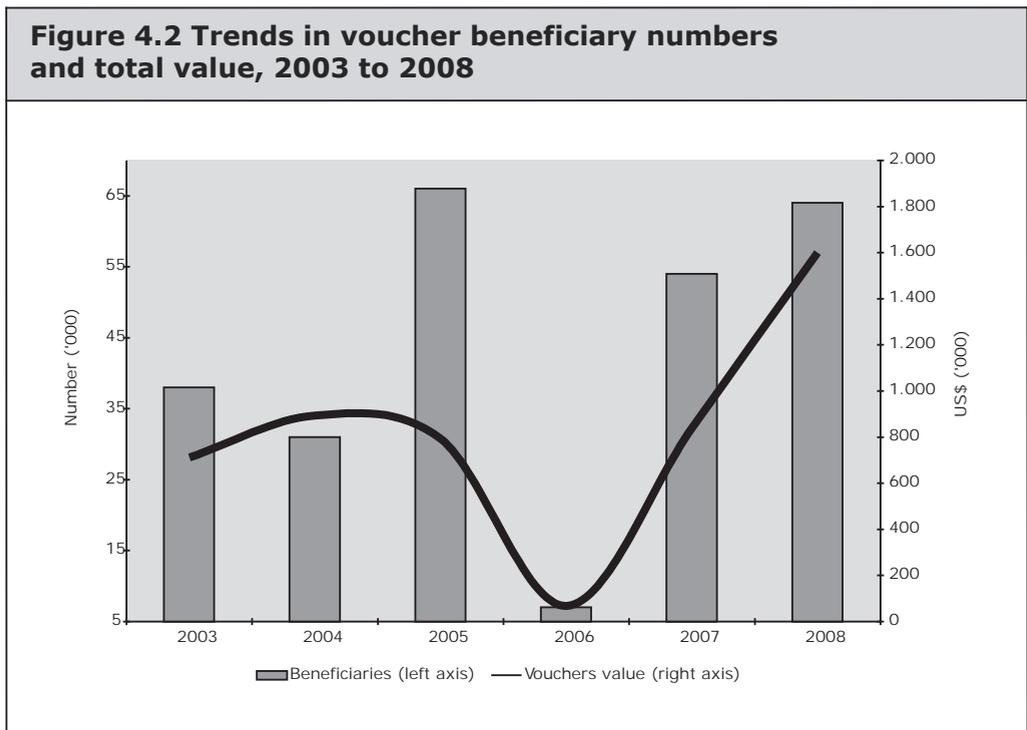
Agreements with participating banks and shopkeepers do not include service charges, as banks benefit from deposits and shopkeepers from increased sales volumes. The overall funding process includes WFP's transfer of so-called matching funds to the National Bank of Pakistan (NBP), of which 20 branches were involved in the programme in 2009. Shops are selected for their high turnover, proximity to project sites and ability to supply food of appropriate quantity and quality. When shopkeepers receive a voucher, they exchange it for cash at NBP branches, against the matching funds. The relevance and performance of selected shops are reviewed annually. To curb market power, several shops are usually selected in each area. In 2009, the programme included 100 shops, selected on the basis of the criteria outlined above. Table 4.2 outlines major programme statistics.

Table 4.2 Major statistics of the voucher programme, 2001 to 2009

Figure	Description
1994	Year of introduction
47 500	Average number of beneficiaries/year (excluding 2006)
US\$1 157 957	Average delivered as vouchers/year (excluding 2006)
US\$9 263 656	Total provided as vouchers
US\$24.3	Average per beneficiary/year (excluding 2006)
100	Shops involved in 2009
20	Bank branches involved in 2009
18.5 million	Trees planted
35,123	Water tanks
23,824	Latrines
6,005	Kitchen gardens
3 032	Income-generating activities
1,114	Wells constructed/rehabilitated
806	Water ponds
101	Hand-pumps installed
5 026	Economy stoves
394	Community centres
248	Water springs rehabilitated
342 km	Diversion channels
199 km	Rural roads
248	Cattle ponds

Sources: WFP Pakistan Standard Project Reports 2002 to 2009; country office dataset.

The voucher programme's expected outcomes are in three domains: income transfers to beneficiaries, market activities, and sustainable assets. Regarding income transfers, the programme provides cash-equivalent vouchers, which beneficiaries can use to purchase the food commodities and quantities of their choice in selected shops. The value of vouchers distributed is based on market wages of US\$4/day for skilled and US\$2.4/day for unskilled labour, multiplied by the number of working days calculated from predefined work norms for a given asset. From 2001 to 2009, each beneficiary received an average of US\$24.3 per year, excluding 2006,⁵ and vouchers worth about US\$1.2 million were injected into local markets every year. The programme reached an average of about 47,500 beneficiaries per year, excluding 2006. Figure 4.2 shows trends in beneficiary numbers and total voucher values for the period 2003 to 2008. From 2001 to 2008 (excluding 2006), the transfers entailed additional demand for small food retailers, of more than US\$1.1 million per year in constant 2007 US dollars.



Sources: WFP Pakistan Standard Project Reports 2002 to 2009; country office dataset.

For asset creation activities, WFP's vouchers are complemented by the government's technical expertise, administrative support and non-food items, sometimes in the form of cash transfers. Beneficiary communities or households also often contribute with their own resources. The creation of assets has therefore been a joint effort by beneficiaries, government and WFP, fostering a high sense of national and community ownership. Since 2001, vouchers have been instrumental in creating about 35,123 water tanks, 23,824 latrines, 5,026 stoves, 6,005 kitchen gardens and 3,032 income-generating activities. Vouchers were also linked to the provision of livelihood and capacity building activities (e.g. transfer of assets and livestock, such as buffaloes), and were instrumental in planting about 18.5 million trees and building 199 km of rural roads. These assets have generated a number of indirect but tangible benefits. For example, focus group discussions revealed that new latrines and water wells had reduced the distances to sanitary facilities, resulting in fewer snake bites reported in Sindh. The time saved collecting water was invested in income-generating activities.

Programming of the vouchers in Pakistan is based on two partnership models: implementation with NGOs in Sindh; and government-based arrangements in AJK and Balochistan. In AJK, the programme is jointly implemented by the Forest Department and the Local Government and Rural Development Department. In Balochistan, PBM is directly involved, for example, in arranging voucher printing and delivery to implementing partners and transferring matching funds to bank branches. The government covers almost the entire operational costs in these two regions, amounting to about 4 percent of the voucher value.

In Sindh, the programme is implemented by four NGOs,⁶ and operational and printing costs are covered by WFP. These are slightly higher than in AJK and Balochistan, averaging about 7.4 percent of the voucher value over the 2002–2007 period, excluding 2006.⁷ In both cases, implementation includes services provided by NBP through its central and local branches.

5. Opportunities and challenges

For more than a decade, the Pakistan voucher programme was WFP's largest and longest-running voucher programme worldwide. Important experience has been gained and lessons have been learned, benefiting not only the country office, but also the rest of WFP and other development agencies (WFP, 2009e; 2006a). Challenges remain, however, and opportunities to be explored in the next few years include those for scaling up, joint programming, extending intra-community support, testing vouchers in other WFP programmes, using index-based vouchers, participating in national social protection initiatives, and undertaking a rigorous impact evaluation.

Scaling up

The scale-up of programmes is often central to discussions about vouchers and cash transfers. Although large-scale cash transfer programmes are emerging (see chapter 20), voucher programmes in developing countries are still somewhat limited in size. Over the years, WFP has accumulated a wealth of experience with vouchers, and the voucher programme is now a salient feature of WFP's development portfolio in Pakistan. In particular, reporting and internal controls have been refined, partnerships consolidated, and overall implementation institutionalized into the operational procedures of the government, banks and NGOs. However, the scale of voucher-supported activities remains relatively small. Existing experience, mechanisms and staffing would allow the programme to be expanded, subject to additional donor funding – which is an important constraint.

Joint programming

Food and nutrition assistance programmes are well-suited to joint programming because of their wide benefits, including those related to health, education and the environment. A joint programme focusing on water, sanitation and environment-related activities with the United Nations Children's Fund (UNICEF), the United Nations Development Programme (UNDP) and the Food and Agriculture Organization of the United Nations (FAO), could be an important instrument for expanding the voucher programme. A joint programme would be very attractive to donors, especially because of the One United Nations pilot in Pakistan.

Extending intra-community support

WFP may consider increasing its contribution within the tripartite arrangements with the government and beneficiaries, as high food prices are making it extremely difficult for communities to retain their existing level of contributions.

Beneficiaries' contribution to asset creation enhances their sense of ownership over the assets, but it also results in some limitations. Some assets, such as latrines, were targeted and provided to specific households. Although focus group discussions revealed the effectiveness of such interventions, they also highlighted that some of the poorest households, which could not contribute to the project, were left out. This led to resentment among the excluded households and significant sanitation problems, despite overall improvement at the community level. There is need to identify ways of addressing the constraints faced by the poorest community members and facilitating their participation, including through increasing the share of WFP vouchers, and/or resources provided by the government, in total asset costs.

Testing vouchers in other programmes

The use of vouchers in other programmes could be explored, such as in those for school feeding and primary health care. When implementation conditions allow, vouchers' effectiveness and efficiency in, for example, take-home rations should be tested (WFP, 2008d). Although it may be difficult for voucher schemes to attain the nutritional objectives of school meals and on-the-spot feeding at health centres, their comparative performance as income or incentive-oriented instruments could be explored (Bundy *et al.*, 2009).

Index-based voucher programming

The high food prices of recent years have posed challenges for the use of market-based instruments, such as vouchers and cash transfers. The extent to which international prices are transmitted into national prices varies, making it important to monitor local price trends carefully, and to adjust transfers to maintain beneficiaries' purchasing power. In 2008, the Pakistan Country Office took steps to increase the nominal value of vouchers, raising those for skilled labour from Rs 250 to Rs 300, and those for unskilled labour from Rs 150 to Rs 200. Depending on the availability of resources, an annual review of the value of the vouchers should be institutionalized into WFP voucher programming as standard practice. The value of the vouchers could be linked to the consumer price index or other food-related price indicators.

Social protection

Discussion and strengthening of social protection systems in Pakistan – and other countries – is evolving rapidly. In 2007, the government issued an initial social protection strategy, supported by the World Bank and other actors (Government of Pakistan, 2007; World Bank, 2007b; Del Ninno, Vecchi and Husain, 2006). Social protection includes transfers in both cash and food,

suggesting that lessons from WFP's experience with vouchers could be leveraged to influence policy formulation at the national level. Lessons from WFP's experience in Ethiopia may be very relevant to current developments in Pakistan, as WFP was able to shape the debate on Ethiopia's Productive Safety Net Programme (see chapter 20) through its experience with the MERET programme (chapter 10).

The Government of Pakistan has introduced a large social protection programme for the poor, the Benazir Income Support Programme,⁸ which disburses cash through post offices. Over the next few years, this will gradually switch to multi-purpose smart cards, to replace national identity cards. The smart cards will also provide a vehicle for WFP to disburse its cash assistance to targeted beneficiaries.

WFP has already started a cash transfer pilot programme, replacing direct food deliveries with cash through the use of debit cards introduced by the government. This programme targets the internally displaced people who are returning to conflict-affected areas of Pakistan. The pilot phase will test the efficacy of food versus cash and the impact of cash on recipients' food security. The results of the pilot will inform early recovery programming in conflict areas during 2010.

Impact evaluation

Some of the assets created with WFP support take time to mature. For example, the effects of tree planting and soil and water conservation practices are not easy to capture and measure in the short term. However, WFP has been involved in asset creation activities in Pakistan for a considerable time, and an evaluation of the impact of these investments may be very useful. Past initiatives, such as the assessment conducted in AJK (WFP, 2004a), were primarily procedural and process-oriented. They were therefore useful for understanding programming bottlenecks, but did not attempt to assess programme impacts.

Based on both quantitative and qualitative measures, a rigorous impact evaluation would reveal both the market multipliers of the US\$9.3 million-worth of vouchers injected into the economy between 2001 and 2008, and the economic and social returns on the assets created. The evaluation would also be an opportunity for establishing a baseline for future surveys and studies, emphasizing the need for WFP to improve its documentation and institutionalization of the considerable development work it carries out.

- ¹ This chapter draws from a review conducted by the authors with support from the Swedish Trust Fund at WFP. We are grateful for comments and support provided by Wolfgang Herbinger, Qasim Rahim, Mushtaq Hussain, Sultan Mehmood and Khalida Malik. Special thanks go to Arshad Jadoon for his support in providing program data.
- ² For extensive research and materials on SNAP, visit the website of the United States Department of Agriculture (USDA) Economic Research Service: www.ers.usda.gov/briefing/snap/.
- ³ For example, the Italian government launched a voucher programme described at www.governo.it/governoinforma/dossier/carta_acquisti/.
- ⁴ From a microeconomic perspective, when vouchers are infra-marginal (i.e., provide less than the quantity normally consumed by beneficiaries) they are economically equivalent to cash transfers; under certain conditions, when vouchers are extra-marginal (i.e., provide more than is normally consumed), they should generate greater impacts on food consumption than cash transfers do (Alderman, 2002). However, they show different impacts even when infra-marginal, in what economists refer to as the “cash-out puzzle” (Fraker, Martini and Ohls, 1995).
- ⁵ Transfers in 2006 were a particularly low US\$9.6/beneficiary because of the earthquake. Beneficiaries can receive payments more than once a year, depending on how many assets they have completed during that year. All US dollar values are real, based on constant dollars of 2007, when the average exchange rate was Rs 60.81/US\$1.
- ⁶ The Thardeep Rural Development Programme, the Society for the Conservation and Protection of Environment, the Participatory Village Development Programme, and the Thar Dhat Development Organization.
- ⁷ In 2006, although vouchers could not be implemented in earthquake-affected Balochistan and AJK, the programme was still active in Sindh, but at a more modest scale. This resulted in exceptionally high total operational costs of 24.4 percent of the voucher value in Sindh, where printing costs are about 0.25 percent of the voucher value.
- ⁸ The Benazir Income Support Programme has a budget of about US\$425 million for 2008–2009, equivalent to nearly 0.3 percent of GDP: www.bisp.gov.pk/benazir/.

5

New technologies in food assistance: electronic vouchers for Iraqi refugees in the Syrian Arab Republic

Tarek Elquindi

1. Introduction¹

As a response to the Iraqi refugee crisis in the Syrian Arab Republic, WFP has provided in-kind food aid through a regional emergency operation (EMOP) since January 2007. Of an estimated total of 1.2 million Iraqi refugees, assistance is provided to 124,000. The refugees depend on humanitarian assistance or informal employment, as they cannot obtain formal work permits, licences to operate businesses or access to social services. However, about 90 percent of the refugees reside in urban areas where food markets are functioning. Challenges that have emerged during the operation include high resale and barter of the in-kind goods provided, beneficiary discontent with the lack of variety of the food items in the basket, and long distances to distribution centres to collect the food ration.

Against this background, WFP Syria is considering new options, including the provision of food assistance through vouchers. In October 2009, a four-month pilot was initiated, covering 1,000 households in two neighbourhoods of Damascus. The pilot had three components: (i) testing vouchers as a new modality for food assistance in Syria; (ii) testing electronic delivery through text messages; and (iii) testing an electronic system for managing voucher distribution and reporting through linking computers in government shops with a central hub managed by WFP. The delivery of food vouchers through text messages is the first of its kind globally.

This chapter reviews the voucher pilot and its innovative components. Based

on data from the database that manages the voucher distribution, the chapter also reports on how beneficiaries used the vouchers. A small post-distribution monitoring (PDM) and the log-book from the help desk assisting beneficiaries help build understanding of the challenges faced during implementation and of how beneficiaries view the programme. Lessons learned round off the analysis. Although challenges remain in getting the scheme to work smoothly, the potential for efficient delivery and the benefits of on-time reporting are the major advantages of electronic vouchers.

2. Context, design and implementation

2.1 Context

The WFP in-kind food basket for the emergency assistance directed to Iraqi refugees consisted initially of a two-months ration of rice, pulses and oil that was distributed with complementary food from the Office of the United Nations High Commissioner for Refugees (UNHCR), including pasta, tea, tomatoes, tomato paste, bulgur wheat and sugar, and non-food assistance. As the refugees have no legal options for income generation, the WFP ration provides a full 2,100 kcal. However, the food is resold or bartered to a large degree; large shares of rice, of 26 to 55 percent, and 17 to 34 percent of pulses are sold to buy food not included in the ration, to buy other varieties of the same items or to cover other expenses such as rent, utilities, health or education. Storing a two-month ration in an urban setting is also a problem for many beneficiaries. Additional complications with the food distribution relate to the distribution centres being far away² and long queues.

To respond to these challenges, the stakeholders have agreed measures such as reducing the quantity of cereals provided, diversifying pulses, and including additional items in the food basket. These planned measures will be implemented in an EMOP starting in May 2010. In addition, a market assessment in 2007 and a study in 2009 recommended the use of unconditional vouchers, allowing beneficiaries to choose items from a pre-specified list using vouchers with a fixed value. Accordingly, a pilot was set up as part of the ongoing EMOP. This aimed to ensure a wider diversity of locally accepted food items, that the beneficiaries would be able to choose the quantities themselves, and that the stores would be closer to beneficiaries than the distribution centres are.

The distribution of in-kind food assistance relies on notifying the beneficiaries through text messages, which is possible because 97 percent of the refugees have mobile phones. It was decided to take advantage of this possibility also for the voucher distribution.

2.2 Innovative aspects of implementation

Two cycles of voucher exchanges took place within the pilot, one short cycle of two weeks in October and one full cycle of six weeks in November to December 2009. The monetary entitlement for each cycle was US\$34, covering two months of entitlements, and the beneficiaries could exchange their vouchers whenever and on as many occasions as they wanted during the cycle. The monetary value of the voucher was based on the local market value of the in-kind distribution ration. In conjunction with the voucher pilot there was, exceptionally, a rice distribution during the first cycle. Consequently, the voucher value for that cycle was reduced by the value of the rice distributed.

For each cycle, UNHCR called on beneficiaries to report to the UNHCR centre on a certain date, for registration. Of the 1,000 beneficiary households randomly selected for the pilot, 909 registered.³ Beneficiary households were issued with UNHCR's verification code and directed to a WFP booth at the same centre, to receive a free SIM card offered to WFP by the telecommunications company MTN. Subsequently, WFP conducted an information session introducing verified beneficiaries to the voucher system, its purpose and the expected advantages, entitlements and procedures. Beneficiaries were thereafter provided with information pamphlets indicating where they could exchange their vouchers and providing them with a WFP help desk number for enquiries and complaints. This help desk enabled WFP to receive and respond to complaints and issues related to implementation.

The partner for the voucher exchange was the General Establishment for Storing and Marketing of Agricultural and Animal Products (GESMAAP), a government body charged with consumer price stabilization. WFP equipped each GESMAAP shop with the necessary hardware, including computers, printers, bar-code readers and modems. Shop staff also received training in carrying out the voucher operation. During the pilot, beneficiaries could exchange their vouchers at three GESMAAP shops, which sell basic food items at prices that are an average of 10 to 15 percent lower than local market prices. The stores sell mostly locally produced food items or imported ones that are locally accepted. Eight items are currently available to voucher holders: rice, oil, eggs, cheese, flour, lentils, canned tuna and chickpeas. These items were chosen to be in line with beneficiary preferences. GESMAAP agreed to fix the price of voucher food items during the pilot, to protect beneficiaries from price fluctuations and the effect of inflation. Figure 5.1 illustrates a sample electronic voucher notification, its on-site verification, and eligible commodities.

Figure 5.1 Electronic vouchers: notification, verification and eligible commodities



As well as the delivery of vouchers through text messages, another innovative feature of the pilot was the electronic system that managed the entire distribution, reporting and monitoring process. This system was used to register information on the demographic profile of each household, its UNHCR verification code, entitlements, voucher collection date, voucher exchange dates, and products and quantities exchanged. This made it possible to reconcile transactions and accounts, and provided real-time reports on the pilot, allowing prompt reporting and monitoring and decreasing the risk of misuse of the vouchers. When UNHCR registered a beneficiary household, its details were entered into the database. Within 48 hours, the WFP server automatically sent a text message to the household, advising it on distribution dates, its specific entitlement in Syrian pounds, and its unique WFP PIN number.

At the GESMAAP shop, the beneficiary presented both the verification bar code and the PIN number so that the shop could access the beneficiary file in the electronic system. Each shop had to have on-line access to the WFP server to obtain information from the system; no files were stored in the shop itself. The shop entered details of the items and quantities selected by the beneficiary. The system verified the entered data against the entitlement, and automatically issued GESMAAP with an electronic invoice, which was signed by the beneficiary as a means of payment, and kept in the shop for billing WFP later on. At the same time, the system sent a new text message to the beneficiary with the updated balance of the entitlement and a new PIN number for future use. With good connectivity, these procedures – receiving the invoice and the new SMS – occurred within two minutes of processing the transaction.

At the end of each cycle, GESMAAP sent electronic invoices to WFP, which reconciled the claims with its database records and identified any discrepancies. Once all transactions were cleared, a payment request was processed.

Box 5.1 A beneficiary shares his experience of the voucher pilot

Kareem's family is one of the 1,000 households selected to participate in the pilot project: "When I learned that the system allows us to choose and buy from a variety of choices including fresh food, I felt very fortunate," he said. When he received the voucher text message, he went immediately to a government store and bought eggs, cheese, tuna fish and a good quantity of chickpeas, rice and oil. Kareem explained the process when he made his first purchase: "It was very easy and user friendly; I received a text message, I went to the government store down the road, and chose food items I needed. When it came to settling the bill, I only had to provide the PIN number sent to my mobile phone by WFP and show my bar-coded verification paper to the shop attendant, and the purchase was complete! That night, my family had the best dinner they had had in years."

Kareem was grateful for the convenience of this innovative scheme compared with traditional in-kind distributions: "Not only was my family happy, but the fact that we no longer need to travel to distributions and struggle back with a two-month ration of food has lessened a huge amount of the burden. We can now obtain whatever we need at any time and in our preferred quantity." He also mentioned the significant impact he felt on the quality of the ration. Kareem hopes the scheme will be a success and the food options expand: "My children are asking for milk and jam, and I was told that WFP is considering providing more food suitable for children."

3. Monitoring the outcomes

3.1 The use of vouchers

The database developed for the voucher project, a small PDM conducted on 30 households, and the beneficiaries' enquiries to the help desk shed light on how beneficiaries used their vouchers and on their views of how the programme was working.

During the first distribution cycle, 833 households – 3,015 individuals – or 92 percent of the 909 registered households exchanged their vouchers. In the second cycle, 841 households exchanged their vouchers. The reasons why some registered households did not exchange their vouchers are still being investigated.

Table 5.1 reports on the products the vouchers were used for. The same trend is observed in both cycles: most of the voucher value was used for oil. Eggs were purchased more in the second cycle than in the first. Some of the commodities, such as Thai rice, wheat flour, lentils and chickpeas in the second cycle, were hardly purchased at all. The PDM revealed that the beneficiaries would have preferred different types of lentils and chickpeas; this will be addressed in the second phase of the pilot. The low purchase of rice is explained by the parallel

in-kind rice distribution, and some beneficiaries did not prefer the type of Thai rice offered.

Table 5.1 Use of vouchers during the first and second distributions, and corresponding calorie values			
Item	Cycle 1 (%)	Cycle 2 (%)	Daily calories per person in cycle 1 (kcal)
Oil	41%	38%	761
Eggs	24%	33%	89
Tuna	13%	11%	27
Cheese	10%	11%	24
Chickpeas	5%	2%	54
Thai rice	4%	3%	812*
Wheat flour	2%	1%	50
Lentils	1%	0%	7
Total	100%	100%	1 824

*Includes the calorie value from the rice distributed in-kind.

Source: Database developed to manage and monitor the voucher programme.

Table 5.1 also reports the corresponding calorie values based on the average exchange of food items per person. The nutrition level is estimated to be 1,824 kcal per person per day for the first cycle, and 1,738 kcal for the second. These are comparable to the nutritional value of the WFP food basket, which amounts to 2,054 kcal.

3.2 Beneficiaries' views of the programme

In the PDM, almost all surveyed households – 97 percent – expressed satisfaction with the voucher programme. However, a third of the beneficiaries wanted a larger selection of food items, such as milk, canned food, sugar, tea and jam. Only 13 percent would rather have received money than vouchers.

Only 17 percent of the households reported that they had sold part of the food ration. Those that reported resale were motivated by the need to pay for utilities, buy different food items, or share with neighbours. Although the sample for the PDM was small and no major conclusions can be drawn from this result alone, market visits and observations confirm that the voucher programme reduced the

resale of products. During the in-kind distribution, there is an immediate appearance of ration food items on the market. This has not been observed with the voucher items.

While almost all interviewees were content with their treatment at the GESMAAP shops, only 60 percent were happy with the distance to the nearest shop. This situation arose because one of the three shops selected had problems with its Internet connection and could not continue exchanging vouchers. Unfortunately, this was in the area with the highest concentration of Iraqi refugees. However, the interviews and direct observation reveal that queuing time was dramatically reduced by the voucher programme. While beneficiaries were queuing for three to five hours to receive their in-kind ration, they spent only 30 to 45 minutes in the GESMAAP shops.

The WFP help desk and resulting log-book of calls were used as an additional monitoring tool, to ensure that implementation problems were solved immediately. Although the nature of complaints was not always specified, especially at the beginning of the pilot, analysis of the data received through the calls suggests that most of the problems encountered related to SIMs not working and recipients not receiving text messages (Table 5.2).

Table 5.2 Complaints and enquiries received by the WFP help desk during the first distribution cycle		
	Cycle 1	
Nature of complaints	Number of enquires	% of total enquires
SIM not working (activation)	81	21.3
SMS not received	76	19.9
PIN not working	27	7.1
PIN not received	23	6.0
Voucher exchange process	1	0.3
Other problems	11	2.9
Enquiries	162	42.5
Total	381	100

Source: Database developed to manage and monitor the voucher programme.

The main reason for the SMS-related problems is that beneficiaries had their own (original) SIM cards and were not able to keep the MTN-provided SIM cards operational at the same time as their own. WFP staff devoted much time and effort to solving this problem. Discussions are under way with MTN to allow beneficiaries to receive the messages on their own SIM cards, rather than having to change cards.

Some of the complaints related to implementation could be addressed, and did not appear to any large extent during the second cycle. This especially concerns issues related to WFP's PIN number.

4. Challenges identified and lessons learned

4.1 Pros and cons of the vouchers

The monitoring and evaluation exercise undertaken during the programme identified some advantages and disadvantages of the voucher programme compared with in-kind food distribution. These are outlined in Table 5.3. In general, the voucher programme has several advantages, and the potential for a successful electronic voucher scheme is huge. The major advantages of the electronic scheme relate to the efficient and secure management of the voucher exchange process and the prompt reporting and monitoring. There are also many advantages for the beneficiaries, as they can choose the quantities and types of products from a nearby shop, rather than travelling long distances for a two-month ration. However, one of the major challenges identified is the need for a gradual scale-up of the voucher programme, especially outside the capital. Currently, only 3 percent of beneficiaries receive vouchers. The challenges related to scaling up include the need to ascertain the capacity of implementing partners and the quality of Internet connectivity for managing the voucher exchanges.

Table 5.3 Pros and cons of vouchers compared with in-kind food distribution	
Pros	Cons
<ul style="list-style-type: none"> • Queuing time 30–40 minutes rather than 4–5 hours • Food types sold in GESMAAP shops meet local preferences better than the in-kind basket. The voucher programme facilitates diversification of food items • Less resale of commodities, as beneficiaries can choose products according to their needs • Less spoilage, as beneficiaries can exchange their vouchers any time during the distribution cycle, rather than receiving a two-month ration at once • The electronic system allows efficient management of the voucher scheme, and prompt reporting and monitoring enable rapid adjustment of activities if needed • The use of two secret numbers (the verification code and the PIN) to access beneficiary records and real-time electronic transactions limits the possibility of illegal entry and modification of records • Strengthens partnerships with government and the private sector, thereby facilitating hand-over to national safety net programmes 	<ul style="list-style-type: none"> • Capacity for only 200 beneficiaries per shop per day, rather than the 700–1 500 at the distribution centres; capacity can be increased by using more shops • Relatively high set-up costs for equipment (\$1,700/shop) and software (\$30,000); these are less of a concern when the voucher programme is scaled up • The programme’s functioning outside the capital and/or with a large number of beneficiaries has not yet been tested • A stable power supply, Internet connectivity, and a high-quality mobile phone network are preconditions for electronic vouchers

Although the implementing partners are crucial in this operation, they also contribute to the challenges. GESMAAP has shops in more than 1,000 locations in all parts of the country, and its 160 mobile units are able to reach additional locations and meet emergency needs. These features make GESMAAP an ideal partner for scaling up. However, efforts are needed to replace some food items with products of better quality, especially lentils and chickpeas.

The help desk data revealed that there were challenges relating to the receipt of text messages. This problem continued during the pilot’s second distribution cycle; imposing MTN SIM cards on the beneficiaries turned out to be impractical.⁴ Much effort and time were needed to forward text messages to beneficiaries who had not received the original ones. In addition, the low capacity of the network (2G) sometimes resulted in slow processing of transactions

between the shops and the WFP server, giving rise to two problems: (i) transactions were not recorded in the system, and had instead to be processed manually at the shop level; and (ii) transactions were recorded in the system but the shop did not receive an invoice. Negotiations with MTN have resulted in the provision of a better-quality network (3G) for future pilot use.

4.2 Way forward

The gradual phasing in of the electronic voucher programme will require a second pilot involving twice the numbers of households and GESMAAP shops. Based on lessons learned during the first pilot, some adjustments will be made. There appears to be a need to change some of the items that the vouchers can be exchanged for; there are plans to do this in line with beneficiary preferences.

The country office spent much time and effort in developing the software application for managing the voucher distribution. This was done on the understanding that the system would serve operational needs in the future, so it has the capacity to deal with a large number of beneficiaries in different locations. For the second pilot phase, there are plans to test the software in mobile store units. The system will also be tested in contexts where distribution is decentralized but reporting is at the regional and central levels.

Considering the encouraging results of the first pilot and the country office's investments, the voucher programme is likely to be integrated as a regular component of the EMOP assisting Iraqi refugees. This would entail a scale-up of the programme in Damascus, where most refugees are concentrated, and its introduction in other governorates.

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- ¹ The author wishes to thank team members in the Syria country office for their strong team spirit, openness to new ideas and dedication.
 - ² In Damascus, beneficiaries travel on average 20 km to the distribution centre.
 - ³ The rather high number of unregistered households is likely to be due to the mobility of the refugees. Some of the sampled beneficiaries might have left the country or were residing in a different location during the voucher distribution.
 - ⁴ More than 80 percent of the refugees use a competing operator for their own SIM cards.

6

Do cash transfers improve food security in emergencies? Evidence from Sri Lanka

Susanna Sandström and Levan Tchatchua

1. Introduction

In December 2004, WFP launched an emergency operation (EMOP) to assist victims of the tsunami in Sri Lanka. The disaster resulted in more than 38,000 deaths and approximately 7,000 people missing. The government estimated that at least 1 million people were directly or indirectly affected, of whom about 500,000 were displaced.

The objectives of the EMOP were to ensure the affected population's food security and to support the rebuilding of livelihoods. General food distribution (GFD) was provided to more than 900,000 people between January and October 2005. In parallel to this, the government provided all affected people with Rs 200 (US\$2) a week in cash. The cash was intended to help beneficiaries meet supplementary food and other household needs not covered by WFP assistance.

In October 2005, WFP shifted to a more targeted intervention – vulnerable group feeding (VGF) – reducing the beneficiary numbers to 350,000. The cash transfer pilot project was implemented under this intervention between October/November 2005 and January 2006.

This chapter starts by briefly reviewing the design and implementation of the cash pilot in Sri Lanka. An important objective of the pilot was to compare cash with food transfers, so beneficiaries were *randomly* assigned to receive either transfer type. This allowed a rigorous evaluation of the two modalities. This chapter focuses on the results from the evaluation, paying special attention to changes in households' consumption patterns and gender-related control and

preferences. A discussion of key ingredients for success and lessons learned during the pilot complete the analysis.

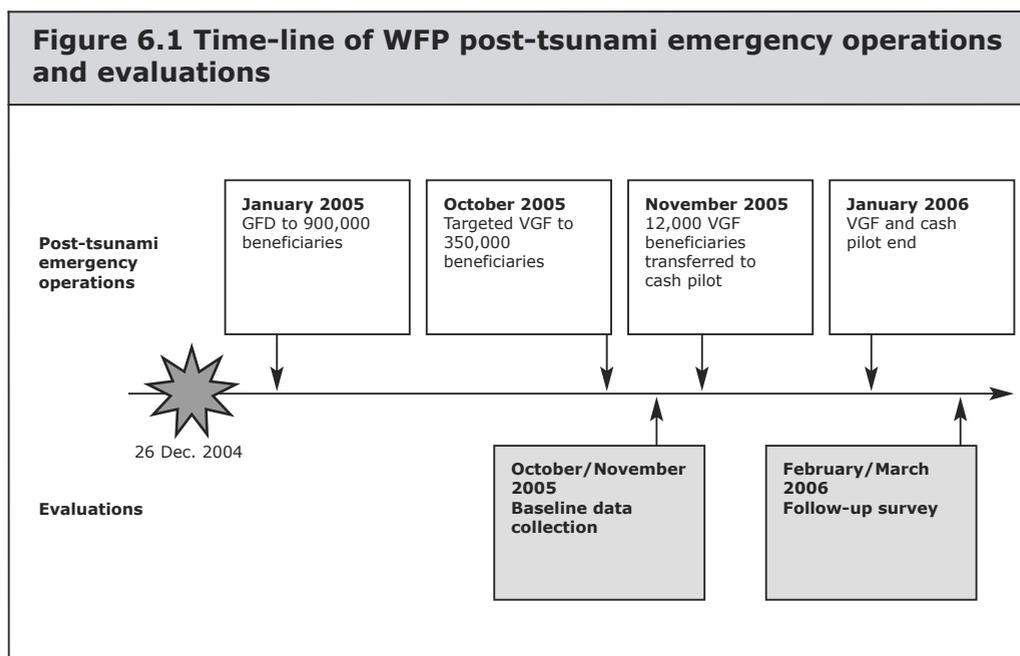
2. Context, design and implementation

2.1 Cash in emergencies?

In Sri Lanka, debate on the merits of cash versus food started in early 2005. These discussions were provoked by the availability of food, especially cereals, in the markets; the expected bumper harvest of the *Maha* crop in February/March; and the government's ban on rice imports to support domestic producers. Before the tsunami, markets were the main source of food, so the population was cash-aware. The question therefore arose as to whether the food security objectives of disaster emergency relief could be achieved by providing cash transfers to the beneficiaries under conditions of well-functioning markets. Several options were discussed, including the full replacement of food by cash.

Considering the operational challenges for WFP, which would be accountable for large direct cash transfers to beneficiaries but had little experience in this area, and government concerns over the complete substitution of cash for food transfers, it was agreed to pilot a cash intervention while pursuing all possibilities for local purchase of food commodities. WFP commissioned a feasibility study (Edirisinghe, 2006) that identified key issues in assessing the appropriateness of cash transfers in Sri Lanka and provided inputs for the design of the cash transfer pilot project (CTPP).

One main objective of the pilot was to compare the different impacts of cash and food transfers on beneficiary households' food and livelihood security and on the local economy. A broader objective was to determine the feasibility and appropriateness of cash transfers in humanitarian situations. In conjunction with the pilot, comprehensive household surveys were set up to study the impacts. The time-line of the post-tsunami EMOP and the evaluations undertaken in conjunction with the cash pilot are detailed in Figure 6.1.



2.2 Design and implementation

The CTPP was implemented between October/November 2005 and January 2006 in four rural or peri-urban divisional secretariat (DS) divisions in three districts of southern and eastern Sri Lanka, targeting approximately 12,000 people in 3,200 households, out of 312,000 VGF beneficiaries. The VGF beneficiaries had been selected according to the following criteria: (i) completely or partially damaged dwellings; (ii) loss of main livelihoods; and (iii) destitution.

The DS divisions selected for the cash pilot had to have access to a Samurdhi Bank Society, as cash was to be distributed through local branches of this bank. The impacts of the cash transfers were expected to depend on initial conditions in the intervention areas, so the divisions were selected to also incorporate heterogeneity in ethnicity, food habits, access to physical and market infrastructure, and type of local economy. Randomization was performed at the Grama Sevaka division level, so that approximately half of the beneficiary populations in each DS division were randomly selected to receive cash transfers. The remaining half remained in the VGF programme, receiving the food ration basket. The selection was carried out at a public event in which the communities themselves drew lots marked “cash” or “food”.

The food ration was based on the number of family members and included rice, wheat flour, pulses, oil, sugar and corn-soya blend (CSB). The full 12-week food ration was distributed in no more than two deliveries. The amount of cash

transfer per beneficiary was based on the local market value of the rations provided to food beneficiaries: Rs 150 (US\$1.5) per week per beneficiary. The cash was transferred to beneficiaries once every two weeks through ten Samurdhi Bank Societies coordinated by the Samurdhi Authority, the government authority responsible for ensuring proper management of the banking system and reporting.

3. Consumption outcomes, livelihood strategies and beneficiary preferences

3.1 The evaluation

WFP contracted the International Food Policy Research Institute (IFPRI) to evaluate the impact of the food and cash assistance. For this, IFPRI undertook a household baseline survey and a follow-up survey, randomly sampling 1,360 households from both groups. Comparison of before-and-after outcomes would be used to analyse various components of food and non-food expenditure, diet quality and diversity, and strategies for managing and controlling resources within households. As the surveys covered both food- and cash-receiving households, it allowed a direct comparison of the impacts of the two types of assistance.¹ Three aspects were studied: possible changes in consumption patterns when beneficiaries receive cash rather than food; the programme's impacts on livelihood-related decisions; and how beneficiary households perceive programme benefits and self-assess cash and voucher programmes.²

3.2 Effects of cash versus food on household consumption

Expected impacts on household spending

Standard economic theory predicts that much of the effect of a transition from in-kind food to cash transfers depends on whether or not the food ration is infra-marginal – that is, whether or not the household consumes greater quantities of the food items than the ration provided in the basket. According to theory, when the ration is infra-marginal, the switch to cash transfers should not have a major impact on household expenditures. Results from the baseline survey suggest that the rations of all the food items distributed, except wheat, were infra-marginal. The ration of the main staple rice was 1.4 kg per person per week, whereas households reported that they consumed 2.7 kg per person per week. The ration for wheat was the same as for rice, but consumption was only 0.98 kg per week. It could therefore be expected that levels of rice consumption would remain similar but those of wheat would decline when households switch to cash transfers.

However, factors other than the infra-marginality of food transfers may also have an impact on consumption patterns. First, a possible difference between the market value of cash versus food may result in unintended income effects, and price movements during the programme period may erode the value of the cash. Results from the baseline and follow-up surveys suggest that the value of the food and cash transfers stayed approximately the same throughout the pilot. However, a market survey suggested that the price of the main staple, rice, increased from an average of Rs 39/kg in December 2005 to Rs 50/kg in January 2006, indicating that the real value of the cash transfer decreased during the pilot.

Other important aspects may affect household consumption. Short-term cash transfers might be treated as windfall, leading to discretionary spending. There may be a change in who controls resources within the household, which may result in changed consumption patterns if preferences differ between men and women in the household. Finally, increased liquidity enables lump-sum purchases. Increased spending on non-food items may also be a result of reluctance to hold cash for security reasons, or of pressures to share cash with other people, such as relatives and friends (Sharma, 2006b). The following sections highlight major findings regarding changes in consumption behaviour.

Cash transfers increased food diversity, but also expenditures on non-food items

The pattern that emerges when studying the differences in expenditure and consumption³ behaviours between cash- and food-receiving households indicates that on average there are some significant changes in habits when people switch from food to cash transfers. Figure 6.2a shows the general pattern of weekly per capita expenditures for cash- and food-receiving households. Food expenditures increase between the baseline and follow-up surveys for both cash and food households, but the increase is higher for cash households, and the difference is statistically significant. Cash-receiving households are more likely to spend some of their benefits on improving the diversity of their diets, by buying more expensive cereals and larger amounts of meat, dairy products and processed foods. This is illustrated in Figure 6.2b, which shows the expenditures on a selected number of food items. Increased alcohol expenditure was observed for both groups but, contrary to widely held expectations, cash transfers did not increase the expenditures on alcoholic beverages more than food transfers.

Regarding the commodities in the food basket, cash households reduced their consumption of the basic staple rice, and also of wheat, as shown in Figure 6.2c. As the wheat ration was extra-marginal, this reduction was expected. The reduction in rice consumption is more surprising. It seems that increased

diversity in consumption was achieved at the expense of reduced consumption of these two basic staples.

Figure 6.2a Aggregate weekly per capita expenditures

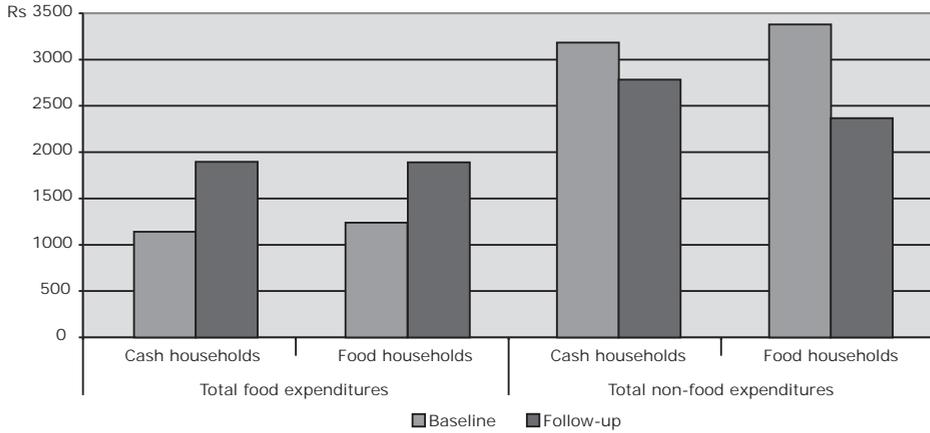
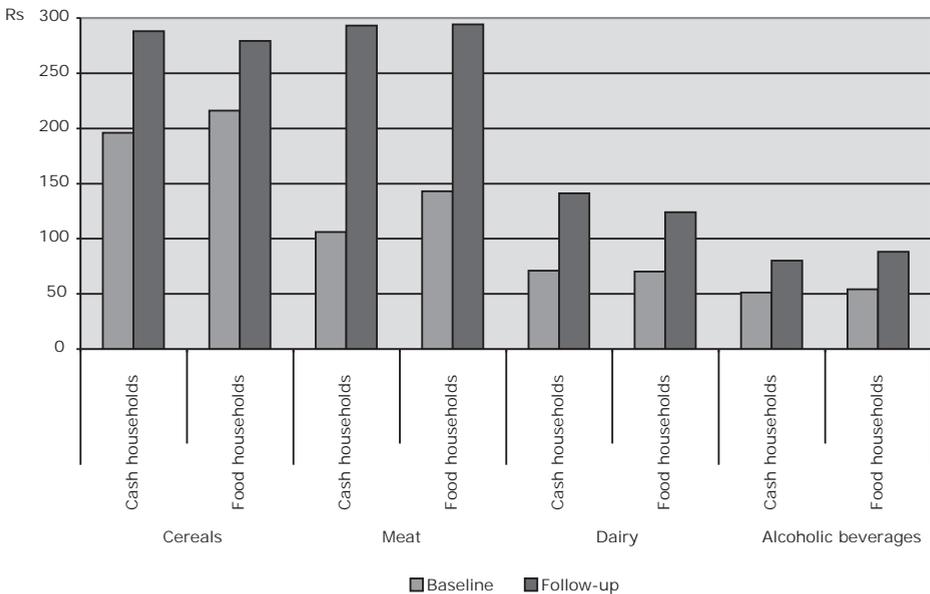
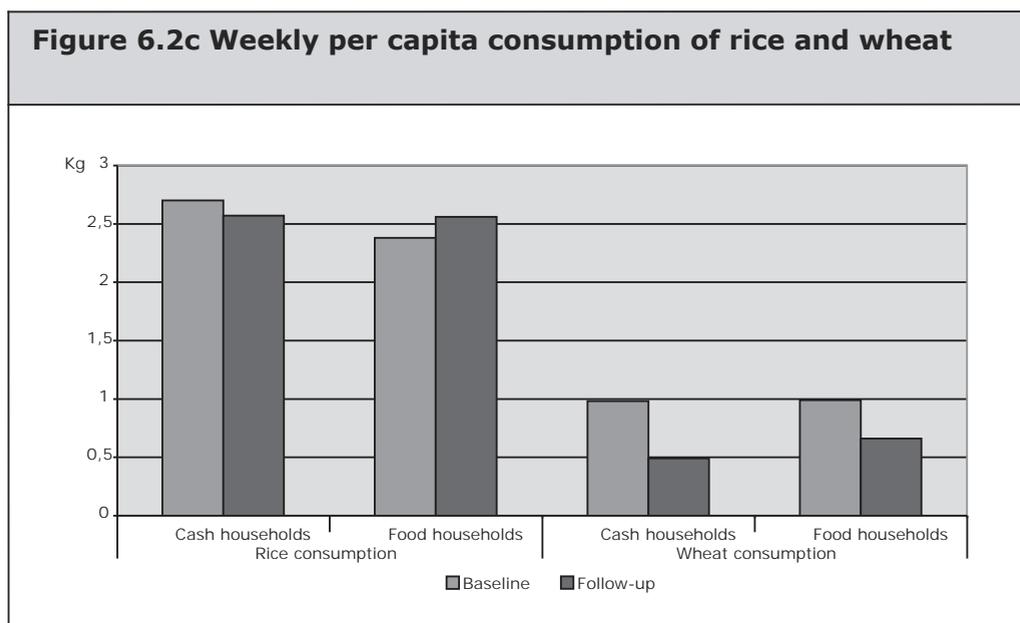


Figure 6.2b Weekly per capita expenditures on selected food items





Source: Calculated from Table 10 in Sharma, 2006a.

Figure 6.2a shows that total non-food expenditures for both groups declined between the baseline and the follow-up surveys, but that the decline was larger in the food households. Again, this difference is statistically significant. The decline in these expenditures can be at least partly attributed to the government stopping its cash assistance when the GFD ended and the VGF started. Concerning non-food expenditure, the major difference between the two groups is that cash households *increase* their expenditures on clothing, while food households *decrease* theirs.

Poor areas and households show larger cash effects

When household behaviour is analysed according to geographical location, significant differences appear regarding how or whether households adjust their consumption as a result of cash transfers. While two of the four DS divisions, Habaraduwa and Hambantota, in the south of Sri Lanka, showed almost no statistically significant changes in consumption patterns, cash-receiving households in Korralai Pattu North/Vaharai in the east adjusted their consumption habits considerably. This is also the only DS division where calorie intake *decreased* significantly as a result of cash transfers. While calorie intake decreased for both cash- and food-receiving households in Korralai Pattu North/Vaharai, it decreased by 250 calories more in cash-receiving households.⁴

Several factors distinguish Korralai Pattu North/Vaharai from the other DS

divisions. First, the households are poorer, with household expenditures that are 33 percent lower than the average for the other three locations. Second, as shown in Table 6.1, their dwelling conditions were more affected by the tsunami, they are less educated, and they depend more on casual labour markets than households in other locations. In this DS division, 88 percent reported irreparable tsunami damage to their houses; in other locations irreparable damage varied from 35 to 47 percent. As a consequence, a far higher share of the households in this DS division live in temporary shelters.

Table 6.1 Selected household characteristics, by DS division

	Habaraduwa	Hambantota	Korralai Pattu North/ Vaharai	Manmunai Pattu
% of households with house irreparably damaged by the tsunami	46.5	41.5	88.1	34.6
% of households living in temporary shelters	56.7	46.0	82.3	48.0
% of household heads who are wage labourers	11.5	11.0	40.6	46.8
Average years of education of household heads	7.8	7.7	3.8	5.5

Source: Table 3 in Sharma, 2006a.

The greater degree of poverty means that households have greater liquidity constraints; the replacement of food with cash transfers improved liquidity, and so was likely to induce a reallocation of household resources to meet non-food needs and to purchase foods not provided by the food ration received previously. This occurred in spite of the DS division having poorer infrastructure and access to markets than the other divisions.

Further analysis reinforces the view that the cash effect is higher for poor households. When the survey households are divided into those living in temporary shelters and those living in own homes or with relatives, the cash

effect is mostly insignificant for households that are living in own homes or with relatives. Those that live in shelters spend significantly more resources on non-food expenditures and diversifying their diets when they receive cash. A similar pattern is found in households with lower education levels. Cash transfers have a significant effect on the expenditure patterns of households with low education, while their effects on highly educated households are mostly insignificant.

Cash transfers appear to have some impact on livelihood decisions

It is important to compare the effects of cash transfers on people's livelihood strategies with those of food transfers. This is, however, difficult to ascertain from a short cash transfer programme. Two indicators were used to study livelihood strategies: household members' decision to engage in the casual labour market, and households' levels of outstanding debt. The proportion of households engaging in the wage labour market increased for both the cash group, by 60 to 71 percent, and the food group, by 58 to 79 percent, but the increase in the food group is higher, resulting in cash transfers having a negative effect on labour market participation of 10 percentage points. This effect is statistically significant at the 5 percent level. There is therefore some indication that the increased liquidity provided by cash reduced the need to engage in the wage labour market to finance essential cash purchases.

Another interesting question is whether receiving cash instead of food decreases the need for cash loans or makes it easier to pay back outstanding loans. Results indicate that outstanding loans decreased between the baseline and follow-up surveys for both groups, but slightly more for the cash-receiving households. However, the difference between the groups is not statistically significant.

3.3 Gender and cash transfers

Most decisions regarding the use of cash are taken jointly

One factor that may contribute to cash and food programmes' different outcomes is the control of resources and divergent preferences within households. Gender-related control and preferences are particularly important issues. Decision-making on how to use cash or food transfers within the household may affect the way assistance is utilized. A commonly held perception is that women have more decision power over food while men have more over cash.

All the beneficiaries in the survey were asked for their perceptions of the programme and of how participation in the programme affected their well-being. When the head of household was a man, his spouse was asked the same questions. Table 6.2 reports on these household perceptions, by gender and by whether the household received food or cash.

Table 6.2 Household perceptions of the programme, by transfer type and gender			
	Male household head	Spouse of household head	Female household head
	%		
	Food-receiving households		
Would have preferred to receive cash	45.7	34.1	47.6
Reported that decisions on use of food ration were made jointly by head and spouse	53.5	53.7	
Reported that he/she made decisions on use of food ration	27.0	16.2	
Reported that male adults benefited most from the food ration	7.5	0.8	
Reported that all members of the household benefited from the food ration	85.0	77.3	
Reported that food ration simply replaced food that would have been purchased in the absence of the programme	39.6	33.7	41.0
	Cash-receiving households		
Would have preferred to receive food	54.3	52.7	63.0
Reported that decisions on how to spend the cash transfer were made jointly by head and spouse	63.6	61.6	
Reported that he/she made decisions on how to spend the cash transfer	21.7	12.8	
Reported that male adults benefited most from the cash transfer	2.5	0.4	
Reported that all members of the household benefited from the cash transfer	91.7	83.7	
Reported that less would have been spent on food in the absence of a cash transfer	28.9	27.9	28.7
Reported that less would have been spent on clothing and footwear in the absence of a cash transfer	57.4	52.1	53.5

Source: Tables 6 and 8 in Sharma, 2006a.

While about half – 54 percent – of both household heads and their spouses in male-headed food-receiving households indicated that they made decisions on how to use the food ration jointly, males were more likely to respond that they made the decisions themselves, at 27 percent, compared with only 16 percent of spouses reporting themselves as the decision-maker.

In cash-receiving households, as many as 64 percent of the male household heads and 62 percent of their spouses indicated that decisions on how to spend the cash transfers were taken jointly; 22 percent of the male household heads and 13 percent of their spouses indicated themselves as the decision-maker. These results counter the concern that women lose decision-making power when cash is distributed rather than food.

A similar pattern was found when participants were asked whether the transfers benefited all members of male-headed households: 85 percent of heads and 77 percent of spouses in food-receiving households, and 92 percent of heads and 84 percent of spouses in cash-receiving households responded that all members benefited from the transfer.

To clarify the mechanics of the impacts of food and cash transfers on household consumption, food-receiving households were asked whether the food ration simply replaced food that would have been purchased even in the absence of the programme. The answers reflect no major differences between male and female heads: approximately 40 percent indicated that this was the case. This means that the food ration did not increase the household food consumption level but released resources for other goods and services. In cash-receiving households, fewer than a third of both men and women indicated that they would have reduced food consumption had the cash transfer not been received. In contrast, more than half indicated that expenditures on clothing and footwear would have been less in the absence of the cash transfer.

Household consumption is more diversified when women have control

To study the impact of decision-making power on household consumption, the surveyed households were divided into two groups: those where the spouse of the male household head indicated that she could control the money for food purchases, and those where she could not. 70 percent belonged in the first group. The results suggest that women's control is important for food versus cash transfers. First, households where women have low control spend more on non-food expenditures when they receive cash rather than food. However, expenditure on clothing is always higher when households receive cash, regardless of whether women have control. Second, diets tend to become more diversified when a household receives cash and a woman has control over how

the money is spent. Households where women have high control spent more on cereals and meat, and less on alcoholic beverages and dairy products. Households that received cash consumed less of the basic staple rice, regardless of women's control.

3.4 Beneficiary preferences for transfer type vary by geographical location and gender

When food-receiving beneficiaries were informed that other beneficiaries had received cash rather than food and were asked whether they would have preferred this option, fewer than half of the households responded that they would have. The result did not differ between male-, with 46 percent, and female-headed households, with 48 percent. As reported in Table 6.2, spouses of male-headed households still had a relatively strong preference for food; only 34 percent would have preferred cash, even though earlier results indicated that cash does not seem to affect women's decision-making power.⁵

In the cash-receiving households, slightly more than half, 54 percent, of male household heads would have preferred food rather than cash, compared with 63 percent of female household heads. Although not reported in Table 6.2, the divergence in perceptions among locations was dramatic. In Habaraduwa, the preference for cash was nearly universal, with only 5 percent of the cash-receiving men and women indicating a preference for food, whereas in Manmunai Pattu the preference for food was nearly universal, with 97 percent of men and 96 percent of women preferring it to cash. This preference for food is probably related to the relatively high food prices in Manmunai Pattu, especially for the main staple rice, and because distances to markets are long.

4. Key ingredients of success and lessons learned

4.1. The context was favourable for cash interventions

As well as the lessons learned regarding the impacts of food and cash transfers on household consumption, several other insights of cash interventions emerged as a result of the pilot (Tchatchua, 2006). On the whole, the pilot was considered a success. Several factors contributed to this. First, *the context was favourable for cash interventions*. The CTPP was implemented in a period when economic recovery, rehabilitation and reconstruction had already commenced, and food markets were well integrated. The presence of a comprehensive road network, a sizeable transport sector, large numbers of wholesalers and traders and a large number of active regional markets supported this view. Surpluses in food producing areas met the demand from urban centres and other deficit areas.

Rural markets also had linkages with the central markets for obtaining adequate supplies of imported foods such as sugar and pulses. In general, the markets were not facing any significant bottlenecks and were capable of meeting increased consumer demand. The exception was Korralai Pattu North/Vaharai, which was controlled by the Liberation Tigers of Tamil Eelam (LTTE). Here, an unforeseeable deterioration in security led to restricted goods movement, resulting in higher food prices, which eroded the transfer value.

This highlights the importance of carrying out thorough market assessments before starting a cash intervention, and also the need for continuous monitoring of both the security and the market environments, so programmes can be adapted as necessary. Korralai Pattu North/Vaharai had poorer physical and financial infrastructure and was militarized to a higher degree than the other DS divisions. Prices and transaction costs were therefore higher, leading to a lower real value of the cash transfers compared with other locations. This led to the recommendation that cash transfer rates should be area-specific and be regularly adjusted to market prices. It was also concluded that travel costs should be considered when markets and banking facilities are distant (Campbell, 2006).

A second key aspect of success was that *working through local banks was effective*. The Samurdhi banks were suitable partners because they had previous experience of large-scale cash distributions, extensive geographical coverage, and knowledge of the targeted communities. Bank staff members were trained and – most important – were involved in the design of the disbursement system and coupons. They were efficient, incurred low logistics costs, and accounted for all the cash transferred from the WFP bank account. Nearly all the cash beneficiaries involved in monitoring the process expressed satisfaction with the bank services, although some had to travel long distances to collect their cash entitlements. It was therefore concluded that a feasibility study should include assessment of beneficiaries' physical access to banks, to guide the design of an appropriate delivery mechanism. Assessing the feasibility of mobile delivery mechanisms was recommended for future projects.

Third, *cash was more cost-efficient than food* in all DS divisions. The cash transfer programme was found to be at least 5 percent cheaper to implement when food delivery costs were calculated as landside transport, storage and handling (LTSH) costs and external transport (Campbell, 2006). The lower cost of delivering cash was largely due to low local food prices and the existence of a well-functioning bank network, compared with relatively high costs for moving food. However, this should not be taken as a generalization about cost-efficiency in other contexts; factors such as higher food prices, insecurity and lack of financial infrastructure may make cash deliveries more expensive.

Finally, project management was *successful owing to the pilot's dedicated*

project manager. At the time of project planning, cash programming was a new activity for WFP, which did not have the necessary in-house technical expertise to implement a cash pilot project in Sri Lanka. The relevant skills were therefore sought from outside. An Oxfam GB officer who had been working in tsunami-affected Sri Lanka was seconded as the CTPP manager, and Oxfam also provided technical assistance through a food security and livelihoods adviser.

4.2 Cash has not been mainstreamed owing to political instability

Despite the positive impacts of cash transfers on beneficiaries' food consumption and livelihoods, cash transfers have not been mainstreamed into WFP operations in Sri Lanka owing to political and security challenges. The security situation deteriorated drastically in July 2006, when the 2002 ceasefire agreement between LTTE and the Government of Sri Lanka was effectively abandoned, peace talks failed and regular outbreaks of fighting in the north-east caused large-scale displacements.

This deterioration of the political and security situation, coupled with embargoes and closures of main transport routes significantly hampered goods movement and trade in conflict-affected areas, resulting in food shortages and rising costs for basic commodities. This had serious impacts on the food security and humanitarian situation of the civilian population. In response to needs, WFP launched GFDs, as cash was deemed inappropriate. However, it is believed that WFP Sri Lanka will consider including cash and vouchers in its portfolio as soon as the security situation allows it.

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- ¹ The difference-in-difference method, normally used when beneficiary selection is non-random, was used to measure programme impact. The rationale behind this was that randomization at the community rather than the beneficiary level resulted in statistically significant differences in the demographic profiles of the two treatment groups.
 - ² Review of the results from the evaluation draws extensively on Sharma, 2006a.
 - ³ Expenditures refer to what people spend their money on, and consumption to the quantity of certain food items that people consume.
 - ⁴ The baseline survey coincided with the Muslim Ramadan and the Hindu Diwali holidays. It is therefore not surprising that there was a decrease in food consumption between the baseline and the follow-up surveys. Nevertheless, the randomized design of the cash pilot guarantees that the observed differences in calorie intake and other outcome variables between food- and cash-receiving households can be unambiguously attributed to the receipt of cash transfers.
 - ⁵ It is worth keeping in mind, however, that households' behaviour may differ from what they report.

7

Comparing cash and food transfers: a cost-benefit analysis from rural Malawi

Blake Audsley, Riikka Halme and Niels Balzer

1. Introduction¹

The Cash and Food for Livelihoods Pilot (CFLP) project was a cash and food-for-assets scheme implemented in southern Malawi over the eight months from October 2008 to May 2009, benefiting 11,100 households. CFLP was designed to prevent acute hunger and invest in disaster prevention and preparedness measures by providing cash, food and mixed cash/food transfers in exchange for participation in the construction of community assets, in line with food-for-assets (FFA) activities under a regular protracted relief and recovery operation (PRRO).²

By *randomly* selecting target beneficiaries for the different transfer types, the project aimed to identify how cash can help WFP and similar agencies achieve their food security goals. Although previous studies of cash transfers in Malawi have demonstrated that cash can be an effective tool for both generating investments in human capital (Miller, 2009) and responding to humanitarian needs (Devereux *et al.*, 2007), few have used a randomized method to compare the use of cash with that of food. By taking this unique approach to cash in humanitarian contexts, the CFLP project attempted to produce learning and best practices for guiding appropriate integration of cash into the WFP response toolkit.

This chapter describes the context and design of the cash pilot and discusses the preliminary effects on cost efficiency and effectiveness of the food, cash and food/cash mix employed in Malawi. Baseline and interim survey data give insights into the *short-term effects* of these different transfers on the food security of beneficiary households.

Owing to the absence of follow-up data, crucial aspects such as non-food spending, nutrition, gender dynamics and livelihood outcomes cannot yet be discussed.

2. Context, programme design and implementation

2.1 Food insecurity caused largely by high lean season prices

CFLP was implemented in a context where food security is caused primarily by problems with access to food, owing to high lean season prices rather than lack of food. As the majority of maize farmers in Malawi have only one harvest, many rural households run out of own-production in November and December, becoming dependent on casual labour. As a result, food prices are highest in the lean season from December to February, and lowest during the harvest in April and May. Over the rainy months of the lean season, flood risk is at its highest, and the slow-onset effects of drought in preceding dry months can transform net producers of maize into net buyers. This situation has been aggravated by insufficiently integrated local markets and the impact of distortive government interventions in commodity markets. Vulnerability occurs to varying degrees across the country, but the more densely populated southern region tends to be more vulnerable to both flooding and drought than the northern and central regions.

Malawi has recorded four consecutive bumper harvests of maize, owing in large part to an extensive government-owned fertilizer and input subsidy programme and a streak of favourable weather conditions. While the wider physical availability of maize has resulted in local market surpluses, expanded strategic government stocks, and increased local procurement options for donors, some districts in the southern region of the country remain food-insecure and highly vulnerable to drought-flood cycles. These disaster-vulnerable areas where food is physically available provide an ideal entry point for a cash scheme linked to building assets that reduce disaster risk.

2.2 The programme's three different modalities

Guided by a rigorous feasibility study, the pilot was carried out in the two perennially vulnerable districts of Chikwawa and Machinga, where 56 and 26 percent of the population, respectively, were found to be severely food-insecure owing to poor access to food and localized shocks such as drought-flood cycles. Households in these districts are characterized by small landholdings of less than 0.8 ha and undiversified livelihoods. Their main income source, *ganyu* or casual agricultural labour, contributes 78 percent of their total income. Households

own few assets, and live far from but are highly dependent on markets, especially for cereals (WFP 2008a). Within the districts, five Traditional Authority (TA) sub-districts were targeted: 44 group village heads (GVHs) within each TA were randomly assigned to receive a cash transfer, a standard in-kind food transfer, or a mixture of the two. The numbers of households targeted were 3,542 for cash, 3,552 for food, and 4,006 for the mix, totalling 11,100 beneficiary households.

CFLP leveraged the existing capacity of local civil society and the private sector to implement the project: World Vision International (WVI) and Emmanuel International (EI) provided beneficiary targeting, capacity building and monitoring; and the Malawi Savings Bank (MSB) acted as the financial intermediary and delivery mechanism for cash transfers. MSB, which had won a competitive tendering process, issued a bank account and a biometrically encoded smartcard to each cash and mix beneficiary. Groups of beneficiaries could arrive at a bank branch at any time, and make withdrawals via their smartcards or withdrawal slips. The value of the cash transfers was based on the value of the WFP food basket, monitored daily at local markets and government-run grain reserve depots.³

Beneficiaries living more than 15 km from a MSB automatic telling machine were given an additional travel allowance of MK 100 (approximately US\$0.70). To avoid continuing the cash transfers when high and rising food prices made them cost-inefficient, an embedded price threshold was designed to switch cash beneficiaries to food, so that cash transfers would not exceed the full cost recovery to WFP of a food basket under the PRRO. In the event, this threshold was not triggered. Food beneficiaries received 50 kg of cereal and 5 kg of pulses a month, at a nearby final distribution point (FDP). Mixed beneficiaries received the local market value of the cereal ration in cash, and the pulse ration in-kind; the cash component was collected at the bank, and the food component at an FDP. The project intended that cash disbursements would occur monthly throughout the eight-month pilot.

A monitoring and evaluation system was designed by the International Food Policy Research Institute (IFPRI) to track changes in three food security indicators: the food diversity score; the food consumption score; and the food consumption group, which is referred to hereafter as the threshold. The food diversity score measures the frequencies with which a range of food groups are consumed over a seven-day period. This provides the basis for the consumption score, which applies WFP-standardized weights to the food groups. The food consumption groups are the category threshold scores by which poor, borderline and acceptable food consumption scores are classified (WFP, 2008b).

2.3 Innovations pose challenges: complications during implementation

Despite careful planning, several unforeseen obstacles emerged during the pilot and complicated implementation of the original project design. These related to breaks in the cash pipeline and problems for beneficiaries withdrawing cash.

The first challenge was a break in the cash pipeline. Based on local food prices, cash was to be distributed to each beneficiary account once a month, for a total of eight transfers. Because of the large amount of this purchase request however, both the local country office and the regional bureau had to take action.⁴

Complications also arose with the integration of MSB into the financial accounting system. As an increasingly complicated flow of funds had to be authorized, payments to beneficiary accounts were delayed. In the end, cash was not distributed for the first three months of the pilot. In the third month, food was distributed in lieu of cash to the cash and mixed beneficiary groups. In the fourth and fifth months, those receiving cash received their monthly entitlement plus the missing entitlements from the first two months. During the remaining months, cash distributions proceeded as planned.

The timeliness of cash transfers had important implications on beneficiaries' financial situation. In expectation of the transfer, many cash beneficiaries took out loans with local moneylenders, at monthly interest rates ranging from 25 to 50 percent. When the CFLP transfers failed to arrive, many borrowers were forced to extend the periods of their loans. These debt obligations had two noteworthy effects: the most easily observed was that the outstanding debt obligations created by the late delivery eroded the real value of the cash transfers to beneficiaries, while the second, less easily measured effect was that erosion of the real transfer value and uncertainty about the transfers' arrival may have forced beneficiaries to resort to coping strategies and livelihood activities that have negative impacts on food security.

Although the pilot was designed to enable beneficiaries to withdraw funds at any time, this did not occur in practice. The flexibility of beneficiary withdrawals was poorly communicated within MSB, where tellers at some branches assumed that beneficiaries could withdraw only on the day when the funds were released to the individual accounts. Some beneficiaries were turned away by tellers and told to return on the date when the funds arrived in the accounts, imposing additional travel expenses. The situation was aggravated by technical problems in many of the most remote bank branches, where problems of connectivity to the main server, power cuts, and broken card swiping machines or fingerprint readers caused further delays in serving the cash beneficiaries. In effect, cash ended up being collected in much the same way as a food

distribution, with groups of beneficiaries showing up on the same day. Because many households needed to buy food immediately after receiving the cash, many grain traders were able to capitalize by temporarily increasing prices above the market value, forcing many beneficiaries to purchase food at inflated rates.

In addition to the cash pipeline break, a food pipeline break also occurred. Maize grain was the planned commodity for distribution to the food and mixed transfer groups. However, by December the WFP warehouse had insufficient maize stock, and some recipients received rice instead of maize grain. Rice was also distributed to some beneficiaries in the last two months of the pilot. Because rice has a much higher local market value than maize grain, transfers to beneficiaries within and among the different transfer groups were not of equal value during these months.

3. Cash improves food security but is expensive relative to food

3.1 Cash households show considerable improvement in food consumption and diversity

Analyses of baseline and interim household survey data collected for the pilot suggest that there is substantial divergence in the food security indicators for food, cash and mixed groups.⁵ The following standard WFP food security indicators were used to assess project impact:

- *Food consumption score*: A weighted diet diversity score calculated from the frequencies of consumption of different food groups by a household during the seven days before the survey. Each food group's frequency is capped at seven and multiplied by a standard weight designed by WFP's Vulnerability Analysis and Mapping (VAM) Unit.
- *Food diversity score*: The unweighted number of food groups consumed over the seven-day reference period.
- *Threshold, or food consumption group*: A classification of food consumption scores. Typical thresholds are used in this analysis: poor < 21; borderline 21.1 to 35; and acceptable > 35.

As indicated in Table 7.1, food consumption increased from its baseline level by approximately 20 percent for the food group, 50 percent for the cash group, and 33 percent for the mix group.⁶ These effects were all statistically significant. Although not reported in Table 7.1, the differences *among* treatment groups indicate that consumption scores increased in the cash group by 23 percent more than in the food group, and by 14 percent more than in the mixed group. These results suggest that more heavily weighted, protein-rich food groups are

consumed when purchasing flexibility – cash – increases. Although this outcome cannot be detected for dairy products and pulses, it was observed that both cash and mixed groups consumed significantly more dairy products and pulses after the transfers than did those who received food.

Table 7.1 Changes in food security indicators for different transfer groups

% change in food security indicator			
Transfer	Food consumption	Food diversity	Consumption group
Food	20% *	-2%	11% *
Cash	50% *	24% *	26% *
Mixed	33% *	12% *	21% *

* = significant at the 1 percent level.

Source: Calculated from baseline and interim household surveys.

Cash and mixed transfers also had significant impacts on dietary diversity. Diversity scores (Table 7.1) increased by 24 percent for the cash group and 12 percent for the mixed group, while the food group did not have any statistically significant change. Cash increased diversity by 27 percent more than food and by 12 percent more than mixed transfers, while mixed transfers increased diversity by 14 percent more than food transfers. The average number of households reporting meat consumption was significantly higher in the cash group than in the food or mixed groups. These scores emphasize that the purchasing flexibility of cash can allow households to broaden their food choices.

Threshold scores, which describe households' food consumption level, also demonstrate the effectiveness of cash. Cash households improved their threshold scores by 26 percent and mixed households by 21 percent, while the food group's threshold scores increased by only 11 percent. Threshold scores for cash were 15 percent higher than those for food, which is statistically significant. This indicates that cash can move recipients from a poor to a borderline, or a borderline to an acceptable classification of food consumption better than food can.

3.2 Cash can be more costly than food

The data suggest unequivocally that cash improves food security indicators more than standard in-kind food transfers do. However, aid agencies selecting the most appropriate delivery mechanism must also consider costs: which treatments are more cost-effective, and which are more cost-efficient?

Cost effectiveness is calculated from the cost of raising a given food security indicator by 1 percent of its baseline value. To measure *cost efficiency*, an Alpha-value is calculated, which measures the cost for every US\$1 equivalent of cash or food received by the beneficiary.⁷ This analysis uses the total programme cost attributable to each transfer type, including the costs of the commodity and administrative and operational expenses. It assumes that the one-off costs for cash and food are the same, i.e., the start-up costs for a new cash programme are not considered. It is assumed that both food and cash beneficiaries must be targeted and identified, and that cash beneficiaries must be registered by financial institutions. Three scenarios are considered: (i) calculates what was actually observed: (ii) assumes there was no break in the food pipeline; and (iii) assumes there was no break in the food or the cash pipelines.

Table 7.2 Costs of increasing food security indicators by 1 percent			
Transfer	Food consumption	Food diversity	Consumption group
Food	\$46 230	\$622 726	\$84 099
Cash	\$19 451	\$40 284	\$37 698
Mixed	\$31 844	\$86 753	\$50 952

Source: Calculated from baseline and interim household surveys.

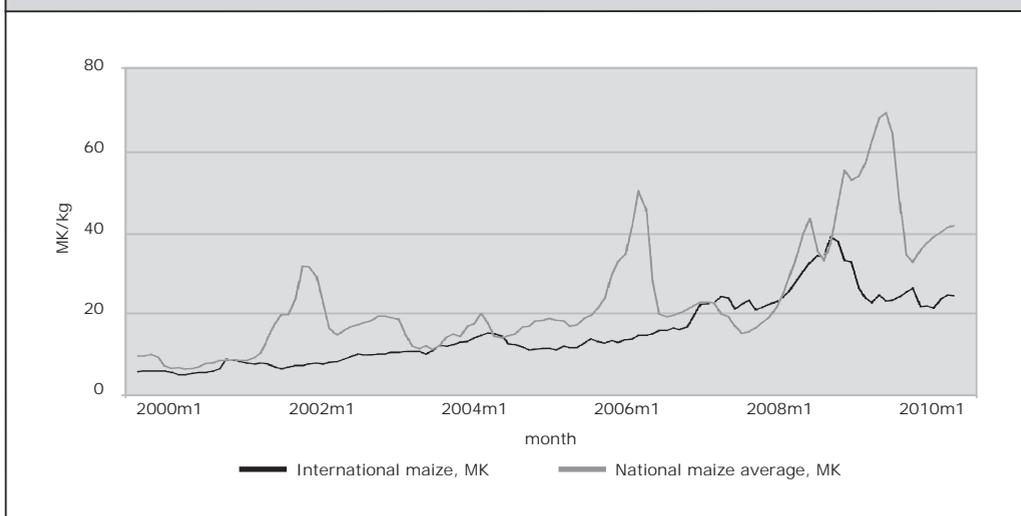
In terms of *cost effectiveness*, the benefits of cash are once again obvious. As indicated in Table 7.2, the programme costs required to raise the three food security indicators by 1 percent of their baseline values is substantially lower for cash than for food or mixed transfers, across all three indicators. Measures of *cost efficiency*, shown in Table 7.3, yield different results. In all scenarios, food has a higher Alpha-value – is more cost-efficient – than cash or mixed transfers. This means that the programme cost of the total local market value of the food and cash delivered to each transfer group was lower for food than for cash and mixed transfers. Such a result immediately gives pause, as conventional thinking is that it should be cheaper to deliver cash than food.

Table 7.3 Alpha-values under different scenarios

Transfer	Observed	No food pipeline break	No food or cash pipeline break
Food	1.35	0.93	0.87
Cash	0.99	0.86	0.76
Mixed	0.98	0.88	0.78

Source: Calculated from baseline and interim household surveys.

How can this curious result be explained? Local price volatility and the resulting market integration may shed light on the behaviour of the Alpha-value. If local markets are integrated with international markets, a co-movement of prices is observed. This is not the case in countries such as Malawi, where there are pronounced price variations between seasons. While international food commodities have demonstrated high volatility in recent years, international medium-run maize prices have increased more gradually than their Malawi equivalents. Although Malawi maize price volatility does not mean that prices are easily predictable, patterns in price *seasonality* are predictable; as shown in Figure 7.1, lean season price spikes are clustered around the month of January.

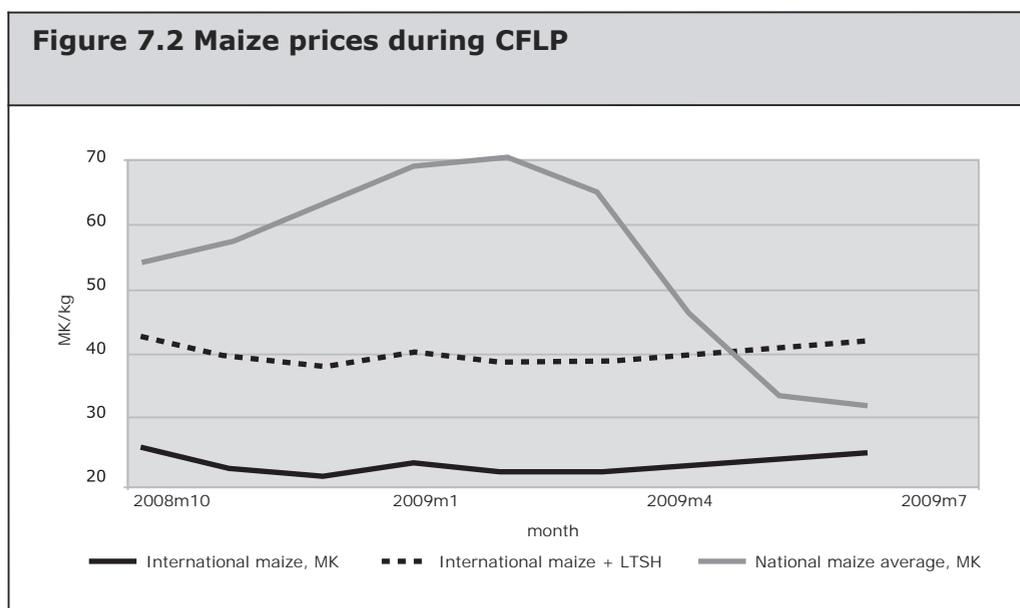
Figure 7.1 Local-international market integration

International maize prices are for US No. 2 yellow, Gulf free on board (FOB).

Sources: Government of Malawi, Ministry of Agriculture and Food Security Retail Price Survey data; and FAO Global Information and Early Warning System on Food and Agriculture (GIEWS), 2009.

The lack of price co-movement – the poor integration – particularly at the beginning/end of the year, means that under the right conditions, agencies can buy low and *transfer* high. If non-local purchase is mandated because local prices exceed import parity, the price for which commodity is procured FOB may differ greatly from the commodity's value on the local market at certain times of the agricultural cycle. If the difference between the WFP purchase value and the recipient transfer value is large enough, such price differences can negate the operational cost savings that make cash attractive.

Figure 7.2 shows observed international maize prices and Malawi's national average maize price during the CFLP project. The Malawi national average represents the local transfer value, the international price is the FOB commodity cost, and the international price plus landside transport, shipping and handling (LTSH) costs is the procurement cost to WFP.⁸ As Figure 7.2 shows, the local transfer value is well above the FOB price. The further below the local market value the FOB cost is, the more flexibility WFP has in terms of operational costs. The difference between the local value of the transfer to beneficiaries – in this example the national average price – and the actual cost to procure commodity internationally is the operational slack. If the local price is high enough, it may exceed the commodity purchase and transportation costs, providing a monetary gain in resource value.



International maize prices are for US No. 2 yellow, Gulf FOB.

Sources: Government of Malawi, Ministry of Agriculture and Food Security Retail Price Survey data; and FAO GIEWS, 2009.

This analysis highlights an important distinction between food and cash. While food can at times be procured at such a low price that its FOB and transport costs may sum to be *less* than the transfer value, cash plus operational costs will always sum to *more* than the cash's transfer value. Giving a beneficiary US\$1 in cash will always require US\$1 plus the operational costs to deliver that US\$1, however low those costs might be. In other words, while food can have an Alpha-value greater than 1 under some circumstances, cash cannot. This does not mean that food is always more efficient than cash, but rather that the efficiency of cash can be more sensitive to operational costs.

Examining prices during the peak lean season in February provides further illustration. WFP procured maize internationally at US\$306.00/mt, while the local value of the same commodity was US\$575.77/mt, 88 percent higher than the FOB cost. Even after factoring in LTSH, WFP costs increased to just US\$426.68/mt. After taking into account transportation, the local value was still 35 percent higher than WFP's costs. The situation changed drastically in just a couple months, however, when the harvest occurred and local prices experienced their typical return from lean season highs. In April, local prices were US\$343.87/mt, 40 percent lower than their February high. WFP procured FOB at US\$275.00/mt, and LTSH increased costs to \$395.68/mt. With local prices plummeting, the WFP commodity costs were greater than the local value of the resources transferred to beneficiaries, even with decreasing international prices. This highlights the important role of local price volatility in cost-efficiency considerations.

4. Implications and challenges for the future

4.1 Cost effectiveness versus cost efficiency

Does it really matter that food has a higher Alpha-value than cash, given that cash is more effective? If US\$1 of cash can do more than US\$1 of food, it may not be pertinent to consider Alpha-values. While CFLP transferred more resources in monetary terms to the food beneficiaries, the cash beneficiaries had more significant increases in food security. In addition, the reason why food was more efficient – poor market integration – is a contributing factor to food insecurity in many parts of Malawi. In other words, food's *efficiency* resulted from the market's *inefficiency*.

Solving the efficiency disparity between food and cash suggests that cash efficiency could be increased by lowering administrative and operational costs. While transferring money from one location to another is cheaper than moving commodity overland, the targeting, registration and identification costs associated with starting up a cash scheme can be substantial. Targeting and

registration are enormous undertakings for even the most capable partners, especially in cultures where beneficiaries might have two names – in Malawi, these would be in the local language, Chichewa, and the colonial language, English. Registration problems abound. The identification of registered beneficiaries can also impose sizeable costs; smartcards with biometric fingerprint identification can be extremely costly. However, CFLP was able to minimize these costs because the financial institution, MSB, was both an implementing partner and a service provider, so absorbed and offset some costs. The potential for increasing the operational efficiency of cash transfers is minimal, or associated with the one-off start-up cost, so cash efficiency, at least operationally, does not seem to be the problem. Rather, it is food transfer efficiency that is at issue. Ironically, food is the most cost-efficient transfer precisely because of the market failure to which it responds.

These findings have additional implications for the full-cost recovery (FCR) mechanism. As noted earlier, an FCR mechanism was embedded into the programme, so that cash beneficiaries would switch to food when the price of transferring cash became too high. One of the important aspects of the pilot is that beneficiaries received transfers of equal value – the values of the cash and mixed transfers were equal to that of a full food ration. Assuming that intended transfer values are equal, this means that the determinant of efficiency, or the Alpha value, is solely cost: $\text{Alpha} = \text{total transfer value} / \text{cost}$. The cheapest modality is, by definition, the most efficient, which was food. However, if food was the most efficient, i.e., the cheapest, the FCR mechanism should have triggered, switching from cash to food when cash became more expensive. This did not occur because although the additional costs of distributing food to the cash and mixed groups in December were recorded as a food commodity cost, the efficiency calculations performed here record them as a cash cost – being units of value transferred to cash beneficiaries. Had the additional food requirements distributed to cash and mixed groups been recorded as a cash expense during the pilot, the costs of cash would have been significantly higher than those recorded, and the FCR mechanism would have been triggered.

The aim of FCR is to ensure that limited resources are fully utilized but, as this study shows, this may mean sacrificing effectiveness for efficiency. FCR prevents a more expensive modality, cash, from replacing a cheaper one, food, as an emergency response tool. However, this analysis has demonstrated that cash is significantly more effective than food at improving food security indicators. The point at which cash transfers are the most expensive transfers for relief organizations – when local prices spike – is when households are the most food-insecure. So FCR in effect switches from a more effective modality to a less effective one, precisely when households are in greatest need.

This suggests that FCR thresholds need to be re-evaluated to take into account the added effectiveness of cash over food. The FCR mechanism should switch only when the costs less the net benefits of cash are greater than those for food, rather than by considering only the costs. A new mechanism might take into account the cost of the difference between the percentage changes in food security indicators brought about by cash compared with food, using food, economic multipliers, diminishing marginal returns to food and cash responses, etc. In other words, cash programming utilizing FCR needs to be more dynamic and have a broader scope than simply evaluating modalities based only on costs. A new FCR mechanism is particularly necessary in poorly integrated markets where the price spikes that cause food insecurity make cash operationally less competitive than food.

4.2 Challenges in responding to cyclical food availability

Although cost issues are of great concern operationally, agencies must not lose sight of long-term programme effects. For CFLP beneficiaries, food insecurity is inherently linked to the loss of purchasing power in the lean season. This seasonality stems from not only a pronounced dry season, but also high post-harvest losses and inadequate storage, lack of irrigation infrastructure, undiversified household incomes, etc. Choosing the appropriate humanitarian response for each case, whether it be with food, cash or mixed transfers, should consider not only the effectiveness and efficiency of the transfers, but also the long-run sustainability of the asset building programmes that aim to help smooth this cyclical food availability and build resilience. Unfortunately, as mentioned at the beginning of this chapter, it is still too early to evaluate CFLP in terms of disaster risk reduction and agricultural development. Questions that might be of particular interest for future interventions are whether or not the type of transfer changes the incentives to work on asset building programmes and/or the quality and sustainability of the assets built.

4.3 Improving the way cash transfers are used

Preliminary lessons distilled from the CFLP project shed light on important considerations for future interventions, for both the Malawi County Office and WFP as a whole.⁹ One of these lessons is that coordination is of the utmost importance in cash transfer projects. During CFLP implementation, WFP's capacity was limited by a lack of good practices and agency guidelines on how to integrate finance and programme units at the country office, regional and Headquarters levels. WFP's learning in this area has made dramatic strides over the past year, so cash delivery mechanisms will now be able to deliver transfers to beneficiaries in a more timely and effective manner. This is important, as

CFLP has demonstrated that failure to deliver expected transfers can result in beneficiaries resorting to unproductive coping strategies.

Finding innovative ways to link cash-for-asset interventions with micro-lending or group savings schemes could be an effective way of leveraging the value of transfers made to beneficiaries. Related to this, continuous beneficiary capacity building must be a priority activity for rural beneficiaries with little banking experience. Education and empowerment are the keys to effective use and management of cash transfers. This was addressed in the CFPL project by providing financial education to the beneficiaries, who were shown how to use bank cards and trained on savings and bank services.

As cash transfers are used increasingly to respond to chronic and transient food security needs, agencies must continue to find new ways of making cash distributions to beneficiaries effective. One of the reasons for choosing MSB to provide financial services was because it has a wider cash distribution network in rural areas than its competitors; expanding such networks could increase the cost-efficiency of cash programmes, while lowering the transport and opportunity costs imposed on beneficiaries. Agencies in Malawi are currently exploring ways of using networks of private retailers to distribute cash, as has been successful in other regions. Distributing resources closer to target villages can have community-wide benefits beyond those accruing to individual households.

¹ The authors wish to thank Anthony Makaluni, Susanna Sandström and Dorothy Tembo.

² Based on a report by Balzer and Gentilini (2006) and on the 2007 appropriateness and feasibility assessment (WFP, 2007c), the WFP country office decided to design and implement CFLP. The initial process was supported by the WFP Special Initiative on Cash and Voucher Programming in Southern Africa, the German government and the Swedish government, whereas the actual implementation was made possible through a grant from the Government of the Kingdom of Saudi Arabia.

³ The Agricultural Development and Marketing Corporation (Admarc) is a para-statal body that buys grain from and sells it to farmers at fixed prices.

⁴ As the pilot was one of the first it had implemented, WFP invested significant time and efforts in scrutinizing and verifying various operational and contractual procedures.

⁵ With 1,239 observations, the baseline survey was larger than the interim survey, with 293 observations. Financing constraints have delayed a final survey of CFLP households, but the interim survey was conducted in April, during the seventh month of the eight-month project, so the interim data should provide a reasonable approximation of final short-run project outcomes.

⁶ As the baseline and interim surveys conducted by IFPRI are cross-sectional, the change between the two surveys is not household-specific. Means comparisons of transfer group indicators are therefore the most logical statistical tool for this analysis. A two-sample comparison of means was used to test the significance of the differences in indicator means within and among transfer groups. As programme placement was randomized and the differences in baseline indicators among transfer groups are not statistically significant, a comparison of post-transfer indicator means among transfer groups should be sufficient for comparing the different changes in food security indicators of the different groups.

- ⁷ For the purpose of the cost-benefit analysis in this chapter, the Alpha-values are calculated as the ratios of the market transfer values (food, cash or a combination of the two) to the costs for WFP to providing that transfer. The method differs from the standard Alpha-value calculation in WFP that takes the ratio of the local market price of a food basket and the costs for WFP to providing that basket.
- ⁸ An approximated average LTSH rate of US\$120/mt is added to the international price. Although national and international costs approximate local and FOB prices only roughly, they serve as reasonable proxies for demonstrating the intuition.
- ⁹ WFP is in the process of producing a comprehensive lessons learned paper (WFP, 2010b). This consolidates information from the baseline survey (Sharma, 2008), interim evaluation (Sharma, 2009), cost analysis (WFP, 2010a), and an *ex-post* impact evaluation.

8

Climate change and weather risk management: evidence from index-based insurance schemes in China and Ethiopia

Niels Balzer and Ulrich Hess

1. Introduction

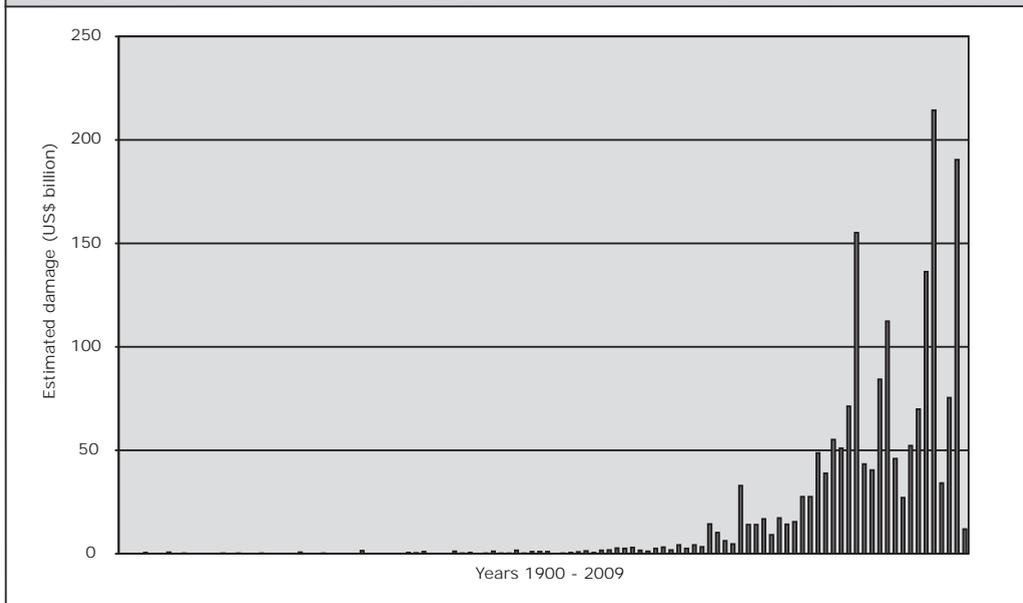
This chapter introduces and reviews WFP’s weather index-based insurance pilot schemes at both the macro and micro levels in Ethiopia and China. It argues that although index insurance is not a “one-size-fits-all” solution for risk management, it can – when combined with existing disaster risk reduction projects – make important, market-based contributions to sustainable safety nets and agricultural growth in the rural areas of developing countries. In collaboration with insurance companies, governments and agencies such as WFP can play crucial roles in enabling and facilitating the start up of such insurance interventions.

The chapter first explains why managing risk rather than managing crisis has become an integral part of WFP’s climate change and disaster risk work. It then explores the possibilities for using weather index-based insurance to manage agricultural risks, along with the limitations. This is followed by descriptions of WFP’s experience of index-based insurance approaches at the local and national levels in Ethiopia and China. Good practices for success are identified and briefly discussed before preliminary conclusions regarding the sustainability and scalability of index-based risk transfer mechanisms in WFP’s work are examined.

2. Weather related disasters threaten food security

Gains in development are at increasing risk from a variety of threats, including climate change-induced disasters (WFP, 2009g), which can exacerbate poverty, especially in the developing world (Dercon, 2004; Hansen *et al.*, 2004). For example, the intensity, amount, frequency and type of precipitation are tending to result in more frequent catastrophic events such as droughts, floods and tropical storms. Ecosystem degradation, chronic poverty and unplanned urbanization underpin this growing risk of devastating disasters. By 2030, these looming risks are forecast to cause average losses of about 12 percent¹ of developing countries' gross domestic products (GDPs), but cost-effective risk reduction measures could reduce this figure by more than 50 percent (ClimateWorks Foundation *et al.*, 2009).

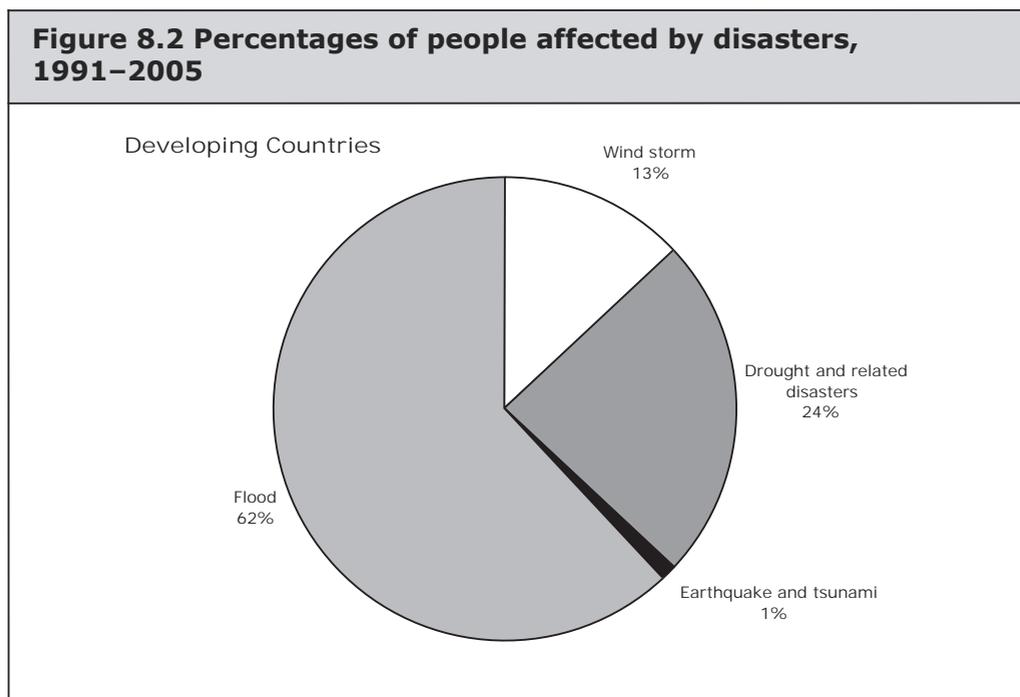
Figure 8.1 Estimated damage caused by reported natural disasters, 1900 to 2008



Note: Excluding technological disasters, i.e., those caused by neither weather nor natural forces, although these may be contributing factors.

Source: EM-DAT: OFDA/CRED International Disaster Database, Université Catholique de Louvain, Brussels. www.emdat.be.

Changing weather patterns are undermining the resilience of poorer communities worldwide. Where there are no functioning safety nets to help them absorb loss and recover from disaster impacts, these people often adopt negative coping strategies that aggravate climate risk exposure. The combination of increasing hazard risk and decreasing resilience constitute one of the major causes of food insecurity and hunger in poorer communities (UNISDR, 2009).



Source: EM-DAT: OFDA/CRED International Disaster Database, Université Catholique de Louvain, Brussels. www.emdat.be.

As illustrated in Figure 8.2, between 1991 and 2005, 85 percent of all the people affected by natural disasters recorded in developing countries suffered the effects of drought or flood.²

Among the population groups with increased vulnerability to droughts and floods are smallholder farmers and day labourers. As well as the impacts of a changing climate, they face a variety of market and production risks that make their incomes unstable and unpredictable throughout the year and from one year to the next. Farmers also face the risk of catastrophe: crops may be destroyed by drought or pest outbreaks; product prices may plummet because of adjustments in local or world markets; and assets and lives may be lost to hurricanes, fires

and floods. The types and severity of the risks confronting farmers vary by farming system, agro-climatic region, and policy and institutional setting, and they are particularly burdensome to small-scale farmers in the developing world. When not adequately managed, agricultural risks slow economic development and poverty reduction, and contribute to humanitarian crises.

For many decades, risk transfer mechanisms such as insurance schemes have been used to manage risk by transferring it to third parties with more stable financial bases. Historically, this has enabled economic growth, and it is now also being considered as a tool for risk management and risk reduction in developing countries. The Hyogo Framework for Action³ and the Bali Action Plan⁴ clearly spell out that “risk sharing and transfer mechanisms such as insurance” are an important element in “disaster reduction strategies and means to address loss and damage associated with climate change impacts in the developing countries that are particularly vulnerable to the adverse effects of climate change” (UNISDR, 2005: 11).

3. Agricultural risk and weather index insurance

A review of the risks arising in agriculture, and of the ways in which they are managed by farmers, rural communities, financial institutions, farm input suppliers, private insurers and relief agencies, reveals the special difficulties and costs that covariate risks pose, especially those involving catastrophic losses. Past attempts by governments and relief agencies to assist the management of covariate risks have been costly and often ineffective. There is now much interest in index insurance⁵ products that might provide a more effective and market-mediated solution (Hess and Hazell, 2009).

Weather index insurance is designed to trigger compensation against specific hazards such as droughts or floods, which are predefined and “indexed”. Typically, these insurance contracts are non-indemnity and parametric, i.e., they are not linked to actual losses.⁶ Rather than assessing the damage to a crop, claims are settled on the basis of a simple and transparent index, such as rainfall measured at a nearby weather station. Experience has revealed that this can be a valuable tool for unlocking rural credit and hence improving rural livelihoods.⁷

In contexts involving rural smallholder farmers, weather index products have distinct advantages over traditional crop insurance: by using the same index and premium rate for everybody in an area, they avoid adverse selection and moral hazard problems; the mechanism is simple, transparent and easy to administer, especially when weather stations are automated; and payouts are triggered immediately and usually reach insurees within a few weeks of the end of the contract (World Bank, 2005b: 15 ff).

There is a fundamental distinction between *protection* insurance, which is designed to help poor people protect their livelihoods and assets, and *promotion* or *development* insurance, which is designed to help households with viable farm businesses manage their risks.

Insurance that *protects* lives and assets from catastrophic losses inevitably has to be subsidized, and requires special delivery channels that should be aligned with relief rather than development interventions, for example, non-governmental organizations (NGOs) and public relief agencies.

Insurance that *promotes* agricultural development can be channelled through private intermediaries, but is unlikely to sell unless it is subsidized or promotes farmers' access to new productivity enhancing technologies or high-value markets that can raise their incomes significantly. There are many opportunities for this in developing countries, where risk and incomplete financial markets hinder small farmers' access to financial markets, modern inputs and high-value market chains (Hess and Hazell, 2009).

As well as benefiting farmers directly at the micro level, index insurance products can also act at the meso and macro levels (Table 8.1).

Table 8.1 Levels of weather index insurance for agriculture	
Level	Comments
Macro	For highly correlated risks, a global system for diversifying risks geographically can help ensure the viability of insurance systems in a country or region. A government, institution or international charity might use index insurance for a disaster relief fund or to fund relief activities after a natural disaster.
Meso	In meso-level index-based insurance schemes, a reinsurer makes payouts to national banks or NGOs, so that they can respond to economic losses resulting from natural disaster.
Micro	Micro-level index-based insurance for agriculture targets farmers or herders – livestock index-based insurance. Coverage is usually provided by local insurance companies; premiums are either paid in full by clients or subsidized, depending on whether the objectives are promotion or protection.

Sources: MCII, Germanwatch and UNU-EHS, 2008; UNFCCC, 2008.

The macro level refers to the international/regional reinsurance⁸ market, while the meso level looks at weather index insurance for national governments, to facilitate the timely availability of adequate funding for disaster response activities. Micro-insurance is characterized by low premiums or coverage and typically target lower-income individuals. The following sections explore two WFP micro-level insurance pilot projects in China and Ethiopia in 2009, and a macro-level experience in Ethiopia.

4. Ethiopia macro-level index insurance pilot 2006

Macro-level insurance can be used by governments to ensure the provision of critical services in the case of weather and other shocks. A well known example is the WFP Ethiopia disaster insurance pilot project of 2006.

Although impending drought-related severe food insecurity can be detected with early warning systems, Ethiopia's disaster response mechanism currently requires evidence of hungry people before donors are approached for appeals, let alone relief is provided. There is therefore an opportunity to act early and prevent some of the anticipated impacts. Index insurance payouts can be a tool for triggering timely relief funds, making disaster response more effective and cost-efficient. Since 2006, the Ethiopian government has been committed to shifting from post-disaster relief to risk management as an approach to emergency response (Hess, Wiseman and Robertson, 2006).

The rationale for such an initiative is clearly explained by Barrett (2006):

Individuals and communities are resilient. Given the resources to manage shocks while they still have time to do so, crises can often be averted through early preventive response by donors (...) massive deliveries of food aid are often unnecessary if timely delivery of appropriate resources are made available in order to equip communities and vulnerable households with the means to manage the oncoming shock before the collapse into crisis.

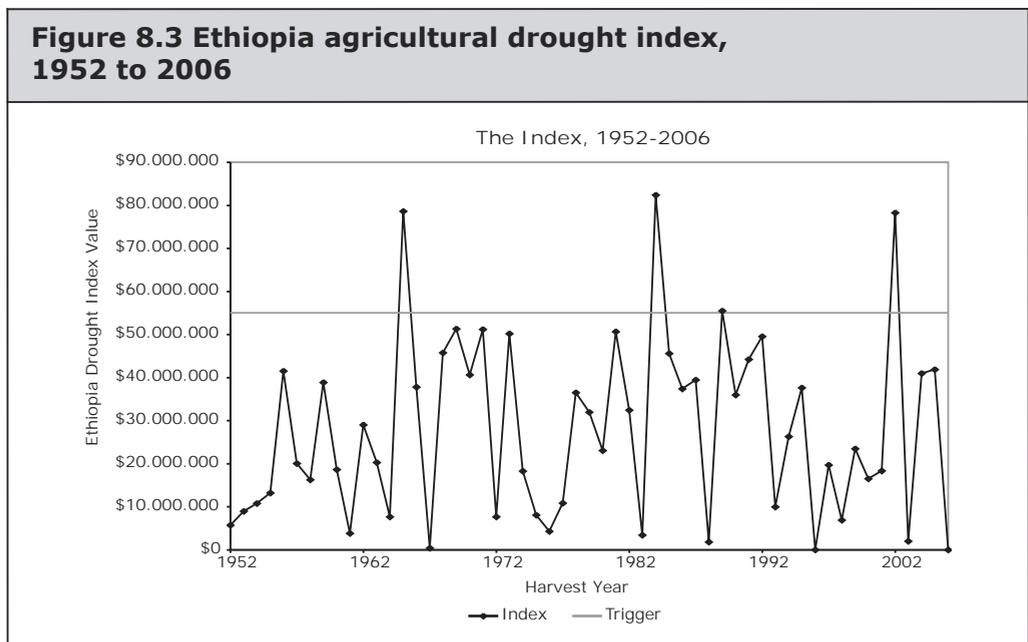
In 2006, with the support of WFP and the World Bank, the Ethiopian government implemented the first index-based national disaster insurance programme of its kind. The mechanism targeted an estimated 5 million transiently food-insecure people, who face food insecurity risk when drought strikes, but are usually able to sustain themselves under normal weather conditions. These people are also beneficiaries of the Productive Safety Net Programme (PSNP, chapter 20).⁹ The seasonally food-insecure risk becoming chronically food-insecure if they do not receive timely support during drought conditions, as they are forced to

resort to negative coping strategies, such as the sale of productive assets. Drought index insurance that releases adequate funds on time, is therefore of great importance and may make the PSNP effective and manageable.

AXA Re, a Paris-based reinsurer, won the insurance tender for the pilot project using a sophisticated index based on Ethiopia's historical rainfall and agricultural output. The premium was set at US\$930,000 for a maximum payout of US\$7.1 million. WFP entered the contract on behalf of the Ethiopian government, and the major part of the premium was covered by the United States Agency for International Development (USAID).

The reinsurer and WFP used historical rainfall data from the Ethiopian National Meteorological Agency (NMA) and a crop-water balance model to develop the Ethiopia Agricultural Drought Index (EADI), which had a correlation of about 80 percent with the number of food aid beneficiaries between 1994 and 2004. Analysis of the historical data revealed a one in 20 probability of catastrophic drought in Ethiopia, as occurred in 1965, 1984 and 2002.

During the 2006 main crop season, the Meher,¹⁰ 26 weather stations across the country measured normal rainfalls. These were confirmed by cross-checks with remote sensing techniques. Field observers also reported that the index captured the rains and crop growth patterns accurately. There was therefore no payout in 2006, owing to favourable weather conditions. As seen in Figure 8.3, the drought index trigger value of US\$55 million was not reached.



Source: WFP, 2006e.

One of the greatest challenges related to the accuracy of input data for calibrating the 2006 model. This so-called basis risk was caused by a discrepancy between sowing periods and actual farming practices. For instance, owing to slightly delayed rains, the traditional cereal teff was sown later than in the model used to calculate the trigger, and therefore the payout. To avoid such discrepancies, more detailed and accurate information on actual sowing periods and growing cycles should be integrated into any future model (Hellmuth *et al.*, 2009).

Despite the challenges, the pilot project revealed that: (i) it is feasible to use market mechanisms, such as the AXA Re partnership, to finance drought risk in Ethiopia; (ii) it is possible to develop transparent, timely and accurate indices for triggering drought-related emergency funding; and (iii) the time is right for facilitating predictable *ex-ante* resources that allow governments to put contingency plans in place, which in turn permit earlier and more productive response to shocks – i.e., managing risk rather than managing crisis (Hess, Wiseman and Robertson, 2006).

Building on the 2006 experience, in 2007, WFP, the Government of Ethiopia, the World Bank and the United Kingdom's Department for International Development (DFID) expanded the concept by designing a comprehensive drought risk management framework that includes risk financing. The World Bank piloted the risk financing component of this framework with a US\$25 million contingency grant, which was triggered by WFP's EADI owing to failure of the 2008 short season rains – the Belg.

At the same time, WFP and the Government of Ethiopia, in partnership with the World Bank, brought to life the Livelihood, Early Assessment, Protection (LEAP) project. LEAP is both an approach and a software based on a water balance model. Studies by the Food and Agriculture Organization of the United Nations (FAO) show that the Water Requirement Satisfaction Index (WRSI) model can be related to crop production using a linear yield reduction function specific to a crop (Doorenboos and Pruitt, 1977). It is particularly successful in capturing the crop's response during drought (Senay and Verdin, 2002).

The software allows users to quantify and index the drought and excessive rainfall risk in a particular administrative unit of Ethiopia. LEAP can then be used, for example, to monitor this risk and guide disbursements for a PSNP scale-up. LEAP uses ground and satellite rainfall data to calculate crop production estimates, and subsequently livelihood stress indicators for vulnerable populations who rely on rainfed agriculture. Based on these, it then estimates the financial magnitude of the livelihood saving interventions that these people will need in the event of a weather shock. In this way, LEAP provides a good proxy estimate of the funding needs for protecting transiently food-insecure people's livelihoods at the time of a shock, by using an

independent, objective, verifiable and replicable index of livelihood stress in the country. It conveys this information in near real-time, to ensure that the response to a livelihood crisis is as timely and effective as possible. It is similar to a more developed and integrated EADI.¹¹

Currently, the Government of Ethiopia and donors are negotiating the third PSNP for 2011–2014. The World Bank is introducing a US\$160 million risk financing component into the PSNP and has asked WFP to design, and integrate into LEAP, sub-national drought, flood and pastoralist indices for this component, ready to trigger the contingency if needed. This mechanism will allow a temporary increase in PSNP beneficiary numbers in post-shock and pre-emergency settings, thereby saving many livelihoods.

5. Ethiopia micro-level insurance pilot 2009

5.1 Background

Based on its previous risk financing experience at the macro insurance level in Ethiopia and on its subsequent experience of LEAP, in 2009, WFP entered into partnership with local stakeholders for the Joint Project on Weather Index Agricultural Insurance in Bofa Area.¹²

The objective of this project was to reduce the vulnerability of poor, rural smallholder farmers to severe and catastrophic weather risks and to assess and test the viability of weather index agriculture insurance products in rural Ethiopia. It provides an example of how weather index insurance can be used to reform disaster response by moving from a reactive approach to an active preparedness mechanism.

Ethiopia is a low-income, food-deficit country. Chronic food insecurity affects 10 percent of the population; even in normal rainfall years these households cannot meet their food needs and rely partly on food assistance. As a consequence of the 2002 drought, the second-most severe in recent history, a record 13 million Ethiopians required emergency assistance in 2003, translating into 1.5 million mt of food aid. In the last ten years, an average 870,000 mt of food aid has been provided annually, primarily through emergency response.

Smallholder farmers have developed many traditional risk management strategies that address limitations to productivity other than weather, such as land tenure, but these usually fail in times of covariate shocks such as drought in areas that depend on rainfed agriculture. Traditional coping mechanisms address idiosyncratic shocks, such as family illness, accidents, livestock death and fire, but they have limited scope for shocks that affect entire risk sharing communities. Smallholders who are sure that timely, sufficient and guaranteed

assistance, such as an insurance payout, will be available as a *de facto* risk management opportunity in times of covariate shock such as drought, may be encouraged to engage in more profitable income strategies, such as purchasing better seeds or using more fertilizer.

5.2 Partnership

The partners involved in the pilot project were: (i) the Lume-Adama Farmers' Cooperative Union in Bofa and its insured farmers, as the main actors and the focus of the evaluation framework; (ii) the Ethiopian Ministry of Agriculture and Rural Development, including its extension workers; (iii) the Nyala Insurance Company (NISCO), as the primary implementer and recipient of technical assistance; (iv) Swiss Re, as the reinsurance company behind NISCO; (v) NMA, as the primary source for rainfall data; and (vi) WFP, represented through its Headquarters-based disaster risk reduction policy unit, vulnerability assessment and mapping (VAM) section at the Ethiopia country office and colleagues from the Nazareth sub-office.

The partnership was governed by a Memorandum of Understanding among NMA, the Ministry of Agriculture and Rural Development, NISCO and WFP. Linking government bodies and the private sector, with WFP acting as an intermediary, has proved to be a successful cooperation model. Uncomplicated and near real-time access to weather data, combined with transparent communication of pilot details and developments to all stakeholders were crucial to its success.

5.3 Contract design

The insurance scheme was based on a simplified version of the WRSI approach, and covered haricot beans during the Meher agricultural season.¹³ The index was calculated from the crop's water supply and demand during a growing season, i.e., the ratio of actual seasonal evapo-transpiration to the seasonal crop water requirement.

NISCO, the farmers' union and the farmers themselves were consulted frequently during development of the insurance policy, ensuring a participatory and transparent process leading to broad ownership of the pilot project. The use of a simple panel displaying the rainfall deficit calculation, a visit to the nearby NMA rain gauge¹⁴ and the installation of an automated third-class weather station¹⁵ were valuable in building the farmers' trust.

The insurance policies were procured by the Lume Adama Farmers' Cooperative Union¹⁶ for 137 of their members in the Bofa area, covering a total of 159.75 ha of haricot beans. The union is backed by a credit institution that facilitates low-cost credit for union members at the start of the season. The union

used this mechanism to pre-finance part of the insurance premium, as otherwise the insurees would not have been able to purchase the policy.

In consultation with agricultural extension workers, union members and NISCO, the production cost for 1 ha of haricot beans was set at ETB 4,000 (US\$320), including estimated agricultural inputs and labour costs. Based on drought probability calculations derived from 30 years of historical rainfall data for the area, the premium was set at ETB 460/ha, or 11.5 percent of the total sum insured.

5.4 Results

Erratic and insufficient rainfall triggered insurance payouts according to the contract terms and conditions. The 137 insured farmer families received a total of ETB 309,000 (US\$24,700) in claim settlements on 1 December 2009. The amount per farmer varied depending on the area insured. Considering the total of ETB 73,485 in premiums collected, NISCO's "investment" generated a substantial ETB 235,515 or US\$18,826.

An ongoing evaluation will produce results and lessons that will contribute substantially to understanding of the effectiveness, appropriateness and efficiency of drought-related weather index-based insurance products in rural Ethiopia. Preliminary lessons point towards the need to: (i) improve the availability and accessibility of quality weather station data; (ii) refine delivery channels and keep farmers better informed on products and underlying triggers; (iii) strengthen the capacity of stakeholders at all levels; (iv) augment the overall effectiveness by combining with other disaster risk reduction tools for prevention; and (v) improve the legal and regulatory framework for index products.

6. WFP/IFAD-supported weather index insurance pilot for farmers in Anhui Province, China¹⁷

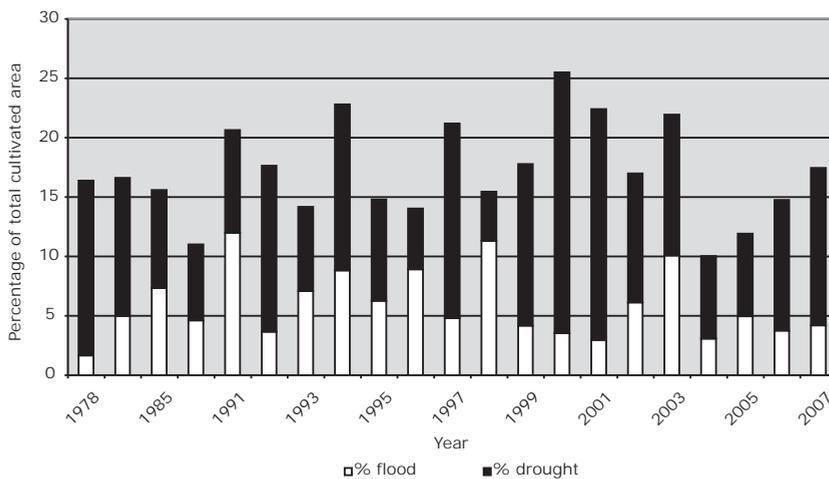
6.1 Background

China is highly exposed to natural disasters and the potential impact of climate change. Over the past ten years, natural disasters have affected between a quarter and a third of arable land in China, and are estimated to destroy 10 percent of annual crops. Cultivated land covers 122 million ha, representing 12.7 percent of China's total land area of 9.6 million km². Rice, wheat, maize and soybeans are the main subsistence crops in China, representing 64 percent of total sown area. The 314 million people directly engaged in the agriculture sector account for 41 percent of the total labour force. However, agriculture accounts for only

11 percent of total GDP. Drought, flood, hail and freeze are the major threats to agriculture in China, particularly in northern, northeastern and western areas. On average, they reduce at least 30 percent of crop outputs on 54 percent of Chinese farmland (Swiss Re, 2008a; 2008b).

Since 2007, China's central and provincial governments have supported farmers with crop insurance premium subsidies as an incentive to invest in high-quality inputs and farm technology. In 2007, the Chinese government spent about US\$300 million on agricultural insurance subsidies for multi-peril crop insurance (MPCI) products. This increased to US\$900 million in 2008. As a result, the Chinese agricultural insurance market had reached a premium volume of about US\$1,744 million per annum by September 2009, making it the second-largest market in the world.

Figure 8.4 Drought- and flood-affected agricultural areas in China, 1978 to 2007



An area is considered affected if the yield loss is equal to or greater than 30 percent.

Source: Government of the People's Republic of China, 2008.

6.2 Partnership

The Ministry of Agriculture of the People's Republic of China, represented by the Institute of Environment and Sustainable Development in Agriculture (IESDA), the Chinese Academy of Agriculture Sciences (CAAS), WFP and IFAD signed a Memorandum of Understanding on 18 April 2008 in Beijing, initiating technical collaboration on the Joint Project on Weather Index Agricultural Insurance in Vulnerable Rural Areas. The project aimed to reduce the vulnerability of rural smallholders in China to severe and catastrophic weather risks, mainly drought and water-logging. The Anhui Guoyuan Agricultural Insurance Company (Guoyuan), a local agricultural insurance company was selected to pilot this weather index insurance product.

6.3 Contract design

The pilot weather index group insurance policy was written for the Yanhu village in the north of Changfeng county, Anhui province, China. Changfeng is located in the watershed of the Yangzi and Huai rivers. The surface is undulating and the soil is very porous with low capacity to retain water. Rainfall shortages are the main problem affecting the staple crop rice, which is also vulnerable to heat waves during the flowering phase in July and August. Village crops include rice, wheat, rapeseed and strawberries. Yanhu has a population of about 1,200 people, with average per capita annual income of RMB 3,400 (US\$498), which is 26 percent below the county average. The county is one of 592 national poverty counties.

From January to May 2009, in collaboration with Anhui Meteorological Institute, the Commission of Agriculture of Anhui Province and Guoyuan, the project team designed the drought index insurance for Changfeng and the water-logging index insurance for Huaiyuan.

For the drought index insurance, several products were designed with different premiums and coverage. Guided by Chinese and international experts, Guoyuan designed the weather index insurance product for paddy rice in Changfeng county, which the China Insurance Regulatory Commission approved for piloting on 25 May 2009. Guoyuan also designed the water-logging weather index insurance, with technical assistance from the project team. Due to temporal constraints, however, the index insurance has not been implemented, but was simulated instead.

The insurance product was sold as group insurance to Yanhu village, protecting 85 ha of rice with a total sum insured of US\$56,000. The policy covered the entire rice crop of 482 village households. Under the group policy, each household was insured according to its plot size, at RMB 300 (US\$50) per 0.07 ha, which is roughly equal to input costs. Plot sizes vary from 0.04 to 0.5 ha. The premium was RMB 12 (US\$2) per 0.07 ha, or US\$26/ha – 4 percent of

the sum insured. Farmers paid 20 percent of the premium cost – RMB 2.4 per 0.07 ha. The other 80 percent was subsidized by the insurer, in line with national MPCII subsidy rules. There was no reinsurance arrangement for this weather index insurance programme given its very small size.

6.4 Results

Owing to favourable weather conditions – adequate rains and no heat waves – the insurance payouts were not necessary. A recent evaluation of the pilot project has brought to light several lessons. A successful continuation of index-based insurance will require: (i) improved availability, accessibility, quality and quantity of weather data; (ii) enhanced government support; (iii) improved integration into existing delivery channels and networks; (iv) increased stakeholder awareness, through better promotion of products; (v) a strengthened legal and regulatory framework for index products; and (iv) better integration of index insurance into national disaster management frameworks (Zhu, 2010; Dick, 2010).

7. Good practices in weather index insurance¹⁸

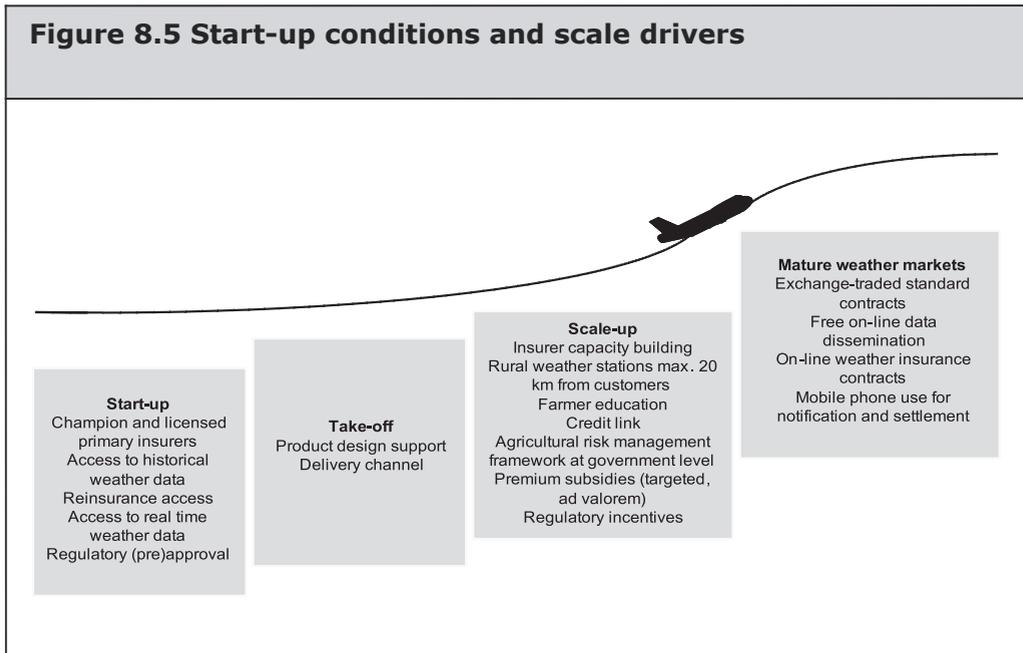
Many programmes, including the WFP Ethiopia and China experiences, were launched only recently, and it is too early to judge their success. However, many schemes show promise and, although not yet at full scale, are providing valuable lessons for the future. WFP and IFAD recently completed a joint review of many insurance programmes, leading to the identification of six key lessons for successful programme performance:

- *Focus on creating value for the insured:* Insurance should be part of a package of related services that cover broader agricultural development and disaster management initiatives.
- *Build capacity and ownership:* It is essential that local stakeholders have the capacity to overcome the challenges and establish effective weather index products.
- *Build awareness of index insurance products:* Client education is critical in achieving and sustaining a demand for index insurance products.
- *Develop efficient and trusted delivery channels:* Building on existing and familiar networks is more likely to bring farmers on board.
- *Ensure reinsurance is in place:* Access to international risk transfer markets is crucial for the sustainability of index insurance.
- *Develop automated infrastructure for quality weather data:* Real-time availability and accessibility of quality weather data can reduce basis risk and improve product performance and transparency.

- *Promote enabling legal, regulatory and policy frameworks:* Work with government partners to establish transparent and effective frameworks.
- *Monitor and evaluate weather index-based insurance schemes:* Better understanding of the impacts on poverty will help the continuous adjustment of index insurance policy designs.

Although private insurers might be expected to take the lead in developing and supplying index insurance, in nearly all cases the initiating role was played by others, especially the public sector, multinational agencies and NGOs. Important public goods and roles need to be in place, otherwise the private insurance sector faces high set up costs and barriers. There is also a first mover problem, because any insurer that invests in research and development of index insurance products cannot prevent competitors from copying its products. If index insurance is to scale up, governments and donors will need to play important enabling and facilitating roles, which include:

- building weather station infrastructure and data systems and making the data publicly available in a timely manner;
- financing agro-meteorological research to guide product design, and making the results publicly available;
- educating farmers about the value of insurance;
- facilitating initial access to reinsurance;
- supporting product design;
- supporting the development of sound national rural risk management strategies that do not crowd out privately provided index insurance;
- subsidizing protection insurance where it is more cost-effective than existing types of public relief, and using smart subsidies to kick-start insurance markets for development;
- supporting impact studies to learn from ongoing index insurance programmes and demonstrate their *ex-post* economic and social benefits;
- providing an enabling legal and regulatory environment.



Source: Hess and Hazell, 2009.

Questions about the role of index insurance remain, but there is enough evidence to warrant greater investment in its development. Such investment will become even more important as climate change increases the risk and severity of catastrophic losses in rural areas. Households need to adapt to climate change; index-based insurance can be both a tool for transferring some of the incremental risk induced by climate change and a catalyst for adaptation.

8. Conclusions

Index insurance has much potential as a market-mediated approach to managing covariate risks for farmers, banks, input suppliers and relief agencies. However, it is not a panacea. It remains a very specific tool – a scalpel rather than a hammer – that is relevant for specific types of risks in regions where many people are vulnerable.

Initial results are encouraging and show that weather index-based insurance can work, but few programmes have demonstrated any real capacity to scale up. There has also been limited spontaneous development by the private sector; governments or international agencies such as the World Bank have initiated activities. This reluctance from the private sector seems to stem from the high basis risk associated with having insufficient weather stations;¹⁹ initial problems

that private firms cannot easily overcome on their own; the need for marketing intermediaries to link farmers with insurers; and the cost of many risk management products, which is too high for many smallholders to afford.

There is need for further product and institutional innovation and for a stronger public sector role in helping to launch new programmes. In particular, governments need to create more enabling regulatory environments, set up more weather stations, and provide a first line of reinsurance. The case for these kinds of public investments and support could be strengthened through good monitoring and evaluation systems that demonstrate the *ex-post* economic and social benefits over the longer term. If index insurance cannot be made to work better, many governments and donors are likely to be pushed further into providing expensive safety net programmes for rural people, especially as climate change increases the risk and severity of catastrophic losses.

¹ Low-income populations, particularly small-scale farmers will lose an even greater proportion of their incomes.

² www.unisdr.org/disaster-statistics/impact-affected.htm.

³ At the World Conference on Disaster Reduction, held in Kobe, Hyogo, Japan in January 2005, 168 governments adopted a ten-year plan to make the world safer from natural hazards. The Hyogo Framework for Action (HFA) is a global blueprint for disaster risk reduction efforts over the next decade. Its goal is to reduce substantially disaster losses – in lives and in the social, economic and environmental assets of communities and countries – by 2015.

⁴ At its thirteenth session in Bali, the Conference of the Parties (COP13, 2007) to the United Nations Framework Convention on Climate Change (UNFCCC) drew up an action plan identifying negotiation elements for an agreement to be reached at COP15 in Copenhagen in 2009.

⁵ For a comprehensive overview on index insurance see Hellmuth *et al.*, 2009.

⁶ In non-indemnity insurance, the sum that the insured is entitled to receive from the insurer does not necessarily bear any relation to the actual loss, if any, suffered by the insured. Instead, it is linked to an index, such as rainfall.

⁷ Insured farmers have better access to credit because the insurance policy can serve as collateral (Mapfumo, 2008).

⁸ Index insurance works best for covariate risks – i.e., risks that affect all members of a community or region at the same time – because this reduces basis risk. However, this presents a converse problem for the insurer: when an insured event occurs, all those who have purchased insurance against the regional index must be paid at the same time. Moreover, if the insured risks indexed against different rainfall stations are highly correlated, the insurer faces the possibility of having to make huge payments in multiple regions. International reinsurance is already available for some kinds of natural disaster risks. The simplest form of reinsurance is a stop-loss contract, in which the primary insurer pays a premium to obtain protection if its losses exceed a certain level. As an alternative to reinsurance, recent developments in global financial markets are making it increasingly feasible to use new financial instruments to spread covariate risks more widely, such as weather derivatives and catastrophe bonds.

⁹ For more details on PSNP see <http://go.worldbank.org/E4PE1DEGSo>.

¹⁰ Depending on the crop, but usually from June to September.

¹¹ For more details, see www.hoefsloot.com/index.php?title=leap_development.

- ¹² Bofa *kebele* – the smallest administrative unit in Ethiopia – is in Boosat *woreda*/district near Nazreth city, or Adama in the Oromia language, 40 km southeast of Addis Ababa.
- ¹³ Haricot beans account for about 20 percent, or 7,880 ha, of the crops planted throughout the Bofa area. The insured crop was selected based on discussions with farmers, farmers' union representatives and NISCO.
- ¹⁴ NMA's third-class weather station in Bofa consists of a simple rain gauge and a thermometer placed in a protected perimeter in a school yard. The school principal is in charge of manually recording daily rainfall and temperature data, which are sent once a month by mail to the data collection centre.
- ¹⁵ In a separate but linked project activity, WFP installed two additional low-cost weather stations with automated data transmission next to the existing NMA weather station. The purpose was to test the appropriateness and accuracy of all three stations and to inform NMA on potential options for automating, upgrading and expanding its existing weather station network.
- ¹⁶ The union consists of four primary cooperatives and has a total of 22,896 members (June 2009). Its main activities are agricultural input supply, produce marketing, seed multiplication and credit services.
- ¹⁷ This project was undertaken in the context of the Weather Risk Management Facility (WRMF), a WFP/International Fund for Agricultural Development (IFAD) partnership.
- ¹⁸ This section is based largely on experiences of the China and Ethiopia projects, as captured in non-formal monitoring and back-to-office reports and the forthcoming publication by Hess and Hazell under WRMF.
- ¹⁹ Many of the potential interventions have multiple benefits. For instance, real-time weather data from weather stations can feed into early warning systems at various levels.

section **II**
Thematic areas

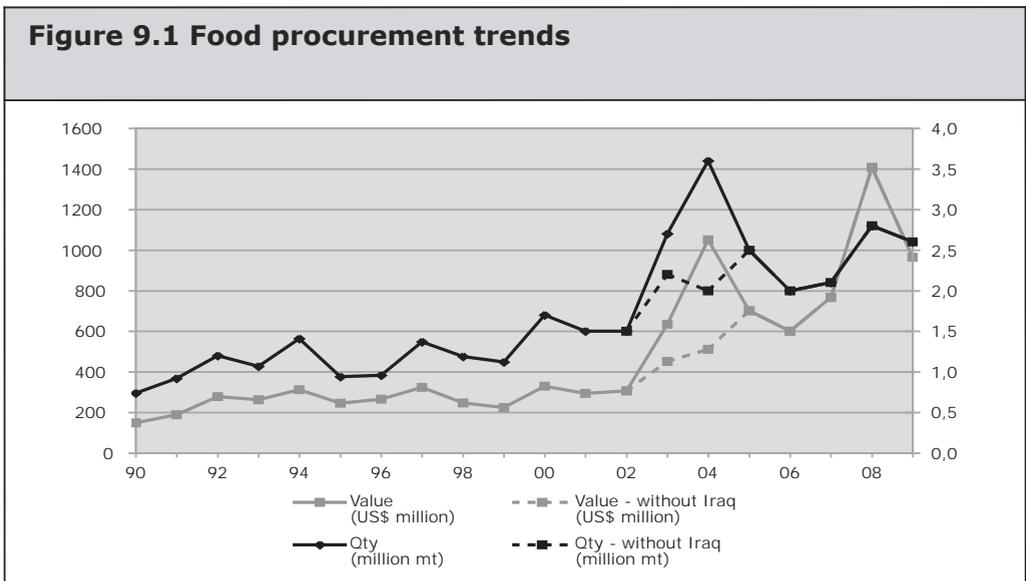
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Connecting farmers to markets: insights from the Purchase for Progress initiative

Ken Davies and Nicole Menage

1. Introduction

Increasing cash contributions have made it possible for WFP to become a stable and substantial purchaser of surplus food internationally, particularly in developing countries. Since 1990, WFP has tripled the quantity and value of food bought globally for its operations (Figure 9.1).



Source: WFP Procurement Division, Annual Report 2009.

In 2007, a record 80 percent of the food purchased by WFP – a total of 2.1 million mt, valued at more than US\$760 million – was bought in 69 developing countries from Afghanistan to Zambia. The largest supplier was Uganda, where 210,000 mt for US\$54.7 million was procured, providing food to some 3.4 million people for one year. Significant amounts of food were also purchased in Ethiopia, Kenya, Malawi, Mozambique, Sudan and Zambia.

In 2009, the tonnage purchased in developing countries remained high, at 2.1 million mt for almost US\$772 million. However, more was bought from middle-income developing countries, with 51 percent in tonnage and 46 percent in value, than lower-income countries, with 31 percent in tonnage and 34 percent in value, particularly relative to 2007. This was owing to the tight food security situation in a number of the lower-income developing countries where WFP traditionally buys, coupled with lingering high prices. Nonetheless, WFP remains a significant market player in lower-income countries.

According to Tschirley (2007), WFP has shown generally good performance in its local and regional procurement (LRP) operations in Africa. From 2001 to 2005, WFP's procurement of maize in Kenya, Uganda and Zambia made savings of US\$67.7 million compared with United States food aid – enough to purchase an additional 437,719 mt of maize. Faster delivery to operations is another recognized advantage of LRP. Local procurement may also produce less obvious benefits such as higher farm-gate prices, strengthened formal markets, and increased investment by traders and processors (Sserunkuuma, 2005).

2. Seizing the opportunity

When both WFP and donors started to put increasing emphasis on optimizing the developmental impact of WFP's local and regional food procurement, new questions emerged. Should WFP buy abroad when surpluses of local cereals and pulses in the country of its operations could offer not only financial savings, more appropriate commodities and a faster delivery, but also an opportunity for preventing poor farmers from becoming food aid beneficiaries? How could WFP use a portion of its purchasing power to buy lower down the value chain to the benefit of poor farmers?

Since the mid-1990s, WFP had engaged in small purchases from rural producer organizations in many countries, including Burkina Faso, Uganda, the United Republic of Tanzania and Zambia, and had developed value-added processing food projects that strived to bring benefits directly to smallholders. However, there was no overarching framework to support these initiatives systematically, and little documentation regarding the positive or negative impacts.

The Purchase for Progress (P4P) initiative builds on analysis and discussions

of the concept and feasibility of home-grown school feeding, which involved the Bill and Melinda Gates Foundation and WFP, and on the learning derived from WFP's agricultural and marketing support project in Uganda and other examples of purchasing from small vendors. Procurement seminars held in Addis Ababa and Rome in 2007 were instrumental in feeding lessons into this process.

At the United Nations General Assembly in September 2008, a five-year pilot P4P project was launched, with a focus on assisting smallholder/low-income farmers by offering them opportunities for obtaining access to agricultural markets and becoming competitive players in the market place.

Through P4P, WFP is committed to using a portion – averaging 10 percent – of its commodity purchasing power to engage low-income farmers in a sustainable programme of tendering and selling their crops to WFP. Grants from the Bill and Melinda Gates Foundation, the Howard G. Buffett Foundation, and the Belgian, Canadian, Luxembourg and United States governments are allowing WFP to expand local procurement and add new purchasing models that aim to benefit local farming economies in 21 pilot countries.

Box 9.1 P4P pilot projects

P4P initiatives are being piloted in 21 countries over the five years from 2009 to 2013:

- Africa: Burkina Faso, Democratic Republic of the Congo (DRC), Ethiopia, Ghana, Kenya, Liberia, Malawi, Mali, Mozambique, Rwanda, Sierra Leone, Sudan, Uganda, United Republic of Tanzania and Zambia.
- Latin America: El Salvador, Guatemala, Honduras and Nicaragua.
- Asia: Afghanistan and Lao People's Democratic Republic (PDR).

2.1 Policy framework

P4P fits into WFP's existing policy framework, which envisages using food procurement to promote agricultural and market development. The programme carries forward the Executive Board's recommendations that WFP strengthen its ability to exploit linkages between its own procurement practices and increased access to markets for small-scale farmers' groups, and that it mainstream best practices within WFP.

In accordance with its Strategic Plan for 2008–2013, WFP is committed to seizing new opportunities for designing food assistance programmes that

generate substantial demand for surplus food staples grown by small-scale farmers, thereby reducing risks and improving incentives for investment in productivity-enhancing and income-increasing technologies and practices.

WFP's Food Procurement in Developing Countries policy, approved by the Executive Board, states that WFP must find the balance between cost-efficient, timely and appropriate procurement and its programmatic goal of strengthening developing country markets (WFP, 2006c). When procuring from developing country food markets, WFP's procedures aim to avoid negative effects on those markets, including price rises that would harm the food security of the poor. With P4P, WFP brings to the fore the objective of promoting developing country food markets in parallel with the food security of food aid recipient countries.

In its review of the Food Procurement in Developing Countries Policy, the Executive Board recommended that WFP work closely with national governments, non-governmental organizations (NGOs), the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD) and others, to assess the capacity of local, subregional and regional markets to participate in WFP procurement, and to support partners' efforts to develop this capacity. The Executive Board also recommended that WFP ensure its country offices and/or regional bureaux have the necessary staff to enable them to procure food based on adequate knowledge and analysis of local, subregional and regional markets.

2.2. The P4P concept

Making smallholder farming in Africa more productive, profitable and sustainable is fundamental to achieving Millennium Development Goal (MDG) 1 of halving extreme poverty and hunger by 2015. It is also central to the achievement of national economic growth targets and to the success of regional initiatives such as the Comprehensive African Agricultural Development Programme (CAADP) of the New Partnership for Africa's Development (NEPAD). CAADP's pillar 3 focuses on redressing hunger and food insecurity in Africa, and stresses that efforts to induce sustainable increases in smallholder incomes must combine supply-side interventions designed to raise farm productivity with measures that reduce market volatility and enhance farmers' access to sources of stable and sustainable demand for their farm products.

P4P allows WFP to help those who have little or no food, while also supporting local farmers who have little or no access to markets to sell their crops. Based on WFP's current procurement policy and practice, with a particular focus on low income and smallholder farmers, P4P aims to:

- identify and share *best practices* for WFP, NGOs, governments and agricultural market stakeholders to increase profitable engagement in markets;

- *expand farmers' capacities* to increase their incomes from agricultural markets;
- identify and implement best practices for *increasing low-income farmers' sales* to WFP;
- *transform WFP food purchase programmes*, to provide better support to sustainable production and address the root causes of hunger.

By integrating its purchasing power with partners' technical contributions for connecting small-scale/low-income farmers to markets, WFP envisions that within five years, or five complete agricultural cycles, participating low-income farmers have increased their annual farming incomes as a direct result of selling commodities to WFP.

3. The three pillars of P4P

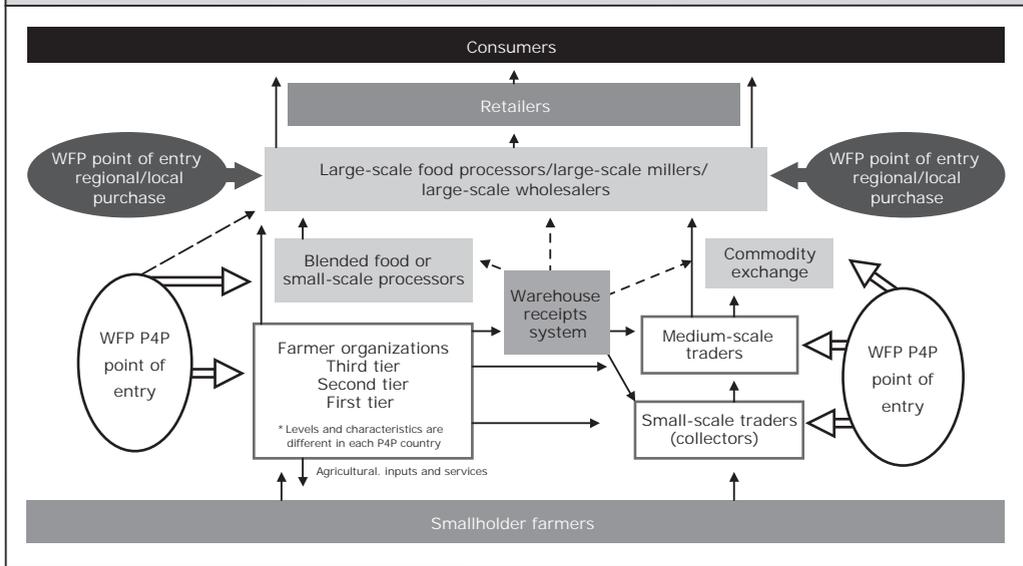
The P4P strategy rests on three pillars:

- 1) innovative procurement modalities;
- 2) strong supply-side partnerships;
- 3) learning and sharing.

3.1 Innovative procurement modalities

WFP brings to the table its expertise in procurement and logistics and its demand base. WFP's standard practice is procurement through competitive tendering and contracting, generally with large-scale buyers (Figure 9.2). However, P4P will experiment with practices that are more favourable to smallholder/low-income farmers including:

- *adjusted competitive tendering practices*, such as reducing tender sizes, waiving bag markings or performance bonds, and purchasing ex-warehouse;
- *direct purchasing* through farmers' organizations, to help stimulate producers' livelihoods – WFP will be directly engaged with farmers organizations, negotiating, signing contracts and paying for their produce;
- *forward contracting*, to reduce risk and provide farmers with greater market certainties and partnerships with micro-credit and insurance schemes;
- *processing options*, with smallholders producing maize meal or blending cassava themselves – WFP will work with the private sector and/or other stakeholders to encourage the establishment of processing units that ensure added value.

Figure 9.2 Targeted P4P market entry points

3.2 Partnerships – linking to the technical experts

Governments in the pilot countries are very supportive of the P4P programme, with different ministries involved. The P4P approach is being aligned with national agricultural development priorities and strategies, such as CAADP and the Alliance for Commodity Trade in Eastern and Southern Africa (ACTESA). A Memorandum of Understanding between the Alliance for the Green Revolution in Africa (AGRA) and the Rome-based agencies – FAO, IFAD and WFP – also underpins the critical need to work together to scale up farmers’ access to farm inputs, so as to trigger supply response.

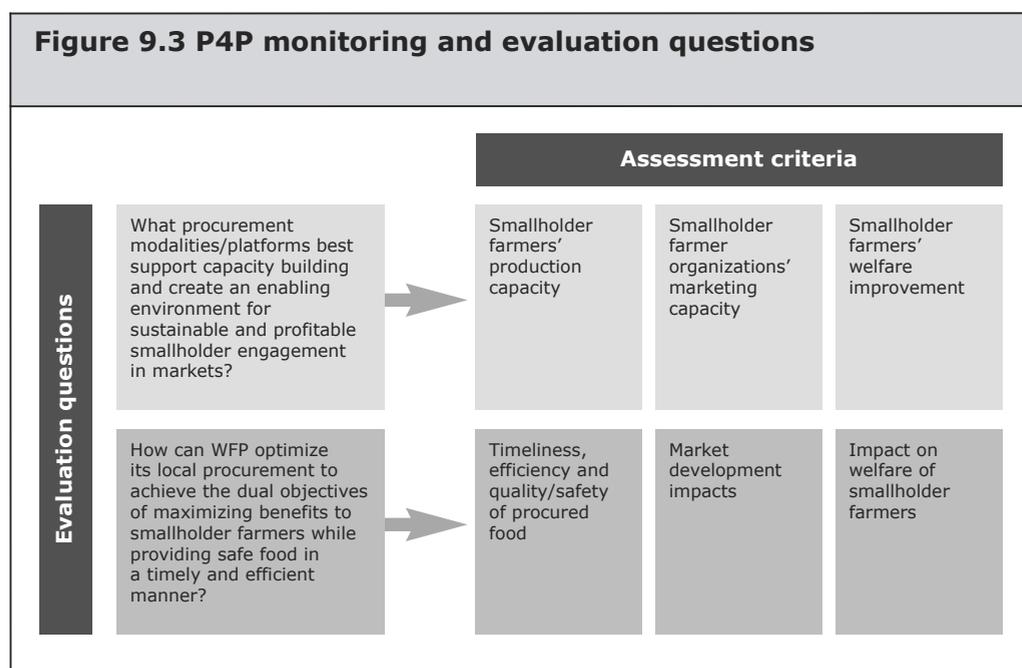
P4P relies on the engagement, expertise, collaboration and input of a wide range of actors, especially supply-side partners that benefit smallholder/low-income farmers. WFP is working with partners to ensure the availability of inputs and to establish and strengthen farmers’ organizations, improve farming technology and techniques, reduce post-harvest losses and improve on-farm storage.

In the area of market access, partners are assisting with quality control and commodity handling, storage, transport and infrastructure. Collaboration between microfinance institutions and WFP is exploring ways of using food supply contracts and warehouse receipts as collateral for loans, making financial services available in remote rural areas, and providing financial services and training to farmers’ associations.

WFP is tying its purchasing activities to a programme of training and capacity development designed to build and enhance the market readiness of small-scale/low-income farmers. This is another area where strong supply-side partnerships are important, and WFP is relying particularly on the experience and knowledge of government extension workers and NGOs.

3.3 Learning and sharing

To maximize the development impacts of its local procurement, WFP is exploring ways of leveraging its presence in markets to promote market development, market access and increased incomes for smallholder farmers; and how, when and under what conditions to buy locally so as to maximize development impacts without unduly compromising food assistance objectives (WFP, 2009i).



A monitoring and evaluation (M&E) system has been developed to track the impacts of both standard LRP activities and P4P innovations. The M&E system will provide the basis for tracking and documenting changes in the agricultural production, market access, incomes and livelihoods of smallholder/low-income farmers, and for identifying best practices and lessons learned relevant to WFP and other actors.

A technical review panel supports the learning and sharing pillar of P4P by

providing high-level independent advice to WFP and the P4P pilot countries. Its members have been selected to ensure individual and institutional diversity, and have expertise in the areas of agricultural and market development and/or M&E.

4. Risk management and safeguards

WFP's policy is to procure food in a manner that is cost-efficient, timely, and appropriate to beneficiary needs. When procuring from developing country food markets, WFP also aims to avoid causing negative effects on those markets, including price rises that would have an impact on food security for the poor. These same principles apply to procurement actions using the P4P approach.

To ensure that the purchase fits the main objectives of cost efficiency and timely delivery, a cost comparison is made between the locally available option and what it would cost to bring commodity of the same quality from regional or international markets. This comparison is based on the costs of purchasing the commodity from the cheapest alternative source – including the associated costs, such as transport to the final destination – and is the equivalent of import parity. In many local markets, the import parity price is an essential indicator of whether commercial stocks in the country are reducing and demand is pushing supply, such as owing to an impending drought.

WFP's procurement and market support units undertake constant market analysis in collaboration with external partners, such as government ministries, other United Nations agencies, the Famine Early-Warning System (FEWS), NGOs and trader networks, and with its own food aid monitors, vulnerability analysis and mapping (VAM) staff and emergency assessment officers. Through P4P, this analysis is being strengthened at the local level to minimize micro-level market distortions and inflationary impacts of WFP market engagement.

WFP uses the specifications of the country in which the commodities are purchased, which must also take into account the quality standards of the recipient country. To ensure that all commodities purchased meet the standards, WFP employs independent surveyors/superintendents to inspect the commodities before taking possession. Inspection includes sampling and testing the commodities according to such parameters as moisture content, foreign matter, colour, and any abnormalities or inconsistencies.

5. Implementation status

By February 2010, P4P assessments had been completed in 20 of the 21 pilot countries, and 17 country implementation plans had been approved.¹ The assessment of Ghana was expected during the first quarter of 2010.

Between the start of the project and the end of 2009, more than 39,000 mt of food was contracted either directly from farmers' organizations or through other marketing platforms, including commodity exchanges or warehouse receipt systems (WRS). Defaults have been less than 10 percent, and are caused mainly by side-selling or the inability of a farmers' organization to aggregate, owing to lack of access to credit.

Table 9.1 P4P implementation status, February 2010

COUNTRIES		Tonnage	Farmers	Competitive processes					Direct purchase	Forward contracts	Processing
		Planned*	Planned*	Pro-smallholder tenders	Warehouse receipt system	Commodity exchange	Cereal fairs	Food reserves			
Africa	Burkina Faso	16 000	31 000	✓					✓	✓	
	DRC	150 (1 year)	4 000 (1 year)				✓				
	Ethiopia	126 500	67 000	✓	✓				✓	✓	
	Ghana	2 000 (1 year)	n/a	✓	✓						
	Kenya	60 000	56 000	✓	✓				✓	✓	✓
	Liberia	10 000	5 600						✓		✓
	Malawi	37 500	38 000	✓					✓		✓
	Mali	11 000	2 700				✓		✓	✓	
	Mozambique	22 000	22 750	✓					✓	✓	✓
	Rwanda	30 000	50 000								
	Sierra Leone	2 000 (2 years)	2 000 (2 years)	✓					✓		✓
	Sudan	1 500	4 100	✓					✓	✓	
Tanzania	55 775	13 000		✓				✓	✓		

Table 9.1 P4P implementation status, February 2010 (cont.)

COUNTRIES		Tonnage	Farmers	Competitive processes					Direct purchase	Forward contracts	Processing
				Planned*	Planned*	Pro-smallholder tenders	Warehouse receipt system	Commodity exchange			
Africa	Uganda	144 000	48 000	✓	✓				✓	✓	✓
	Zambia	36 000	60 000			✓					✓
Central America	El Salvador	8 000 (4 years)	8 000 (4 years)	✓					✓		
	Guatemala	14 000 (5 years)	15 000 (5 years)	✓					✓	✓	✓
	Honduras	24 000 (4 years)	11 300 (4 years)	✓					✓		
	Nicaragua	8 500 (4 years)	8 000 (4 years)	✓							
Asia	Afghanistan	176 000	n/a	✓					✓	✓	✓
	Lao PDR	7 600	8 500	✓					✓	✓	✓

In 2009, 40 farmers' organizations with more than 45,000 members sold food commodities to WFP. The number and type of farmers' organizations vary enormously across countries, ranging from four to five in Liberia, Mozambique and Zambia, to 202 in Kenya, and from grassroots associations to apex organizations, including farmers' unions and federations in Mali and Mozambique.

Purchasing from smallholder farmers has been carried out in line with WFP's principles of quality and cost efficiency. Local purchases under the P4P programme have allowed WFP to save US\$2.6 million compared with importing the same commodities from abroad.

Through P4P, WFP has purchased food for the first time in post-conflict countries such as Liberia and Sierra Leone, where the aim of the food purchases is to contribute to re-energizing markets. In Sierra Leone, WFP rice specifications have been defined in collaboration with the Ministry of Agriculture, FAO and WFP.

WFP purchases from the Zambia Agricultural Commodity Exchange (ZAMACE) and from WRS in Uganda aim to support the development of these innovative marketing platforms, which present new opportunities for smallholder farmers. WFP will engage with emerging WRS in Kenya, Malawi and the United Republic of Tanzania.

Box 9.2 Warehouse receipt systems

In Uganda, WFP is supporting a WRS that enables smallholder farmers to deposit their commodities in a certified warehouse in return for receipts that can be exchanged for cash at a local financial institution. Commodities need to meet certain standards of quality and grade to be accepted. The average value of a receipt is equivalent to 60 to 70 percent of the market value of the deposited commodity. The difference is paid to the farmers once the commodity is sold. Through the WRS, farmers have access to cash at harvest time, without having to sell their produce immediately. The system offers a network of certified warehouses that guarantee farmers adequate storage conditions, sometimes better than those provided by farmers' organizations. WFP is helping farmers to meet the standards required by the WRS, and is buying from it.

To date, WFP and its partners have trained more than 17,300 farmers and warehouse operators. Training topics include contracting with WFP, agricultural production, quality specifications, post-harvest handling, group marketing, commercialization and managing agricultural finance.

As part of the comprehensive M&E system, baseline surveys have been completed in ten pilot countries and were starting or about to start in another seven countries in early 2010. Detailed surveys at the household, farmers' organization and trader levels are being coupled with longitudinal case studies of participating farmers, farmers' organizations and traders.

P4P has established operational and strategic partnerships with a wide range of entities including governments, international and regional organizations, NGOs, microfinance institutions, research entities and the private sector. These partners provide complementary technical expertise in agricultural production and post-harvest handling, facilitate access to agricultural inputs and credit, build capacity and strengthen farmers' organizations. More than 40 supply-side partners are working with targeted farmers' organizations to support P4P at the field level. In almost every country, national coordination fora or steering committees have been established, some led by government counterparts.

P4P is providing a platform for collaboration among the Rome-based agencies. For example, in Mozambique, strong collaboration has emerged through the Delivering as One Joint Programme on Building Commodity Value Chains and Market Linkages for Farmers' Associations. P4P country coordinators are engaging with FAO and IFAD to ensure that relevant technical assistance informs the development of P4P in each country.

6. Emerging insights

A number of challenges emerged during the first year of implementation, as highlighted during the first global annual review meeting in December 2009:

Funding for food purchases: Although donors have made funds available for P4P technical capacity, challenges remain in securing timely cash contributions for commodity purchases. The need for timely and flexible cash contributions to WFP regular programmes is a precondition for the smooth implementation of any local procurement, including P4P purchases.

Credit: Limited access to credit for financing crop aggregation and purchases from members is hindering the ability of farmers' organizations to market their products and, together with the lack of storage facilities and cleaning equipment, is the cause of most side-selling. El Salvador, Ethiopia, Guatemala, Liberia, Mali, Mozambique, the United Republic of Tanzania and Zambia have identified credit as a major constraint.

Food quality, infrastructure and post-harvest handling equipment: Lack of storage facilities and post-harvest handling equipment is the other major challenge facing farmers' organizations in many P4P countries, leading to high post-harvest losses and encouraging side-selling. Supporting the construction or rehabilitation of storage facilities and providing post-harvest handling equipment are other areas where partners can make important contributions to the P4P project.

Capacity of farmers' organizations: Weak business management skills and lack of experience of handling and marketing their produce is a major limitation for farmers' organizations. Strengthening of the organizations, including their internal management, business planning and record keeping, is another area requiring more partner support.

Messaging and understanding of P4P: One year on, misunderstandings regarding the ultimate goal of P4P persist among some partners. These give rise to concerns that P4P's focus on smallholder farmers might lead WFP to compromise on quality and/or pay above market prices.

Partnerships: It is taking far longer than expected to translate various agreements, such as the Memorandum of Understanding between AGRA and

the Rome-based agencies, into actions in the participating African countries; renewed efforts in 2010 focus on collaboration in Mozambique, Uganda, the United Republic of Tanzania and other countries. Many potential and existing P4P partners that support farmers' organizations face resourcing challenges, and P4P has limited financial capacity to support their activities.

Gender: P4P pilot countries have struggled to translate WFP's gender targets into actions for the advancement of women farmers within targeted farmers' organizations. There is need to strengthen these efforts and to find partners working specifically to enhance women farmers' position within farmers' organizations, to ensure that women reap more of the economic benefits.

Box 9.3 Gender gaps in the agricultural value chain

Critical gender gaps across the agricultural value chain (WFP, 2009h) include:

- women's lower use of agricultural extension and training services;
- their lower access to credit services;
- their low levels of representation and participation in farmers' organizations, as both members and leaders;
- the lower number of female than male traders in agricultural commodities.

6.1 The road ahead: P4P as a catalyst

Launched during the global food and fuel crises and the worldwide financial and economic downturn, the P4P programme offers an opportunity to ensure that food assistance is part of a long-term solution to the hunger challenge. P4P will contribute to the much broader tapestry of efforts and investments in agricultural and market development. WFP can play a central role in exploring how its major presence as a purchaser of food in local markets can promote the development of small-scale agriculture and simulate the use of nascent marketing platforms.

Strategic priorities for 2010 and beyond are:

- adapting and adjusting WFP's procurement processes and procedures to allow experimentation in how WFP does business to the benefit of smallholders, including through engagement in emerging marketing platforms;

- developing the capacity of WFP staff, partners and farmers' organizations in core areas such as post-harvest loss reduction;
- coordinating with the full range of supply-side initiatives and stakeholders, to ensure that WFP's demand is supplemented by appropriate interventions that increase productivity and prevent price increases;
- studying what models work and what do not, and sharing the lessons learned widely, to inform the next steps;
- planning for exit by ensuring that strong linkages are established with institutional buyers, including those for hospitals, schools, prisons and the army, and the private sector, so that smallholders have the ability and the choice to sell to quality buyers other than WFP.

¹ Afghanistan, El Salvador, Honduras, Guatemala, Nicaragua, Burkina Faso, Ethiopia, Kenya, Liberia, Mali, Malawi, Mozambique, Sierra Leone, Sudan, Uganda, United Republic of Tanzania and Zambia.

10

Disaster risk reduction: experience from the MERET project in Ethiopia

Betru Nedessa and Sonali Wickrema

1. Introduction¹

Disaster risk management is a systematic approach to preventing, reducing, mitigating and coping with natural hazard risks, and for emergency response, recovery and reconstruction. In the context of disasters, risk is the probability of an adverse consequence occurring as a result of a hazard event, and it is influenced by the degree of vulnerability to the hazard. Within disaster risk management, disaster risk reduction is “the concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.”²

In 2005, in Hyogo, Japan the World Conference on Disaster Reduction formally recognized the role that vulnerability plays in risk, and thus in the consequences of disasters. The resulting Hyogo Framework now guides systematic action to reduce vulnerability and, hence, the risks from disasters.

The linkages among risk, vulnerability and food insecurity were already well understood by practitioners fighting hunger. Food *in*security occurs “Where households are unable to mitigate negative impacts [of risk] on food availability, access, and/or utilization.... Without viable expectation of availability, access and utilization at all times a household is prey to deep-seated uncertainty that affects all of its investment and disinvestment decisions” (Webb and Rogers, 2003). When risk is explicitly reduced, households have a chance to make more progressive investment decisions that help build food security.

Despite the call to action and the theoretical underpinning of disaster risk management, it has been difficult to implement effective programmes that both manage humanitarian needs and address the causal factors of vulnerability. This is mainly because humanitarian situations attract interventions that have the short-term objective of rapidly providing relief from a life threatening situation, whereas disaster risk reduction inevitably requires a longer-term developmental approach in communities that are typically beset with crises. This creates a conflict between meeting immediate needs and making important investments for future benefit.

For the last few decades, Ethiopia has served as a learning ground for approaches to combating food insecurity. The frequent recurrence of food crises for large parts of the Ethiopian population indicates not only the scale of the problem, but also its complexity and the inadequate resources – national and international – applied to the underlying constraints that allow hunger to persist.

This chapter also uses Ethiopia as a learning ground, by reflecting on the disaster risk reduction results achieved in a WFP-assisted development programme called Managing Environmental Resources to Enable Transition – MERET, which means “land” in Amharic. MERET’s origins lie in the emergency operations that responded to food crises in the 1970s. In 1980, the government, supported by WFP, embarked on a development project addressing what were felt to be the root causes of food insecurity in Ethiopia at that time. Spanning 30 years, MERET has evolved through times of turbulent change. These changes are part of MERET’s story and are woven into its current design.

It is hoped that lessons from MERET can inform disaster risk reduction programming in contexts of recurrent weather-related hazards. As climate change causes increasingly frequent erratic weather in many parts of the world, the disaster risk reduction results of MERET can also be applied to efforts to support adaptation to climate change by reducing the risk of hunger and livelihood damage resulting from weather hazards.

This chapter first describes the risk of and vulnerability to food insecurity in Ethiopia. It then describes the programmatic evolution of MERET, leading to its current design. This is followed by a summary of the main results achieved by MERET, including the technological innovations introduced. The chapter examines WFP’s role in supporting government and community implementation of MERET, and the challenges faced by the programme. It concludes with a synthesis of major lessons learned.

2. Food insecurity in Ethiopia

With a population of 79 million people, Ethiopia is the second-most populous country in Africa. It is one of the poorest countries in the world, ranking 169 out of 177 in the 2008 Human Development Index. Gross national income (GNI) per capita is about US\$280, far lower than the average for sub-Saharan Africa. The agricultural sector accounts for 47 percent of gross domestic product (GDP), 90 percent of total export earnings, and more than 80 percent of employment. The 2005 Demographic Health Survey highlights the underlying vulnerability of poor Ethiopians to food and nutrition crises. The results of this survey show Ethiopia to have the highest rates in Africa for stunting, at 47 percent, and underweight, at 38 percent of children under 5. The prevalence of wasting is 10.5 percent, which is above the threshold defining a nutrition alert. Undernutrition contributes to 58 percent of the deaths of children under 5, and life expectancy at birth is 45.5 years (Government of Ethiopia, 2005b).

Since 1970, Ethiopia has suffered two major famines and almost yearly food crises, ranging from localized to national disasters. During the almost 20 years of the Mengistu regime, from 1972 to 1991, the Ethiopian economy, including agricultural production, shrank. By the end of the regime, the economy had fallen back to 1960 levels, while the population had continued to grow.

Food insecurity in Ethiopia is linked mainly to the pattern of rainfall, land degradation and population density. Agriculture remains predominantly for subsistence, with smallholders cultivating more than 90 percent of total cropland and producing more than 90 percent of total agricultural output. Smallholders' landholdings generally range from 0.5 to 1.5 ha per household. The level of agricultural input use is even lower than the standard for sub-Saharan Africa (Government of Ethiopia, 2010). Climate change increases the risk of harvest failure and low pasture regeneration from weather-related shocks. In rural areas, 28 million people live below the poverty line. Of these, an estimated 15 million were food-insecure in 2002 – and this figure may now be higher as a result of population growth (Government of Ethiopia, 2002).

Agricultural potential and vulnerability to weather-related shock are heavily influenced by Ethiopia's geography. With a total land area of 120 million ha, the country has a very rugged and diversified topography, which has a strong influence on climatic conditions. As a result, rains are seasonal and unevenly distributed in time and space. About 45 percent of the land is above 1,500 m and characterized by mountainous terrain with plateaux, steep slopes and deep valleys. The highlands are temperate with regular rainfall, arable land and agrarian livelihoods; about 95 percent of crop production comes from the highlands. However, microclimates in parts of the highlands result in semi-arid zones, particularly near the Great Rift Valley escarpment, which bisects Ethiopia

to create the lowest point on earth – the Denakil Depression. Overall, the lowlands account for more than 55 percent of Ethiopia’s land area, and are characterized by high temperatures, low and erratic rainfall, and pastoral livelihoods.

Despite huge groundwater resources, 90 percent of agriculture depends on rainfall rather than irrigation; rain patterns are therefore a significant determinant of food security. The highland rains can last for about eight months and reach as much as 1,500 to 2,400 mm a year, but rains tend to occur in high-intensity bursts concentrated in three to four months of the year. In the lowlands, total rainfall can be as little as 400 mm, making the runoff from highland rain a major source of water. Analysing long-term climatic data from 1961 to 2003, the Famine Early-Warning System Network (FEWS-NET) concludes that rainfall has become more erratic over the past 30 years.

Land degradation, owing mainly to poor land management and high population density, is the main cause of Ethiopia’s low agricultural productivity and vulnerability to drought. Despite significant levels of rainfall, poor land management results in the soil’s inability to retain water, increased soil erosion and nutrient depletion. Only about 50 years ago, about 40 percent of the country is reported to have been covered by forests, but forest cover had fallen dramatically to about 10 percent, or 14 million ha, by 1990 and is now estimated at 5 percent (Government of Ethiopia, 2010). The main reasons for deforestation are land clearing for agriculture and the use of wood for fuel. Some 80 percent of the population still lives in rural areas, mainly in the highlands, where an estimated 50 percent of the land is degraded. The population density on arable land has more than doubled since 1950 (WFP, 2009).

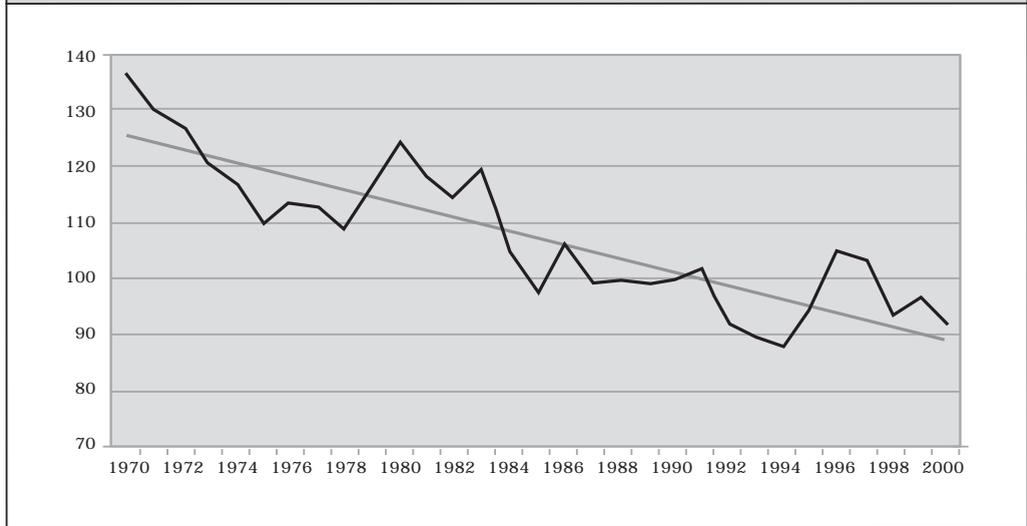
3. The evolution of MERET

3.1 The early years

After the devastating famine of 1973/1974, the Ethiopian Ministry of Agriculture began to use relief food aid for undertaking work in drought-affected areas, in collaboration with WFP. This led to a more developmental approach to disaster mitigation, which combined soil and water conservation efforts with afforestation to rehabilitate catchments and micro-watersheds. In 1980, Ministry of Agriculture and WFP, with technical support from the Food and Agriculture Organization of the United Nations (FAO), began implementing Development Project Ethiopia 2488: Rehabilitation of Forest, Grazing and Agricultural Lands – known as “Project 2488”.

Over its 20-year life span, Project 2488 laid the foundations for MERET.

Figure 10.1 Ethiopia's per capita agricultural production index, 1970 to 2000



Source: FAO, 2000

During this period, the project attempted to achieve development results while responding to drought and conflict. Although the results in natural resource management were limited, they spurred efforts towards disaster risk reduction as the foundation for development in crisis-prone communities. Political and cultural changes during Project 2488's life affected government policies, institutional structures and capacity, as well as farmers' organization and empowerment, and played a role in the learning cycle that led to the emergence of MERET.

During the 1980s, Project 2488 implemented large-scale, top-down reforestation, soil conservation and rural road works throughout the country, paying little attention to the integration of these activities at the farm level. Quality and sustainability were low, resulting in a poor image of food for work as a developmental tool in subsequent decades. The staff time required to ensure farmers' participation was considered a luxury at a time when all available resources were devoted to supporting access to food. During the 1980s, Project 2488 therefore failed to overcome the challenges of addressing an increasing humanitarian caseload with a truly developmental intervention.

The Mengistu regime – referred to as “the Derg” – was a top-down hierarchical political structure. Nevertheless, one of its legacies, which eventually benefited Project 2488, was the creation of peasants' associations (PAs) as the lowest political and administrative unit. PAs are organizations of farmers who

live in the same area, usually with holdings that total about 800 ha.³ They were first organized between 1974 and 1976, when the Derg created PAs to ensure that its command and control system was effectively passed down to the community level. Following the end of the Derg regime in 1991, the PAs have evolved to become representative, and remain an important source of community capacity.

3.2 The transformative years

Between 1991 and 1993, the Transitional Government of Ethiopia initiated a new chapter in the country's political history. Communities seized the opportunity to gain control over decisions that affected their livelihoods. Realizing that the top-down approach had failed, MOA revitalized earlier attempts to increase participation. The new approach had to reconcile the technical demands of soil and water conservation with farmers' priorities. By 1992, with FAO technical support, Project 2488 had developed the local-level participatory planning approach (LLPPA), through which grassroots communities in target areas were involved at every stage of planning and implementing the various project activities.

When the Federal Democratic Republic of Ethiopia was created in 1993, under the leadership of Prime Minister Meles Zenawi, a process of decentralization and community empowerment was initiated. The newly developed LLPPA was welcomed by both communities and Ministry of Agriculture field staff, as they now had a greater voice in the planning process. However, the new policy of decentralization pointed clearly to the need for wide-scale capacity building before any planning could be effective. In addition, community empowerment had to be balanced with the technical requirements of soil and water conservation and the physical aspects of the watershed. Unfortunately, at this critical stage, FAO lost its funding for continued technical assistance, so WFP recruited a number of technical experts to provide the needed capacity building.

During the next decade, LLPPA became firmly entrenched as the preferred method for planning natural resource interventions. A process of feedback and technical scrutiny ensured that interventions combine the organizational and technical requirements of large-scale planning with the participatory approach essential for sustainable natural resource management. The achievements of communities that successfully managed and maintained the transformation of their local environments provided an example for others to follow. The success of Project 2488 grew, but at a time when WFP's resources for development activities were being slashed.

Box 10.1 A new approach to gully control

In 1993, a slowly expanding gully was destroying Ato Ifru's small plot of land. He asked his neighbour if he could have the land at the head of the gully. His neighbour, looking at the muddy crevice, agreed that if Ato Ifru rehabilitated the land he could keep it. Ato Ifru had seen the benefits of tree planting in the nearby Project 2488 site, and decided to plant trees in the gully.

Slowly, over four years and with the help of the district (woreda) expert in soil and water conservation, Ato Ifru established a row of check-dams, reshaped the gully, and planted a variety of trees from the Project 2488 nursery. By the end of this period, Ato Ifru had created an oasis.

On seeing this, his neighbour decided that he would do the same, and sectioned off the next part of the gully for rehabilitation. By 1999, 214 farmers had sectioned off individual plots covering almost the entire gully. The community gives them "private rights" to any benefit from their work. By "privatizing" gully rehabilitation and introducing healthy competition among neighbours, the community has transformed more than 10 km of gully into verdant gardens.

3.3 The rise of MERET

Following approval of WFP's Enabling Development Policy in 1999, the Ethiopia country office had to rethink its role in development activities. The positive impacts of Project 2488 were only beginning to be seen, while WFP's donors were demanding the phasing out of food aid to development assistance.

WFP and the government's Natural Resource Department seized the opportunity of showing how food assistance could enable development by taking the best of Project 2488 and broadening its perspective to encompass a livelihoods approach, thus creating a new programme: MERET. Building on the experiences of Project 2488, MERET was adopted as a community-based participatory integrated watershed development approach with the explicit recognition that land degradation is not only an ecological issue but also a social and economic one. The previous focus on rehabilitating degraded lands through soil and water conservation and reforestation was broadened to encompass a wider range of productivity improvement and income-generating technologies, such as horticultural crops, small-scale animal fattening with improved forage production, and bee-keeping, which brought faster and significant improvement to beneficiaries' livelihoods. These livelihood packages were supported by low-cost soil fertility management techniques and small-scale irrigation practices, to increase productivity and profitability while minimizing production costs.

MERET was launched as Activity 1 of WFP's country programme Managing Environmental Resources to Enable Transitions to more Sustainable

Livelihoods. The key differences between MERET and Project 2488 are:

- geographic concentration on highly food-insecure communities;
- linkages beyond natural resource management interventions to include livelihoods and income-generating activities that consider the community's economic and social needs when planning conservation;
- a focus on women, their inclusion in planning and management, and the prioritization of interventions that reduce women's work burden while encouraging their empowerment;
- a focus on knowledge, technological innovation and learning, to ensure that MERET continues to evolve, remains relevant and disseminates knowledge about the natural resources system to leverage the scale-up of activities;
- the introduction of results-based management, including training on measuring results for *woreda* experts and community management teams;
- a plan for phasing out food assistance and moving towards technical assistance and partnerships for microcredit, village savings and loans, income-generating group formation, etc.

3.4 Design aspects of MERET

MERET is implemented through the Natural Resource Department's extension system and enables food-insecure communities to manage their natural resources effectively, in order to increase their resilience to weather-related shocks. Food assistance is provided for up to three months each year to enable food-insecure households to participate in labour-intensive soil and water conservation activities. Extension agents control the quality of the work before households receive food.

As sustainable land management requires community ownership and leadership, the MERET approach includes capacity building for a community-selected management committee, to ensure that the community works together and manages together. Communities work with extension agents – who are often conservation engineers – to identify their priorities, select and plan activities, and manage natural resources. Community plans for rehabilitating their micro-watersheds consider environmental, social and economic needs. The approach includes empowerment for disadvantaged groups such as poor women and elderly-headed households so that they can benefit from assistance, and support to women's participation in planning, implementation and decision-making on issues affecting their livelihoods; half of the management committee must be women.

As MERET requires communities to take marginal lands out of cultivation and prevent livestock from grazing freely in protected areas, food remains a preferred form of assistance to compensate for the reduction in household food

access during environmental rehabilitation. Once conservation measures have improved soil productivity and water recharge, the community can begin income-generating activities such as horticulture, forage harvesting, fruit tree production, and bee-keeping. As incomes improve, WFP phases out food assistance but continues to support MERET's outreach to communities through funds for additional extension activities, incentives for innovation, and training on income-generating activities.

MERET is led and steered by the National Project Coordination Committee (NPCC), which is chaired by a State Minister of the Ministry of Agriculture and Rural Development and includes representatives from the Ministry of Finance and Economic Development and heads of regional bureaux of agriculture and rural development. NPCC decides on policy matters and resource allocation to the regions, and reviews progress. Its executive arm is the National Project Support Unit (NPSU) in the Natural Resource Department, which is headed by the National Project Coordinator, who is WFP's main focal point.

At the regional level, policy- and decision-making is carried out by the head of the Bureau of Agriculture and Rural Development, who reports to the regional council; the council is responsible for regional policy and budgetary allocations to agriculture and other sectors. The executive agency for MERET is the Regional Bureau of Agriculture and Rural Development, represented by the Regional Project Support Unit (RPSU), which is headed by a regional project coordinator and is responsible for project implementation at the regional level. Technical experts from the Bureau of Agriculture and Rural Development, the RPSU, and zonal and *woreda* natural resource offices provide technical support and oversight and ensure effective implementation.

Implementation is through natural resource extension agents at the community level. WFP country and sub-office staff include technically qualified soil and water conservation engineers, who work as a team within the NPSU and RPSU structure, providing back-stopping, supporting supervision and facilitating the exchange of knowledge and the learning cycle.

WFP and the Natural Resource Department have agreed a graduation strategy for food assistance, whereby FFW switches to technical support and, when funds are available, financial support for small revolving loans for income-generating activities. The *woreda* experts continue to receive advice and incentives, and community members continue to participate in awareness raising and training activities. After about five to seven years, WFP support moves to another community. WFP also provides funds for supporting technical staff in NPSU, training and other learning activities.

MERET supports more than 50 activities and technical packages, which can be grouped as in Table 10.1.

Table 10.1 MERET activities by category

Physical and biological measures	Livelihoods	Capacity development
Cultivated land treatment measures	Vegetable and fruit planting, bee-keeping	Community management support
Forest/closed area treatment measures	Fodder/forage development	Technical training for natural resource experts
Integrated gully treatment measures	Revolving loans for income-generating activities	Demonstration sites and study visits
Drainage structures	Nursery support	Incentives for innovation and technology development
Sediment capture structures	Village access road rehabilitation	Business training for community groups
Water harvesting, water ponds	Awareness creation on HIV/AIDS	Training on results-based management

4. Results achieved by MERET

Over the last few years, MERET has been evaluated by external consultants, Government of Ethiopia officials and WFP. These evaluations provide useful insights into the results achieved and ongoing challenges faced by MERET. All reports conclude that MERET has made substantial progress towards its goal of improving livelihood and food security opportunities for the most vulnerable, particularly women-headed households, through sustainable use of the natural resource base.

It should be emphasized that during most of the period of Project 2488 and MERET, communities implementing food-for-work activities have also received relief resources when affected by drought. However, both Project 2488 and MERET have adhered to the development standards for soil and water conservation required to rehabilitate a watershed, and transfers have only been given after verification that the work activity has maintained quality standards.

4.1 Results for community members

In addition to programme evaluations, in 2005 FAO undertook a cost-benefit analysis on behalf of WFP to assess the investment returns on MERET activities for beneficiaries. The study analysed soil composition, water capture, the production of woody biomass, and crop and horticultural productivity after conservation treatment implemented through MERET. It found that economic and financial rates of return averaged more than 12 percent for the main activities implemented through the programme – a remarkable achievement for drought-stricken areas.

The analysis also captured MERET communities' views on the benefits resulting from improved natural resource management. It found that all community members interviewed felt that their incomes had improved, and thus that their regular food deficit had decreased. They also found noticeable improvements in the quantity and quality of water available as a result of the conservation efforts. In particular, community members appreciated how pond development had improved the water supply for livestock. The study examined the project's effect on time savings in the collection of fuelwood, fodder and water, tasks traditionally assigned to women. Households in the community noted that significant time savings, averaging 2.2 hours a day for fuelwood collection and 2.0 hours for water collection (WFP, 2005d).

4.2 Technological results

Probably one of the most striking features of MERET has been the role of the partnership between WFP and the natural resource extension system in encouraging innovation. MERET has developed a range of appropriate technologies that adapt international standards of conservation engineering to Ethiopia's watershed requirements and community economic needs.

For example, the development of sediment storage dams, combined with check dams and reshaping techniques, helps control floods, stabilize gullies and restore the disrupted hydrological balances in catchments. Farmers were quick to notice the suitability of these methods, leading to increased popularity and faster rates of replication. As a result, gullies were transformed into productive land, where the concentration of fertile soil and sufficient moisture allow the production of high-value crops that generate income.

The development of these adaptive technologies results from a combination of government investments in technical support and incentives for natural resource experts and extension agents to innovate. Incentives include scholarships for summer schools to learn new approaches and undertake graduate and post-graduate programmes, as well as opportunities for travel and promotion. Farmers and extension agents are also rewarded directly through farmer field days, when experience sharing visits are organized and prizes – certificates and non-food items – are awarded to model farmers and exemplary extension agents.

Locally developed physical technologies, such as sediment storage dams, eyebrow basins and percolation pits, are all variations on basic conservation structures that have been adapted to the highlands' steep terrain and intense rain bursts. Biological measures range from soil fertility management such as composting and manuring, to vegetative measures such as planting trees, shrubs and herbaceous grasses and legumes among the physical conservation works.

For example, leguminous fodder plants combine gully stabilization with fodder supply for livestock. Similarly, pigeon pea provides a source of nutrition, stabilizes land and is drought-resistant. Tree crop planting includes economic wood and fruit trees and trees that enhance soil nutrients.

4.3 Community empowerment

In recent years, greater attention has been paid to MERET's impact on building community capacity and empowerment. A study by the International Food Policy Research Institute (IFPRI), in 2006, found that by focusing on the community, MERET has resulted in community empowerment. "Plans are subject to ratification by the whole community, allowing for voice and accountability. As communities have gained skills in carrying out development activities, they have moved beyond basic conservation to deciding on the allocation of productive resources and governance of communal assets" (Garrett *et al.*, 2009).

A more recent study also found "that individual households now find themselves as part of expanded social networks, and strengthened social values of interdependence and solidarity." By strengthening social capital, MERET enhances collective action and helps reduce individual households' vulnerability to risk (Government of Ethiopia, 2010).

4.4 The capacity for sustainable land management beyond MERET

The problem of land degradation and food insecurity in Ethiopia far outstrips the ability of any single agency to resolve it. MERET therefore has the explicit objective of reaching out to others, sharing learning and building capacity across the government natural resource extension system, by finding partners that can contribute their own knowledge, resources and support to the government. The impact of influencing a system rather than just a community can be seen in Tigray region where the Natural Resource Department applied lessons from MERET to the entire region. For the past 20 years, about 80 percent of cultivated land in Tigray has been treated with soil and water conservation measures. This amounts to about 960,000 ha, of which 300,000 ha is under livelihood-improving biological measures such as fruit trees, fodder shrubs and grasses. Overall, just under 40 percent of Tigray's land mass is treated, protected or reforested. This has been accomplished through the commitment of the regional government and its administrative structure to using all available resources and community self-help to implement quality community-based integrated watershed development (Tafere, 2009).

WFP, the World Bank and the German Agency for Technical Cooperation (GTZ) have collaborated with the government to develop and publish national community-based participatory watershed development planning guidelines.

This partnership has also advocated for and helped form the government-led Sustainable Land Management Forum, which helps to harmonize the efforts of all partners working on watershed rehabilitation, by providing a platform where they can learn from and support each other in expanding sustainable land management practices across the country.

5. WFP's support to MERET and the challenges faced

Project 2488 enjoyed significant development funding during the 1980s. In many ways, this was to the detriment of WFP, because the 1980s top-down food-for-work schemes became a symbol of why WFP should not be involved in development food aid. Although scepticism remains over the role of food in development, MERET's more recent successes have reignited hope that development results can be achieved with a humanitarian caseload – remembering that many MERET beneficiaries have continued to receive relief resources in severe shock years.

Challenges remain, however. Ethiopia still struggles with the need to invest in development, but the obligation first to provide humanitarian assistance. Covering humanitarian needs while trying to achieve quality development investments is still difficult. Furthermore, the dominance of relief food aid in official development assistance (ODA) flows to Ethiopia has generally hurt WFP's support to MERET.

5.1 Funding development in a humanitarian context

Over the past three decades, efforts to promote rural productivity and income growth in Ethiopia have been overshadowed by emergency relief assistance, which until 2005 was the major form of aid to food-insecure households (Thurow, 2003). In 2000, about 30 percent of ODA funds to Ethiopia went to humanitarian efforts, compared with 8 percent to agriculture and 10 percent to transport infrastructure (FAO, 2002). By 2007, a greater share of ODA was going to health, education and safety nets, but humanitarian resources were still high, at 25 percent of ODA. During 2008, humanitarian funding increased dramatically in response to the food and fuel price crisis; as a result, flows to other sectors declined by about 10 percent. Again, humanitarian needs displaced some development ODA. In donor budgets, Ethiopia currently receives more ODA than any other sub-Saharan country, but per capita flows are among the lowest, at about US\$41.⁴

WFP's development programming in Ethiopia is also only a fraction of its humanitarian assistance. During the 2008 crisis, MERET accounted for less than 5 percent of WFP's assistance to Ethiopia. Attempts to increase resources for

MERET are hampered by donors in Ethiopia wanting to encourage non-food approaches to development, given the dominance of food aid in the humanitarian sector.

Table 10.2 summarizes the value of WFP's assistance through Project 2488 and MERET.

Table 10.2 WFP assistance through Project 2488 and MERET					
Period	Project	Beneficiaries	Food (mt)	Cost to WFP (US\$ million)	Total, including government contribution (US\$M)
1980–1982: Original	Ethiopia 2488	2 280 000	145 000	49	66
1982–1987: Phase II	Ethiopia 2488/I	5 340 000	350 000	105	137
1987–1994: Phase II	Ethiopia 2488/II,	5 040 000	378 000	86	96
1994–1999: Phase III	Ethiopia 2488/III	936 000	137 000	50	60
1999–2002: Phase IV	Ethiopia 2488/IV	1 427 000	320 000	122	161
2003–2006	MERET	1 311 000	135 000	51	60
2007–1011	MERET-PLUS	1 700 000	164 000*	72*	79*

* This is the planning figure, thus far MERET has been 50 percent underfunded.

5.2 Trying to achieve development results in a humanitarian context

Despite efforts to increase investment in development, Ethiopia and its partners have been frustrated by the scale of food insecurity and its drag on development. Given that donors are already spending more in Ethiopia than elsewhere, taking MERET to scale is seen as a way of leveraging development results while addressing humanitarian needs.

Since 2005, Ethiopia's Productive Safety Net Programme (PSNP, chapter 20) has sought to meet the challenge of providing long-term development assistance to a humanitarian caseload. PSNP is an attempt to scale up the success of MERET as part of a longer-term commitment to disaster risk management and social safety nets using development funds. However, there are major

differences between design of PSNP and that of MERET, including the following:

- The PSNP transfer is a household entitlement not a community-based incentive to undertake quality soil and water conservation works.
- PSNP public works include a menu of options, and give less emphasis to applying a participatory integrated watershed management approach in their planning.
- PSNP often excludes work on homesteads and farmland, even when needed to treat a watershed, as its priority is work on communal land.
- PSNP does not invest time and effort in strengthening the community natural resource management committee.
- The PSNP package does not include the learning cycle and incentives for natural resource extension agents, experts, and community members.

As a result, PSNP lacks a focus on community natural resource management and has faced challenges in transforming natural resources and productivity in marginal communities. The hopes and resources placed in PSNP have diverted attention and resources from MERET. Since 2006, owing to resource shortfalls, MERET has been scaled down from supporting 600 communities to its current 451, reaching only about 300,000 people. At the same time, PSNP has faced problems in generating MERET-like successes in watershed rehabilitation.

During 2008 and 2009, WFP undertook significant work with donors to increase awareness about the differences between MERET and PSNP, emphasizing that MERET is not a substitute but rather a complement that helps PSNP achieve its productive aims. In particular, the value of MERET's support to capacity building, community empowerment and the learning cycle was confirmed by an evaluation in 2009 and by work undertaken by IFPRI (WFP, 2009a; Garrett *et al.*, 2009).

6. Lessons learned

The Government of Ethiopia has focused on watershed rehabilitation since the mid-1970s. Meanwhile, MERET currently reaches only about 4 percent of the areas requiring treatment, and its funding is marginal compared with WFP's resources for humanitarian assistance. Therefore, can MERET really be seen as a success story, and does it really offer lessons for other WFP operations?

In answering these questions, three factors should be kept in mind: it takes time and mistakes to learn lessons; inertia within government and international organizations hampers efforts to respond to lessons and change direction; and a context of continued humanitarian crises and low administrative capacity slows the process of transferring political and institutional change down to the

grassroots level. However, despite these hurdles to institutional learning and developmental transformation in a crisis-prone context, MERET shows that change can occur and food assistance can support effective disaster risk reduction at scale.

A critical success factor of MERET is the vision, commitment and tenacity of NPSU in pushing forward the learning agenda and ensuring that staff working in MERET truly partner communities, listening and responding to their needs. The adaptive technologies and the integration of livelihood needs and income-generating activities in the MERET approach are a direct result of this learning partnership. Similarly, WFP's consistent support – both financial and in food and staff resources – to NPSU and regional staff gave them the leverage they needed to experiment, innovate and incentivize communities to act.

The key lessons from MERET and WFP's experience of supporting it are at the strategic and programme levels.

6.1 At the strategic level

- Communities facing humanitarian crises can achieve development results, but combining humanitarian and development objectives in one programme is extremely challenging. In MERET, it has been more effective to implement a community-based programme that maintains the rigour and quality of a development intervention but is complemented by, rather than combined with, humanitarian interventions.
- A project cannot transform a society. Only the society, supported by national government, can resolve its own problems; this underlines the importance of capacity building, learning, and working through government systems.
- Investing in community management capacity is essential to the sustainability of disaster risk reduction interventions. This requires time and regular support to the community, but the resulting social capital is an important part of resilience.
- In highly food-insecure communities where markets do not function reliably, food is often a preferred transfer, especially when development investments require households to reduce income levels in the short term, through eliminating unsustainable livelihood activities. Various studies (Government of Ethiopia, 2010) have noted that poorer communities in Ethiopia often prefer food wages to cash, and only about 15 percent of the food is sold to meet other basic needs. In times of stress, more than 90 percent of the food wage is consumed.

6.2 At the programme level

- Achieving “quick wins” in livelihood enhancement increases incentives and people’s commitment to continuing with environmental rehabilitation. In the watershed development package, intensive water harvesting activities in semi-arid areas have allowed small-scale irrigation within as little as a year. This, coupled with the selection of viable income-generating packages, quickly improved the livelihoods of beneficiaries, increasing their commitment to implementing the watershed treatment and collectively managing and maintaining the watershed.
- Working with the community as a partner requires community empowerment for decision-making, and encouragement to government administrators at all levels for internalizing and sharing the problems voiced by community members.
- Using learning to effect change requires adequate support to capacities for planning, implementation and monitoring and evaluation; regular supervision; and technical support among community managers, natural resource experts and extension agents.
- To encourage the adoption of new technologies, they should be developed within communities, not at research stations, and disseminated through demonstrations in the field by technical staff. Farmer field visits, where farmers share experiences with each other, are a useful tool.
- Maintaining an effective quality control system with agreed standards across all sites ensures that efforts achieve the intended results. In MERET, technicians review the quality of soil and water conservation structures, ensuring that suboptimal work is corrected before food transfer are made.
- It is important to have technical capacity within WFP and funding to provide government technicians, administrators and community members with incentives for learning. These make it possible to adapt technologies to local needs and allow the close collaboration and support on programme design and implementation that achieve results.

¹ MERET’s success is a direct result of work by the Government of Ethiopia’s natural resource extension system, supported by the MERET National Project Support Unit in the Ministry of Agriculture and Rural Development and at the regional level, and currently led by Ato Betru Nedessa. The authors thank Mohamed Diab and the WFP staff supporting MERET for their inputs into this chapter: Yihewew Zewdie, Fithanegest Gebru, Arega Yirga, Tariku Alemu and Messele Gebregziabher. Special thanks to Volli Carucci, who has contributed to the evolution of MERET and documented its experience for the past 20 years.

² United Nations International Strategy for Disaster Reduction website, Terminology 2009: www.unisdr.org/.

- ³ Although all land is still owned by the State, communities and farmers have traditionally been allocated land-use rights. Building on this tradition, a land-use certification process is now being established.
- ⁴ Organisation for Economic Co-operation and Development/Development Assistance Committee (OECD/DAC) Table 2a ODA disbursements by recipient and type: www.oecd.org/dac.

11

Introducing new and improved food products for better nutrition

Saskia de Pee, Tina van den Briel, Joris van Hees and Martin W. Bloem

1. Introduction

To achieve the Millennium Development Goals, undernutrition must be addressed urgently and effectively. The development of ready-to-use therapeutic foods (RUTFs) has revolutionized the treatment of severe acute malnutrition/severe wasting and catalysed the development of other food-based commodities for treating and preventing less severe and other forms of undernutrition (Ciliberto *et al.*, 2005; Collins *et al.*, 2006; De Pee and Bloem, 2009).

WFP has already focused on ensuring that energy and protein needs are met and has stepped up the micronutrient fortification of processed commodities, such as cooking oil, flour and salt. The latest developments under its Nutrition Improvement Approach are directed towards meeting the nutritional needs of specific target groups (De Pee *et al.*, 2008b). These include children under 2 years of age, moderately malnourished individuals, pregnant and lactating women, populations suffering from micronutrient deficiencies, and the chronically ill – people living with HIV/AIDS and tuberculosis (TB). Meeting their nutritional needs is important for their survival, as well as for development. For ensuring survival, it is most important to treat or prevent micronutrient deficiencies. Among children under 5, vitamin A and zinc deficiencies are responsible for 0.6 million and 0.4 million deaths, respectively, every year (Black, *et al.*, 2008). To prevent or treat the different forms of undernutrition among different groups effectively, it is important that the underlying causes and consequences of undernutrition are understood, appropriate food-based

commodities are selected, and realistic and effective programme options are developed.

The focus on addressing the nutritional needs of specific target groups, and the concurrent increase in availability of specially formulated foods put WFP into a better position for saving more lives and improving the growth, development, health and future well-being of its beneficiaries. This is also of utmost importance to WFP in achieving its Strategic Objectives (SOs), such as SO1 saving lives and protecting livelihoods in emergencies, SO3 restoring and rebuilding lives and livelihoods in post-conflict, post-disaster or transition situations, and SO4 reducing chronic hunger and undernutrition.

This chapter describes the many lessons that WFP has already learned during the process of introducing new commodities in support of the Nutrition Improvement Approach, and identifies strategies to be pursued for providing better nutrition at scale to its beneficiaries and other groups of the population not directly serviced by WFP.

2. Improved nutrition for children under 2 is highest priority

Early undernutrition leads to reduced physical and mental development during young childhood, which subsequently affects school performance and attendance. Undernourished children are more likely to start school later and drop out earlier. The devastating impact on their early development and school performance adversely affects their income-earning potential for life, making it very difficult to rise out of poverty (Victora *et al.*, 2008). In addition, undernourished children who put on weight rapidly at later stages of childhood and adolescence are more likely to develop nutrition-related chronic diseases, such as diabetes, hypertension and coronary heart disease (Black *et al.*, 2008). The long-term damage caused by early childhood undernutrition includes shorter adult height, lower productivity, and low birth weight for babies born to women who were undernourished girls, which perpetuates the problem in the next generation.

Research among men aged 25 to 42 years in Guatemala found that those who received a nutritious supplement when they were 0 to 2 years of age earned higher hourly wages – by an average of 46 percent – than men who did not receive the supplement (Hoddinott, 2008). This indicates that investment in early childhood nutrition can drive economic growth for individuals and societies.

Much of the damage caused by early childhood undernutrition is irreversible, especially when the child's circumstances and diet remain largely the same while he/she grows up. Bones and tissues such as muscles grow very

quickly during certain periods, particularly the first two years of life and during adolescence. When growth during these periods is limited by a shortage of the essential nutrients required for the formation of new tissues, shorter height will result, unless the diet is drastically improved. For the brain to develop well, it also needs nutrients and stimulation at an early age. When nutrients are lacking and the child is constantly tired owing to anaemia or illness, the response to stimulation is reduced and overall development hampered. Much remains to be learned about the exact physiological processes of growth, immunity, transmission of stimuli in the brain, etc., but there is increasing evidence that damage brought about by early childhood undernutrition – including during foetal life – is largely irreversible. The period between conception and 2 years of age, or from -9 to 24 months, is therefore known as the “window of opportunity”; this is the period when good nutrition is particularly important and a lack of the right nutrition will have lifelong consequences.

The prevention of maternal and child undernutrition is a long-term investment that will benefit the present generation and its children. It is very important to focus interventions on the prevention of stunting/short stature and micronutrient deficiencies, and the prevention and treatment of wasting/recent weight loss. It is also necessary to provide nutritional support to pregnant women, to ensure adequate nutrition for their unborn children and to reduce the risks of mothers giving birth to underweight or mentally impaired babies or dying during childbirth. Mothers also need nutritional support so they can feed and care for their children adequately, through exclusive breastfeeding for the first 6 months of life, followed by appropriate complementary feeding.

Based on these findings, WFP is giving priority to improving the nutritional value of its commodities in order to deliver the right nutrition at the right time in people’s lives, particularly for young children. This means introducing new and modified commodities, delivering specific commodities to specific target groups, and developing new programming that reaches specific target groups with special commodities and information.

2.1 Why is chronic malnutrition relevant in emergencies?

Wasting, or low weight-for-height, is also known as acute malnutrition; stunting, or short height-for-age, is also known as chronic malnutrition. The terms “acute” and “chronic” are somewhat misleading, however, as both chronic and acute malnutrition develop in relatively short periods.

Wasting usually has a sudden onset and is mostly due to a combination of sudden food shortage and disease. Severe wasting should be addressed immediately, as it has a very high mortality rate; moderate wasting should be treated so that it does not worsen. Stunting develops before the age of 2 years

and, as explained in the previous section, should be prevented before requiring treatment because it is very difficult to correct without major dietary and environmental changes and is associated with other nutrient deficiencies and related developmental delays and shortcomings, many of which cannot be corrected later in life. This means that a short-term intervention between conception and 2 years of age can prevent chronic malnutrition, which would otherwise affect a child for the rest of her/his life.

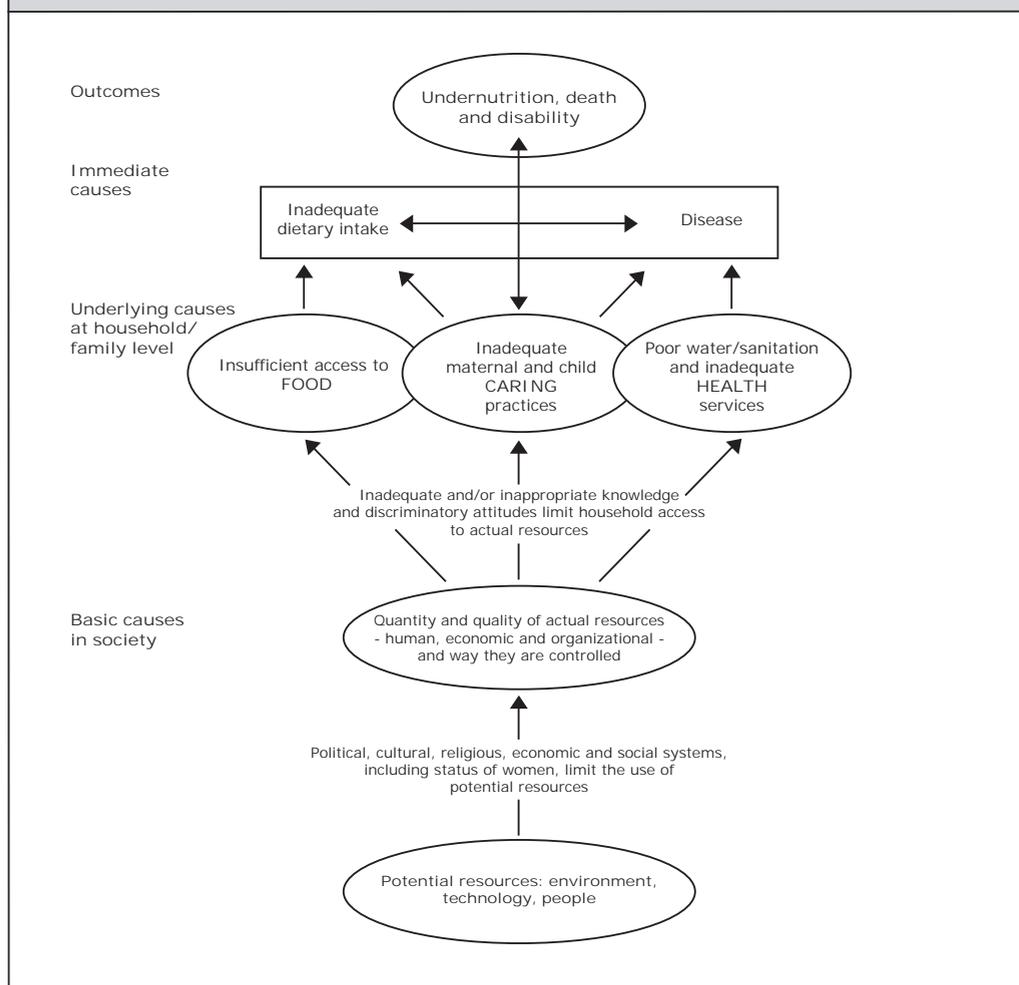
In other words, any intervention lasting for one or two years – whether it is an emergency operation, a protracted relief and rehabilitation operation or another kind of programme – can implement short-term actions for long-term impacts through providing the right nutrients to the youngest children.

2.2 Better foods versus other factors with an impact on nutrition status

The United Nations Children’s Fund (UNICEF) conceptual framework of the direct, underlying and basic causes of malnutrition shows that in addition to nutrient intake or consumption of special foods, many other factors are also important for nutrition status (Figure 11.1). These include clean water, hygiene, good caring practices, maternal education and economic development and stability. So why is making better foods available regarded as being so important?

To develop a good understanding of how nutrition status can be improved, the immediate causes should be distinguished from the underlying and basic causes. The immediate causes of child malnutrition are dietary intake and disease. Especially for stunting, dietary intake of appropriate nutrients is of utmost importance, because without it a child’s body will not build enough of the bones and muscles required for gaining height, not develop a well-functioning immune system, and cognitive development will also be reduced. This requires very diverse nutrients, including essential amino acids, macrominerals – calcium, phosphorus, magnesium, etc. – and micronutrients/vitamins and minerals. As a rule of thumb, a diet consisting largely of plant-source foods, such as staples, vegetables and fruits, and virtually no animal-source foods, such as milk products, fish, meat and eggs, or fortified foods does not provide all the nutrients required for a young child’s growth, health and development.

Figure 11.1 UNICEF conceptual framework for the causes of undernutrition



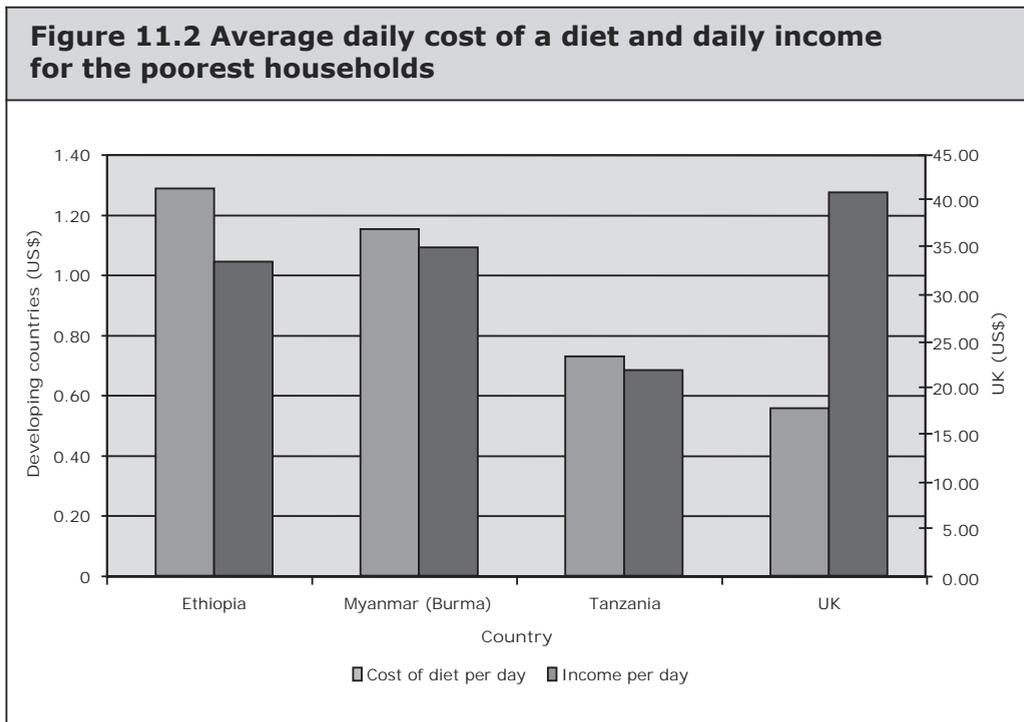
Source: UNICEF, 1998.

Thus, a high prevalence of stunting and micronutrient deficiencies indicates that young children are not receiving all the nutrients they require from their diet. Diseases further reduce the chances of meeting nutrient requirements because they increase nutrient needs, lead to reduced food intake owing to poor appetite, and increase nutrient losses. However, it is important to realize that even in the absence of disease, children with inadequate nutrient intake will not grow adequately and will thus become stunted (Golden, 2009).

An inadequate nutrient intake can have multiple causes, including being unable to afford a variety of foods in the family diet beyond staples, i.e., poverty;

lacking access to a good variety of foods, because they are not produced or are not available in markets or shops; or lacking knowledge and having inappropriate child care practices and/or food taboos. It is very important to understand these causes when planning the most appropriate interventions. For example, where people can make choices because they have access to nutritious foods – i.e., the foods are available and affordable – nutrition education may be required. However, knowing which choices to make will not make much difference to people who are food-insecure because of poverty or poor harvests, as they cannot afford these choices.

The cost of the diet assessments by Save the Children UK show that incapacity to afford an adequately nutritious diet can affect many households in a population (Chastre *et al.*, 2007). For example, Figure 11.2 compares the costs of a nutritious diet with the income available to the poorest households in Ethiopia, Myanmar, the United Republic of Tanzania and the United Kingdom. In all the countries except the United Kingdom, the total available income of the poorest households is clearly not enough to afford a nutritious diet, especially given that not all income is spent on food – the poorest households typically spend 70 to 80 percent on food (Chastre *et al.*, 2007).



Source: Save the Children UK, 2007.

In areas where food insecurity is prevalent, children will certainly not meet their nutrient requirements for adequate growth, health and development, because this requires adding high-quality nutritious foods to the diet, which is impossible in food-insecure households.

Thus, although interventions to reduce disease, nutrition education about good food choices, universal access to education, etc. are very important, they cannot reduce child undernutrition significantly unless they enable or are accompanied by access to and consumption of nutritious foods. Currently, many actors, including the private sector, focus on developing and making nutritious foods available to people with limited access to appropriate foods for meeting the nutrient requirements of their children.

3. What changes is WFP making to its food basket?

Improving the quality and diversity of food products used in WFP programmes is critical. WFP is working, swiftly and determinedly, with partners in the private sector, universities, United Nations agencies and non-governmental organizations (NGOs) to develop new products and delivery modalities as part of a toolbox of strategies for treating and preventing different types of malnutrition, including micronutrient –vitamin and mineral – deficiencies. WFP and its partners are also working to develop and assess the effectiveness of innovative products for the prevention and treatment of malnutrition.

Foods should provide the nutrients required to prevent or recover from undernutrition for each target group. For example, foods provided to children suffering from moderate acute malnutrition should provide the nutrients required for the growth of muscle, bone and fat mass, energy for physical activity, and adequate vitamins and minerals to allow good health and development.

For the past 30 years, fortified blended foods (FBFs) have been provided to any group with high nutrition needs, such as moderately malnourished individuals and pregnant and lactating women, and as a good source of micronutrients to the general population. The rationale for this is the foods' contents: good-quality protein, mostly from soy, carbohydrates from wheat or maize, and a vitamin and mineral premix added during production. In addition, FBFs are affordable, with prices that are not much higher than those of other commodities in the food basket.

However, selecting the right mix of foods to promote good growth and development is a complex task, because one food, such as soya, cannot easily replace another food, such as milk. It is increasingly understood that foods do not contain only nutrients, such as protein, vitamins and minerals, but also anti-nutrients, such as phytate, polyphenols and enzyme inhibitors.

Foods with comparable protein profiles, such as soy and milk, may therefore have very different growth and health promoting properties, owing to their different anti-nutrient contents. Anti-nutrients have negative impacts on digestion and the utilization of foods consumed. For example, soybeans contain phytate and fibre, which reduce the absorption of the minerals iron and zinc and increase the bulkiness of the food, so that young children consume less energy for the same volume. Milk does not contain these anti-nutrients, and is also thought to contain growth promoting factors.

Because food composition tables do not list most anti-nutrients and active compounds, it is difficult to draw conclusions about the potential nutritional impact of a product made from a variety of ingredients without detailed knowledge about these ingredients and testing of the end-product in the target group.

The commodities and programme modalities used by WFP to prevent and treat undernutrition, including micronutrient deficiencies, are being revised as follows:

- *Enhancing the quality of the home diet for young children by adding complementary food supplements, particularly as lipid-based nutrient supplements (LNS) or micronutrient powders (MNPs)*: Home fortification refers to the addition of a small complement to the meal or diet in the form of a powder or spread that contains specific nutrients of which the home-based diet typically has too little (Dewey, Yang and Boy, 2009; Zlotkin *et al.*, 2005; De Pee *et al.*, 2008a; Adu-Afarwuah *et al.*, 2007; 2008; Defourny *et al.*, 2009). Examples include the micronutrient powders MixMe™ or Sprinkles™, and small amounts of spread, such as 45 g/day of Plumpy Doz™, 20 g/day of Nutributter™, or 50 g/day of RUFIC India/Pakistan (see below). In addition to micronutrients, the spreads or LNS also contain milk powder, essential fatty acids, essential amino acids and macro-minerals such as calcium and magnesium.
- *Improving FBFs such as corn-soya blend (CSB) and wheat-soya blend (WSB)*: From January 2010, all FBFs should use a new vitamin and mineral premix with larger amounts and improved forms of vitamins and minerals, known as CSB+. In addition, CSB++ has been developed for consumption by young and malnourished children. It consists of 57 to 62 percent maize, 15 to 20 percent dehulled soya, 9 percent sugar, 8 percent milk powder and 3 percent soybean oil, and uses the same micronutrient premix as CSB+, with reduced permissible levels of aflatoxin and microbiological contamination.
- *Using ready-to-use foods (RUFs) for treating moderate malnutrition*: Following the success of RUTFs such as Plumpy Nut™ in treating severe acute malnutrition, products with very similar properties are being developed for treating moderate malnutrition/moderate wasting, such as Supplementary

- Plumpy™ at 92 g/day, and RUFIC India/Pakistan at 100 g/day.
- *Developing and testing RUFs, especially spreads, for treating moderate malnutrition among under-5s, providing about 500 kcal/day, and for blanket preventive use among under-2s, providing up to 250 kcal/day or 50 g/day:* For example, a chickpea paste being developed in India and Pakistan, and known as RUFIC India/Pakistan, is comparable to the LNS currently on the market, such as Supplementary Plumpy™ and Plumpy Doz™, but uses additional, local ingredients. The impact of these new RUFs has still to be tested.
 - *Increasing food fortification for the general population through the fortification of staples – wheat and maize flours, rice is still experimental – cooking oil and condiments, salt:* All flours distributed by WFP need to be fortified, but many cereals are still distributed as whole grains. Since the World Health Organization (WHO) published new guidance on food fortification (Allen *et al.*, 2006), WFP has supported introduction of the recommended fortification practices. Fortification of staples is a very cost-effective way of improving the general population's intake of vitamins and minerals, but can never meet the greater needs of young children, pregnant and lactating women or people living with HIV and AIDS, because these groups do not consume large enough amounts of these foods, which are fortified at levels that meet requirements of the average person in the population.

Table 11.1 in the annex to this chapter describes each of these categories, their intended target groups and options for their use, and provides information on the locations and scale at which WFP has started to introduce these commodities.

The availability of different options means that choices have to be made, such as between providing an RUF or an enhanced FBF to moderately malnourished children, or between improving the diet of young children with an MNP or a spread. Programmes may also have to be changed when foods are to be provided to groups that were not previously targeted with a specific product. For example, in a situation of high food insecurity and high prevalence of child malnutrition, it might be considered essential to provide a special product to under-2s, to prevent increased malnutrition rates. Sometimes this is only a temporary measure, usually during the lean season. Information should be provided about the what, why and how of a product introduced for such purposes. In addition, although this preventive approach has been shown to be cost-effective, it requires additional funding, which may not always be easily accessible.

Figure 11.3 Nutritional products used by WFP



From top-left: micronutrient powder (sprinkles), high energy biscuits, Plumpy Doz™, Supplementary Plumpy™, date-bars, and the key components of the WFP food basket.

Source: WFP website: www.wfp.org/photos/gallery/nutritional-products-used-wfp.

The following section describes some of WFP's experiences with these aspects as it introduces the new commodities.

4. Experience with the introduction of new commodities

Before new or improved commodities are introduced, certain conditions need to be in place: first, WFP, its government and other partners, including donors, must all understand and agree that the changes are necessary; second, specific commodities have to be selected, and must be available in time, either locally or through import; and third, the partners selected to implement the programme must be able to provide information about the products – what they are, whom they are for, etc. – and this may require the design of a social marketing campaign, etc.

The following sections describe the issues encountered when new commodities are introduced into WFP operations, and outline ways forward.

4.1 Introducing MNP into a community: the importance of package design and social marketing

MNP for home-fortification usually comes in small sachets containing 1 g of powder to be mixed with one meal, once a day or once every two days. Because both the product and the practice of fortifying a meal just before consumption are new to most beneficiaries and programme staff, the MNP needs careful introduction and presentation. This includes effective packaging of the sachets and their box, which are the main routes of communication with beneficiaries, and a social marketing and awareness raising campaign. Traditionally, WFP has distributed foods that are well known to beneficiaries. A powder in a sachet is very unfamiliar, and such products are not yet available on local markets. Through its partnership with DSM,¹ WFP has started distributing MNPs in Kenya, Nepal and Bangladesh, and has learned many lessons.

For quick production of the MNP, printed foil for the sachets should ideally be ready in the factory. Except where the product is already produced locally, this means that the same sachet should be acceptable across different countries. Preferences are very locally specific, so WFP uses a pictogram of the sachet's contents being emptied on to a generic bowl of food (Figure 11.4). Clear guidelines have been drawn up for the design of boxes, including the information they must provide, because boxes have to be designed locally in the appropriate language and with appropriate images of target group(s), declaration of ingredients, and instructions for use, storage, etc.

The social marketing and awareness raising campaign should tie into existing nutrition and health promotion activities and programmes and use actors who are

trusted by the community. This is particularly important for avoiding rumours, such as the misconception that the white powder distributed in a package illustrating a happy child, mother and father is meant for family planning.

Figure 11.4 Universal sachet design for micronutrient powder (MNP)



Extra micronutrients are needed by many people, particularly young children, and not just the beneficiaries of WFP, government or other programmes; in many cases families could afford a micronutrient product if it was available on the local market. Availability on the local market would also allow WFP and others serving the poorest of the poor to purchase the product and benefit from its being known to the population. A subsequent step in a nutrition programme should therefore be to use a public-private partnership to make an MNP or similar product available for sale at the same time as it is distributed free of charge. When beneficiaries obtain the product by using a voucher – which they receive for participating in a food-for-asset programme, for example – the same outlets could be used by both groups of customers, and marketing efforts could be combined.

The experience of designing MNP packaging may also be relevant to other new products that are developed for specific target groups and that therefore need good communication about appropriate use, preparation, etc.

Important lesson learned: Marketing expertise is essential when designing and distributing a new and unknown type of product, such as MNP, to consumers.

4.2 New and specialized foods, limited market, limited production

Although many of the world's children require one or more specialized foods for preventing or treating undernutrition – 179 million children under 5 are stunted, and 19 million suffer from severe acute malnutrition – the products are new and are being produced in only a few facilities, suggesting that demand is far greater than availability. However, there is also a great desire to use local foods as much as possible when dealing with undernutrition. This can range from using nutrition education to explain which foods are best, to producing a special food industrially from a selection of locally available foods, preferably enhanced through fortification.

Nutrition education has a long history, but as discussed earlier, it only works when people can exercise choice, and even then the needs for particular nutrients are so high during certain periods of development that it is very difficult to meet them without at least some fortification, such as an MNP. In addition, with local production, a company has to be able to profit from its investments in research and development, and must have the capacity to produce the specialized food. Currently, very few companies are producing lipid-based RUFs; although production is not particularly high-tech, companies need a guaranteed demand before they decide to produce these products.

For WFP, this means that local acceptance of a new or improved product and the possibility of importing it are essential; the required quantity must also be available in time. To increase the availability of suitable products while using local ingredients as much as possible, WFP is involved in the development of a chickpea-based spread in India and Pakistan, and in date-bar fortification in the Middle East. Meanwhile, UNICEF is working with producers to increase the production capacity for existing, ready-for-production, lipid-based RUFs.

Important lesson learned: Development and international acceptance of a new specialized food product do not guarantee its availability locally.

4.3 Product development requires a range of expertise and a pilot production facility

To develop new foods, such as the chickpea paste in India and Pakistan, WFP requires a range of expertise, including in nutrition, food technology, packaging, legislation and marketing – the typical areas of expertise for food companies. A small pilot production facility is also needed, for producing test batches of new product to fine-tune the proportions of ingredients and the processing steps and to examine the product's properties.

WFP has very limited expertise in these areas, especially in food technology and packaging, and no facility for producing test batches. The few experts in WFP therefore liaise with local and international companies for product development, on condition that the specifications of any product developed should be made publicly available. This means that any company that can meet these specifications can bid when WFP issues an invitation to tender for production. This experience illustrates how the lack of guaranteed demand from purchasing agencies hampers efforts to increase the availability of suitable new specialized food products.

Important lesson learned: Public-private partnerships are needed to pioneer ways of working together on the development of new food products.

4.4 Enhanced FBFs such as CSB++ have superior nutrition properties, but few production facilities

WFP purchases more than 300,000 mt of CSB every year, more than 60,000 mt of which is for children under 2 years or moderately malnourished children. Both groups should now receive CSB++ instead of CSB (Table 11.1, annex), or a ready-to-use food, and facilities for producing CSB++ should be identified.

The specifications for CSB++ are tighter than those for CSB+ in terms of microbiological contamination and aflatoxin content; dehulled soybeans should be used; oil and milk are added during the production process; and the product is packaged in smaller bags, of 3–7 kg instead of 25 kg, so they do not have to be opened and split into smaller quantities at distribution points. As a result, almost all CSB++ producers outside Europe – WFP purchases about 60 percent of CSB in developing countries – have to modify their production facilities and processes, which requires substantial investments that producers cannot yet realize. Specific technological assistance, longer-term agreements with producers to guarantee purchase of a specific quantity for a set period, investment support, etc. are required to enable these facilities to produce CSB++ for WFP and UNICEF.

Important lesson learned: The substantial adjustments to production processes, including strict application of good manufacturing practices and principles of hygiene, required to produce CSB++, are hindering a rapid increase in production capacity.

4.5 Should each new specialized food product be tested for impact before use?

Because new specialized foods are developed for the specific purpose of preventing or treating undernutrition, including micronutrient deficiencies, their impacts on nutrition outcomes should be known. However, impact studies take at least one to two years to carry out, following six to 12 months of designing and acquiring ethical approval and funding for the study.

The question now is whether newly developed foods that are accepted by the targeted community can or cannot be used in programmes while their impact is still being studied. In principle, the best foods available should be provided, which for moderate malnutrition are LNS such as Supplementary Plumpy. However, these foods are new, and available only at limited scale; the fall-back food is CSB+,² but CSB++ has a better composition for treating moderate malnutrition than CSB+ – owing to its additional milk powder, sugar and oil, use of dehulled soybeans, and stricter limits for aflatoxin and microbiological contamination – so it should replace CSB+ where LNS provision is impossible. The impacts of CSB++ compared with those of LNS products and CSB+ are being tested, to find out whether it requires further modifications. The same applies to the chickpea-based RUF developed in India, and to its use and the use of CSB++ in blanket feeding to prevent malnutrition among children aged 6 to 24 months.

This twin-track approach of using a new product while it is being tested, if it is expected to perform better than the product it replaces, is in-line with an agreement reached at the WHO/WFP/UNICEF/UNHCR informal technical consultation on the treatment of moderate malnutrition in October 2008 (Shoham and Duffield, 2009).

Important conclusion: Specialized products have special purposes and their impacts on the desired outcome should be tested in well-designed studies. However, while these studies are being conducted, the products can be used in programmes, provided that they are acceptable to the target population and are expected to perform better than the products they replace.

4.6 Collaboration with the private sector

The new specialized foods are processed products, and most of them are produced by the private sector. Because the products are new and not yet widely available on the market, packaging has to be adjusted to programme and local needs, and WFP has to link its logistics to those of the manufacturer; good collaboration between public and private sector partners is essential.

Every company has its own corporate culture, ways of working, targets, etc., and companies do not all follow the same approach to partnerships with the public sector, whose agencies also operate in very diverse ways.

WFP is involved in a number of public-private partnerships aimed at providing it with access to specific expertise and products in a wide range of areas, including logistics, micronutrients, school feeding and food technology. For the companies, working with WFP enables them to support the poorest of the poor, increases their understanding of the issues faced by this group and by WFP, and involves them in interaction and experience that should lead to new ideas and initiatives focused on low-to-middle income population segments. These groups also need the new specialized products, but are not typically targeted by WFP or other programmes, and would be able to afford some of them. At the moment however, such products are often directed to higher-income segments of populations and may be imported in fancy packaging.

Important lesson learned: Public-private partnerships are needed to increase the availability of nutritious products for both the poorest of the poor and low- to middle-income consumers; individual partners must collaborate to make things work.

4.7 Utilization of new products: are nutrient requirements being met?

The new products have been developed to meet nutrient requirements more effectively. Their use should therefore be monitored to ascertain whether their distribution results in the desired nutrient intake. Because certain commodities are meant for consumption by only specific family members – blanket feeding of children under 2, supplementary feeding for the moderately malnourished, the chronically ill or pregnant and lactating women, etc. – it is important to determine whether or not they are actually reaching these individuals. The acceptance, preparation and consumption of new commodities, as well as the overall diet of the individual, therefore needs to be monitored.

Important conclusion: Monitoring of the actual use and consumption of distributed commodities by individual household members is required.

5. Conclusions

WFP's toolbox already includes the fortification of staples and condiments, and the production of FBFs such as CSB. WFP is now developing, improving and adding food commodities to the food basket to meet more effectively the nutrition needs of specific target groups: young children, moderately malnourished children, pregnant and lactating women, people living with HIV/AIDS or TB.

The toolbox also includes new strategies, such as home-fortification with MNPs (MixMe™ or Sprinkles™) to address micronutrient deficiencies, ready-to-use supplementary foods (RUSFs) for treating children with moderate acute malnutrition, and food supplements to complement the diets of young children aged 6 to 23 months, to prevent malnutrition.

WFP uses a twin-track approach to the development and use of new or modified foods for young children. New foods are developed in line with current scientific knowledge and hypotheses regarding the treatment or prevention of different kinds of malnutrition. These foods are distributed in selected operations in place of foods of less adequate nutritional composition. At the same time, the impacts of the products on growth – weight as well as length or height – morbidity and micronutrient status are being tested, which could lead to further improvements of products as well as their production and delivery.

¹ DSM is a global life and materials sciences company producing innovative nutrition, speciality food and pharmaceutical products, performance materials and industrial chemicals; WFP's collaboration with DSM focuses on nutritional quality, particularly micronutrients.

² From January 2010, all CSB should be formulated with the new vitamin and mineral premix, which makes it CSB+.

Table 11.1 WFP's new nutrition products

Commodities available or being developed	Description	Target group(s)
<p>Complementary food supplements: Micronutrient powder (MNP) Lipid-based nutrient supplement (LNS): 20–45 g/d = 120–250 kcal/d, e.g. Nutributter™ (20 g/d), Plumpy Doz™ (45 g/d), Indian chickpea-paste (50 g/d)</p>	<p>A small highly nutritious complement added to a meal or the daily diet, to improve its nutritional value</p>	<p>Children 6–23 months and children 24–59 months</p>
<p>Ready-to-use foods (RUFs), such as Supplementary Plumpy™ and Indian chickpea-paste (RUFC): 90–100 g/d or more</p>	<p>Spreads comparable to RUTF (Plumpy Nut™) but used for treating moderate malnutrition. May be most effective food for this. Note: the Indian chickpea paste is still under development</p>	<p>Moderately malnourished children typically targeted by supplementary feeding programmes</p>
<p>Improved fortified blended foods (FBFs) such as CSB+ and CSB++</p>	<p>Being improved by more comprehensive vitamin and mineral mix (CSB+); for special use sugar, milk powder and oil are added (CSB++)</p>	<p>CSB+ is for people from 24 months onwards, especially to provide protein and micronutrients CSB++ is for children 6–23 months and moderately malnourished children</p>
<p>Food fortification</p>	<p>Improves micronutrient intake, so contributes to controlling micronutrient deficiencies</p>	<p>General population, using staples (especially flours; rice fortification under development) and condiments (iodized salt, cooking oil with vitamins A and D)</p>

When to use	Ongoing or completed use by WFP: location and approximate numbers of beneficiaries reached
<p>Low-dose LNS (20–45 g/d) preferred for children 6–23 months where stunting at 24–59 months is high LNS (45 g/d) can also be used for blanket feeding in lean season, to prevent a rise in malnutrition</p> <p>MNP preferred where anaemia is widely prevalent but stunting not very high</p>	<p>MNP used in Damak, Nepal (8 500 under-5s), far western region of Nepal (114 000 under-5s), Kakuma, Kenya (50 000 refugees 6 months and older), EMOP Bangladesh (100 700 under-5s and 59 400 pregnant and lactating women), Cox Bazaar, Bangladesh (27 000 refugees: under-5s, pregnant and lactating women, adolescent girls), Afghanistan (95 000 primary schoolchildren), India (71 000 primary schoolchildren), Cambodia (5 300 primary schoolchildren), United Republic of Tanzania (5 750 primary schoolchildren) and EMOP Peru (7 000 children 6–36 months)</p> <p><i>Plumpy Doz™</i> used in Sudan (18 000 children 6–36 months)</p> <p><i>Nutributter™</i> pilots started in Dadaab, Kenya and Algeria in collaboration with UNHCR (small-scale as yet)</p>
<p>In programmes for treating moderate malnutrition</p>	<p><i>Supplementary Plumpy™</i> used in Ethiopia (40 000 under-5s), Somalia (22 000 and 63 800 under-5s) and Yemen (21 921 under-5s)</p> <p><i>Indian chickpea paste</i> still under development, has been used at small scale in Bihar floods, India (15 000 children 6–23 months)</p>
<p>CSB+ replaces all CSB; other FBFs will also have the improved premix</p> <p>CSB++ can be used for blanket feeding of children 6–23 months and for children on supplementary feeding programmes. Alternative choice for blanket feeding is LNS (20–45 g/d); alternative for supplementary feeding is RUF</p>	<p>CSB+ should replace all CSB from January 2010. The new premix is more bulky and consists of several components, so appropriate guidance is being prepared for manufacturers</p> <p>Production of CSB++ started in Europe in January 2010. The more stringent specifications – de-hulling soybeans, tighter aflatoxin and microbiological contamination criteria – mean that producers must make substantial changes to production and quality control processes</p>
<p>Fortified staples and condiments should always be used, unless whole-grain staples are distributed because they cannot be processed. In this case, small-scale fortification should be explored (small mills, home- or institution-fortification using MNP)</p>	<p>Ongoing efforts by WFP and partners to fortify other foods, such as rice (pilot to be started in Egypt and possibly India), date-bars (used in Gaza and Egypt), cassava (Zambia)</p> <p>Meanwhile, WFP supports implementation of new WHO fortification guidelines for flours and other commodities, which means ensuring that fortificants have adequate bioavailability (i.e. are properly used by the body)</p>

12

Food technology for safe and nutritious food

Dominique Bounie, Charlotte Bienfait, Shane Prigge and Bertrand Salvignol

1. Introduction

Food technology is the application of food science to the selection, preservation, processing, packaging, distribution, control and use of safe, nutritious, tasty and convenient food. Food technologists study the physical, microbiological and chemical make-up of food. Depending on their area of specialization, they may develop ways of designing, processing, packaging, controlling, transporting or storing food, according to consumers' expectations, industry specifications and government regulations.

Food technology at WFP serves mainly to support different units and country offices by providing technical advice and solutions to enable the production of safe and nutritious food that is appropriate for humanitarian aid. This chapter describes how food technology can support and improve WFP's operations in accordance with WFP's mandate and strategy – for example, in two of its recent corporate initiatives: Purchase for Progress (P4P) and the Nutrition Improvement Strategy. Figure 12.1 lists the types of food that WFP distributes for different groups of beneficiaries in order of the technological complexity of producing the foods; the prices of each are given in the notes.

This chapter is organized by type of food used by WFP, and provides examples of innovative experiences, trials or pilot studies aimed at improving the quality, taste, convenience or safety of WFP foods and the processes used to manufacture them.

Figure 12.1 Main families of foods distributed in WFP assistance programmes, and their technological demands

		General population	Pregnant and lactating women	People with chronic illness	Children under 2 years	Moderately malnourished children	Moderately malnourished children 6-59 months
Increased food processing complexity		General food basket (GFB) ¹					
	- (Cleaning, drying, milling) - Mixing	Fortified foods (FF) ²					
	- Cleaning, milling, mixing - Cooking - Grinding, mixing	Fortified blended flours (FBF) ³					
	- Cleaning, milling, grinding, mixing - Cooking, (drying) - Grinding, mixing				Fortified blended flours + milk, oil, sugar (FBF++) ⁴		
	- Cleaning, milling, mixing - (Heating/cooking) - Homogenizing/mixing		Ready to use supplementary foods (RUSF) ⁵				
	- Cooking - Mixing - Sterilizing	Ready-to-eat meals (RTEM) ⁶					

¹ GFB: cereals US\$200–600/mt; pulses US\$400–1,200/mt.

² FF: flour US\$300–400/mt; oil US\$900–1,200/mt; salt and biscuits US\$1,100/mt.

³ FBF: CSB+ US\$600/mt; WSB+ US\$650/mt).

⁴ FBF++: CSB++ US\$1,100/mt; WSB++ US\$1,200/mt).

⁵ RUSF: imported US\$3,500/mt; locally made US\$3,000/mt.

⁶ RTEM: US\$2,500–3,500/mt.

2. General food basket (GFB): initiating and managing an overall food quality strategy for WFP

WFP's traditional food basket includes cereals such as rice, wheat, sorghum and maize; pulses such as beans, peas and lentils; and fortified foods such as fortified wheat flour, maize meal, oil and salt. Beneficiaries are often people affected by natural or human-incurred disasters. WFP also aims to identify and direct food assistance to food-insecure populations. Food technologists work to improve the quality of the food basket. An effective WFP food quality system is crucial for: (i) protecting the health and safety of WFP's beneficiaries; (ii) providing food at the right time, in the right place and in the right quantity, avoiding pipeline breaks; (iii) providing food at an acceptable cost, and in line with specifications, national regulations and, whenever possible, beneficiaries' expectations; and (iv) protecting the reputations of WFP, donors and host governments. Food safety is not the only component of quality requirements, but it requires priority attention so that WFP is able to ensure the safety and quality of the food it distributes, in conformity with its mandatory, regulatory and contractual obligations and in accordance with its financial, technical and human resources.

Beneficiaries, donors and the public are increasingly interested in the safety and quality of the food delivered in humanitarian interventions (Webb, 2009). This is partly owing to information disseminated by the media, most of which relates to real or supposed risks of outbreaks of food-borne diseases or the misuse of food aid funding along the humanitarian food chain. This has led WFP to develop a more acute corporate commitment to quality by improving its control systems for identifying food that does not conform to requirements, preventing this food from reaching beneficiaries, and taking pre-emptive actions to avoid any potential hazard outbreaks (Menage and Salvignol, 2009).

However, effective food quality control is undermined by fragmented regulations, the involvement of multiple stakeholders, and weaknesses in monitoring and enforcement procedures in the humanitarian context in which WFP operates.

In response to the internationalization of trade and the related regulations, most modern food industries have extended their quality operations, moving from quality control in 1910–1950, to quality assurance in 1950–1980 and to total quality management from 1980 (Weil, 2001). Companies engaged in these new management methods have gained significant advantages by matching consumers' expectations. Humanitarian stakeholders recognize these advantages and are aware that they too will have to conform to this trend for increased quality management in coming years (The Sphere Project).¹

Food quality encompasses food safety, which is compulsory by law, nutritional values, sensory values such as taste, smell and texture, and

convenience values such as ease of cooking. To ensure that all food quality aspects are taken into account, WFP food technologists are drafting a quality management system that includes redefining food specifications and ways of controlling them, suppliers' contracts and food inspection companies' scope of work; developing new standard operating procedures; improving the monitoring and traceability system; engaging with host governments' food authorities to ensure mutual understanding of each others' quality control systems; and designing training materials for staff and food chain actors.

Some elements of these new systems have been tested or piloted in different countries. For instance, in Turkey, a new system for controlling the production of WFP's largest suppliers of wheat flour has been implemented, and new standard operating procedures for checking fortification have been developed and implemented. Once all the elements of this system are in place, the end-result will be a stronger food quality management system based on risk assessment and the prevention of quality issues. The system will apply to the general food basket and any food produced for WFP's operations. A second example of WFP working with the food processing industry is the milling operation in Pakistan to provide fortified wheat flour to beneficiaries. WFP worked with wheat flour millers to implement quality control and quality assurance systems that ensure the fortified wheat flour meets WFP's specifications. Throughout this process, WFP has been in dialogue with the government to help improve the quality of fortified wheat flour.

3. Fortified food (FF): implementing basic technologies appropriate to the poorest

WFP's new Nutrition Implementation Strategy aims to deliver about 80 percent fortified foods to beneficiaries, compared with the current 25 percent. Innovations in food production are necessary for achieving this target, but often provoke controversy and reflect different interests. Governments, the food market arena, the food industry and WFP's beneficiaries frequently differ on which fortified foods to use; owing to conflicting perceptions of any innovation, new products may be seen as difficult to use or accept, difficult or costly to produce, or unsustainable for addressing nutrition deficiencies.

3.1 Low-cost improvement of the nutritional value of staple foods: fortification of rice in Asia and Africa

In 2004, the Copenhagen Consensus ranked fortification as one of the most cost-effective means of improving the nutrition situation. A key tenet in fortification is to identify a suitable vehicle for delivering vitamins and minerals. An important factor in this is selecting a commodity that is consumed frequently,

in relatively consistent quantities each day. Staple foods are therefore often selected for fortification.

Rice is the major staple for many people around the world, particularly in Asia, where almost 90 percent of rice is produced and consumed; worldwide, almost 96 percent of rice production is in developing countries. For low-income Asian countries, such as Indonesia, the Philippines, India, Bangladesh, Vietnam and Myanmar, per capita rice consumption has reached a high level and may not grow further because of very low income elasticity of demand and rapid urbanization. The major boost in demand will therefore come from countries in West Asia, sub-Saharan Africa and South America.

Table 12.1 Changes in rice consumption, selected Asian countries				
	Milled rice consumption	Per capita consumption		
	(mt)	(kg/person/year)		
	1999–2001	1970–1972	1989–1991	1999–2001
China	113.51	79	93	89
India	76.45	69	79	76
Indonesia	31.62	105	147	149
Bangladesh	21.37	150	153	155
Vietnam	13.03	157	154	167
Myanmar	9.71	160	209	203
Philippines	7.65	86	96	101
Japan	7.53	89	65	59
Thailand	6.83	152	110	109
Korea, Republic	4.12	119	104	88
Nepal	2.27	82	106	99
Cambodia	2.03	163	158	155
Malaysia	1.96	123	81	88
Iran, Islamic Republic	1.89	25	31	27
Pakistan	1.78	29	14	13
Sri Lanka	1.77	95	93	94
Korea, People's Democratic Republic	1.73	82	73	78

Countries in bold are where WFP has an ongoing operation.

Source: FAOSTAT database, 2004.

The major challenge in rice fortification has been finding the appropriate technology to ensure that the vitamins and minerals are safely distributed in the desired quantities to consumers. There are four main technologies used to fortify rice: hot extrusion, cold extrusion, coating and dusting.

Hot extrusion

DSM and Buhler joined forces to develop Nutririce®, which is micronutrient kernels produced with hot extrusion technology. The process consists of milling broken rice, blending the rice flour with micronutrients and other ingredients, processing the rice in an extruder, drying the micronutrient kernels and packing them. An interesting feature of rice produced by hot extrusion technology is that it very closely resembles traditional rice kernels and there is flexibility for mimicking many varieties of rice. The micronutrient retention in the Nutririce® kernels is very high.

Cold extrusion

PATH Ultrarice® technology applies cold extrusion technology, which is often used by pasta manufactures; the process is similar to that for hot extrusion. The final product closely resembles natural rice, and micronutrient retention has been demonstrated to be quite high. PATH has developed very strict standard operating procedures for producing and utilizing Ultrarice®, and is now transferring the production technologies to other companies, starting with those in Brazil and India.

Coating

In the coating process, micronutrients are mixed with waxes, gums and other ingredients, and the mixture is sprayed on to the surface of rice to produce micronutrient kernels that are blended with natural rice to produce fortified rice. This technology is used mainly in the United States, the Philippines and Costa Rica.

Dusting

The dusting process involves blending micronutrient premix with polished rice. The main disadvantage with dusting is that micronutrient retention is very low if the rice is washed before cooking or the water is drained off after cooking.

For the past two years, WFP has been working with partners to develop a rice fortification pilot project. It will be important to demonstrate that processes can be applied on a large scale where fortified rice is distributed to beneficiaries.

3.2 Extending the shelf-life of full maize meal: knowledge transfer from Bangladesh to the Democratic Republic of the Congo

For distribution to the most vulnerable groups in Bangladesh, wheat is milled and the whole flour is enriched with minerals and vitamins. The milling and fortification units are run by women, who produce nutritious whole wheat flour of very good quality. The equipment was specially designed to take into account the project's specific needs, such as the low technical capacity of operators and the need for durable machines that can withstand rigorous operations and are easy to maintain and repair in difficult conditions.

In the Democratic Republic of the Congo (DRC), WFP purchases locally produced maize meal, which becomes rancid very quickly. The reason for this is that the equipment used is too rudimentary to produce de-germed maize meal. This results in the presence of oxygen; the fat contents of the maize germ are oxidized and hydrolysed, leading to rancidity (Hamilton, 1994). The hot and humid conditions prevailing in tropical countries exacerbate the situation, making the maize meal unpalatable.

Several solutions are available for overcoming this issue:

- The maize could be de-germed, but this would require the purchase of new equipment. In addition, 25 percent of the maize meal – the germ and the bran – would have to be removed and sold as feed, but there is no local market for feed products.
- The germ and bran could be heat-treated before being reincorporated back into the meal. This would inactivate the enzymes responsible for lipid hydrolysis, but would require huge investments in new equipment, and a lot of space.
- A blender fitted with an automatic dosing system, similar to the one developed in Bangladesh, could be used to add antioxidants, minerals and vitamins, which would both solve the oxidation and rancidity problem and improve the maize meal's nutritional value through fortification with minerals and vitamins. Such a blender is simple, robust, durable and easy to operate for illiterate people, as dosage is by a volumetric device. WFP is currently looking into the feasibility of using this type of equipment in DRC. If this proves successful, the blender's use will be replicated in other countries.

The challenges with this last option are in ensuring that the system is fully adapted to the harsh local context and local needs in DRC. Prior to field implementation, WFP is experimenting with maize meal and various combinations of antioxidants in Europe. It is also asking its premix suppliers to try incorporating antioxidants into their mineral and vitamin premixes. A single

dose that combines a mineral and vitamin premix with antioxidants will be simpler for operators in DRC to handle.

The success of this initiative depends on having a fully demonstrable and documented experiment that convinces other private manufacturers of maize meal to adopt the same process.

4. Fortified blended foods (FBF and FBF+ +): tailoring products to local needs and resources

With the help of the private sector, WFP has already designed a new and more stable premix for its FBFs, which became available in early 2010. WFP also plans to focus on products' acceptability, palatability, digestibility, energy density and shelf-life. Its efforts in this regard focus on encouraging technological development, promoting scientifically and technically valid standards, and advocating for local production to accommodate beneficiaries' preferences, including by developing formulas based on locally available raw materials; local production means fresher product, local purchase and agricultural development.

4.1 Improving FBFs' nutritional value by using new ingredients and new processes

In recent years, new equipment and techniques for producing improved FBFs have been tested. FBFs, such as CSB and WSB, are mixtures of 75 to 80 percent cereals with 20 to 25 percent soybean or other pulses. The raw materials are processed by mixing and cooking to improve their digestibility and safety, and to decrease the cooking time of finished products, such as rehydrated gruels for children. The mixture is milled into flour, and minerals and vitamins are added. The final product is then packed into plastic bags.

FBFs can be prepared according to local habits; for example, FBF in Lao People's Democratic Republic (PDR) is steamed, in Sri Lanka it is used as a porridge, in Nepal CSB is roasted, and in Cambodia it is fried. The formula is bland, so beneficiaries can add sweet or savoury ingredients, such as vegetables, fish or meat, according to their preferences.

The original CSB was formulated nearly 30 years ago, and is now being replaced by CSB+ and CSB++. Both of these contain an improved micronutrient formulation, with a wider range and different quantities of minerals and vitamins; in addition, CSB++ also contains 8 percent milk and 9 percent sugar, as it is intended mainly for older infants of 6 to 11 months and young children of 12 to 23 months.

4.2 Fine-tuning FBF thermal treatment to enhance the digestibility and energy-density of gruels

The quantity of energy that a child can consume each day from gruels depends on the number of meals eaten, the quantity consumed at each meal and the energy density of the gruels. In many societies, mothers are involved in multiple tasks and cannot prepare gruels more than twice a day. In addition, babies cannot eat more than 30 to 40 ml of gruel per kilogram of body weight at each meal, because of their small stomach capacity. Gruels that are prepared from starch-based foods – cereals – and have not undergone sufficient treatment involving water and temperature, such as extrusion-cooking and drum-drying, tend to absorb a lot of water, so their energy density is low; the concentration of flour in a gruel is the main determinant of its energy density. The viscosity of gruels increases quickly according to the concentration of dry matter/flour. The carers who prepare gruels therefore face the dilemma of increasing the proportion of flour or FBF with respect to water to obtain a gruel of very high viscosity – i.e., solid – that is difficult for children to swallow, or preparing a gruel of a suitable semi-liquid consistency but low energy density.

Wherever gruels are given no more than three times a day, the only way of increasing the quantities of energy consumed by children is to increase the energy density of the gruels. To achieve this, the flours/FBFs used must undergo extensive enzymatic and/or hydrothermal treatments, which modify the physico-chemical properties of the starch. These treatments break down the starch macro-molecules and limit their swelling during cooking, consequently reducing the gruels' viscosity. This makes it possible to prepare gruels of higher energy density while maintaining an appropriate consistency.

Technologies for producing FBFs include roasting, toasting or micronizing, but extrusion cooking technology is the preferred method for increasing the energy density in FBFs and decreasing the viscosity of gruels. This process has been used successfully to produce nutritious foods for distribution in dry packaged form.

The extrusion process creates heat by friction between the food and one or two high-speed screw(s); this pre-cooks the food and breaks down the starches in it. Such mechanical breakdown of starches reduces the viscosity of gruels made from extruded cereals, thereby enhancing their calorie and nutrient densities. Concurrently, the high-temperature heat treatment improves the product's hygiene.

Low-cost extruders, which rely on dry extrusion and that process foods at moistures of less than 20 percent, have the lowest capital and operating costs and can produce fortified, packaged, stable food products for 30 percent more than the cost of the raw ingredients. The term “wet extrusion” implies that the extruder requires an external source of heat or steam, with steam and/or water

being injected either directly into the extruder or into a continuous preconditioner. In dry extruders, all the cooking is accomplished by friction – the shearing of highly viscous material – which is diminished as extra water or oil is added; this explains why wet extruders require external heat to cook the product fully. It also explains why these equipments require high energy inputs from the driving system, which may rapidly be a limiting factor at high feed rates – as a rule of thumb, dry extrusion of 10 kg of product requires 1 kW of energy input. Wet extruders can process materials of higher moisture and fat contents, and at higher throughputs, but the extruded products will need to be dried.

As CSB++ contains more fat and is intended for children requiring more energy-dense food, the use of wet extrusion is recommended. Dry extrusion limits the use of fat and does not completely gelatinize the starch; the energy density of the gruel is therefore lower. WFP experiments show that wet extrusion allows the fat content to be increased to 15 percent and increases the energy density of the meal by at least 50 percent.

Table 12.2 Effects of dry and wet extrusion on gruel characteristics

	Maximum fat (%)	Gruel energy content (kcal/100 ml)
Dry extrusion	8%	50
Wet extrusion	15%	75

As products manufactured by wet extrusion need to be dried, WFP has tested a new machine that combines drying and grinding at the same time. This is a pin mill augmented by the circulation of hot air, which mills and dries the product in less than a second. The finished powder is finer than traditional CSB, making it more acceptable to beneficiaries, who often claim that CSB is too coarse; the cooking time is also reduced, to five minutes instead of the usual ten. In this extent, use of roller mills, as used in the production of wheat flours, might also be prospected

4.3 Developing new formulas that suit local food habits and support national sustainable development

WFP's food technologists have also been supporting efforts to produce FBFs that are adapted to beneficiaries' tastes or convenience. The use of food products made from locally grown produce offers a promising market for the local economy and farmers, while helping to improve local populations' access to nutritious food. Although existing food fortification activities play an essential role in addressing malnutrition, the potential for using locally grown produce is largely untapped.

The idea is to develop new recipes using locally produced raw materials other than maize and soybeans. The nutritional value of these products is equivalent to that of traditional CSB, and because the raw materials are familiar to beneficiaries, the new FBFs are often more acceptable. New formulas have been developed in Lao PDR, where finer granulation and improved cooking have been achieved; Myanmar, using rice and soybean; Timor Leste, using maize, mungbean and soybean; Pakistan, using chickpeas and wheat; Nepal, using wheat, maize and soybean; and Senegal, using maize, peanuts and soybean. New products are also expected soon in Sierra Leone, using niebe, soybean and maize, and Sudan, using sorghum and soybean. General impacts include improved nutritional adequacy of locally produced fortified foods, delivery of fresher products, reduced risk of pipeline breaks, the development and production of different FBF formulas, increased knowledge about WFP's processed food experience, and higher consumption of locally produced FBFs.

In Lao PDR, each 1,000 mt of locally produced CSB feeds about 40,000 schoolchildren for one year, while providing extra income to 10,000 farming family members. The acceptability of the product has been increased, leading to a higher consumption rate. Production depends on local maize and soybean, and the quality of these improved during development of the new FBF; Chinese traders now cross the border to buy maize or soybean for food, rather than for feed, and this has also helped increase farmers' incomes.

The development of new food products faces many challenges, but these are less likely to arise if a proper feasibility study is made in advance, taking into account the sustainability of production and the implications for local markets. Challenges encountered so far include a lack of responsiveness to local needs, food habits and capacity to innovate; failure to understand seasonality, in terms of the prices as well as the availability of raw materials; efficiency and cost issues; manufacturers' lack of administrative capacity and ownership, including lack of access to credit for factory improvements, running costs, raw material purchases, etc.; local people's lack of ownership or acceptance; issues related to the quality of the food, including failure to match WFP's quality specifications and problems

with analysing some food quality parameters in developing countries; and producers' reliance on WFP as their only client.

The standard process for setting up local production involves five steps:

- (i) a needs assessment establishing the specific needs of a particular target group in the country concerned;
- (ii) a feasibility study determining whether there are sufficient infrastructure, available commodities, reliable partners and donor support to ensure a successful operation;
- (iii) a business plan outlining the sustainability of the project, including its costing;
- (iv) development and testing of the product, and installation of the technical equipment needed for production;
- (v) monitoring and evaluation, including impact studies.

The whole process takes about 12 to 18 months. It is crucial that the local government and partners have ownership of and commitment to the project.

WFP is concentrating its efforts on purchasing locally available foods and, when feasible, making these foods more nutritious by fortifying or processing them. The objectives are not only to develop local food markets and food processing industries, but also to provide WFP beneficiaries with commodities of higher nutritional value.

4.4 Capacity building

From experience, WFP knows that food industries need technical support to produce fortified foods or improved products that match WFP's specific requirements. It is therefore working to improve coordination between private sector and WFP food technology standards, while informing and training relevant government personnel.

5. Investing for the future by filling the gap between emergency and development: smart concepts and products

5.1 Building versatile solutions through containerized food production units

Containerized food production units (CFPUs) are food production lines built into standard 20-foot (6 m) shipping containers for transportation. The units are standardized and can be integrated into almost any environment. They enable the production of food that matches WFP's specifications, and are provided with services to facilitate their quick installation.

This project is still in its early stages, but CFPUs are thought to be a solution for local food production in times of crisis. During initial project design, two scenarios emerged for consideration: emergencies, and medium- to long-term development.

In an emergency, CFPUs would aim to provide beneficiaries with local food using local resources within 1.5 months of the emergency's onset. In such crisis situations, beneficiaries are often destitute and may be cut off from their traditional food resources, so require an alternative source of locally produced food that satisfies their nutritional needs and food habits. As already mentioned, the use of local resources always benefits a country in crisis. CFPUs are manufactured in advance and are stored at United Nations Humanitarian Response Depots (UNHRDs). When a crisis strikes, they can be mobilized and transported by ship, taking about one month to reach their destination. They may be accompanied by a stock of raw ingredients for processing during the first weeks. While the CFPU is in transit, its reception site is prepared to allow quick installation when it arrives. The first trials are prepared while the unit is being installed on site. The CFPU would be used for the duration of the emergency and would then be either dismantled for transport to another location or back to the UNHRD storage facility, or adapted and left in the country for use in rehabilitation and development schemes.

In medium- to long-term development situations, WFP aims to develop local markets and economies in line with its new orientation of providing food assistance rather than food aid. CFPUs are considered standard turnkey factories. Five types of units have already been designed, and two others are under development (Table 12.3).

Table 12.3 Types of CFPU developed by WFP

Type	Description	Capacity (mt/hour)	Cost (million US\$)
1 Cereals and pulses	Drying, cleaning, grading, bagging	1–2	< 1.1
2 Maize meal	Fortified maize meal production	1	< 1.7
3 Wheat flour	Fortified wheat flour production	2	< 1.1
4 FBFs	Adapted to various raw materials	1– 3	< 1.7
5 Oil extraction	Oil production	0.3	< 0.9
6 RUSFs	Ongoing development		
7 Biscuits	Fortified biscuits	0.5–1	< 1.9

Prices are estimates and vary among manufacturers. They include the CFPU, transport costs, preparation of the reception site, installation of the unit on site, and training and assistance in running the unit.

While developing the CFPU, a team of WFP food technologists contacted various manufacturers and studied their proposals, testing the performances of their machinery. The team then drafted several guide books:

- a site preparation manual, giving technical specifications for the CFPU reception site;
- an operating manual on starting up, running, controlling, cleaning, maintaining and repairing the unit;
- a quality manual to ensure the production of quality food;
- a laboratory manual to ensure that testing protocols are performed correctly.

CFPU's many advantages include: (i) rapid deployment; (ii) pre-assembly, full electrical wiring, pre-testing, uniformity and flexibility; (iii) staff training at the manufacturing site; (iv) sustainability owing to adaptation to different contexts and the attention paid to local environments; and (v) the provision of a global solution, including plant layout, operation and control and laboratory facilities, at a similar cost to that for a traditional factory. CFPU are also a challenging way for WFP to become directly involved in managing production activities, and to translate theoretical approaches into pragmatic field solutions.

The CFPU project has involved designing, implementing and following up on new food processing activities, through project identification and management, process engineering, safety and control, e-learning, and outreach support for sustainable entrepreneurship. This experience provides corporate capacity building that can be used later for improving existing or creating new applications.

A pilot CFPU may be deployed in Afghanistan in 2010. This would be a containerized fortified biscuit production facility, for installation in an area that is not traditionally covered by food industries. The use of local nuts and dried fruits is being studied, as this would support the local agricultural economy.

5.2 Beyond traditional approaches: stimulating experiences with RUSFs and RTEMs

Ready-to-use food for children (RUFC)

RUFC is a RUSF designed for children. Successful use of ready-to-use therapeutic food (RUTF) at the community level has revolutionized the treatment of severe malnutrition, and efforts have been made to develop other lipid-based nutrient supplements adapted to different contexts, such as for the prevention of malnutrition in highly vulnerable populations through blanket feeding, or for the rehabilitation of moderately malnourished children through supplementary feeding.

At the end of 2007, WFP India took the initiative in developing RUFC, in collaboration with Indian producers. This initiative was expanded into Pakistan in early 2009. The main objectives were to expand the food options available to WFP for addressing malnutrition among infants and young children; to adapt RUFs to local tastes and preferences by using locally available ingredients that are familiar to the population; to produce food at lower costs than those for similar products produced elsewhere; and to build capacity and increase WFP's collaboration with the local food processing industry.

RUFC consists of locally procured soybean oil, fried chickpeas, extruded rice flour, icing sugar, dried skim milk, and extruded soy flour. Local procurement provides an opportunity for engaging the local food processing industry in producing products that are appropriate for humanitarian aid, while providing a market for local farmers to sell their produce, which has a positive impact on improving their livelihoods and is consistent with WFP's Purchase for Progress (P4P) initiative.

Growing evidence indicates that lipid-based foods have a greater impact on addressing malnutrition than FBFs (Cilberto *et al.*, 2005). Studies conducted in Ghana and Malawi found that lipid-based spreads registered significant improvements on anthropometric indicators and haemoglobin concentrations

(Adu-Afarwuah *et al.*, 2007; Kuusipalo *et al.*, 2006).

There is huge potential for this type of food in WFP's operations in South Asia and beyond. According to the World Bank, the prevalence of underweight children in India is among the highest in the world, and the number is nearly double that in sub-Saharan Africa; approximately 60 million Indian children are underweight (World Bank, 2005a). Malnutrition is an underlying cause of mortality; in India, there are an estimated 2.4 million deaths of children under 5 every year (Black, Morris and Bryce, 2003).

Owing to its lower cost and suitability for South Asia, many neighbouring countries, including Afghanistan, Bangladesh, Nepal and other low-income, food-deficit countries, have shown an interest in using RUFC in their programmes. RUFC has huge potential as a WFP emergency food for infants and young children, and in national food programmes and South-South collaboration, as an affordable option for addressing hunger and malnutrition. Tailored to other specific nutritional needs, such as malnourished adults and AIDS patients (Figure 12.1), similar products could target other vulnerable groups and enlarge the scope for applying RUSFs.

Ready-to-eat meals (RTEMs) for emergencies

WFP has been working on the development of RTEMs for emergencies to address a gap in its emergency response. At the onset of an emergency, it may not be appropriate to distribute common WFP commodities, such as grain, pulses and oil, because these require cooking, the facilities for which have often been affected by the disaster or left behind when people are forced to migrate. WFP is therefore identifying suppliers capable of producing foods that can be eaten directly as a complement to fortified biscuits.

The RTEMs should be filling while delivering the nutrition that affected people need to carry on rebuilding their lives. Many food processing technologies pre-cook foods to make them ready to eat, and many innovative packaging formats are easy to open and allow consumers to eat the food directly from the package. Appropriate packaging also allows RTEMs to be kept for extended periods, so they can be stored in UNHRDs ready for immediate dispatch when an emergency strikes. Owing to the varied environments where WFP is called to respond to disasters, these foods should be versatile and suitable for populations with different tastes and preferences.

In the aftermath of cyclone Nargis in Myanmar, WFP aimed to distribute RTEMs that were a mixture of rice, pulses, oil and spices processed using a retort process. The success of this distribution was limited, however, as WFP had to purchase from suppliers that had only small quantities available and whose supplies did not necessarily match WFP's requirements. In preparation for

future emergencies, WFP food technologists are collaborating with other units and food manufacturers to develop a full ration that matches the needs of a general population and can be produced quickly and/or stored for long periods. The University of Lille (France) is developing a new type of emergency rations based on multi-compartmented RTEMs, whose dry base is processed mostly through extrusion cooking. Other products are also being developed; special attention should be paid to processing texturized vegetable proteins (TVPs), as it could provide a low-cost means of producing analogues of meat or meat extenders from locally available non-conventional proteins.

5.3 Embedding quality into WFP routine activities: quality control in the field and food traceability

To cope with changing environments and anticipate emerging problems and challenges, WFP tracks promising technological innovations that may be usefully transferred to humanitarian contexts: new processes, new equipment, new regulations, new technological skills, and evolving scientific theories. This involves keeping a watchful eye on recent publications and other documentation, and collaborating with industries and universities. The following paragraphs describe two examples of how knowledge tracking and transfer can benefit WFP's activities in terms of safety and quality.

Mobile laboratories for quality control in the field

Food quality control requires continuous attention. Up to now, WFP has relied on external laboratories that make regular checks on selected samples of the food being distributed. This is a costly, time-consuming and complicated process, especially for representative sampling and the safe storage and transport of products for further analysis. The lengthy process delays and undermines WFP's capacity to prevent food that does not fit its specifications from being delivered, and puts beneficiary populations at risk of ingesting unsafe or unhealthy locally processed food. It also creates extra work for the WFP agents in charge of food control and slows down the solving of problems and the conciliatory procedures for cases of litigation. This may have a major impact on WFP's work and image, and on the sustainability of the local production being supported, so WFP is seeking ways of avoiding or shortening the delay in quality control by implementing analyses closer to production sites.

For short- or medium-term production sites, such as for quality control of the raw materials and end-products of CFPUs, the solution could be to allocate one container unit to routine food analysis. WFP is therefore investigating the analyses, equipment and chemicals that could be applied in isolated and difficult conditions by moderately trained staff.

For longer-term production sites, WFP warehouses and plants that are not directly under WFP supervision, another solution would be to use mobile laboratories, which can be easily and regularly transported around scattered sites. For this, WFP is in contact with companies that supply vans fitted out with all the equipment needed for routine analyses: moisture, ash, protein and fat contents; rapid microbiology tests; aflatoxin determination; and measurement of particle size, density, colour, etc. A special cabinet for sensory evaluation could be added to the vans, to allow sensory testing.

Radio frequency identification (RFID) food traceability

Traceability refers to the tracing of goods along the distribution chain to allow: (i) responses to the risks that can arise in food, and assurance that all food products are safe to eat; and (ii) identification of risks and their sources, for swift isolation of the problem and to prevent contaminated products from reaching beneficiaries. Food traceability is a core component of modern quality management. RFID technology facilitates traceability by allowing the instantaneous and constant exchange of numeric data. WFP has been working with leading companies on adapting RFID technology to its operations, this involves tackling the cost and technical constraints and also ensuring compatibility with WFP's corporate Commodity Movement Processing and Analysis System (COMPAS).

As well as the benefits that this technique would bring to WFP's complex global logistics, it could also be developed to use special active tags containing moisture (Johan *et al.*, 2007) and temperature sensors (Jedderman, Ruiz-Garcia and Lang, 2009). Such devices have recently been developed to track temperature and moisture variations during transportation, which are known to alter food conservation irreversibly. Application of such technology to the real-time tracking of quality in the particularly harsh environments that usual prevail in humanitarian contexts could bring benefits for WFP, and immediate returns on investment.

¹ www.sphereproject.org/.

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The evolution of food assistance for HIV care and treatment 2000 to 2009: a decade of institutional innovations

Francesca Erdelmann, Mary Njoroge and Annmarie Isler

1. Introduction

The fight against HIV and AIDS is firmly established as a global health priority. The number of people living with HIV infection continues to grow, and AIDS-related illnesses are projected to remain among the leading causes of premature mortality in the coming decades. Sub-Saharan Africa is still the region most heavily affected by HIV worldwide, accounting for more than two-thirds, or 67 percent, of all people living with HIV and nearly three-quarters, or 72 percent, of AIDS-related deaths in 2008 (UNAIDS, 2009a).

In countries with high prevalence rates, the majority of people infected with HIV are in the most economically productive age group of 15 to 49 years. HIV-related mortality lowers national life expectancy rates and has far-reaching social and economic impacts on households, communities, businesses, public services and national development and growth. Countries with heavy HIV burdens are often affected by high levels of food insecurity and malnutrition, a dual threat that creates a downwards spiral of mutually reinforcing effects. However, the roll-out of antiretroviral therapy (ART) is enabling people to regain health, dignity and productivity, and WFP's support to Food by Prescription (FBP) programmes plays a significant role in their success. In addition, WFP's social safety net programmes mitigate the impact of HIV on affected families, helping to preserve household integrity and improving the life trajectories of vulnerable children and other household members.

This chapter traces the evolution of WFP's programming in the context of HIV care and treatment over the past decade. It demonstrates how scientific advances and developments in the political landscape have shaped programming directions and approaches. The first section gives a brief introduction to the linkages among HIV, AIDS, food and nutrition and is followed by an exploration of the past ten years, reflecting on changes in WFP programme approaches and their associations with global events. In conclusion, the chapter considers the important challenges and opportunities that have emerged as lessons from the experience of innovation, reflecting on the increasing professionalization in this field, the need for further programme rationalization and adaptation, the role of global advocates, funding challenges, and the importance of forging linkages that make global nutrition a priority.

2. HIV, food and nutrition

2.1 Regional variations

HIV epidemics throughout the world continue to evolve at their own pace, each on a trajectory influenced by multiple cultural, political and economic factors. The slowing but unrelenting rise in the global prevalence rate is attributed to both increased longevity among the infected, which is related to treatment success, and the high numbers of new infections in Eastern Europe, Central Asia and other parts of Asia. Sub-Saharan Africa's epidemics vary significantly from country to country, with most appearing to have stabilized, although often at very high prevalence levels, particularly in Southern Africa. Drivers of the epidemic also vary widely, generating different vulnerability profiles among countries or even among areas of the same country. The substantial diversity of national epidemics underscores the importance of tailoring food assistance strategies to local contexts, while supporting decentralized AIDS response mechanisms.

The Joint United Nations Programme on HIV/AIDS and World Health Organization (UNAIDS/WHO) 2009 Epidemic Update reports continued improvement in the numbers of adults and children receiving ART, which had reached 4 million by December 2008; however, overall global ART coverage still stands at only 42 percent (UNAIDS, 2009a). WFP's Southern, Eastern and Central Africa region currently accounts for half of the total people living with HIV and AIDS (PLHIV) in sub-Saharan Africa (UNAIDS, 2009a). Many of the countries in this region are experiencing serious chronic and recurrent food insecurity, and show high levels of chronic malnutrition among children – a sign of broad underlying nutritional vulnerabilities within the population at large. In comparison, West and

Central Africa is characterized by a relatively low HIV prevalence. With an average adult HIV prevalence of 1 percent, the Caribbean is the second-most affected region in the world, after sub-Saharan Africa, and AIDS has become the leading cause of death among both men and women aged 15 to 44 years.

In most of Latin America, HIV is classified as concentrated among the groups most at-risk, but the escalating rate of new infections among women and girls shows that the epidemic is becoming more generalized. The HIV epidemic in Asia presents a contrast to other parts of the world, with vulnerable groups such as injecting drug users, men who have sex with men, and sex workers tending to be the most at risk of HIV (UNAIDS, 2008).

2.2 HIV, AIDS and food security

As already mentioned, HIV epidemics exhibit regional diversity and have different interrelationships with food security. There is clear evidence that HIV affects all three components of food security: availability, accessibility, and utilization. Although epidemic contexts vary, PLHIV all tend to identify food as an important priority need. Families with an HIV-infected member are more likely to be poor and food-insecure. Being infected with HIV limits productivity, leading in turn to loss of income, while increasing health care costs. At the same time, individuals who are food-insecure may be more likely to engage in transactional sex or to become mobile, increasing their risk of contracting HIV (Weiser *et al.*, 2007).

2.3 HIV, AIDS and nutrition

Nutrition plays a vital role in the immune systems of all people, including PLHIV. Good nutrition strengthens the immune system, while HIV infection and malnutrition – including micronutrient deficiencies – have the cumulative effect of damaging it. People living with HIV and AIDS are more vulnerable to malnutrition than the general population, and their nutrition status is a strong predictor of mortality risk, independent of cluster difference 4 (CD4) count.

HIV itself puts PLHIV at high risk of disease-induced weight loss and wasting due to lower food intake resulting from reduced appetite, diarrhoea, mouth sores, etc. on the one hand, and increased nutrient needs and poorer utilization on the other hand. Once infected with HIV, the body mounts an immune response that requires energy above and beyond usual needs;¹ malnutrition is known to affect HIV and TB infection negatively by further weakening the immune system and negatively affecting disease progression.

HIV infection also increases micronutrient needs, owing to more frequent illness and increased losses. Ensuring that PLHIV consume at least the recommended nutrient intake (RNI) of micronutrients is therefore very

important and may require the use of micronutrient supplements or specific fortified food commodities (De Pee and Semba, forthcoming).

ART drugs, although highly beneficial in countering HIV's attack on the immune system, have an impact on the metabolism and affect nutritional well-being as a result of reduced food intake and utilization owing to nausea, anorexia, etc., particularly in the first phase of treatment. The combined nutrition challenges of AIDS-related illnesses and initial ART side-effects are cause of great concern regarding client survival and treatment success.

Figure 13.1a Milestones in HIV/AIDS care and treatment

<i>Global</i>		<i>WFP</i>
	2000	
		<ul style="list-style-type: none"> Emerging issues paper (EB)
	2001	
<ul style="list-style-type: none"> MSF starts treatment in poor countries WFP presents "Food Security, Livelihoods and HIV/AIDS" paper at ACC/SCN Hunger, Poverty and HIV/AIDS joint panel presentation at UNGASS (WFP, FAO, IFAD, IFPRI) 		<ul style="list-style-type: none"> 5 country missions conducted (Cambodia, Ethiopia, Kenya, Uganda and Zambia) WFP Information note on food security, food aid, and HIV/AIDS Fast-track project proposals for food, nutrition and HIV
	2002	
<ul style="list-style-type: none"> Triple threat emerges in Southern Africa Global Fund ATM established IAC Barcelona: FAO, WHO, WFP session on The Challenges of Food Security and Nutrition to HIV/AIDS 		<ul style="list-style-type: none"> Southern Africa drought response highlights impact of HIV and AIDS

3. Programme innovations: following and informing global developments

3.1 Early support: before 2000

Although aligned to global developments, WFP's HIV policy development process before 2000 was largely guided by community-based organizations' increasing demand for food assistance to PLHIV and affected households.

One of the first reported HIV food support activities was established in northwestern United Republic of Tanzania in the mid-1990s, supporting chronically ill people. In 1999, requests emerged from the adjacent region in Uganda through with The AIDS Support Organization (TASO). In both cases, WFP provided household food support through home-based care (HBC), encouraging testing, counselling and frequent programme attendance by clients, and promoting child care and livelihood support for their families.

3.2 Rapid scale-up: 2000 to 2002

HIV/AIDS was first brought to the attention of WFP's Executive Board (EB) in the paper on *Emerging issues relevant to WFP* presented to the EB in May 2000. This was also the first time that WFP's EB was asked to consider adding a corporate programme response to a disease-related problem. The EB noted the serious negative impact of AIDS, and recommended that WFP should "explore, with its partners and consistent with its mandate, specific areas of intervention concerning HIV/AIDS and tuberculosis" (WFP, 2000a).

In 2001, about 18 years into the epidemic, the response to AIDS was stagnating. Although UNAIDS was the designated lead for a consolidated United Nations response, there were widespread lethargy and little political commitment. The necessary push to reactivate the response occurred when the United Nations General Assembly Special Session (UNGASS) on HIV/AIDS was held – the first time the United Nations convened over a single global health issue. All agencies were compelled to act swiftly, and were expected to report at UNGASS on what actions they were taking.

A joint task force was established at WFP Headquarters to support country offices in formulating programme responses. The task force put together a panel from WFP, the International Fund for International Development (IFAD), the United Nations Food and Agriculture Organization (FAO) and the International Food Policy Research Institute (IFPRI) to present at UNGASS; this was the first high-level, high-profile exposure of HIV, food and nutrition issues and the first time that WFP was publicly and prominently linked to AIDS response. A letter was sent to country offices and regional bureaux requesting them to prioritize the response to AIDS, using a new mechanism designed to fast-track projects for approval (WFP, 2001d). Headquarters

then initiated country missions, funded by the Canadian Grant, to Cambodia, Ethiopia, Kenya, Uganda and Zambia, to gauge the needs and identify possible activities and areas of intervention. In 2001, the first regional workshop on HIV/AIDS was held in Kigali, Rwanda to discuss emerging issues in this new programming area, followed by the release of WFP's first HIV programme guidance note (WFP, 2001c).

WFP partnered HBC providers across East and Southern Africa, contributing to comprehensive care and support for chronically ill people without access to treatment, referred to as “food in-lieu of medicine” in Uganda and Rwanda. Peter Piot's feedback after a mission to Malawi in April 2001 highlighted PLHIV need for food in addition to, or even above, care and treatment.

“Some weeks ago, I was in Malawi and met with a group of women with HIV. As I always do when I meet with people living with AIDS, and other community groups, I asked them what is their highest priority. Their answer was clear and unanimous. Not care, not drugs for treatment, not stigma, but food.”

Peter Piot, UNAIDS Executive Director, Nairobi, Kenya, 3 April 2001

Targeting the most food-insecure areas, food assistance was provided in the form of household rations; in addition to supporting the chronically ill household member, the aim was also to support livelihood stability through appropriate food-for-assets (FFA), food-for-training (FFT) and income-generating activities, in the United Republic of Tanzania and Burundi. In Rwanda, food assistance was introduced to enable community care volunteers to scale up peer counselling and HIV literacy and life skills training for PLHIV and AIDS-affected households. Food assistance was widely used in the region to support home care volunteers in the absence of formal remuneration arrangements.

In 2002, the theory that HIV and AIDS is both a cause and a consequence of food insecurity started to emerge in the unfolding Southern Africa food crisis, which affected six countries. As a result, national governments declared AIDS a national emergency. The “triple threat” – the cumulative effect of frequent droughts and other shocks, the impact of AIDS, and a weak governance structure – was recognized as the driving factor. A “new-variant famine” hypothesis was conceived to explain why and how HIV/AIDS aggravates the food crisis. A strong case was emerging for concluding that these uniquely negative and aggravating factors were irreversible, unlike other shocks (De Waal and Whiteside 2003; Arrehag, de Waal and Whiteside, 2006). WFP's emergency response to the drought in Southern Africa recognized the special nutritional needs of the target population² by increasing the ration standards to 2,200 kcal and providing additional corn-soya blend (CSB) in relief rations to facilitate care for chronically ill people.

At the 14th World AIDS Conference in Barcelona, Spain in 2002, WFP, FAO and WHO held a session on the challenges of nutrition and food security in the context of HIV/AIDS. At that time, the focus was on the impact of AIDS in rural areas, particularly on agriculture; WFP and FAO collaborated to support knowledge sharing and joint programme planning.

In 2002, to accelerate the response to AIDS and other high-burden diseases, the Global Fund to Fight AIDS, Tuberculosis and Malaria was established to attract, coordinate and disburse large-scale funding for prevention and treatment.

Figure 13.1b Milestones in HIV/AIDS care and treatment

<i>Global</i>	2003	<i>WFP</i>
<ul style="list-style-type: none"> WHO commits to 3 by 5 PEPFAR established WHO reviews nutritional requirements of PLHIV 		<ul style="list-style-type: none"> EB Approves WFP Policy Paper on HIV ART food support Pilots in Uganda and Mozambique Multi country mission to explore PMTCT options WFP becomes UNAIDS 9th co-sponsor HIV unit established in WFP HQ WFP/UNHCR explore improving HIV/AIDS prevention, care and treatment in refugee camps
	2004	
<ul style="list-style-type: none"> UN SG Calls for an expanded and comprehensive response to HIV/AIDS IAC Bangkok Guidelines on HIV in emergency settings by the Inter-agency Standing Committee on HIV/AIDS 		<ul style="list-style-type: none"> MOU with Clinton Foundation New guidance: <ul style="list-style-type: none"> - PMTCT and food assistance
	2005	
<ul style="list-style-type: none"> Durban meetings HIV and Nutrition and HIV and Food Security (WHO and IFPRI) DFID funds 3-year programme to scale up HIV/AIDS services for populations of humanitarian concern UNAIDS Division of Labour: WFP lead on Food and Nutrition 		<ul style="list-style-type: none"> Collaboration with WHO on ART and nutrition guidance HIV food assistance costing exercise Review of social assistance mechanisms in support of HIV

3.3 Settling in for the long haul: 2003 to 2005

WFP's first HIV/AIDS policy, *Programming in the Era of AIDS: WFP's Response to HIV/AIDS*, was approved by the EB at its first regular session in 2003 (WFP, 2003). Based on what was then known about HIV/AIDS and food insecurity, the paper highlighted modifications to the main programming areas, with a focus on mitigating the impact of AIDS on affected households.

With the policy approved, an HIV/AIDS Unit was created at WFP Headquarters to provide technical support and strategic guidance to country offices, and to steer the nutrition and food security agenda at the global level. An initial strategy for implementing the policy was prepared, and 11 United Nations Volunteers were deployed to country offices to provide programme support. With the Southern Africa food crisis at its peak, the then WFP Executive Director, James Morris, was appointed as the Special Envoy to the United Nations Secretary General for Humanitarian Needs in Southern Africa, further raising WFP's profile.

In the same year, WFP became the ninth UNAIDS co-sponsor, alongside WHO, the World Bank, the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA), the International Labour Organization (ILO), the United Nations Office of Drugs and Crime (UNDOC), the United Nations Development Programme (UNDP) and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

At the programme level, drugs were made increasingly available to a select group of PLHIV, through limited coverage, strict entry criteria, triage, etc., and food assistance was introduced to support treatment roll-out, with a focus on improving uptake, retention and adherence to ART care and treatment regimes. Stigma contributed to a lack of disclosure and limited ART uptake, and eligible PLHIV also reported fear of starting treatment in the absence of adequate food to manage the treatment side-effects. Food assistance offered encouragement and support during the first six to 12 months of ART.

Although ART coverage steadily increased, HBC continued to provide critical palliative care for those without access to treatment programmes. Food-assisted HBC expanded in response to increasing recognition of the nutritional needs of PLHIV.

The nutritional needs of PLHIV were now widely acknowledged, and nutrition care and support guidelines were released globally by FAO and WHO (WHO/FAO, 2002). WFP continued to provide household food rations in recognition of the profound impact of HIV and AIDS on whole households, rather than on just PLHIV. Concerns about ration sharing, and thus reduced intervention effectiveness, also informed ration design. Where possible, food rations included fortified cereal flours and blended foods to meet special

nutrition requirements and reduce food processing labour and costs.

In prevention of mother-to-child transmission (PMTCT) programmes, it was observed that far fewer women were taking prophylactic drugs around the time of delivery than had first presented for testing. To help minimize the number of clients lost to the programme, food assistance aimed to encourage and enable frequent ante-natal care attendance, thus increasing exposure to PMTCT education and counselling, in Ethiopia, Burundi and Mozambique.

Interest increased in appropriate complementary/replacement feeding for children over 6 months of age whose mothers had ceased breastfeeding in accordance with international guidance. CSB, when available in clinics, was sometimes used to fill the gap, but is not nutritionally adequate on its own. To encourage return visits for routine surveillance and for HIV testing of the child, food assistance was continued from pregnancy to 18 months after birth.

Health services were becoming the centre of attention in providing life-

Box 13.1 Government ownership – supporting the national AIDS response

HIV food assistance has, by its very nature, contributed to WFP's corporate interest in developing national hunger solutions. With the overriding objective of contributing to national AIDS responses, WFP's HIV support programmes aim to enhance government ownership, develop national programme infrastructure and strengthen local food assistance management capacities.

WFP food assistance programmes offer a platform for building food assistance programme models, testing emerging approaches, consulting on national strategies and exploring technical considerations. Ongoing programmes also offer opportunities for analysing the cost and institutional requirements of taking programme approaches to a national scale, thus contributing to national planning and budgeting.

The Government of Malawi has shown how a partner-supported nutrition rehabilitation scheme can be integrated into the national treatment protocol, successfully drawing on Global Fund resources for programme roll-out at the national level.

When partnering governments to explore national strategies and design model interventions, recognition of ministerial mandates and public administration processes such as planning and budgeting is critical. Although the fragmentation of programme components is avoided for the benefit of the client, offering appropriate strategic components to relevant counterpart ministries may increase their ability to adopt these components at the national level. Building bridges among national institutions is essential.

Equity principles in public services delivery^a should be respected when considering national ownership. Programmes need to be designed accordingly.

^a All clients with equal needs, anywhere in the country, must have equal right to services and should have reasonable access to appropriate assistance.

extending support to PLHIV, and food assistance was not a perfect substitute for the eroded health sector capacities. Recognizing the burden that the provision of food assistance would place on already overstretched facilities, WFP explored the options for integrating food assistance into social welfare mechanisms, addressing the needs of clients and households as one (Greenblott, 2007).

Livelihood support for AIDS-affected households continued to be of critical importance. In Southern Africa, guidelines for the appropriate adjustment of FFA and FFT activities were introduced to accommodate AIDS-affected households with limited able-bodied labour capacity, with the aim of including these households in mainstream programmes rather than HIV-exclusive activities, in Malawi, Lesotho and Zambia (C-SAFE, 2004).

By 2003, the impact of ART in prolonging lives had become an accepted fact, and halting the deaths due to AIDS became urgent. However, ART was still not widely accessible to the millions who needed it, mainly owing to high costs. It was at this time, that WHO and UNAIDS launched the “3 by 5” initiative as a global target, aiming to provide 3 million people with life-prolonging ART by the end of 2005 (WHO, 2003). At almost the same time, the United States President’s Emergency Plan for AIDS Relief (PEPFAR) was established, as the largest commitment in history made by any nation to combat a single disease.

With HIV programmes starting to take shape, the need for programming guidance was widely recognized. WFP, together with the Food and Nutrition Technical Assistance project (FANTA) and the United States Agency for International Development (USAID), started to prepare a programme handbook, which was finalized in 2007.

As ART became more readily available, the need for proper nutrition became more evident. In 2005, WHO hosted the Durban Consultation on Nutrition and HIV/AIDS in Africa, which was instrumental in building consensus on the role of nutrition in HIV and AIDS (WHO, 2005). At the same time and location, IFPRI organized a consultation on HIV and food security, which emphasized the vicious and mutually reinforcing cycles of HIV/AIDS as a cause and a consequence of food insecurity.

Figure 13.1c Milestones in HIV/AIDS care and treatment

<i>Global</i>	2006	<i>WFP</i>
<ul style="list-style-type: none"> ▪ PEPFAR Policy Guidance on the Use of Emergency Plan Funds to Address Food and Nutrition Needs ▪ Universal access campaign initiated ▪ IAC Toronto (Stephen Lewis makes special appeal for food and nutrition needs) 		<ul style="list-style-type: none"> ▪ Dedicated regional HIV capacity in 6 regional bureaux ▪ First PEPFAR funds for WFP food assistance programmes ▪ JFFLS and Alliance for orphaned and vulnerable children, social protection and livelihoods ▪ New guidance: <ul style="list-style-type: none"> - HIV and transport - HIV, AIDS and gender - HIV, food and social protection
	2007	
<ul style="list-style-type: none"> ▪ ICASA Abuja (session on PMTCT and food security and nutrition) ▪ CAAP, Colombo (session on Nutrition and HIV) 		<ul style="list-style-type: none"> ▪ OMB Workshop on HIV Nutrition/Food Security ▪ WFP supporting ART in 16 countries ▪ New guidance: <ul style="list-style-type: none"> - FANTA/WFP Food assistance programming in context of HIV - Food assistance and TB care - HIV and food ration design
	2008	
<ul style="list-style-type: none"> ▪ High food and fuel prices, followed by financial crisis 		<ul style="list-style-type: none"> ▪ PEPFAR funds WFP HIV support programmes in 4 countries ▪ HIV thematic evaluation ▪ New guidance: <ul style="list-style-type: none"> - Orphaned and vulnerable children food assistance

3.4 Rationalizing food assistance: 2006 to 2008

In 2006, the 3 by 5 initiative was replaced by the Universal Access to Prevention, Treatment, Care and Support initiative, with the goal of making HIV and AIDS prevention, treatment, care and support universally accessible by 2010. In the same year, the 59th World Health Assembly adopted the WHO Resolution on Nutrition and HIV/AIDS, which called for Member States to pay special attention to integrating nutrition into all HIV/AIDS policies and programmes. In New York, a United Nations General Assembly high-level meeting on AIDS urged countries to revise national AIDS strategic plans to integrate food and nutrition support.

At the XVI International AIDS Conference in Toronto, the HIV community reaffirmed food and nutrition support as integral to comprehensive HIV treatment and care. WFP's role in advocating for the integration of food and nutrition support in national AIDS strategies and programmes was recognized in speeches by Stephen Lewis, United Nations Special Envoy for AIDS in Africa, and Paul Farmer, a well-known AIDS activist and clinical practitioner. For the first time, PEPFAR funded WFP-supported HIV and AIDS programmes, in Ethiopia and Mozambique.

With uptake and retention rapidly improving, owing to improved access and declining stigma,³ the role of food moved towards addressing specific nutritional needs, because low body mass index (BMI)⁴ was found to increase mortality in clients starting ART. The incentive/enabler effect of household food assistance remained relevant, particularly in lower-prevalence settings. HBC was shifting towards treatment support while continuing to offer assistance to those with limited access to clinics. WFP's beneficiary figures showed a shift towards increased support for ART clients, away from addressing general chronic illness.

Box 13.2 Shifting from HBC towards ART

From 2006 to 2008, the number of WFP-supported ART programmes increased by 131 percent, from 16 to 37. From 2007 to 2008, ART beneficiaries – clients plus their families – increased by 87 percent, from 332,000 to 621,049.

This was a result of efforts by national governments and international communities to make ART treatment accessible to all, and also of increasing awareness of the role of nutrition and food support in treatment.

Most likely as a direct result of this, WFP's HBC activities decreased from 13 countries in 2007 to ten countries in 2008.

As a UNAIDS co-sponsor, in 2006 WFP was identified as the lead in coordinating nutrition and dietary support. In this context, it continued its external and internal advocacy efforts, including by commissioning research papers and participating in high-level meetings to ensure that food security and nutrition remain on the global agenda. Internally, global meetings were organized for all WFP HIV focal points to learn about the latest developments and share experiences. In 2007, WFP chaired the UNAIDS Committee of Co-sponsoring Organizations (CCO), a standing committee of the Programme Coordinating Board, and worked with the secretariat to prepare the 2008–2009 UNAIDS Unified Budget and Workplan. Findings from the independent HIV thematic evaluation were presented to the EB in 2008 and have informed WFP's latest policy and programme directions.

Assessments by both WFP and partners showed that the 2008 high food and fuel price crises had a negative impact on both HIV programmes and their beneficiaries. PLHIV and their families were recognized as vulnerable groups owing to pre-existing vulnerabilities, and were prioritized for WFP support. The new WFP 2008–2011 Strategic Plan, launched in 2008, reaffirmed WFP's commitment to HIV/AIDS and TB response. WFP continued to build credible partnerships, and four WFP country offices – Rwanda, Côte d'Ivoire, Mozambique and Ethiopia – received funding from PEPFAR for HIV programming.

During this period, governments increasingly integrated PMTCT with regular mother-and-child health (MCH) services, calling for a rethink of the role of food assistance; although uptake remained a challenge, the focus shifted towards ensuring the nutritional well-being of mothers and children. This was because concerns about low birth weight compromising child development also apply to HIV-negative mothers, thus requiring an integrated, broad-based mother-and-child health and nutrition (MCHN) approach. WFP country offices that previously provided dedicated PMTCT support considered either exiting from the programme or expanding/integrating their support to cover MCH clients, as in Rwanda and Mozambique. In Mozambique, Plumpy Nut®, originally designed to support the nutrition rehabilitation of severely malnourished children, was introduced by UNICEF to support at-risk⁵ infants over 6 months of age.

Figure 13.1d Milestones in HIV/AIDS care and treatment

<i>Global</i>	2009	<i>WFP</i>
<ul style="list-style-type: none"> ▪ UNAIDS Joint Action Framework recognizes importance of food and nutrition ▪ WHO recommends ART starts at CD4 350 ▪ WHO recommends PLHIVs on ART and continuation of breastfeeding 		<ul style="list-style-type: none"> ▪ WFP commits to JAF: support ART, TB-DOTS and social protection programming ▪ GAIN, UNAIDS, WFP Food by Prescription paper ▪ Preparation of new policy paper (3 background papers) ▪ New guidance: <ul style="list-style-type: none"> - M&E guide
	2010+	

3.5 Continuing innovations: 2009–2010 and beyond

The recent efforts to integrate nutrition and food assistance into treatment are reflected in the Joint Outcome Framework (JOF) 2009–2011, launched by UNAIDS' Programme Coordinating Board in 2009, which outlines priorities for amplifying the AIDS response and contributing to the broader development agenda in nine priority areas (UNAIDS, 2009c). WFP has committed its efforts to three of these JOF priority areas:

- 1) ensuring that PLHIV receive treatment, by integrating nutrition support into treatment programmes;
- 2) preventing PLHIV from dying of TB, by ensuring effective integrated service delivery for HIV and TB, including nutrition support in all settings;
- 3) enhancing social protection for people affected by HIV, by providing social safety nets for them, including for people experiencing hunger, poor nutrition and food insecurity, and orphaned and vulnerable children.

Most food assistance programmes are beginning to distinguish individual nutritional supplements provided as part of comprehensive treatment, such as Food by Prescription (FBP), from household food support components delivered through home care and social welfare mechanisms. Livelihood assistance and/or back-to-work programmes are also considered relevant for supporting long-term treatment adherence and the productive recovery of clients and their households. An FBP landscape review conducted in 2009 recognizes these three distinct but

complementary, intervention components, each with its own purpose (Greenaway, 2009).

Eligibility for nutritional rehabilitation relies on clinic staff's ability to recognize malnutrition as measured by BMI or extreme weight loss.⁶ The management of nutritional well-being through nutrition education, assessment and counselling is expected to be an integral part of ART. The international community's increasing interest in strengthening health systems has led to the training of health staff and the introduction of new cadres of personnel to allow such integration. However, introducing new and additional tasks to already overstretched workloads remains a challenge.

Underlying household vulnerability is measured through socio-economic indicators, which requires the expertise of social workers, relying heavily on referral mechanisms. In some instances, NGO partners with broad mandates are able to manage both clinical and social safety net programmes. However, the operational management of food supplies in clinical and social welfare settings raises considerable challenges for logistics and staff capacity.

As the need to distinguish clients' needs from those of their households is increasingly recognized, questions arise regarding the nutritional adequacy of food products in supporting the nutritional rehabilitation of malnourished ART clients, particularly adults. While CSB remains the main product for addressing this problem in most cases, some programmes introduce new products, such as ready-to-use therapeutic foods (RUTFs). The Government of Malawi, with

Box 13.3 From "food plus" to "plus food"

Given the broad orientation of the global response to AIDS, it has always been clear that food cannot function as stand-alone support to PLHIV and AIDS-affected households. From the outset, WFP's interventions have been integrated, consolidated and complementary.

In the absence of widely available treatment, in the early days, food took centre stage, while WFP and partners sought complementarity from counselling, education, livelihoods support, etc.: *food plus*.

With the introduction of affordable drugs, the strengthening of health systems and the identification of comprehensive care and treatment approaches, food was increasingly identified as *complementary* to the core medical programme: *plus food*. This new orientation calls for WFP to identify appropriate ways of integrating food assistance into care and support structures, mainly clinics and treatment outreach services. Familiarization, appreciation and adaptation are required to fit food assistance into its new environment – a steep learning curve!

support from NGOs and United Nations partners, established a standard nutrition support programme as part of comprehensive ART, using the RUTF Plumpy Nut®. In Kenya, the PEPFAR-supported nutritional rehabilitation programme introduced a new line of fortified blended foods (FBFs) aimed at meeting the specific needs of selected subgroups.

Alongside the development of FBP approaches and protocols for nutrition improvements, WFP country offices are developing innovative ways of improving access to food for household support through complementary social and productive safety net mechanisms, many of which are aligned with governments' greater interest in building national support schemes. In Zambia, ART clients are identified as a priority target group and receive electronically registered vouchers through a broad-based safety net programme; the vouchers can be redeemed at retail outlets. In Ethiopia, treatment clients obtain access to household food support through a comprehensive network of social actors. WFP, USAID/AMPATH and PEPFAR partners in Kenya have agreed on standard approaches for FBP, while seeking complementary support for livelihood protection and promotion from non-clinical partners. In Mozambique, WFP works with the government to explore operational modalities for increasing access to a basic food basket through voucher systems. WFP in Swaziland, Lesotho and Namibia are establishing strategic partnerships to develop food assistance methods that match national needs and service delivery capacities.

Box 13.4 HIV versus poverty: equity in livelihood protection and promotion

As ART regimes provide greater opportunities for physical recovery among PLHIV, questions arise regarding the appropriateness of prolonged exclusive livelihood assistance to PLHIV and their families when large numbers of other community members are experiencing similar poverty and food insecurity. Some may argue that continued support secures long-term treatment adherence, while others may emphasize that treatment investment facilitates productive recovery, and thus greater returns to community economic well-being.

Where vulnerability to food and nutrition insecurity are explicitly an impact of HIV and AIDS, the exclusive targeting of HIV-related subgroups, such as malnourished ART clients, can be considered appropriate. However, to address long-term non-HIV-specific livelihood vulnerabilities, inclusive approaches that reach out to the broader community should be considered. Of course, service providers' mandates and funding abilities determine the feasibility for such broad-based approaches. Although programmes may target PLHIV, stakeholders should consider the consequences for community dynamics and equity principles, particularly when designing national strategies.

New developments continue to affect the design and implementation of food assistance programmes. Some of the most critical developments are related to the basic protocols for ART and PMTCT services, unrelated to food and nutrition issues:

- In 2009, WHO introduced new guidelines for PMTCT, encouraging the enrolment of HIV-positive pregnant women in ART programmes, irrespective of clinical eligibility, and facilitating mothers' continued breastfeeding beyond 6 months. This will require reconsideration of the special nutrition needs of infants and young children born to HIV-positive mothers, as well as of the needs of the women themselves in relation to the nutritional impact of ART drugs.
- New ART guidance from WHO recommends increasing the ART eligibility standard to CD4 count⁷ 350, up from the 200–250 currently used in many developing countries. The implications on the nutrition needs of clients are still unknown. It may be assumed that patients with higher CD4s will not have progressed to AIDS, so will not have increased their energy requirements or lost weight to the same extent as current ART clients. However, the drug effect may still cause some clients to lose weight when starting treatment. Household food security conditions are expected to be better, as patients will not have divested their assets to cover illness-related costs, discontinued productive and economic activities and/or lost employment owing to recurrent and/or chronic illness. Of course, this assumes timely testing and treatment initiation.

Nutrition-specific developments are also continuously evolving and contributing to programme guidance:

- WHO and technical partners, including WFP, plan to review existing evidence on HIV, AIDS and nutrition in 2010, and have initiated a review of the linkages between and effectiveness of TB and nutrition interventions; both reviews are expected to inform new guidance.
- New food products available for the treatment and prevention of malnutrition among children are raising expectations of appropriate products for adult nutritional rehabilitation, which plays an important role in the successful start of ART. This includes the development of a new range of ready-to-use foods, similar to but not the same as Plumpy Nut®, such as chickpea-sesame paste, which is used by Valid International for initial treatment of people with AIDS, and Supplementary Plumpy®, for treating moderate malnutrition.
- Technical, programme and operational guidance is expected to emerge from ongoing FBP programme reviews in selected countries and associated partnerships among WFP, the Global Alliance for Improved Nutrition

(GAIN), FANTA and other major stakeholders.

Meanwhile, on a global level, there is still a significant gap in treatment access; many eligible PLHIV are waiting to start. Many of them are registered in clinics and receive an alternative treatment regime consisting of broad-spectrum antibiotics and targeted treatment for diagnosed opportunistic infections. There is growing demand for introducing nutritional rehabilitation or preventive nutritional care for this group, to prepare them for a smoother transition on to ART. Their regular clinic attendance offers opportunities for nutrition counselling and support. At the other end of the spectrum, greater ART success is increasing the occurrence of long-term side-effects, calling for greater attention to associated nutrition linkages and appropriate responses.

Box 13.5 While treatment progressed: care and support for orphaned and vulnerable children

Given the immense impact of AIDS on adult mortality, the number of children orphaned and made vulnerable by AIDS has been growing exponentially in East and Southern Africa. WFP's original orientation towards household food assistance saw a peak in support to orphaned and vulnerable children in the early years of engagement. Questions regarding the duration of food support, child and household "graduation" ability and/or WFP exit strategies have restricted expansion, in many cases resulting in reduced programme size.

WFP partnered UNICEF and FAO to help countries identify the critical needs of and associated services for orphaned and vulnerable children, in National Plans of Action for Orphaned and Vulnerable Children; to explore the possibilities for livelihood and life skills training for older adolescents, at Junior Farmer Field and Life Schools (JFFLS); and to support national strategy development regarding orphaned and vulnerable children, livelihoods and social protection. Food and nutrition remain a critical component of comprehensive care and support to orphaned and vulnerable children.

As debate emerges around national cash transfer schemes – old-age pensions, child grants etc. – it is also argued that a limited focus on food does not satisfy the broader needs of children and their families. Successful food assistance programmes are integrated into local and national governance and aligned with other support mechanisms: in Kenya, food assistance complements cash grants for orphaned and vulnerable children during the lean season, when food prices increase; WFP's food assistance in Mozambique is implemented by partner organizations offering at least two other basic services, identified in the National Plan for Action, complements a national cash transfer scheme, and is coordinated through provincial committees; and in Namibia, food assistance facilitates the identification and registration of orphaned children, who are later transferred into the national cash grant programme, thus resulting in a gradual phase out of WFP's engagement.

4. Conclusions

The history of HIV programming in WFP reflects a decade of evolution and continuous innovation, responding to rapid scientific, epidemiological and political developments while contributing to global and national priority setting.

Before it embarked on HIV support in the early 2000s, WFP had no precedent for this type of food assistance, which involved dealing with: a rapidly changing environment; initial reluctance to recognize the importance of food and nutrition in this context; evolving evidence of the linkages and of intervention effectiveness; a need to integrate into and adapt to national service delivery; and, most important, a need to guide and be guided by national AIDS responses.

4.1 Challenges

WFP entered this area by building on its available expertise and common sense, mostly from routine food assistance programmes and experiences in TB support and child nutritional rehabilitation. As the requirements for food assistance became more specific, expertise from health and social sectors was called on to help redesign programmes. The increasing specialization and professionalization of food assistance in support of HIV and AIDS will continue to challenge WFP's expertise in this area.

Programme guidance relied on good practice examples emerging from field-level implementation of what were often creative and experimental country initiatives, thus requiring time to allow for trial and error. Good practice guidance followed the establishment of programmes originally initiated as pilots. Although many donors called for evidence-based/guided programming, the evidence came as the programmes matured over time, through learning by doing.

Programme models are an important way of encouraging effective interventions' replication and integration into national plans. The widely varying characteristics of the pandemic across the East and Southern African region, the African continent and the world at large limit the possibility for prescribing standard approaches. Differences in prevalence, drivers, cultural considerations, political interest, systems' capacities, etc. determine the application of basic HIV, food and nutrition programme principles. Increasing staff competence and confidence⁸ are required to adapt common programme parameters to specific operating environments.

Although food and nutrition are globally recognized as critical components of comprehensive HIV care, treatment and support, funding lags behind. This is not necessarily intentional. With the introduction of effective treatment, the world is committed to continuing support to those who have initiated and those waiting to start treatment. Changing the CD4 eligibility criteria will increase the

expected ART uptake in high-burden countries. The pressure of maintaining treatment coverage is enormous and costly, and includes not only drugs but also staff and institutional capacities, laboratory and pharmacy services, etc.⁹ Treatment absorbs the major share of Global Fund resources, leaving limited funding for complementary services such as food and nutrition support.¹⁰ The share of PEPFAR's funding allocated to food and nutrition support, while much appreciated, is also limited in comparison with the needs.

4.2 Opportunities

Successfully embarking on a new area of food assistance in a rapidly changing environment relied on innovation, the seizing of opportunities, creativity and initiative, and space, time and support for developing and reshaping appropriate programme approaches. The commitment, ingenuity and tenacity of staff and partners in the most-affected countries have made WFP's HIV support portfolio what it is today.

While originally responding emotionally to an equally emotional demand for food support, WFP has recognized the need for a strategic, intelligent and visionary approach to take interventions to a scale that provides a relevant contribution to national and global AIDS responses. Rationalization, evaluation and continuous reflection on effectiveness and relevance are critical ingredients for WFP's continued engagement in this area, as the environment continues to change.

Although those on the ground never doubted the importance of food and nutrition in responding to AIDS, recognition at the global level relied on critical events and the advocacy of strategic actors. The emergency drought response in Southern Africa highlighted HIV and AIDS and its links to food and nutrition insecurity. For the first time, the pandemic's impact on entire countries, their resilience to shocks, weak governance structures and limited capacities for service delivery were exposed. The appointment of WFP Executive Director James Morris as United Nations Special Envoy for the humanitarian crisis in the region brought HIV to a new global humanitarian platform, and emphasized the importance of food and nutrition considerations. The widely publicized confrontation of Peter Piot, UNAIDS Executive Director, with PLHIV requesting food rather than care or medicines, and the support to WFP's food assistance to PLHIV publically expressed by Stephen Lewis, United Nations Special Envoy for AIDS in Africa, during the Toronto International AIDS Conference have made tremendous contributions to furthering the HIV, food and nutrition agenda.

It is often argued that HIV has given global nutrition strategies a new impetus to move forward and seek innovative approaches. In turn, WFP's recent endorsement of a corporate nutrition improvement approach offers a similar impetus back to HIV, food and nutrition programming. Exploring the use of new

nutritionally enhanced food products in HIV nutrition support programmes, for both treatment and prevention, may offer WFP a new position in treatment support. At the same time, the introduction of innovative food assistance modalities such as food, cash and vouchers in social and productive safety nets may facilitate the repositioning of WFP in the HIV social protection debate.

4.3 In conclusion

Global funding for HIV rose from US\$1.6 billion in 2001 to an estimated US\$13.8 billion in 2008. Despite this impressive increase in resources, however, the estimated global requirement of US\$25 billion for achieving universal access to treatment in 2010 will not be reached. The challenges facing the response to AIDS have been exacerbated by the global financial and economic crisis, which has increased poverty, malnutrition and food insecurity, while often also reducing the delivery of government services.

WFP will continue to emphasize scientific evidence, build strong partnerships and coalitions, implement cutting-edge programmes based on the latest evidence, and establish robust monitoring systems to measure results.

WFP will strengthen its advocacy efforts and continue to build evidence for the importance of nutrition as an integral part of AIDS treatment. Within UNAIDS, and on behalf of PLHIV and TB patients, it is WFP's responsibility to ensure that nutrition receives adequate focus and funding in the global response to AIDS.

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- ¹ Energy requirements go up by 10 percent in the asymptomatic stage. Once the CD4 count drops, unless treatment has begun, the energy required for basic bodily functions increases by about 30 percent. Symptomatic HIV-positive children need 50 to 100 percent more energy than HIV-negative children (WHO, 2005).
 - ² PLHIV increased energy needs and commensurate increases in protein and fat needs, documented by WHO in 2001, were introduced into the calculations for population-level nutritional requirements in emergency situations in the SPHERE Standards.
 - ³ However, stigma is still an issue in many countries of East and Southern Africa. Food by Prescription in Kenya experiences high client drop-out due to challenges in status disclosure within the family.
 - ⁴ Measured as weight/height² (kg/m²) using cut-offs of 18.5 and 16 to determine moderate and severe malnutrition respectively.
 - ⁵ Including those born to HIV-positive mothers.
 - ⁶ Weight loss of more than 10 percent between two monthly weighings.
 - ⁷ The need for ART is determined by CD4 count and/or staging of disease progression. The CD4 count is a clinical measure of the number of CD4 immune cells in the blood that serves as an indicator of a person's immune system. Higher CD4 counts indicate a higher degree of immune function.
 - ⁸ In 2010, WFP is launching an organization-wide learning programme on HIV, food and nutrition.
 - ⁹ Following the food and fuel price increases and financial crisis of 2007/2008, the costs of delivering treatment services have increased while the national revenues available to cover such costs declined.

Countries known to be financially stable and in full control of their ART financing, such as Botswana, have reported possible treatment ceilings in the absence of newly identified funds.

- ¹⁰ In 2010, WFP is embarking on a partnership with George Washington University to explore the possibilities for funding food and nutrition programmes through Global Fund resource mechanisms.

14

The multiple impacts of school feeding: a new approach for reaching sustainability

Luca Molinas and Marc Regnault de la Mothe

1. Introduction

Development activities that target children are tools for eradicating chronic hunger and lifting developing countries out of the poverty trap. By investing in the health and nutrition of school-age children, a country can increase the human capital of its younger generations and achieve sustainable economic growth and human development. This chapter describes school feeding as a powerful and effective intervention that can help fight chronic hunger while reducing poverty and inequality. It also shows how school feeding is a productive safety net that can be adopted in emergency and protracted crisis contexts, as well as more stable development contexts.

In fact, virtually all countries in the world provide their students with some sort of school feeding to achieve certain social and economic outcomes. With its 45 years of experience, WFP can be considered the largest international actor in school feeding. However, despite this internationally recognized role, three factors have provoked criticism of WFP's school feeding.

First, school feeding has always been considered an education-only intervention. In other words, donors, national governments and development stakeholders view the provision of food to hungry children in school as an effective tool for promoting and improving only educational outcomes in poor countries. Second, WFP has very often implemented school feeding as a stand-alone intervention, with very little integration or alignment with national policy strategies. In the majority of countries, WFP's partnership and cooperation with national governments have been limited, and this has often hindered the

effectiveness of hand-over strategies and the transition to national ownership. Third, traditional school feeding programmes have been associated with high costs relative to national education budgets and other food aid tools. These three factors have had a profound impact on donors' willingness to fund school feeding, and on national governments' interest in achieving national ownership.

WFP school feeding has responded to the organizational shift from food aid to food assistance by developing a framework of eight standards needed to ensure quality, sustainable and nationally owned school feeding. Achievement of these standards represents the ultimate objective of the new generation of school feeding programmes.

This chapter is structured as follows: section 2 reviews the available evidence on the multiple benefits of school feeding; and sections 3 and 4 introduce the new approach, with a focus on two analytical tools that WFP has developed in partnership with the Boston Consulting Group to achieve sustainability and support the transition to nationally owned school feeding programmes.

2. Education and beyond: the multiple benefits of school feeding

Solid empirical evidence of the impact of school feeding programmes on educational outcomes proves that school feeding increases school enrolment and attendance by reducing drop-out (Ahmed, 2004; Dreze and Kingdon, 2001; Lazmaniah *et al.*, 1999). There is also significant evidence that such interventions go beyond traditional educational outcomes by providing a wider range of short- and long-term social and economic impacts.

In contexts of emergency, economic shock, protracted crisis and vulnerability, school feeding is a productive safety net. This is the main conclusion reached by the World Bank Group and WFP in a joint analysis of school feeding worldwide (Bundy *et al.*, 2008), and the World Bank Group specifically includes school feeding as one of the programmes eligible for support from the US\$1.2 billion Global Food Crisis Response Facility established in 2008 to address the global food and financial crises (Grosh *et al.*, 2008).

This means that among all possible food assistance interventions, school feeding represents a unique opportunity by providing multiple benefits at both the outcome/short-term and the impact/long-term levels. This section reviews the most significant evidence for the various positive impacts of school feeding.

2.1 School feeding and nutrition

Enhanced nutrition and health of primary schoolchildren leads to improved learning and decreased morbidity, paving the way for healthier lives. School

feeding programmes not only alleviate child hunger in school, but also enhance nutrition, particularly when the food is fortified with micronutrients. This raises the potential to improve a child's health, school performance and educational attainment.

School feeding enhances the diet and increases the energy and kilocalories available to a child. It targets micronutrient deficiencies, which are widespread among school-age children in developing countries and which increase susceptibility to infection, leading to absenteeism and impairing learning capacity and cognition (Latham *et al.*, 2003; Van Stuijvenberg, 2005; Solon *et al.*, 2003; Grillenberger *et al.*, 2003). Improving micronutrient status through food fortification or micronutrient powders, particularly of iron, B-vitamins, vitamin A and iodine, contributes directly to enhanced cognition and learning capacity. Recent studies in Kenya and Uganda proved that both in-school meals and take-home rations (THRs) reduce anaemia prevalence (Andang'o *et al.*, 2007; Adelman *et al.*, 2008).

School-age children also have the most intense worm infections (Jukes, Drake and Bundy, 2008). Between one-quarter and one-third of school-age children are infected with one or more of the major helminths – roundworm, whipworm or hookworm. Severe worm infestation contributes to morbidity, undernutrition and iron deficiency. Iron-deficiency anaemia is a major issue for school-age children, affecting more than half of this group worldwide, and evidence suggests that a significant reduction in anaemia can be achieved with de-worming (Brooker, Hotez and Bundy, 2008; Gulani *et al.*, 2007). In situations of high worm prevalence, de-worming is essential to maintain good nutrition status and achieve better absorption of food, as well as improved cognition (Grigorienko *et al.*, 2006; Sonnino, 2007; Nokes *et al.*, 1992; Bundy, 2005).

When school feeding targets preschool children, it can help give a child a healthy head-start and pave the way for a promising future. There is compelling evidence that poor nutrition in early childhood affects cognitive development and learning potential; poor health is an additional barrier to education (Jukes, Drake and Bundy, 2008). Increased access to preschools can enhance education outcomes and equity among children of primary school-age. School feeding should be seen as part of a continuum and one of many potential interventions that support nutrition for pre-primary and primary school-aged children; for example, it does not directly target poor nutrition in pregnancy, infancy and early childhood, which are the most important years in terms of immediate and long-term effects on cognitive abilities (Jukes, Drake and Bundy, 2008). School feeding in pre-primary schools, for children aged 3 to 5 years, can be seen as preventive, and has the potential to bridge the gap between infancy and primary

school age – 6 to 11 years – in countries where preschools are part of the basic education system.

2.2 School feeding: improving learning and cognition

Providing food for consumption at school can be beneficial for learning because it relieves immediate short-term hunger. Children who are not hungry are more attentive and have higher cognitive abilities (Simeon, 1998). The ration should be served as early as possible during the school day, for maximum benefit while the child is in school. Thus, timing of the meal or snack is important for addressing hunger and reaping cognitive benefits.

Alleviating short-term hunger among children at school may contribute to improved performance in school tests and promote normal progression from grade to grade in completing a basic education.

2.3 School feeding: the positive impact on gender, orphans and other vulnerable children

It has been proved that school feeding contributes to improved education for girls, as both in-school meals and THRs are effective in targeting gender objectives. This is particularly useful in boosting girls' enrolment where access to education is limited. Educated girls are more likely to have fewer and healthier children and to head families that are food-secure. School feeding closes the gender gap in schools and helps to empower women. It leads to improved protection from HIV/AIDS and better access to work opportunities for women. It changes the lives of not only girls but also of their future children. Maternal and infant mortality rates decrease, and better educated girls make more informed choices. The World Bank estimates that only one additional year of schooling for girls reduces the birth rate by 10 percent, and that every extra year of schooling provided to 1,000 girls results in 60 fewer infant deaths (Summers and Lawrence, 1992; World Bank, 2007a).

An evaluation of India's Mid-Day Meals Programme found that girls in the programme were 30 percent more likely to complete primary school (Dreze and Kingdon, 2001). In Pakistan, a programme that provides girls with a conditional THR of oil once a month has changed the way their parents think and act. Before the programme started, 48 percent of households did not send any of their daughters to school; afterwards, all households educated at least one daughter (WFP, 2005b).

When school meals are combined with THRs, the effect on girls is even greater. THRs draw girls to school, maintain their attendance and increase their progress from grade to grade, effectively eliminating the gender gap in school. A major WFP review documented increased enrolment of girls in higher grades in

schools with combined on-site and THR programmes (Gelli, Meir and Espejo, 2007). Similarly, the THR programme in Bangladesh increased girls' enrolment by 44 percent and boys' by 28 percent in schools on the programme, while enrolment in non-programme schools increased by only 2.5 percent during the same period (Ahmed, 2004).

A desk review conducted by WFP found that, in 2008, 500,000 orphans and children affected by HIV in nine countries had benefited from WFP school meals, THRs or a combination of both, encouraging them to attend school, and thereby reducing the burden on their households.

2.4 School feeding as value transfer

During periods of shock and reduced purchasing power, families often resort to negative coping mechanisms, including taking children out of school to save on school fees and related expenses (World Bank, 2009a). School feeding programmes can help to safeguard households' investments in education by defraying some of the costs of schooling and encouraging parents to enrol their children in school and ensure that they attend class regularly throughout the complete cycle. This helps protect children from the risk of both formal and informal child labour and facilitates social integration (Paruzzolo, 2009).

School feeding is a well-recognized safety net that transfers significant value to households with children enrolled in school or with school-age children (Bundy *et al.*, 2008). The value transfer from school feeding frees up resources within households, allowing families to buy food and invest in productive assets, and ultimately improving their livelihoods, nutrition and education.

The value transferred is equivalent to the value of the food transfer delivered to the child at school, the value of the THR, or both. This serves as an incentive for households to send their children to school and ensure that they continue to attend. The provision of food therefore alleviates short-term hunger, while supporting the longer-term goals of educational attainment and improved nutrition and health.

School feeding value transfers have the potential to increase school enrolment and attendance at times when food-insecure families with low purchasing power may be at risk of resorting to negative coping strategies, including taking children out of school. THRs are the best vehicle for maximizing the benefits that a school feeding safety net offers, by extending the value and impact of the transfer beyond the benefits that a child receives from the food ration consumed in school. THRs can easily be targeted to the specific groups that may be most in need of support, such as girls, orphans or other vulnerable children of school age and possibly other members of a household.

3. A new approach to school feeding: the transition towards sustainability and government ownership

It is now undisputable that school feeding programmes provide an effective safety net to poor families in times of crises, in post-crisis recovery situations, and in chronic long-term development settings. School feeding increases household income, freeing up resources for productive investments. It offers an incentive for households to send their children to school and invest in education, breaking the poverty trap.

However, analysis has also highlighted some shortcomings. While school feeding programmes are widely recognized as far-reaching, effective and relevant, many have been essentially supply-driven and have sometimes fallen short of what the international aid community has come to see as essential and non-negotiable requirements: in essence, the principles of aid effectiveness. These are embodied in the Paris Declaration, in which donors agreed on government ownership of national strategies for poverty reduction, donor alignment behind these, and the harmonization of procedures for obtaining funds and measuring results, to avoid duplication and demonstrate mutual accountability. According to the new aid architecture, the recipient government is in the driver's seat, and priorities are to be based on the national development agenda. However, these principles are difficult to apply in the complex settings of developing countries, and it will take years of global effort to shift the policies and programmes of donors and agencies.

Where does WFP school feeding fit into this overall picture? Its current transformation reflects the organizational strategic shift from food aid to food assistance and is in accordance with the new aid agenda, in that it brings WFP school feeding closer to national development strategies, aligning it with education policies and embedding it in national financing frameworks and budgeting processes. WFP's role is expected to change from direct implementation with cooperating partners of all stages of programming – design, procurement, transport and warehousing, distribution and monitoring – to enabling, building capacity, advising, and acting as a repository for best practices. It is now clear that the way forward is to assist national governments in making the transition to sustainable programmes that are nationally owned, nationally led and locally sourced. During this process, WFP will continue its support to ongoing, traditional programmes. Until national capacities are adequate, WFP will lead the implementation, procurement, monitoring and evaluation of school feeding, when requested by national governments. Completing this transition may take several years, or even decades in some countries, and WFP will be present throughout, providing technical support where required.

There are three main areas of innovation in school feeding:

- (i) Knowledge, in-depth analysis and understanding: WFP will provide analytical support and advice on needs assessment, targeting, cost-effectiveness and cost containment to governments that seek it, thereby enhancing design and implementation.
- (ii) Support to governments' coordination of national school feeding strategies: This is facilitated by bringing the stakeholders together to ensure an effective national approach to school feeding programmes that respond to local needs.
- (iii) Capacity development and technical support to ensure sustainability: The aim is to increase governments' capacities to design and implement programmes that are sustainable and affordable and that can be brought up to scale.

These three elements all help to enhance the sustainability of school feeding as a productive safety net. Framing school feeding programmes as a safety net opens the door to new national and global funding sources, other than ministries of education, such as funding for poverty reduction strategies, social protection, the Fast Track Initiative and the World Bank's recently established Rapid Social Response Fund.

Eight drivers of sustainability were identified through an analysis of WFP's 45 years of school feeding and the recent joint World Bank/WFP school feeding analysis (Bundy *et al.*, 2009). These standards for quality and sustainability are an essential part of WFP's school feeding policy, approved by the Executive Board in November 2009. All school feeding projects are now to be conceived and designed to ensure: (i) sustainability; (ii) sound alignment with national policy frameworks; (iii) stable funding and budgeting; (iv) needs-based, cost-effective quality programme design; (v) strong institutional arrangements for implementation, monitoring and accountability; (vi) a strategy for local production and sourcing; (vii) strong partnerships and inter-sector coordination; and (viii) strong community participation and ownership. Both newly designed and existing programmes must adhere to these eight quality standards, or establish a strategy for working towards them, to ensure a gradual transition to national ownership.

Sustainable school feeding requires strategic partnerships at the global and country levels, such as the newly established school feeding partnership with the World Bank, whose objectives are very much in line with the new thinking on school feeding: (i) assist country efforts to mainstream school feeding; (ii) develop institutional capacity for implementing school feeding programmes effectively, cost-efficiently and sustainably; and (iii) promote the transition

towards national ownership and resourcing.

Initial WFP/World Bank cooperation efforts have focused on countries that have already expressed an interest in partnership, including Ghana and Kenya in 2009, and Lao People's Democratic Republic (PDR) and Bangladesh in 2010, and possibly extending to Haiti and Mozambique. These pilots receive extensive support from the headquarters of both institutions, throughout the four stages of enabling, assessment, design and implementation.

During the enabling stage, to ensure government leadership, ownership and commitment, a set of analyses and other tools have been developed and are being tested in the pilot countries: (i) a needs/coverage analysis; (ii) a school feeding investment case; (iii) a school feeding cost containment tool, or cost analysis; (iv) an assessment based on the eight quality standards; (v) mapping of stakeholder and coordination mechanisms; (vi) a stakeholder workshop; and (vii) an analysis of school feeding modality options. The school feeding investment case and cost containment tool are described in more detail in the following section.

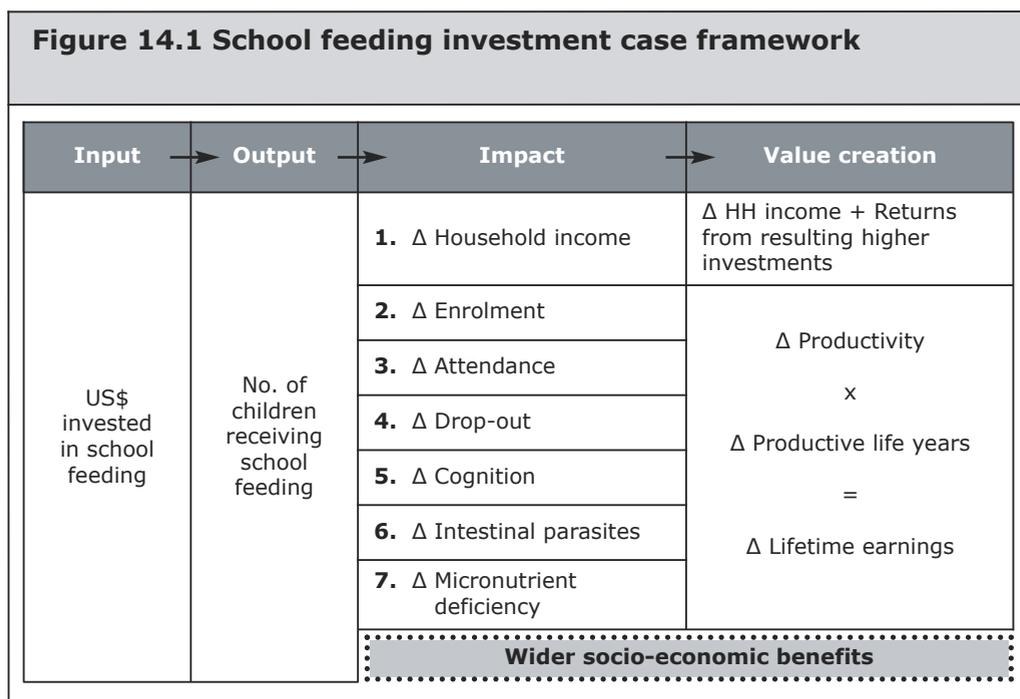
To identify a road map for transition and to enhance coordination, findings from the analyses are presented and discussed at a stakeholder workshop, which is jointly organized with the World Bank. Eventually, all the WFP country offices with school feeding programmes will be introduced to the new approach, which WFP aims to roll out wherever possible, ensuring that all lessons learned and best practices are implemented in WFP's and government-owned school feeding programmes.

4. Two analytical tools for the new approach

The analytical tools for helping to improve the quality, efficiency and coordination of sustainable school feeding include two – the school feeding investment case and the cost containment tool – that constitute a new, innovative way of looking at school feeding programmes, by introducing elements that have historically been regarded as pertinent to the private sector. In using these tools, WFP's aim is to design and implement programmes that are better targeted and more focused and cost-effective than in the past. Both tools were designed by a team of consultants from the Boston Consulting Group and WFP.

4.1 School feeding investment case

The first step was to develop an analytical framework, shown in Figure 14.1. Each of the coefficient impacts of school feeding, defined by a *delta* (Δ), is calculated based on the most reliable current academic evidence (see section 2).



Source: Devised by the authors in cooperation with the Boston Consulting Group, based on WFP Standard Project Reports.

Reading the framework from left to right, the various impacts of school feeding lead to a single, long-term quantifiable value created: higher productivity over a longer, more productive life of the school child. This is then monetized to obtain a single figure, which constitutes the return on investment. Some assumptions have to be made.¹ The logical sequence of the benefits and their estimated values are described in the following paragraphs.

A. School feeding improves education and nutrition: School feeding leads to increased time spent in school, through increased enrolment and attendance and decreased drop-out rates (Ahmed, 2004). WFP data from Lao PDR show that attendance increases by 5.5 percent per year, enrolment by 16 percent, and drop-out declines by 9 percent. School feeding also leads to increased cognition: learning is improved. For instance, in Lao PDR, one additional year of school feeding leads to an increase in cognition of 0.09 SD in test scores. An increase of 1 SD leads to an increase of 11 percent in wages over a productive life (Jukes, Drake and Bundy, 2008). School feeding and deworming lead to improved micronutrient status and decreased prevalence of intestinal parasites. These lead to decreased morbidity: children in school are

less frequently sick, and attend more. Fewer schooldays are lost. A 1 percent increase in school attendance rate leads to a 0.055 percent increase in life expectancy (Grigorienco *et al.*, 2006; Brooker, Hotez and Bundy, 2008).

B. Better education cognition, health and nutrition: These lead to higher productivity: academic evidence² shows that every additional year of primary schooling leads to a 5 percent increase in future wages. When children are well nourished during primary school age, they will be healthier and more productive during their future working years. This, together with the wage impact arising from increased learning skills, adds up to longer life expectancy. Higher income also leads to increased life expectancy.³ Each additional year of schooling raises disease awareness, particularly to HIV, and decreases HIV prevalence by 6.7 percent (De Walque, 2004); this too increases life expectancy and productivity.

C. School feeding provides a value transfer: By providing school meals, school snacks and THRs, school feeding frees up household income that would otherwise be used for food consumption. The financial value saved from food expenditure is equal to the monetary value of the food transferred, and households can invest part of these savings in productive assets. Evidence from developing countries shows that the poorest households consume an average of 85.5 percent of this added income, spending the remaining 14.5 percent on productive assets. In other words, of every US\$100 of value transferred through school feeding, US\$14.5 is invested in productive assets. The median return on this US\$14.5 investment in developing countries is estimated to be 54 percent per year (Banerjee and Duflo, 2004).

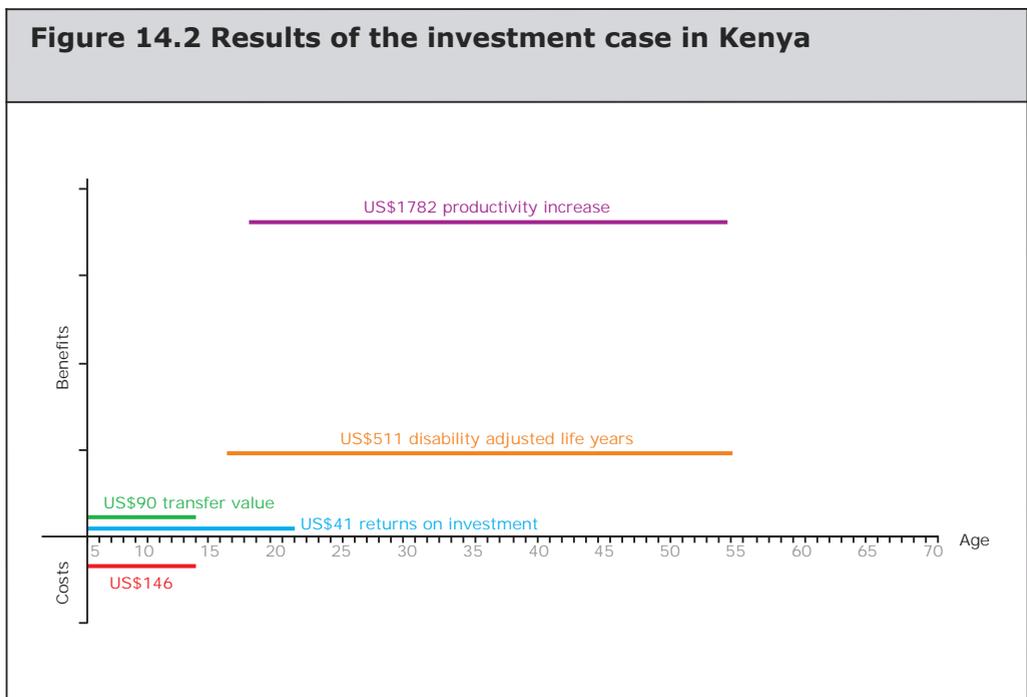
D. All of these factors lead to higher lifetime earnings: The combination of higher productivity and longer productive lives results in higher earnings for longer periods. This effect, when added to the increased household income resulting from increased investments in productive assets, leads to higher returns on investment for school feeding, making school feeding an attractive investment.

Two main conclusions can be drawn from the investment case:

- (i) Investing in school feeding creates significant economic value. Based on the four cases analysed so far – Kenya, Lao PDR, Ghana and Zambia – the benefit to cost ratio ranges from 7:1 to 16:1. For every US\$1 invested in school feeding, between US\$7 and US\$16 can be expected in return.
- (ii) School feeding is a unique safety net intervention owing to the interdependency and multiplication effect among its various outcomes and

to its combination of short-, medium- and long-term benefits from nutrition, education and value transfer.

Figure 14.2 illustrates the case of Kenya, where the investment of US\$146 in each child provides US\$90 of value transferred directly to the household as savings, of which an average of US\$41 is invested. The productivity increase resulting from improved education and better wages throughout the future life of the child yields US\$1,782, with an additional US\$511 to allow for disability-adjusted life years. Overall, each US\$146 invested generates a net present value of US\$2,400 over the life of the child: a return on investment of 16:1, which is very worthwhile, even by private sector standards. WFP advocacy efforts now focus on the school feeding safety net as an investment, rather than a non-productive expenditure.



Source: Devised by the authors in cooperation with the Boston Consulting Group, based on WFP Standard Project Reports.

4.2 The cost containment tool

When seeking sustainability, costs are probably the most important issue. School feeding programmes are expensive for governments, especially during the transition from external funding to national budgets. Trade-offs are carefully weighed by national decision-makers, who have to prioritize limited budgets. In this context, a cost containment tool is a valid means of ensuring that school feeding is included in national social protection and education agendas. The tool is based on an analysis of costs, which highlights the areas where savings could be made.

The cost analysis has three objectives: (i) to validate and update current benchmarks for school feeding costs and cost-efficiency, by modality and by programme model; (ii) to understand the drivers of apparent variations in costs, and the concomitant opportunities for cost containment; and (iii) to guide the design of tools for retrospective cost analysis and cost projections based on different programme/modality options.

In designing this tool, the first step was to establish global benchmarks for different categories of school feeding programme, based on data from 94 countries, to allow comparisons among school feeding programmes in the same category. For example, Kenya is compared with the other 29 school feeding programmes that provide meals only and use international procurement.

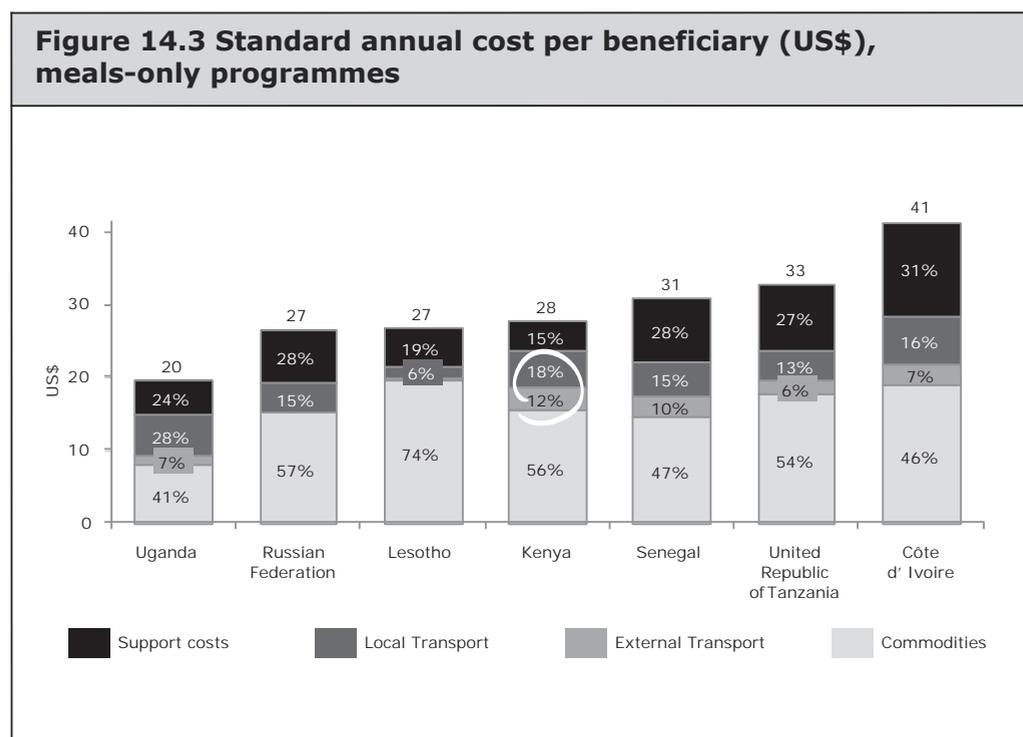
The innovation from previous studies is the attempt to estimate the full range of complementary, non-WFP costs related to implementing a school feeding programme, including government costs, such as staff, warehouses, office space, transport and monitoring, and community costs, such as building the school canteen and warehouse, paying cooks, fetching fuelwood and water, and parents' time spent managing and monitoring school feeding. These were estimated for the global benchmark and then validated through specific surveys in the 2009 pilot countries, Kenya and Ghana.

Food costs were estimated by calculating either the quantity of food distributed in school feeding as a proportion of the total food distributed in a project, or the share of country office school feeding expenditures in total project expenditures. WFP project reports and country office yearly expenditures, by beneficiary, were used to estimate non-food expenditures related to the school feeding programme. In projects with multiple activities, the expenditure accountable to school feeding activities only had to be estimated. Beneficiary and food distribution data are usually reported by activity within a country programme or development operation, but non-food expenditures – such as ocean transport; landside transport, storage and handling (LTSH); direct support costs (DSC); other direct support costs (ODOC); and the 7 percent indirect support costs (ISC) – are not, so they had to be approximated. The cost

estimates were then standardized across the different modalities: meals, biscuits, THRs, meals plus THRs.

To allow more accurate comparisons, costs then had to be standardized according to fixed parameters: 200 school days and fixed calorie contents for meals and biscuits. A linear regression with standardized costs as the dependent variable and number of beneficiaries as the explanatory variable was used to assess economies of scale.

The results for Kenya, presented at the November 2009 stakeholder workshop in Nairobi, show how the country's school feeding programme ranks against others in its category (Figure 14.3). Although the Kenya programme is quite cost-efficient, coming twelfth out of 44 meals-only programmes, there are still opportunities for cost containment, as external transport costs represent 12 percent of total costs, and are growing, while LTSH costs represent 18 percent – 60 percent of which is incurred to reach district warehouses. Cash donations allow more flexible sourcing, and procuring from local or regional markets would reduce both external transport and LTSH costs.



Source: Devised by the authors in cooperation with the Boston Consulting Group, based on WFP Standard Project Reports.

5. Conclusions

This paper outlines a completely new way of conceiving and designing school feeding programmes. Tests in pilot countries are only the beginning, and mainstreaming this new approach into the school feeding portfolio will require time, effort and a multi-year strategy. The programmes implemented by only three of the main actors in this field – India, Brazil and WFP – reach a total of 180 million beneficiaries, which illustrates the scale of the efforts needed.

A global alliance of donors, governments, international organizations, NGOs and practitioners will be needed to support this approach, which is clearly in line with the new thinking on school feeding: greater alignment with national strategies; increased government ownership and commitment; and an evidence-based approach to designing cost-effective, relevant and well targeted programmes.

¹ Costs: build on expenditures as reported in standard project reports; are adjusted for government and community contributions through mark-ups based on project documents, academic studies and country data requests; and annualize one-off costs to spread set-up costs over the project's life time.

Benefits: education parameters are derived from local monitoring reports or ministry of education sources; the country average is used as the control group to disentangle school feeding effects from country-wide trends; change in education parameters has the same impact, independent of starting level; potential decreases in quality of education are controlled for by artificially keeping the student-teacher ratio constant; and income transfer is valued according to commodity prices on local food markets.

Methodology: the discount rate is 6.5 percent, and gross domestic product (GDP) growth is ~2 percent (below); life expectancy at birth in Kenya is 54 years (World Bank), and in Lao PDR 64 years (World Bank); growth rate of the economy converges to ~2 percent over the next 30 years; the monetization factor is based on GDP per capita (United Nations country data); and impacts of pipeline breaks on both costs and benefits – income transfer, education impacts – are based on an average of pipeline breaks that is relatively constant over time.

² Coefficient calculated by the Boston Consulting Group and WFP as the median of those from Psacharopoulos and Patrinos (2002); Onphanhdala and Suruga (2007) Miguel and Kremer (2004)

³ A 100 percent increase in per capita income increases life expectancy by 7.4 percent.

15

Protection and food assistance programmes: promoting safety, dignity and more effective hunger outcomes in humanitarian crises

Nicholas Crawford, Gina Pattugalan and Kjersti Dale

1. Introduction

This chapter outlines WFP's approach to integrating and addressing the protection concerns of its beneficiaries into its food assistance activities. For WFP, protection means carrying out food assistance activities in ways that promote the safety, dignity and integrity of the people receiving assistance (WFP, 2008e: 102). While it is relatively easy to understand that food assistance beneficiaries living in troubled environments may be the victims of rights abuses, it is more difficult to determine how food assistance programmes – including distributions, communication campaigns, advocacy, and staff and partner presence – might be retooled to improve beneficiaries' safety and protection and, ultimately, their food security.

WFP's protection approach is consistent with human rights-based programming, including a right to food approach. However, unlike rights-based methodologies, which are generally pursued in stable settings, WFP concentrates on addressing rights issues in complex emergencies and conflict situations. Approximately 80 percent of WFP's global operational expenditures were directed to 32 conflict-affected countries or fragile States in 2008. Protection is an overriding concern for food interventions in areas with complex emergencies, such as Afghanistan and Darfur; high-crime, high-violence natural disaster settings, such as Haiti; and protracted political crises, such as Myanmar.

The challenges of protection are enormous, and WFP, along with other

external actors engaging in protection, must be realistic about how it can tackle these challenges. Even recognized protection enforcement actors, such as United Nations and other peacekeeping forces, international police forces, and the legally mandated protection agencies, are not reliable substitutes for the primary role of a State in guaranteeing its people's protection. However, emerging experience from more than 20 countries where WFP operates is showing how more systematic situation analysis, designed around a protection framework, can translate into practical programming decisions and advocacy that expand people's options for protecting their food security and themselves.

While a protection focus can lead to improved food security – the central theme of this chapter – there is value in adopting a protection approach that extends beyond food outcomes. For a large humanitarian agency, preoccupied with major day-to-day operational challenges, a protection approach re-connects staff with the United Nations' ethical framework of independent, principled humanitarian action. It encourages and equips staff and management to consider, at some depth, the legal basis and political events that have put them there, and to examine critically assumptions about the possibilities and limitations of WFP food assistance. Finally, the word “protection” reminds staff, partners, government counterparts, soldiers and others of what people are facing in many conflicts and complex emergencies: a continuous struggle to protect the well-being and dignity of their families – and compels all these actors towards acknowledging those threats and seeking common solutions.

This chapter starts by describing the developments that led WFP to analyse its activities through a protection lens and the conceptual framework adopted by WFP. This is followed by findings from field studies that examine the protection issues surrounding WFP operations. The chapter then describes tools for protection within food assistance, and how these tools can be translated into hunger solutions in the field. Violence against women, which is a recurring theme in protection contexts, also receives attention. Food assistance might fuel unrest or conflict, but the WFP protection framework outlined in this chapter concentrates on widening protection options for *beneficiaries* to help them protect their food security. The collective impact of aid on societies and conflicts is outside the scope of this chapter.

2. Bridging protection and food assistance

Obviously, food alone is insufficient for a hungry or starving person, and providing other basic needs – water and sanitation, basic health, etc. – has always been a part of the humanitarian package. For many years, however, even in situations of conflict and complex emergencies, the natural disaster model of assistance prevailed, wherein the shortfalls of a commodity were calculated and the international community endeavoured to fill the gap.¹ Today, recognizing the limitations of a traditional natural disaster approach, the aid community deploys a much wider array of tools and interventions aimed at supporting the integrity, or the wholeness, of a person affected by an emergency. The provision of basic needs is now complemented by programmes to protect livelihoods, build governance capacity, address gender inequality, restore markets, and so on. Part of this evolution has been an acceptance – contested by some – that humanitarian action should contribute towards realizing human rights generally. Even more self-evident has been the recognition that people whose basic safety is at risk are unlikely to be receiving, or optimizing the use of, humanitarian assistance.

2.1 Developing an approach to protection

A number of developments prompted WFP to re-examine how well it was linking its food assistance activities and their outcomes to people's basic human rights and their protection. The transformation of WFP assistance from being primarily developmental to being primarily humanitarian was a consequence of the turmoil and conflicts of the 1990s. These events – and the international community's failure to protect civilians in places such as Rwanda and the former Yugoslavia – prompted the United Nations to reconsider its role in peace and security, and the tools at its disposal. This process culminated in the General Assembly's approval of the Responsibility to Protect (R2P) resolution in October 2005. While R2P is essentially a political peace and security instrument, a parallel debate was raging among humanitarian and human rights actors to define protection and determine whether, and in what ways, they could contribute to preventing and alleviating protection crises.

In the latter part of the 1990s, the Secretary-General called for the incorporation of human rights into all the pillars of United Nations work, including development and humanitarian assistance. This commitment was strongly reiterated by the Secretary General in 2002 (United Nations, 2002).

The creation of a global Protection Cluster in 2005 within the United Nations reform agenda was a further acknowledgement of the United Nations' need to revive its commitment to protection within humanitarian action. It was also a call for better collaboration among agencies and for the inclusion of a wider

pool of actors, beyond the legally mandated agencies, to maximize the impact of humanitarian actors on people's protection.

Within WFP, the Gender Policy – Enhanced Commitments to Women to Ensure Food Security, approved by the Executive Board in September 2002 – paid attention to protection concerns at both the strategic and the practical levels. The policy listed measures for addressing protection concerns affecting women, but was later criticized for being overly prescriptive and not fitting into all local contexts. It was recognized that concerns about protection require a broader gender analysis; for example, distributions of food that requires cooking leads to fuelwood collection in situations where women's physical safety may be at risk.

The WFP Executive Board also formally approved a policy of humanitarian principles. Besides humanity, neutrality and impartiality, other principles adopted were respect, participation and accountability, including towards beneficiaries (WFP, 2004b). Translating these into meaningful action in operations meant exploring how to deliver on the commitments implied in the principles.

In 2005, prompted by these developments – and by field offices' increasing requests for advice in the face of growing international concern about protection – WFP began to explore how rights could be integrated into emergency food assistance and whether a protection approach might be useful. This required an understanding of whether protection issues have an impact on WFP's hunger mandate and, conversely, whether food assistance activities can contribute to the United Nations' overall protection commitments. Some basic questions arose: What does protection mean for an assistance agency such as WFP? Does WFP already engage in protection-related activities, without calling them protection? Is there reasonable scope for improving food assistance outcomes through a protection approach, and – if so – what skills and tools are needed?

2.2 A definition of protection for WFP

Between 2005 and 2009, WFP's research on protection and food assistance included 15 country case studies, reviews of various protection frameworks and definitions, discussions with protection-mandated agencies and assistance agencies, membership in the Protection Cluster, and participation in international meetings and workshops on protection. This research was carried out concurrently with experiments in guidance, training and programming at the field level, with WFP country offices seeking improved food assistance outcomes in complex settings – almost all of which involved protection crises, characterized by high insecurity and significant human rights violations and threats.

As a field-based, operational agency, WFP sought a definition of protection that emphasized the pragmatic: one that would marry WFP's delivery of food assistance to the conditions and rights that enable food recipients to enjoy that

food. Borrowing heavily from NGOs' experience of mainstreaming protection into their assistance work,² WFP adopted a practical definition of protection derived from *Protection: An ALNAP guide for humanitarian agencies* (Slim and Bonwick, 2005), adapting it to fit the mandate of WFP. For WFP:

protection means carrying out food assistance activities in ways that contribute to the safety, dignity and integrity of people in the communities receiving that assistance.

Including dignity and integrity as part of the definition captures the fundamental guiding principle of a humanitarian agency – humanity – and ensures that the whole individual, and not just his or her caloric intake, is considered to the extent possible. Additionally, it emphasizes lines of accountability beyond donors and governments to beneficiaries themselves and their overall well-being. This working definition of protection is reflected in WFP's Strategic Plan 2008–2013, which states that all WFP activities will be “carried out in conformity with humanitarian principles, and therefore in ways that contribute to the safety and dignity of affected populations” (WFP, 2008e: 9).

2.3 A protection framework for WFP

Field studies examining protection issues in WFP operations consistently find assaults on the dignity and integrity of many food assistance beneficiaries living in troubled environments. In Myanmar, WFP beneficiaries in northern Rakhine state who are members of the Rohingya ethnic group are food-insecure because the official government food balance exercise, which determines the flow of commodities to markets around the country, denies their existence in the country, thereby leaving roughly 800,000 people officially Stateless. These people are also victims of forced labour, including to build military camps for the Myanmar army that restricts the Rohingyas' own movements. In the Democratic Republic of the Congo (DRC), WFP's field study noted that hospital feeding for victims of rape or other violence had been lengthened to three months, allowing more recovery time, but that these people often then returned home to similar violence or community stigmatization. In Colombia, extortion of food by armed gangs was not uncommon after WFP distributions in some barrios. In northern Uganda, in camps where food operations kept hundreds of thousands of people alive during the worst of the Lords Resistance Army conflict, the prevalence of HIV/AIDS had shot up to double or triple the national level. In these camps, domestic violence accounted for 25 percent of hospital admittances, with a major source of intra-household conflict reportedly being arguments over one of the only resources they had left – food.

In many of these cases, it is more difficult to understand how food assistance activities themselves may contribute to indignities; to understand the negative impact that violence and other protection concerns have on food assistance results; and to determine how food assistance programmes – distributions, communication campaigns, advocacy, staff and partner presence – might be retooled to improve the immediate safety of beneficiaries around distributions and to contribute to better overall protection of beneficiaries.

In many ways, WFP's traditional food assistance activities already played a protective role. For example, the registration of internally displaced persons (IDPs), even when just for assigning food ration cards, has sometimes provided an important identity document for proving entitlement to other basic services, such as in Darfur. It is standard practice to plan distributions that are safe in terms of location, timing, security and facilities available for beneficiaries. Protecting the interests of women by making them the holders of family ration cards is the default when women prefer this. Helping to re-establish education through school feeding after crises is another example, because it gives families an incentive to put their children into safe environments during the day.

However, the field studies also found inconsistencies in the implementation of accepted protection practices such as these, and identified significant potential for more effective leveraging of WFP's field presence to contribute to overall protection concerns. Field staff and local partners were asked to identify this potential, based on their knowledge of protection threats on the ground and the feasibility of addressing these.

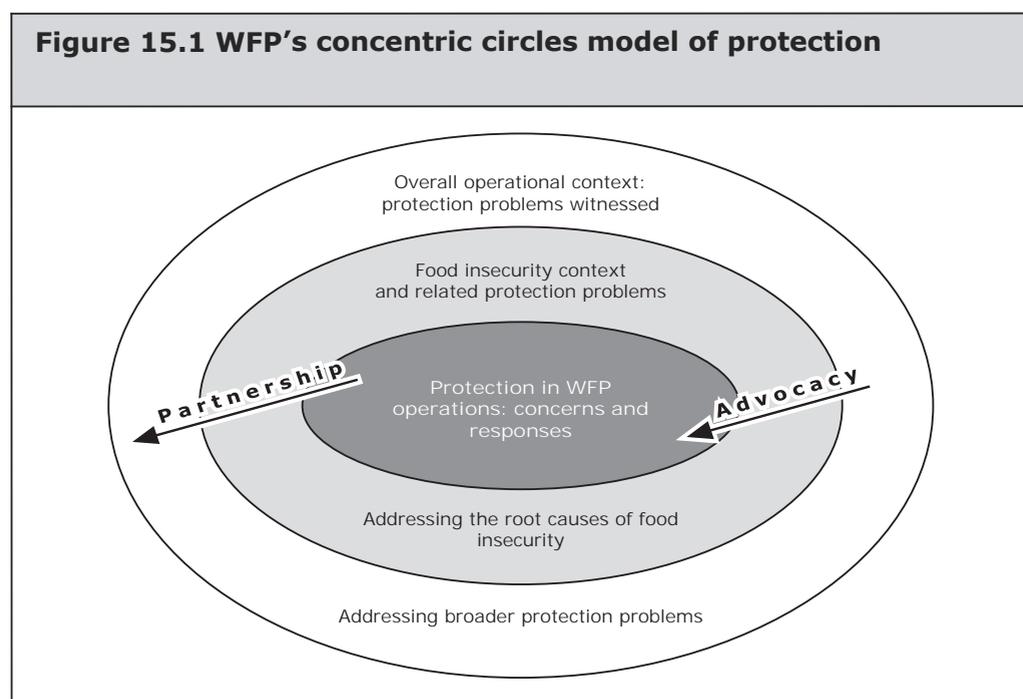
This research on protection at WFP coincided with new thinking on how WFP should tackle hunger, pointing to the close links between livelihoods and protection. WFP's current Strategic Plan proposes a food assistance approach to tackling hunger, which incorporates a range of intervention tools and moves away from more strictly food-centred analysis and decision-making. In short, WFP has been looking more deeply at the underlying causes of hunger and emphasizing access to food, including through a better understanding of people's livelihood strategies for obtaining such access. Research into livelihoods in protracted crises, especially in conflict-affected areas, also demonstrated the need to address protection and livelihood issues together. In other words, protection issues help to determine not only the safety and dignity of relief transfers, but also how a food assistance agency such as WFP should make the shift from early recovery to recovery settings as it seeks to move from acute humanitarian interventions to more sustainable hunger solution investments.

The WFP research found that it was the staff and partners closest to the operations – rather than the management and counterparts in capital cities – who found the discussions around protection most relevant. These practitioners

also offered the most practical solutions for confronting the protection threats and abuses they saw affecting their operations. Clearly, however, better and more continuous analysis of protection concerns and food security was needed. Staff needed a way of organizing their analyses of threats, and tools for prioritizing their responses and identifying partners where WFP action alone is insufficient.

2.4 The concentric circles model of protection

WFP worked to develop a conceptual framework for protection that was easily accessible to field staff and partners; placed a protection approach within WFP's mandate and overall operational context; and defined the limits of WFP's protection role. The framework in Figure 15.1 serves all these functions.



The inner circle – protection issues around traditional WFP delivery activities: The concentric circles begin with the protection concerns that affect WFP and its beneficiaries most directly. The inner circle refers to food assistance activities carried out by WFP and partners – general or targeted distributions, education, nutrition, food-/cash-for-work programmes, etc. – and confirms that the protection of beneficiaries within these activities is a direct responsibility of WFP. This conforms to general policy and practice in WFP, such as reflected in

WFP's Commitments to Women, which call for women's protection needs to be addressed in food assistance activities.

Basically, the inner circle requires that distribution sites are safe for beneficiaries; adequate facilities such as toilets and shade are in place to protect people's well-being and dignity; and activities are organized to minimize waiting time and take into account the distances beneficiaries need to travel. It is also accepted policy and practice to ensure that measures are in place to prevent and protect against sexual exploitation and abuse (SEA) by WFP staff or partners with control over food resources, although the application of SEA policies is irregular. Standard post-distribution monitoring includes ensuring that beneficiaries have received their rations and been able to get home safely with them. Although case studies showed frequent inconsistencies in the achievement of these protection objectives, field management and staff fully acknowledged the direct protection responsibilities within this first circle.

Causes of food insecurity and assistance-related violence – the middle circle: The middle circle refers to food-related protection problems and causes of food insecurity. This raises greater challenges, as it implies taking greater responsibility for protection issues beyond the moment of food transfer, and addressing food-related protection problems. The best-known food-related protection problem is probably the well-documented cases of women being raped while collecting the fuelwood needed to cook their food rations. Throughout 2006 in Darfur, it was estimated that 200 women a month were raped or killed while collecting fuelwood for cooking their food rations or making a living (Women's Commission for Refugee Women and Children, 2006), and the situation continues. In 2007, this protection issue alone spurred the Inter-Agency Standing Committee (IASC) to adopt inter-agency policy and guidance on fuel and firewood in emergencies, referred to as Safe Access to Fuel and Alternative Energy (SAFE).³

The many other protection issues that directly undermine people's food security include bribery, armed groups' harassment of farmers' access to their farmlands, extortion and other forms of illegal taxation on properties, and attacks on personal safety resulting from disputes over farmland and other properties. Less direct examples include women being forced to engage in transactional sex owing to poverty.

As already noted, food assistance alone cannot foresee or solve all these problems, but food-related protection problems are clearly of major concern to a food assistance agency, and WFP's recognition of this has been confirmed through its commitment to the SAFE approach.⁴

The middle circle also touches on even more difficult and sensitive areas.

Accepting that sustainable hunger solutions are WFP's ultimate goal requires recognition of and efforts to address the underlying causes of hunger, including those that result from protection gaps: violence, intimidation, discriminatory practices, deprivation, and policies that either directly threaten household food security or push people into unsafe coping mechanisms. The middle circle recognizes that hunger is often a political rather than a supply issue, as many hunger experts have pointed out.⁵

The outer circle – when the protection issue is not related to hunger, but WFP is present as the United Nations frontline hunger agency:

The outer circle is in some ways both the simplest and the most problematic element of the WFP protection framework. WFP is neither a United Nations human rights agency nor an enforcement arm of the United Nations, and does not aspire to these roles. The agency therefore has no obvious mandate or competency to deal with the outer circle. Nevertheless, WFP is often the largest, and sometimes the only, United Nations presence in remote regions of conflict- and crisis-affected countries. WFP staff and partners witness protection problems that may be unrelated to food insecurity but that pose immense dilemmas to people who respect the Universal Declaration of Human Rights. When local authorities are incapable of addressing abuses, or when they themselves are the perpetrators, reporting abuses and rights violations can put WFP staff and their families at risk.

Partners and advocacy: The WFP protection framework illustrates two other essential elements of a protection approach for a food assistance agency. As protection issues move from the innermost to the outer circle, away from incidences directly around the food distribution site, WFP's capacity to act alone in influencing these issues and to control the environment diminishes.

Changing an environment that is causing food insecurity is more difficult than adjusting procedures at a food distribution site. Partnership with major protection actors is essential. Government authorities have the primary responsibility to protect the rights of their citizens. The Protection Cluster, led by the Office of the United Nations High Commissioner for Refugees (UNHCR) and/or the Office of the United Nations High Commissioner for Human Rights (OHCHR) and the United Nations Children's Fund (UNICEF), represents the overall humanitarian response to protection threats. Other actors – such as non-governmental organizations (NGOs), community-based organizations (CBOs), bilateral donors, traditional or religious leaders, and other development actors with a rights-based approach – can either contribute to an improved protective environment or help WFP advocate for changes on behalf of food-insecure

populations whose right to food is not being realized. In the outer circle, where WFP has no mandate and limited expertise, strong partners such as OHCHR are essential in establishing a United Nations-wide system for reporting and in guiding staff on what to do when they witness abuses.

A do-no-harm element throughout the whole framework: This means asking the basic question, is food assistance itself causing or perpetuating protection problems for affected populations? This question is not new or controversial for WFP and other assistance agencies, but the protection approach outlined here demands systematic situation analysis that goes beyond the traditional, natural disaster-related model of food security analysis, and that re-examines assumptions as a conflict or protracted crisis evolves.

A framework of analysis that considers food-related protection issues at the individual beneficiary and community levels can also provide important insights into whether assistance itself is fuelling unrest or conflict, and therefore creating hunger.

3. Tools for protection within food assistance

3.1 Teaching staff to see food assistance through a protection lens

Research and field testing of programme support to country offices revealed some major knowledge gaps within WFP, and a need for structured tools for analysing and proposing responses to protection concerns with an impact on food security. First, as humanitarians, there is both a practical and an ethical need for all staff, in all areas, to know and understand the basic humanitarian principles and legal framework that provide guidance on which food assistance activities to implement in crisis situations. Neutrality and impartiality are essential for obtaining and securing access to vulnerable populations, and therefore crucial to meeting WFP's most fundamental objective of saving lives. Second, staff must understand that their responsibility and accountability extend beyond a food distribution, and include the safety and dignity of the people they are trying to help. This responsibility reflects the core ethics of humanitarianism, and embracing it is the equivalent of seeing all food assistance through a protection lens. Third, a protection lens is not enough without practical field-based solutions to the protection dilemmas that threaten the outcomes of food assistance projects. Box 15.1 summarizes the main elements of a three-day package of training and facilitation that forms the starting point for preparing WFP country offices to address these three issues and incorporate protection into food assistance activities. Further details are given in Table 15.2 in the annex to this chapter.

Box 15.1 Outline of protection training for WFP staff

- The meaning of protection: Understanding the concept and how it relates to assistance.
- International law: Identifying and demonstrating the relevance of international treaties for humanitarian assistance.
- Humanitarian principles: Understanding the sources of moral obligation for humanitarian agencies and for making appropriate decisions and taking action when faced with ethical dilemmas. The principles also include WFP's protective obligation to prevent SEA.
- Context analysis and response planning: Facilitating different techniques for mapping out the context and identifying solutions to protection threats.
- The do-no-harm approach: Reviewing current practices to ensure that WFP assistance does not cause harm to beneficiaries or members of the community.
- Humanitarian negotiations: Coaching staff on the tools and techniques of effective negotiation.

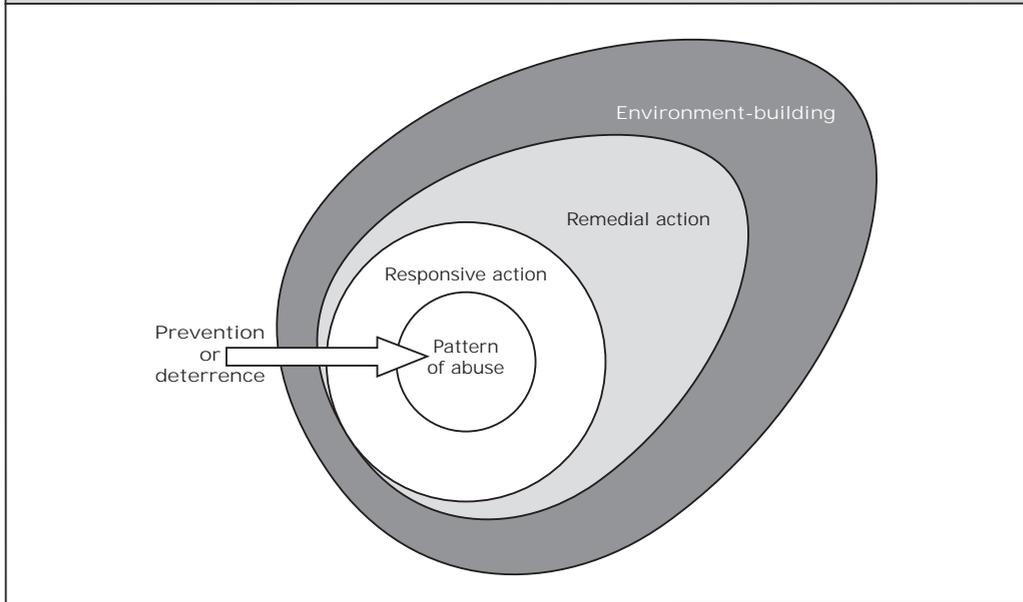
3.2 The protection framework in action: translating protection action into hunger solutions in the field

Although WFP's experience with protection is relatively new, interventions in a range of countries and contexts have demonstrated that WFP can use its food assistance activities to make modest but meaningful improvements to people's protection, including by addressing the protection concerns that more systemically threaten their food insecurity. WFP's protection responses within its food assistance activities generally conform to the three modes, or spheres, of action identified in the egg model for protection developed by several humanitarian agencies led by the International Committee of the Red Cross (ICRC). The egg model (Figure 15.2) sets out three forms of protection activities within an overall context of rights being denied:

- Responsive action aims to prevent or halt a specific pattern of abuse, or alleviate its immediate effects.
- Remedial action aims to restore people's dignity and put them into a situation where they can pursue their livelihoods.
- Environment building aims to foster an environment conducive to respect for the rights of individuals.

Locating all three responses within the contours of the egg underlines "the interdependent and complementary nature of the interventions" (O'Callaghan and Pantuliano, 2007: 11). Typically, humanitarians attempt to address all three areas simultaneously.⁶

Figure 15.2 The egg model for humanitarian protection responses



Source: IASC, 2002: 115, quoted in Slim and Bonwick, 2005: 43.

In general, protection is an overriding concern in three contexts of food interventions. Table 15.1 outlines these contexts and the protection threats that are typically present, although vulnerable populations in many of these situations face protection threats across the whole spectrum of rights abuses. Similarly, the responses described within WFP food assistance programmes may focus on specific actions. However, as in the egg model and as described in the field examples in Table 15.1, staff in the field typically adopt a range of protection responses.

Protection and food assistance in conflict and complex emergencies

In complex emergencies, addressing the protection threats is beyond the capacity and expertise of any one organization. By definition, complex emergencies are driven by political crises that require political solutions. Nevertheless, WFP is often the largest United Nations presence, apart from peace-keeping forces, in such situations, and has sought – in partnership with other protection actors when present – to deal with difficult protection issues such as sexual violence or the situation of child soldiers. In the absence of political action to stop violence, protection activities often fall within the responsive sphere of the egg model. In DRC, for instance, sexual violence is one of the gravest protection threats facing

Table 15.1 Typical protection threats		
Operational setting	Common protection threats	Modes of action: responses
Conflict/post-conflict and complex emergencies: e.g., Côte d'Ivoire, DRC, Sri Lanka, Afghanistan, Darfur	Forced and multiple displacement, sustained gender-based violence, repeated attacks on civilians	Responsive/remedial: safe distributions, referrals, proactive presence, linking livelihoods and protection
Natural disasters in high-crime, high-violence contexts: e.g., Haiti, Uganda/Karamoja	Violence at distributions, gang extortion	Responsive/remedial/environment building: safe distributions, advocacy with authorities and police, capacity building of local actors/institutions
Protracted political crisis and State repression, e.g., Myanmar	Discriminatory policies and denial of rights, limitations on freedom of movement	Remedial/environment building: linking livelihoods to protection, advocacy with local authorities, capacity building with local NGOs and CBOs

the civilian population, resulting in life-long damage to the psychological, physical, social and economic well-being of survivors. It is estimated that 40 women and children are raped every day in eastern Congo (OHCHR, 2010).⁷ Since 2000, WFP has been providing food to hospitalized survivors of sexual violence, to help their recovery. It has also designed programmes to extend post-hospitalization support, through food-for-training and food-for-work activities, to facilitate people's economic and social reintegration into their communities. As a responsive action, this type of support is limited to dealing with the consequences rather than the causes of the abuse.

In Côte d'Ivoire, between 2005 to 2008, WFP's food assistance was an integral component of the demobilization and reintegration of child soldiers. Other support provided by UNICEF included medical and psychosocial assistance, and vocational and literacy programmes. Altogether, these programmes enabled war-traumatized children to return successfully to their communities.

Protection and food assistance in natural disaster settings

In recent natural disaster settings, such as Uganda's drought in Karamoja in 2008 and the Haiti earthquake in January 2010 – both areas that suffer high rates of violence independent of disasters – WFP's first concern was to anticipate protection threats and design distributions in ways that minimize violence. Experience in Karamoja and Haiti underscores the importance of monitoring protection issues in a community and, when necessary, modifying activities and tactics to ensure the safety of beneficiaries.

In Karamoja in 2008, reports of food grabbing and stealing, stampedes and assaults of beneficiaries at WFP food distribution sites prompted the WFP country office to seek advice and support from WFP's protection expertise at Headquarters. WFP undertook an analysis of the prevailing situation, including the immediate and longer-term risks that food distributions posed to beneficiaries and the community at large. As a result, WFP introduced new approaches to food distributions in 2009, including:

- recruitment of independent, international NGOs as implementing partners;
- greater reliance on local staff with links to the community and local language skills;
- a region-wide registration and verification process;
- sensitization at distribution sites;
- greater consultation with local leaders regarding planning and implementation, and a concurrent reduction in their control of food distributions, to ensure transparency;
- exclusion of the army and police from the food distribution process, as it was evident that they were escalating security concerns rather than preventing them.

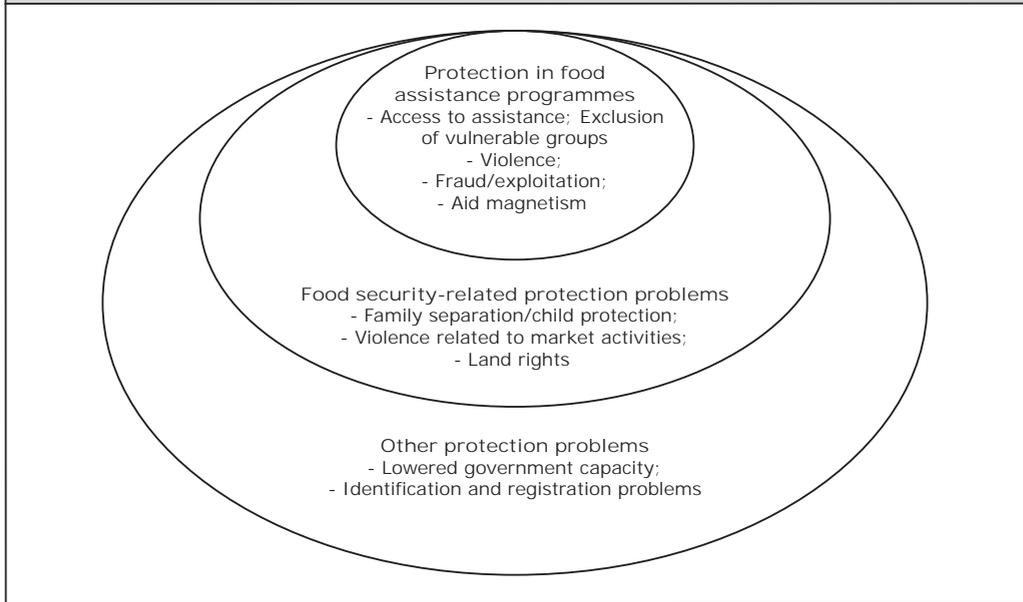
In Haiti, following the earthquake of January 2010, the prevention of violence during food distribution was a major protection concern for WFP. Given the centrality of food to survival, and the culture and history of violence in Port-au-Prince, protection concerns had to be addressed immediately. Before rolling out large-scale food distributions, WFP food monitors and volunteers – many of whom had been newly recruited to help WFP deal with the scale of the disaster – were given a crash course on principles and strategies for safe and dignified food distributions by experienced WFP protection officers already on the ground. WFP aimed both to respond to the immediate threats directly linked to food distributions and to undertake its activities in ways that helped restore the dignity of affected populations as soon as possible. Discussions with experienced local staff and early assessment findings led WFP to integrate the following protection measures into its food assistance activities:

- delivering messages on targeting/entitlements through local radio and the Protection Cluster's network of grassroots organizations, to prevent negative impacts on community and family relations;
- identifying vulnerable groups, such as pregnant women, and elderly and handicapped people, at food distribution sites and providing them with safe spaces and extra support – volunteers, including boy scouts, were recruited to help;
- enhancing coordination and working mechanisms with the United Nations Joint Forces of peace-keepers and police and the Haitian national police, to ensure adequate security at all sites;
- training all WFP volunteers and food aid monitors on protection, including how to identify, prevent and report specific incidents;
- selecting distribution sites and conducting distributions based on applicable standards, such as SPHERE and IASC guidelines for gender-based violence interventions in humanitarian settings;
- incorporating protection concerns derived from post-distribution monitoring into subsequent distributions;
- sensitizing staff and partners on prevention of SEA.

A protection analysis was also conducted in parallel with WFP's emergency food security assessment (EFSA), to identify key protection concerns related to food insecurity; the findings of this analysis were integrated into the EFSA. Figure 15.3 shows the issues that emerged from the process.

Findings indicated that there were strong linkages between protection and food security, including in food assistance programmes. In the immediate term, segments of the population were adopting negative coping strategies such as robbery and prostitution to obtain access to food. In the medium term, threats of violence against traders were seen as a high risk, with the possibility of market disruptions and decreased food availability; high food prices were identified as a possible trigger for riots; deteriorating community solidarity was identified as a risk for access to food among vulnerable groups; and assistance provision was examined for potential negative push/pull factors for population movement. Longer-term protection risks were also identified: prolonged displacement in outlying provinces and rural areas might exacerbate existing conflicts over unresolved land rights; and incomplete or incorrect registration/identification of affected people might prevent access to jobs and basic services.

Successful integration of protection concerns into WFP's early response in Haiti was challenged by the scope of the disaster and the climate of violence that characterized life in Port-au-Prince prior to the earthquake. However, two factors

Figure 15.3 Protection issues in Haiti

in the Haiti response demonstrate how an assistance agency can prepare itself to prevent protection threats to people affected by disaster while helping to mitigate new threats as they evolve. First, staff already on the ground need to have some understanding of protection and the particular protection threats in the communities where food assistance is taking place. In November 2009, WFP had carried out protection training and workshops for a large proportion of its staff in Haiti. This general training, along with protection expertise embedded in WFP's Haiti country office staff, enabled more nimble recognition and addressing of protection threats within WFP's immediate food assistance response after the quake. Second, for the first time in an emergency, WFP fielded protection expertise to Haiti as part of its overall surge capacity. Additional dedicated protection officers on the ground allowed WFP to analyse protection threats related to food insecurity and to ensure that a protection lens shaped all food assistance activities from early distributions, to assessments, to project design.

Protection and food assistance in long-running political crises

In protracted political crises, protection problems are often perceived as political and controversial. There are fears that raising sensitive protection-related topics will imperil access, or sour relations with governments in other ways. In such situations, engagement in protection is constrained but not impossible, and better food security results for populations can be achieved. For instance, in Myanmar, WFP has made considerable headway in promoting the protection of local populations by building the knowledge and capacity of local staff and local NGO partners. Over two years, WFP has held 23 protection workshops involving close to 400 staff and partners in nine sub-offices throughout Myanmar. In a country characterized by highly centralized decision-making, the workshops concentrated on identifying protection threats faced by food assistance beneficiaries, and encouraging staff and partners to find sub-national local but strategic ways of overcoming protection obstacles to sustainable food security.

WFP has also used its presence as leverage for dialogue with local authorities, village leaders and community members, lessening distrust of the United Nations and external actors in general. It has also increased humanitarian space, not only by expanding its own access, but also by seeking access for its cooperating partners. These NGO partners have helped with capacity building at the local level, and have fostered community-based mobilization efforts. Although directly confronting protection threats and abuses in difficult political environments can be challenging, there is often room, as in Myanmar, to concentrate on the environment building part of the protection puzzle: building CBOs' capacity; seeking local solutions with local authorities; encouraging awareness and initiative among staff and partners; and bringing more general protection issues to the United Nations country team for advocacy support.

In Myanmar, the sustained engagement of a protection expert has allowed WFP to ensure that its assistance responds to immediate food needs and that its food-for-work activities are sustainable and promote protective outcomes. National and local authorities' increasing desire for large-scale agricultural production for export purposes is leading to land access problems for local communities, and is undermining their food security. Before implementing food-for-work activities in the northeastern region of Wa and Kokang, WFP therefore sought signed agreements and land certifications from local authorities, to guarantee that local communities will not be evicted from WFP-supported land development and rehabilitation projects.

A recurring theme: violence against women

Violence against women and girls occurs all over the world and is not confined to a specific culture, religion or country. It takes many forms – physical, sexual, psychological and economic – and can occur within the family or the community and/or be perpetrated or condoned by the State. It leaves life-long scars on the dignity and integrity of affected women and girls. Discrimination against women is one of the root causes of violence against women. Conflict and natural disasters, leading to a breakdown of social order, reinforce existing gender inequality and abusive practices, and disrupt gender roles within the family and the community (Michels, 2007). Rape has long been used as a tactic of war to humiliate opponents, terrify individuals and destroy societies, as documented during conflict in DRC and the Rwanda genocide

Food assistance can be a direct protection tool for women. By putting the food into women's hands, and encouraging women's active participation in food distribution mechanisms WFP helps empower women and addresses unequal access to basic goods (WFP, 2002; 2009d). Ensuring equal participation by women and men in decision-making bodies gives women an opportunity to influence decisions that affect them and a voice in forums previously closed to them. Food assistance provided to women living in extreme poverty can prevent them from adopting harmful and negative coping strategies, such as transactional sex and early marriage.

At the same time, food assistance can also put women at risk of violence. Food becomes a desired commodity where resources are scarce, such as in eastern DRC and Liberia, where women were reported to be victims of sexual violence while travelling to and from distribution points (Michels, 2007). Villages

Box 15.2 Protection of women in post-conflict Nepal

In post-conflict Nepal, discriminatory and abusive practices against women remain common, as manifested by women's excessive workloads and exposure to various forms of physical violence. This widespread, serious and self-reinforcing situation continues to suppress women's voice and resistance in most Nepalese communities. Non-formal education programmes, which are a component of WFP's food-for-work activities, are now addressing gender awareness and caste discrimination. This is strengthening women's voices at the household and community levels, and giving them new opportunities. In some remote areas, WFP coordinates its food distribution with United Nations Population Fund (UNFPA) health camps that treat uterine relapse, and other medical and psychosocial issues. WFP beneficiaries who walk long distances to collect food can also benefit from these UNFPA health services. These initiatives in Nepal are examples of how WFP is using the convening power of food to achieve protection impacts (Nash, 2009).

and camps have been attacked immediately after food distributions, putting beneficiaries, particularly women, at risk of looting, killing or rape (Michels, 2006). In the IDP camps in northern Uganda, many men lost their traditional roles and responsibilities, and reacted with alcoholism, frustration and sometimes aggression, while women maintained and strengthened their responsibilities for child care, food and family management. With its mix of desirable – empowering women – and unforeseen, undesirable outcomes – disempowering men – this dynamic was reinforced by the policy of putting food into the hands of women.

The gender dimensions of protection in food assistance programmes are a major component of WFP's protection-based context analysis. Among the standard questions asked are: How are men and women affected differently by the crisis? What are their coping mechanisms? What are the different roles of women and men with regard to food security, and how are these evolving?

4. Moving forward on protection in WFP: demand, capacity and challenges

Integrating and addressing protection concerns within food assistance activities is work in progress. The need for realism and pragmatism about the effectiveness of any outside agency – mandated or not – in opening protective space for vulnerable people remains an ongoing concern. However, it is indisputable that much of the landscape of hunger worldwide is characterized by major protection gaps and rights violations. Even if violence and rights violations are not directly correlated to hunger, there is a wide overlap of countries that suffer from both, and these are largely the countries where WFP's food assistance programmes operate. As pointed out in a recent study of vulnerability to food price increases, “for the 30 WFP-designated countries as most vulnerable [to food price crisis], 20 of them (two thirds) are located in the bottom quintile of Foreign Policy's 2008 Failed States Index” (Natsios and Doley, 2009).

Some of WFP's largest and most complex operations are in countries suffering from significant protection gaps. Within Africa, for example, many of the countries whose food security is most at risk also rank lowest in governance rankings that incorporate, among other indicators, safety and security, rule of law, corruption, incidence of displacement, and prevalence of small arms.⁸ These findings are in line with WFP field research that shows how protection gaps are both an immediate and an underlying cause of food insecurity in many settings.

At an international conference on humanitarian assistance and complex emergencies hosted by WFP in June 2009, one of the major conclusions was that improved context and conflict analysis, including through more systematic

engagement with local communities, was a prerequisite to more successful assistance outcomes (WFP, forthcoming). Safe access and an understanding of food insecurity and other vulnerabilities faced by crisis-affected populations depend on this.

The integration of protection and food assistance remains a challenge. By definition, a humanitarian agency must act quickly to save lives, and an action-focused agency may find it difficult to justify the time and resources needed to comprehend the complexities of a situation and to programme assistance accordingly. Staff turnover, operational pressures, and political interference and intimidation all weigh against a consistent food assistance-protection approach. In highly charged political environments there will always be tension between securing and maintaining humanitarian access and advocating for protection. However, advocacy can take many forms, starting with quiet persuasion, and only in the most dramatic situations arriving at the sort of public denunciation that might risk staff security or result in loss of access. As WFP's protection project has shown, even in the most challenging political contexts, a balance can often be found between striving for positive contributions to the overall safety and dignity of beneficiaries and maintaining the access necessary to carry out food assistance programmes.

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- ¹ Mark Duffield and David Keen, among others, have pointed out the stubborn prevalence of this model.
 - ² WFP looked particularly to Oxfam and the International Rescue Committee, which had made conscious efforts to integrate protection issues into assistance programming.
 - ³ Co-chaired by WFP, UNHCR and the Women's Refugee Commission, the SAFE approach triggered a global analysis of the protection challenges associated with the collection, provision and use of fuel for cooking – activities closely related to WFP's core mandate. As a result, WFP strengthened its commitment to work in partnership with other relevant actors to promote safe access to fuel in humanitarian settings.
 - ⁴ The SAFE goal was announced by WFP's Executive Director at the United Nations Climate Change Conference in Copenhagen, November 2009.
 - ⁵ Amartya Sen and others.
 - ⁶ The egg model recognizes that any action by humanitarian assistance and protection actors takes place in tandem with action by political, military and human rights actors.
 - ⁷ The actual figure might be much higher, owing to under-reporting of this type of crime.
 - ⁸ The Ibrahim Index, published by the Mo Ibrahim Foundation, ranks African countries according to governance quality: www.moibrahimfoundation.org/en/section/the-ibrahim-index.

ANNEX

Table 15.2 Protection checklist for food assistance operations

WFP's interventions – especially in conflict and post-conflict situations – are often closely linked to the protection of civilians. Food assistance, as a scarce and strategic commodity in emergencies or protracted crises, is itself a basic tool for protection. However, WFP's assistance can also create new risks, prolong existing root causes of protection problems, or harm already insecure populations. Assistance that does not take into account the protection needs and capacities of affected populations and the principles of humanitarian action can undermine the safety, dignity and integrity of individuals and communities.

This checklist provides guidance for integrating protection into food assistance operations. It underlines the importance of good information, sound analysis and informed strategy as part of every aspect of WFP's operations. It also puts into practice the do-no-harm approach, humanitarian principles, and other standards of conduct for ethical humanitarian action.

A. ASSESSMENT AND ANALYSIS

1. Analysing conflict and protection risk and their linkage with food insecurity
2. Integrating conflict/protection risk analysis into food security analysis tools (VAM/EFSA)
3. Training relevant staff and partners in conflict/protection analysis
4. Establishing contacts with multiple actors on the ground to acquire better information relevant to both food security and protection analysis
5. Engaging United Nations and humanitarian actors, including protection-mandated agencies, in joint assessments
6. Sharing assessment and analysis with partners, to facilitate comprehensive assistance by a wider humanitarian community

B. PROGRAMME DESIGN

7. Analysing the negative and positive impacts of WFP-planned activities on the protection of local populations and communities
8. Planning measures to reduce negative impacts and increase positive impacts
9. Planning a food basket that respects religious and cultural traditions, but does not:
 - i) perpetuate improper food utilization;
 - ii) perpetuate discrimination at the household level;
 - or iii) expose beneficiaries to further harm
10. Developing an exit strategy to encourage hand-over and sustainable solutions that promote food security and are run by the government, other United Nations agencies and NGOs

ANNEX

Table 15.2 Protection checklist for food assistance operations (cont.)

C. TARGETING AND REGISTRATION OF BENEFICIARIES
11. Analysing the impact of targeting and registration methods and strategy on the dynamics and safety of communities
12. Planning measures to prevent negative impact of targeting strategies, such as between target and non-target communities
13. Establishing reliable checks to prevent and address inclusion and exclusion errors in registration due to abuse of power, fraud or other forms of cheating
14. Identifying the impact of gathering sensitive information, such as beneficiaries' ethnicity, age and family size, on their safety and security
15. Informing beneficiaries and non-beneficiary neighbouring/host communities of WFP's targeting criteria and registration procedures
16. Identifying possible negative and positive impacts of putting women's names on ration cards, and devising measures to mitigate the negative consequences
17. Maintaining a system of confidentiality pertaining to beneficiary registration information such as ethnicity, HIV/AIDS status, etc.
D. LOGISTICS AND DISTRIBUTION
18. Consulting with beneficiaries and local authorities on safe, secure and nearby locations for distribution sites, and adjusting distribution modalities accordingly
19. Coordinating with local government, military and police to determine their roles in guaranteeing beneficiaries' safety during food collection, including crowd control strategies
20. Informing beneficiaries of the procedure, timing and frequency of food distributions and rations
21. Creating safe spaces at distribution points for vulnerable women, elderly people and children
22. Establishing a mechanism for reporting violations/abuses and corruption by WFP staff, implementing partners, food management committees and other actors during and after distribution
23. Increasing visibility and labelling of United Nations and WFP food, trucks, sites, etc. during food distribution, and using visibility to increase protective presence on the ground

ANNEX Table 15.2 Protection checklist for food assistance operations (cont.)	
E. MONITORING, PROGRAMME REVIEW, EVALUATION AND REPORTING	
24.	Orienting staff about the consequences of the messages and behaviour they convey to communities regarding the protection of civilians during monitoring
25.	Establishing a mechanism for gathering and reporting beneficiary complaints
26.	Establishing a confidential mechanism for reporting and analysing protection issues witnessed by WFP staff
27.	Establishing a secure system of sharing information within WFP and with implementing partners and the United Nations country team
28.	Incorporating questions on protection into monitoring and evaluation tools, such as safety of beneficiaries, and post-distribution and immediate impacts of WFP food on household and community dynamics
29.	Including analysis of the impact of food assistance on building local capacities as part of programme review and external evaluation
30.	Conducting periodic reviews to examine the positive and negative impacts of WFP food assistance on beneficiary protection
F. NEGOTIATIONS, ADVOCACY AND PARTNERSHIP	
31.	Mapping causes and effects of conflict, the actors concerned and their motivations
32.	Analysing the perceptions that parties in conflict have of WFP
33.	Developing access negotiation messages based humanitarian principles
34.	Engaging CBOs, NGOs and United Nations partners in WFP's negotiations
35.	Training staff on principles and skills for humanitarian negotiations and advocacy
36.	Developing an engagement strategy with traditional leaders, local authorities and other local stakeholders, to advocate WFP principles and programmes
37.	With implementing partner(s), developing a message of neutrality and impartiality to convey to the population/government
38.	Developing joint advocacy opportunities with other members of the United Nations country team and wider international humanitarian community groupings
39.	Conveying food security and protection concerns when talking with authorities and armed groups
40.	Establishing a protection feedback loop within WFP and with cooperating/implementing partners
41.	Defending and supporting cooperating partners if they are harassed, attacked or threatened

ANNEX

Table 15.2 Protection checklist for food assistance operations (cont.)**G. STAFF AND PARTNER RECRUITMENT**

- | | |
|-----|---|
| 42. | Raising staff and partners' awareness of and compliance with humanitarian principles |
| 43. | Vetting recruited staff to determine their association with government, armed groups, or group with political agendas |
| 44. | Incorporating humanitarian principles, code of conduct and protection of beneficiaries in field-level agreements and memoranda of understanding |
| 45. | Agreeing on sanctions or remedial actions for abusive/corrupt behaviour of partner staff |

section **III**
**Supportive activities
and institutional
platforms**

16

Assessments of the impacts of global economic crises on household food security: innovative approaches, lessons and challenges

Issa Sanogo and Joyce K. Luma

1. Introduction

The impact of the recent global economic shock has been well researched at the macro level. Initial analyses sought to simulate the potential impacts of the 2007–2008 global food and fuel price and financial crises on countries and households. Between 2000 and the peak of the food price crisis in 2008, the Food and Agricultural Organization of the United Nations (FAO) cereal price index more than tripled. As households started to lose their purchasing power, discontented populations voiced their concerns in the form of socio-political unrest, especially in cities, such as in Haiti, Burkina Faso, Côte d'Ivoire and Indonesia. Although such manifestations constituted early evidence of the negative impact of the global food and fuel price crises, there was little direct empirical evidence that hunger and malnutrition were broadening and deepening. On top of these price crises, the global financial crisis began in mid-2007, culminating in widespread financial stress among major financial institutions in September 2008 and degenerating into a global recession. This widespread economic downturn dealt another blow to the resilience of poor households.

These developments led to a shift in the focus, which moved from the causes to the consequences of global economic crises and to the policy actions and responses required to mitigate their adverse impacts. To support governments in responding to these new global challenges, WFP initiated several assessments

to guide the design of appropriate interventions for alleviating food insecurity and enhancing nutrition status. The objectives of the assessments were to determine the country-specific channels through which impacts of the global food, fuel and financial shocks were transmitted, changes in the food security status of households, and mitigating responses that might be appropriate. This chapter provides insights into recent assessment approaches, findings and related response options. It is structured to reflect urban and rural differences, to the extent possible.

2. Assessment of the impacts of food, fuel and financial crises: new approaches

WFP country offices tracked the effects of soaring food and fuel prices and the global financial crisis of 2007–2008 on urban and rural households' food security and livelihoods. Several country assessments were carried out, and interventions were mounted accordingly. Two sets of analyses were undertaken: one to identify the countries most at risk from the global phenomena; and the other to identify effects at the local level.

2.1 The countries most vulnerable to global economic crises: a global selection approach

Prior to launching field assessments, WFP analysed macro-level data to identify countries likely to be vulnerable to the global food, fuel and financial crises, and therefore likely to have the largest changes in their food security profiles.¹ Regarding the global food and fuel price crisis, the underlying hypothesis was that the countries likely to exhibit high levels of food insecurity would be those that rely heavily on imported food and fuel commodities, have relatively large urban populations, are experiencing high inflationary pressures, and have populations that spend a significant proportion of their incomes on food. The countries most likely to be vulnerable to the global financial crisis would be those whose economies are linked to others', particularly if they have high levels of remittances, trade, tourism, foreign direct investment and official development assistance (ODA). In addition, the food security situation of these countries would be likely to deteriorate if it was already precarious before the crisis. The global analysis therefore included three food security-related factors – the level of the country's food deficit, the proportion of undernourished people in the population, and the proportion of underweight children – to help identify the countries most vulnerable to increased food insecurity. This preliminary analysis led to the identification of 40 countries as vulnerable to the global food and fuel price crisis or the global financial crisis, with high risk of further deterioration

of their food security situations. Field assessments to determine how households were affected by these global crises were carried out in some of the most vulnerable countries

Table 16.1 Countries most vulnerable to the global food, fuel and financial crises		
Region	Most vulnerable countries	
	Global food and fuel price crisis	Global financial crisis
Central Africa	Cameroon, Central African Republic, Chad, Democratic Republic of the Congo (DRC), <i>São Tomé and Príncipe</i>	Equatorial Guinea, <i>São Tomé and Príncipe</i>
East Africa	<i>Burundi</i> , Ethiopia, <i>Eritrea</i> , Kenya, Rwanda, <i>Somalia</i> , United Republic of Tanzania, Uganda	<i>Burundi</i> , <i>Eritrea</i> , <i>Somalia</i>
Southern Africa	Angola, Comoros, Madagascar, <i>Malawi</i> , Mozambique, <i>Zambia</i> , <i>Zimbabwe</i>	Lesotho, <i>Malawi</i> , Swaziland, <i>Zambia</i> , <i>Zimbabwe</i>
West Africa	Benin, <i>Gambia</i> , Guinea, <i>Guinea-Bissau</i> , Mauritania, Niger, Senegal, Sierra Leone, <i>Togo</i>	<i>Gambia</i> , Ghana, <i>Guinea-Bissau</i> , Liberia, <i>Togo</i>
South and Southeast Asia	<i>Afghanistan</i> , Bangladesh, Indonesia, Myanmar, Nepal, <i>Pakistan</i> , <i>Timor-Leste</i>	<i>Afghanistan</i> , <i>Pakistan</i> , <i>Timor-Leste</i> , Tonga, Vietnam, Solomon Islands
Middle East, Central and Eastern Europe	Occupied Palestinian Territory, <i>Tajikistan</i> , Yemen	Belarus, Bulgaria, Estonia, Jordan, Moldova, <i>Tajikistan</i>
Latin America	<i>Haiti</i>	Dominica, Dominican Republic, El Salvador, Guyana, <i>Haiti</i> , Jamaica, Nicaragua, Saint Kitts and Nevis, Suriname

Countries in italics are at high risk of being hit hard by both crises.

Source: WFP, Food Security Analysis Service, Rome.

2.2 Impacts of the global food and fuel price crisis on households: a quasi-EFSA approach

Although the impact of the price shocks at the macro level was well researched, findings could not be generalized to the household level. There was little understanding of how households were being affected. To fill this knowledge gap, in collaboration with partners, WFP undertook about 40 country assessments to identify the most affected households, and to assess their food security and livelihoods situation, coping mechanisms, priority needs, and ongoing mitigation responses.

Isolating the economic impact of the price shock from that of other types of shocks affecting the most vulnerable was challenging, particularly because most households were facing multiple and/or recurrent shocks. The more recurrent the shocks – natural disasters and human-incurred crises – that a country faces, the more vulnerable its households become to food insecurity and poverty. The assumptions underlying the assessment are therefore that rising prices would create a sharp increase in the incidence and depth of household food insecurity and poverty in both urban and rural areas, but that the severity would vary among households and livelihoods, given the different production, income, expenditure, nutrition, consumption and market dependency patterns. Household vulnerability is the degree to which households are exposed to food price shocks, and depends on whether households are net buyers or sellers. The worst-hit households are likely to be net buyers, whose capacity to cope with price fluctuation is weakened when they face high and volatile food prices. On the other hand, some households, including smallholding net food surplus producers, may enjoy real income increases, although the expected increases in net incomes may be offset by sticky wages in comparison with price increases, and higher input and processing costs following fuel price increases.

The WFP emergency food security assessment (EFSA) approach was applied² to assess the effects of the global food and fuel price rises. This comprises a range of rapid assessment approaches, focused primarily on understanding food consumption patterns and the changes to these that result from a shock. The primary impact of the global food and fuel price crisis was examined through household welfare – the real value of households' per capita consumption expenditures. A proxy food security indicator, the food consumption score (FCS),³ was used to assess the effects on food security. Additional indicators included food sources, income sources, expenditure patterns and coping strategies. The assessments aimed to compare the current situation with that prior to the increase in prices.

Comparisons among assessment findings should be made with caution, owing to methodological differences. Some of the assessments used a household

survey with random sampling, while others used purposive sampling. The majority of the assessments followed a rapid EFSA approach, using purposive sampling, key informants, community and focus group discussions and/or household interviews, depending on the country context and the resource and time constraints. The most complete and in-depth assessments analysed: (i) markets, for better understanding of how food markets performed during the high food price crisis; (ii) household food security, for better understanding of the impact of high food prices on specific demographic and livelihood groups, with details on the socio-economic characteristics of these groups; (iii) nutrition and health status, to determine recent changes in the prevalence of global and severe acute malnutrition, underweight and stunting among children aged 6 to 59 months; and (iv) the water and sanitation situation, to determine the implications of the high food price crisis on hygiene practices. Other assessments analysed secondary data to simulate the effects of price increases on households' expenditures and overall welfare, followed by rapid EFSA's to support the results. This approach was used in Pakistan. Although attempts were made to maintain a set of core indicators across all assessments, this was not always possible. In addition, the assessments focused on the effects of the crisis on food security, and did not provide details of the effects on non-food-related issues.

2.3 Impacts of the global financial crisis on households: a representative country case study approach

Rather than conducting many country assessments and covering a massive population, assessments of the impact of the global financial crisis were more focused and covered only seven countries. Case study countries were selected to ensure representation of all geographical regions and all the major channels through which the crisis could be transmitting vulnerability to the household level (Table 16.2). For example, Armenia represents an economy that is highly dependent on remittances from the Russian Federation and has high currency fluctuations; Nicaragua depends on remittances from and exports to the United States; Bangladesh demonstrates the implications for countries that depend on textile exports and migrant work/remittances; and Zambia the implications for countries with high reliance on mineral exports and tourism revenues. The Ghana case study looked at agricultural exports, and examined the crisis's effects on what is the only sub-Saharan African country to be on-track for achieving the Millennium Development Goals (MDGs). Of the seven countries, the International Monetary Fund (IMF) rated three – Bangladesh, Ethiopia and Nicaragua – as at medium risk from the crisis, while Armenia, Ghana, Tajikistan and Zambia were rated as high-risk.⁴

Each case study reviewed the country's macro-economic performance, and

Table 16.2 Potential vulnerabilities of case study countries to external factors	
Country	External vulnerability factors
Armenia	Trade openness: 48.2% of GDP in 2007 Growth led by two sectors: construction with 25% of gross domestic product (GDP), and remittances with 20% of GDP in 2007
Bangladesh	Trade openness: 43% of GDP in 2008 Growth led by two sectors: garment industry with 80% of total exports and 16% of GDP, and remittances with 10% of GDP in 2008
Ethiopia	Trade openness: 43% of GDP in 2008 High exchange rate premium: expanding by an average of 18.3% in 2007/2008 Growth led by coffee exports: with 30% of the total export earnings
Ghana	High trade openness: 81% of GDP in 2007 Growth led by two sectors: services with 41% of GDP, and agriculture with 34% of GDP (driven mainly by cocoa and gold) in 2007.
Nicaragua	High trade openness: 84% of GDP in 2007 High economic dependence on textiles and apparel with 60% of total exports, and remittances with 13% of GDP in 2008
Tajikistan	High trade openness: 106% of GDP in 2007 High economic dependence on exports and remittances: aluminium, electricity and cotton accounted for more than 80% of exports, and remittances for 43% of GDP in 2008
Zambia	Trade openness: 75.6% of GDP in 2007 Growth led by two sectors: copper with 9% of GDP and 77% of total exports, and tourism with 6–10% of GDP in 2006

Trade openness is measured as the share of exports and imports in GDP.

Source: Adapted from Luma and Sanogo, 2009.

attempted to trace the transmission of the global crisis effects to the household level through a major channel, such as a decline in mineral or textile exports. Light and rapid data collection tools were used, such as key informant interviews and focus group discussions (FGDs). Key informants included senior government officials, development partners, non-governmental organizations (NGOs), research institutions and leading members of the private sector, and

were used to triangulate the secondary data review. Primary data was collected from FGDs and community interviews, to identify how households were affected. FGDs collected information on households' perceptions of vulnerability, including income sources, expenditures, coping strategies, priority needs and responses. Attempts were made to determine the changes that had occurred during the months around the peak of the crisis in September 2008.

A purposive sampling procedure was applied to enable follow-up of the communities and households that were directly affected. Urban and rural survey areas were identified through a literature review and key informant discussions on the dominant livelihoods that were most likely to be affected by the global financial crisis. Areas of particular interest were those with high rates of migration and dependence on remittances, high concentrations of agricultural labour and cash crops, high concentrations of non-agricultural unskilled labour, such as the textile industry, high levels of tourism, or industries with high levels of exports, such as minerals. For example, in Zambia, mining cities were visited, and households affected by lay-offs in mines were interviewed. In Bangladesh, the sampled communities were in towns with relatively high levels of textile industries and/or a high proportion of the population relying on migrant work. Control groups were selected in other areas to represent categories of livelihoods that were not directly affected by the crisis. FGD participants were identified with the help of key informants – village heads, health and education workers, government employees – in each selected location. At each location, separate FGDs were held for men and women by teams of five members: a supervisor, an organizer, a moderator, a note-taker, and a field writer. FGD equipment included voice recorders and notebooks.

Given the purposive nature of the case studies and the qualitative tools used, the findings cannot be generalized to the whole population. The surveys were designed to draw out respondents' perceptions of the impact of the global financial crisis. The validity of the results may also be affected by moderators' ability to lead the discussions with participants. A moderator has to allow participants to talk to each other, ask questions and express doubts and opinions, and has very little control over the interaction other than generally keeping participants focused on the topic; by its nature, focus group research is open-ended and cannot be entirely predetermined. The reliability of focus groups' perceptions may be reduced by internal cultural and hierarchical dynamics and lack of confidence within the group. As a result, moderators may not be able to ensure the full participation of all. Efforts to select groups that were homogeneous in terms of both sex and livelihoods aimed to reduce this bias.

3. Findings and lessons learned: the emergence of a new face of hunger

3.1 Impacts of the global food and fuel price crisis on households: already food-insecure households paid a heavy cost

In spite of the limitations mentioned in the previous paragraph, the assessment findings indicate that there were three levels of impacts, depending on whether countries depend more on imported staple foods, on substitutes for internationally traded food products, or on domestically produced foods that are not traded internationally (Sanogo, 2009). In general, the impacts on urban food security were more pronounced in countries that depend mostly on imported cereals – wheat, maize and rice (Table 16.3). These countries experienced the steepest increases in domestic food prices caused by a high price transmission effect. As a result, the impact on household food security was greater, because of the large proportion of net buyers, particularly in urban settings in countries with high food imports.

Assessment findings showed a new face of hunger in some countries. In Tajikistan, the most affected households in urban areas were government-salaried workers – previously considered a food-secure group – and petty traders. The proportion of households with a poor diet was higher in urban areas, at 37 percent, than rural areas, at 34 percent. In Pakistan, the price shock was strongly felt in rural areas, where total food expenditures rose more than for urban households. In both urban and rural areas, although households were able to increase expenditure to meet food needs, a large proportion was left unable to pay for medical care, rising from 6 percent in 2005/2006 to 30 percent in mid-2008. In Greater Monrovia, Liberia, 31 percent of urban households faced an income decline, resulting in a sharp drop in the proportion of households with adequate diet, from 64 to 40 percent.

In general, the assessments revealed that the most vulnerable and food-insecure in urban areas were those who were already poor and/or from lower-income households prior to the rise in food prices. Casual labourers, petty traders, female-headed households and households with a high dependency ratio tended to be among the worst affected. In several countries, the new face of hunger included mainly low-paid government-salaried workers, who were becoming food-insecure owing to a loss of purchasing power. Households employed a variety of coping mechanisms to deal with rising food prices. Many searched for additional income-earning activities, and household members who were previously not working, such as women and children, started looking for employment opportunities. There were indications that the quality of diets had deteriorated, and in Bangladesh the nutrition status of children and mothers declined and was negatively correlated with the food price hikes.

Table 16.3 Impact of the food price crisis on households in selected countries that depend on internationally traded staples					
Country	Main staple food items	Caloric contribution (%)	Average real price increase 2008/2007 (%)	Expenditure on food (% of total)	Household food security status
Nepal	Rice	37	44	59% (73% for the poorest 20% of the population)	12.7% of urban and 28% of rural households with poor FCS
	Wheat	14	28		
Afghanistan	Wheat	58	110	Increased from 40% to 78%	20% increase in households with poor FCS
	Rice	22	61		
Pakistan	Wheat flour	38	40	70% for the poorest households; 10% increase for rural households	Households with poor FCS increased from 23% to 28%
	Rice	7	68		
Tajikistan	Wheat	57	-	81% for rural and 62% for urban households	Rural households, 11% poor and 23% borderline FCS; for urban households, 15% poor and 22% borderline FCS
Liberia	Rice	28	-	Decreased from 57% to 50%, in favour of non-food expenditures; (91% of households increased total expenditures)	In poor urban neighbourhoods, households with poor FCS increased from 4% in December 2006 to 8% in June 2008. In urban areas, people with good FCS decreased from 64% to 40%
	Cassava	21	-		
	Wheat	9	-		
Ethiopia	Maize	21	147	68% for poor households in Addis Ababa	From January to June 2008, households with poor FCS increased from 3% to 5%; those with borderline FCS increased from 9% to 22%
	Wheat	18	74		
	Sorghum	10	133		
Lesotho	Maize	59	-	44% (98% of households increased food expenditures)	11% of urban households with poor FCS and 36% with borderline FCS

Source: Adapted from Sanogo, 2009.

3.2 Impacts of the global financial crisis on households: the emergence of new vulnerable areas and households

The findings of the case studies show that the primary effect of the global financial crisis on households is a loss of income due to the loss of employment and/or remittances (Luma and Sanogo, 2009). The most affected households were generally those dependent on export-oriented activities – cash crop smallholders, cash crop waged workers, mine workers, shea nut gatherers – and remittances. In all countries, substantial job losses were reported among households engaged in export-oriented sectors. By the end of the first quarter of 2009, large numbers of migrant workers from Bangladesh, Armenia and Tajikistan had lost their employment, with many returning to their home countries. Many were also deported. Except Zambia and Ghana, all countries experienced a substantial decline in export volumes. Currency depreciation occurred in all countries, leading to generalized inflation and increased costs for imported food, fuel and fertilizers, as well as higher debt repayments.

New vulnerable areas and households emerged as a result of the global financial crisis. Job losses did not necessarily occur among the poorest socio-economic groups, but often among the upper lower-income groups such as miners and urban garment factory workers. These household profiles are not the usual vulnerable groups, but represent a new vulnerable profile that is not known as poor in some countries. Areas with high concentrations of export-oriented activities, previously seen as well-off, became relatively vulnerable. For example, in Sylhet division of Bangladesh, remittance-dependent households that are not usually poor were particularly affected by the global financial crisis. These socio-economic groups often live in areas that are not usually served by humanitarian organizations, and affected households have little access to public welfare assistance or social safety nets. Secondary effects following the loss of employment and incomes were sometimes severe. In Zambia, loss of employment in the mines had serious implications for HIV/AIDS- and TB-affected households, because it resulted in a loss of access to good health services and treatment. In Armenia, small traders' incomes declined owing to reduced demand and/or increased purchases on credit. Fewer employment opportunities for casual labourers were also reported. Female-headed households tended to be the hardest hit, as in the case of shea nut gatherers in Ghana.

To cope with the loss of income, many households adopted a variety of coping mechanisms, including increased farming, increased purchases on credit or borrowing to meet health and education expenses, removing children from fee-paying schools and placing them in public ones, engaging in additional income-earning activities, and increasing their reliance on extended family support. Among the poorest households, the most common coping strategies were

food-related – households reduced the quality and quantities of food consumed, with serious implications for micronutrient deficiencies and malnutrition.

4. Innovative responses to global food, fuel and financial crises: an increase in market-based and urban interventions

WFP's responses to the 2007–2008 global economic crises were based on country assessments. Particular attention was paid to the increased needs in urban areas. WFP interventions were designed in close collaboration with partners, including governments and international and non-governmental organizations. WFP used the newly broadened programme tools outlined in its 2008–2013 Strategic Plan, including cash and voucher distributions. Key features of interventions included:

- increasing food assistance in urban areas where food was unaffordable and there was a risk of further discontent, as in Afghanistan, Haiti, Liberia and the Occupied Palestinian Territory;
- extending emergency school feeding to children throughout the school holidays, as in Guinea, Haiti and Senegal, and using schools as platforms for providing take-home rations to vulnerable families, as in Bangladesh, Liberia, the Occupied Palestinian Territory, Pakistan and Tajikistan;
- providing supplementary rations of nutritious food to malnourished children and women, as in Liberia, Nepal, Pakistan and Tajikistan;
- accelerating voucher programmes to provide people with access to food through the market, as in Afghanistan, Burkina Faso and Zambia, and providing cash transfers to support work activities, including urban youth employment projects, as in Bangladesh, Liberia, Nepal and Pakistan.

Generally, WFP responses to the high food price crisis did not include general food distribution in urban settings. A key lesson was that in urban populations, food insecurity due to high food prices was caused by restricted access to food rather than insufficient availability. As a result, targeted food assistance and non-food-based interventions, such as cash and vouchers, were considered more appropriate in urban settings (Table 16.4).

WFP scaled up the piloting of cash and voucher transfers in response to the high food price crisis, especially in urban settings (Figure 16.1). The benefit of implementing cash or voucher transfers in urban areas is that they are less likely to stimulate inflation, because of the presence of a large number of traders and functioning markets ready to respond with additional supply. The additional demand caused by a cash transfer programme is likely to be small relative to the overall market demand in an urban area, to the extent that market mechanisms

Table 16.4 Selected interventions in urban areas in response to the global crises

Country	Activities	Beneficiary type	Distribution channels
Afghanistan	Food for training, food for work, voucher programme	People with illness (including TB), female-headed households, large families with one adult, children, elderly people	Hospitals, district centres/schools, government/community representatives/NGOs
Haiti	Food for work, school feeding, mother-and-child health	Children 6 months to 5 years, primary schoolchildren, pregnant and lactating women, TB patients and HIV patients	Public institutions and NGO centres, schools, health centres, warehouses of emergency projects
Bangladesh	School feeding and cash for work	Primary schoolchildren and vulnerable households	Schools, NGO partners
Occupied Palestinian Territories	Voucher programme	Vulnerable people (disabled, poor, unemployed, etc.)	Bakery shops
Burkina Faso	Voucher programme and supplementary feeding	Poor households (vouchers), children 6–24 months, poor pregnant and lactating women (supplementary foods)	The Burkinabe Red Cross
Liberia	School feeding, mother-and-child health, supplementary and therapeutic feeding	Pregnant and lactating women, TB patients, orphans and vulnerable children	Schools through NGOs and government bodies, hospitals, health centres
Senegal	School feeding, blanket feeding	Primary schoolchildren, children 2–5 years	Schools
Zambia	Food vouchers	HIV/AIDS and TB patients, peri-urban farmers	Health facility, partner NGOs and local governments

Sources: WFP project documents.

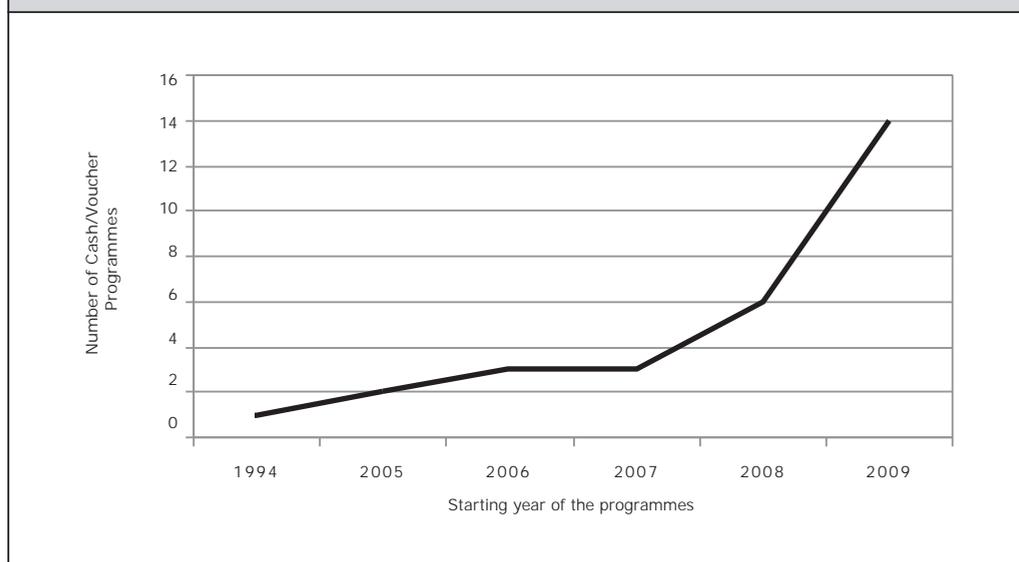
should be able to keep project-induced inflation in check (Magen, Donovan and Kelly, 2009). However, these assumptions may not hold true in large-scale cash or voucher transfers, so market prices should always be closely monitored, regardless of the assumed functioning of markets in urban settings.

5. Conclusions and challenges

The assessments showed increased food insecurity, especially among urban households, as a result of the global food, fuel and financial crises. However, the deterioration in food insecurity varied in degree and severity. The primary effect of the financial crisis on households was a loss of income, due to the loss of employment and/or remittances. The primary effect of the food and fuel price rises was on purchasing power.

The assessments also revealed that the worst affected were those who were already poor prior to the rise in food prices. However, the challenge of disentangling chronic food insecurity from transitory food insecurity makes it difficult to quantify changes in the food security situation. Casual labourers, petty traders, female-headed households and households with a high dependency ratio were among the worst affected, but these are usually the groups that are vulnerable to shocks. In some countries, however, a new face of hunger emerged,

Figure 16.1 Evolution in the numbers of WFP cash and voucher programmes



Source: WFP, 2009e.

consisting mainly of low-paid government-salaried workers, who became food-insecure owing to a loss of purchasing power.

Job losses due to the financial crisis did not necessarily occur among the poorest socio-economic groups, but rather among the upper lower-income groups, such as miners and urban garment factory workers, and in relatively wealthy geographical areas. The new faces of hunger to emerge from the global financial crisis were among previously upper lower-income population groups employed in export-oriented activities.

Many households adopted a variety of coping mechanisms in response to the global food, fuel and financial crises. These tended to be similar for both crises. Among households in the upper lower-income to lower-income groups, coping strategies included increased farming, increased purchases on credit and other borrowing to meet health and education expenses, removing children from fee-paying schools and putting them into public schools, engaging in additional income-earning activities, and increasing their reliance on extended family support. The poorest households tended to rely on coping strategies that were food-related, by reducing the quality and quantities of food consumed. This often has serious implications for micronutrient and overall nutrition status. The extent to which a country's food security and nutrition status deteriorates as a result of these crisis is positively correlated to its poverty.

In response to the global food, fuel and financial crises, WFP scaled up the piloting and implementation of market-based interventions, especially in urban areas – when the right conditions were in place. It also maintained its traditional food assistance activities, such as targeted food distributions, food for work, school feeding, small-scale income-generating projects, support to HIV/AIDS programmes, and targeted supplementary feeding of women and children.

The analytical outcomes of the assessments would have been enhanced and more comparable if standardized approaches had been applied consistently. In addition, assessment tools and indicators were primarily adapted from those developed for rural areas, so in the predominantly cash economies of urban areas, it was unclear what core set of indicators and corresponding thresholds would have been most appropriate. On the programming side, cash and vouchers are increasingly being considered as transfer modalities, but are still implemented as pilots rather than large-scale transfers. The targeting of these programmes remains a challenge, especially in urban settings where more complex targeting methods may be needed.

- ¹ These analyses were led by A. Husain of WFP's Food Security Analysis Service in Rome.
- ² For further details, see WFP, 2009b: www.wfp.org/content/emergency-food-security-assessment-handbook.
- ³ The FCS measures the diversity and frequency of food consumption over a seven-day recall period. The higher the score, the better the diet and the more food-secure the household.
- ⁴ Three of these country case studies – Bangladesh, Ghana and Zambia – overlapped with Overseas Development Institute (ODI) country case studies undertaken in the same period. Regarding the vulnerability of women and children to the global financial crisis, Ghana and Ethiopia are considered at the highest risk, culminating in a decelerating growth rate, low reductions in under-5 child mortality, and low performance in gender parity in school (Buvinic, 2009).

17

Emergency preparedness tools and activities in Latin America and the Caribbean

Raul Balletto and Stephanie Wertheimer

1. Introduction

Preparedness activities are of particular benefit in the Latin America and Caribbean region, which is often hit by “silent” emergencies. Especially in low-income countries, recurrent minor disasters with low international visibility have drastic effects on poor rural livelihoods, exacerbating socio-economic inequalities and hampering the solution of basic problems affecting the most vulnerable areas of the region. The effect of recurrent natural disasters on poor livelihoods also diminishes the impact of national social programmes combating food insecurity and undernutrition.

In view of this, WFP has developed a strategy for enhancing preparedness in the region, for itself and for the humanitarian community as a whole. The strategy was achieved through the creation of the Latin American and Caribbean Emergency Preparedness and Response Network (LACERN), which focuses on augmenting logistics capacities for storing and moving food rapidly within the region, developing the capacities of WFP staff and counterparts to respond to disasters effectively and efficiently, and creating information systems that can alert practitioners to the possible hazards and risks of disasters and their impact on food security, working in partnership with national, regional and international institutions.

This chapter details WFP’s innovations and achievements in the areas of preparedness and early warning in Latin America and the Caribbean, highlighting the value added of working in partnership with governments and humanitarian actors, which makes WFP a recognized player in facilitating South-

South and triangular cooperation in emergency preparedness and response interventions in the region.

2. Emergency preparedness and response strategy

The Latin American and Caribbean region is highly prone to emergencies, owing to its high levels of vulnerability and to recurrent natural hazards. Countries on the Pacific coast are prone to earthquakes and volcanic activity, and suffer the effects of El Niño Southern Oscillation (ENSO), including drought and/or excess rainfall. Countries in Central America and the Caribbean islands are in the North Atlantic hurricane path, putting them under permanent threat every season, from June to November. All these phenomena trigger hazards such as drought, floods and landslides; deforestation is an additional well-known cause of hazards in some countries. Emergencies in Latin America and the Caribbean generally lead to damaged agriculture and infrastructure, food shortages and inequitable access to food.

WFP has been working on emergency preparedness and response (EPR) in Latin America and the Caribbean since the early 1960s. Its emergency response role in the region has been historically strong, but a lack of preparedness at the national and regional levels had led to deficiencies in some areas of its emergency response implementation, and these required strengthening. In 2005, the WFP Regional Bureau for Latin America and the Caribbean therefore developed a strategy for improving its capacity to respond to sudden-impact emergencies, orienting most of its activities towards preparedness. The EPR strategy was based on three main pillars:

- strengthening WFP's own capacity to respond faster to emergencies, providing food assistance and common services when required;
- developing a regional information management platform to provide pre- and post-crisis information for preparedness and response;
- building local capacity in food assistance, logistics and emergency preparedness and response tools.

These pillars were in line with the WFP Strategic Plan for 2004–2007, and are still in line with the Strategic Plan for 2008–2013, which focuses on: (i) saving lives and protecting livelihoods, as WFP Strategic Objective (SO) 1; (ii) preventing acute hunger and investing in disaster preparedness and mitigation measures, SO 2; and (iii) strengthening countries' capacities to reduce hunger, SO 3.

LACERN was established in 2005 to allow WFP and its partners – governments, United Nations agencies and non-governmental organizations (NGOs) – to improve the emergency response capacity and deliver food aid

immediately and cost-efficiently to disaster-affected areas in the region.

This network was originally based on four hubs – one regional and three subregional – for supporting disaster-affected countries by providing emergency food rations and relevant emergency equipment as required for specific crises throughout the year.

As well as establishing these hubs, the LACERN project's goals were to:

- strengthen risk analysis capacity in the Latin America and Caribbean region, refine early warning tools, and develop assessment and estimation tools for use in the early stage of emergencies;
- develop a knowledge-based virtual space for sharing information on best practices;
- seek the support of civil defence and regional organizations in coordinating and preparing joint actions;
- collaborate, in partnership with the United Nations family, with academic research centres, specialized agencies and NGOs;
- develop national capacity through international exchanges of staff and experts and the organization of inter-agency workshops and distance learning;
- promote South-South cooperation and joint actions in emergencies, with the assistance of leading governments whose capacity is the most advanced.

The creation of a true network within LACERN implied an active advocacy role for all partners, through participation in conferences and seminars and the dissemination of best practices related to EPR. WFP presented its regional strategy and established links with the main actors in emergency response – governments, United Nations agencies and NGOs – signing several cooperation agreements for the strategy's implementation throughout the region.

Preparedness tools and response capacities were then developed to satisfy the region's needs as defined in the strategy.

3. Prepositioning: depots and standby personnel

3.1 Depots

LACERN initially comprised one main hub in Panama, where equipment is stored, and three subregional depots – one each in Central and South America and the Caribbean – where small stocks of ready-to-eat food and non-food items are kept for rapid interventions. Associated with each of the depots, centres of excellence were established where WFP and its partners can share experiences, pre-crisis information and operational data in order to optimize prediction and

the timeliness of responses. The hubs provide logistics services for governments and partners, reinforcing the capacity for humanitarian emergency response.

The locations selected for hubs where food aid is coordinated and dispatched were El Salvador for Central America, Ecuador for South America and Barbados for the Caribbean. Governments hosting the hubs provided WFP with warehouse facilities for the storage of pre-positioned food and non-food items, and cooperation agreements were signed.

The pre-positioned ready-to-eat food is nutritious high-energy biscuits (HEBs), which can cover the most urgent needs of a nominal beneficiary caseload in the acute phase of an emergency, when the affected population is unable to cook owing to displacement or lack of access to basic facilities such as clean water and cooking equipment. HEBs are subsequently complemented by food rations, usually provided by the government or WFP through wider-scope emergency projects following the initial phase of an emergency. The HEB is an ideal food to be pre-positioned in warehouses for rapid responses to the sort of emergencies that occur in the hot and humid tropical weather that prevails throughout most of Latin America and the Caribbean. Each subregional depot has an initial stock of 150 mt of HEBs, which is replenished immediately after every dispatch.

Over the past four years, the three subregional hubs have responded efficiently to different emergencies, providing food assistance within 72 hours to the most vulnerable populations affected by disasters.

3.2 Ecuador, South American hub

In November 2006, WFP signed a cooperation agreement with the Government of Ecuador to establish the LACERN hub for South America. The Ecuadorean Ministry of Agriculture provided WFP with a 7,900-m² warehouse in Tumbaco, near the new international airport, for a period of ten years, free of charge. As well as HEB stocks, this facility houses a fully equipped training area with capacity for 100 people, for use as a centre of excellence.

In addition to providing the hub – known as the Logistics Centre for Food Assistance (CELAH as its Spanish acronym) – the government also supported WFP by loaning the initial HEB stocks. Over the years, the Ecuadorian government has provided air transport for moving food from CELAH to Cuba, Guatemala, El Salvador, Bolivia, Peru and the Dominican Republic when disasters strike, thereby becoming an active player in South-South and triangular collaboration for emergency response in the region.

The emergency food aid dispatched from CELAH to countries in the region is as follows:

- In 2005: 68 mt of HEBs to Cuba during Hurricane Dennis, and to Guatemala and El Salvador during Hurricane Stan.

- In 2007: 115 mt of HEBs to Bolivia during floods, to Peru during an earthquake, and to the Dominican Republic during Tropical Storm Noel.
- In 2008: 233 mt of food commodities to Bolivia and Ecuador during floods, and to Cuba during hurricanes Gustav and Ike.

3.3 El Salvador, Central American hub

WFP signed a Memorandum of Understanding with the Government of El Salvador in February 2006 to establish the LACERN subregional hub for Central America. A temporary warehouse of 12,500 m² was provided to store food and non-food items until the definite hub at the Comalapa airbase, adjacent to the international airport, was ready. The Central America subregional hub was provided with a stock of 150 mt of HEBs for immediate dispatch to affected areas in the region. This Regional Centre for Humanitarian Response (CRRH as its Spanish acronym) was officially inaugurated in June 2007. It also hosts an emergency management/disaster preparedness centre for knowledge and information sharing and emergency preparedness and response capacity building activities.

The emergency food aid dispatched from CRRH to countries in the region is as follows:

- In 2007: 130 mt of HEBs to Belize during Hurricane Dean, and to Mexico during floods.
- In 2008: 92 mt of HEBs to Cuba during hurricanes Gustav and Ike, to Haiti during hurricanes Fay, Gustav, Hanna and Ike, and to Panama during floods.
- In 2009: 44.1 mt of HEBs to Guatemala and Nicaragua during drought, and to El Salvador during floods.

3.4 Barbados, Caribbean hub

The Barbados hub used a warehouse in the Bridgetown harbour area, provided by the government through intercession of the Caribbean Disaster Emergency Management Agency (CDEMA), with which WFP signed a cooperation agreement in 2007.

Emergency food aid dispatched from this hub to countries in the region included, in 2007, 101 mt of HEBs to Jamaica during Hurricane Dean, and to the Dominican Republic during Tropical Storm Olga, and the pre-positioning of 40 mt in Haiti.

Barbados was initially considered the ideal location for the hub, because most players in the region, including CDEMA, have their Caribbean offices and representatives there. However, it later proved to be logistically inefficient for the rapid delivery of goods to other islands, owing to its limited sea and airfreight

connections; the dispatch of emergency aid from Panama and El Salvador proved to be more timely and cost-efficient. The Barbados hub was therefore closed, and WFP provided emergency response assistance to the Caribbean from its other hubs in Central and South America.

3.5 Panama, regional hub

A central hub was established in Panama for the pre-positioning of non-food items and emergency equipment to support response operations throughout the region. The depot is currently situated in Corozal, Panama City in a temporary location that needs to be enlarged; conversations are ongoing with the Government of Panama for this purpose. In August 2006, management of the Panama central hub was transferred to the United Nations Humanitarian Response Depot (UNHRD) network, managed by WFP logisticians. UNHRD is a WFP network established to provide storage, logistics support and services to humanitarian organizations, to reinforce emergency response capacities throughout the world (chapter 19). The network is formed of five depots located in Panama, Ghana, Malaysia, Dubai and the central depot in Brindisi, Italy.

The equipment that was purchased and pre-positioned in the Panama warehouse for dispatch includes:

- warehousing and handling equipment: tents, fuel bladders, pallets, polypropylene bags, etc.;
- radio and telecommunications equipment: HF, VHF, satellite phones, solar panels;
- safety items: anti-ballistics helmets, bullet-proof vests, etc.;
- vehicles: 4x4 cars, quad bikes, motorbikes, flat-bottomed aluminium boats.

This one-time purchase of equipment provided adequate stocks for rapid interventions in affected countries of the region. Since coming into operation, UNHRD Panama has made a total of 126 rapid deliveries of humanitarian cargo to WFP and partners, in response to emergencies in the region: eight in 2007, 22 in 2008, and 96 in 2009.

3.6 Stand-by personnel

One of WFP's most powerful tools is its highly trained and experienced staff, so the regional EPR strategy envisioned a roster of personnel from the various technical areas covered by the regional bureau and country offices and available to support response operations within the region. The roster serves the dual purpose of: (i) deploying experienced Spanish- and French-speaking staff from within the region to emergencies, to ensure greater efficiency of WFP operations; and (ii) promoting on-the-job learning for less experienced staff, to enhance

capacities in the various technical areas and to allow staff to gain hands-on experience of a wider range of emergency interventions than may occur in their own countries – for example, staff from Colombia deployed in a hurricane response in the Dominican Republic, or staff from Honduras deployed to respond to frosts in Bolivia are unlikely to face similar events in their normal day-to-day activities.

The WFP regional response roster grew from 55 in 2006 to more than 100 in 2009. These emergency staff members are located in the 12 WFP offices throughout the region, and the network has been activated in most emergency response interventions since it was established. The regional bureau has also deployed roster staff from different units to carry out preparedness activities such as procurement capacity assessments, contingency planning, and the development of EPR strategies in Central America and the Caribbean.

4. Information systems for emergency preparedness

4.1 Information products

The regional bureau regularly produces information products that are disseminated among staff, partners, counterparts and donors. These include the daily news *Emergencies Update*, and seasonal newsletters during the hurricane season, El Niño and WFP EPR activities.

A LACERN information platform has been developed in collaboration with the Emergency Preparedness and Response Branch at WFP Headquarters, with the aim of supporting the humanitarian community at large. A number of technical solutions and Geographic Information System (GIS) products developed for the WFP global intranet *EPweb* have been incorporated into the regional inter-agency web portal *redhum.org*, which was developed with WFP's active participation. The EPR information products regularly disseminated to WFP, partners and donors include:

- a daily update on crisis situations, based on the consolidation of regional information sources – national emergency management centres, civil protection, the press, WFP and other United Nations agencies – and disseminated via e-mail as a news service, *Emergencies Update*, which has more than 300 e-mail subscribers, and is also accessible on *EPweb*, *redhum.org* and the regional knowledge management system *nutrinet.org*;
- the *LACERN Update* newsletter, informing partners and donors about the progress of LACERN and regional emergency preparedness and response activities and events;
- seasonal newsletters that inform humanitarian actors on the evolution of

weather phenomena such as El Niño, the hurricane season and drought, as well as on crises that affect the food security situation of vulnerable groups, such as the international food price and economic crises of 2007–2008.

4.2 Early warning

WFP collaborates with institutions in the Central American Integration System (SICA) to apply and improve early warning tools in the subregion. The following subsections describe these in more detail.

Central America Early Warning System (SATCAweb)

SATCAweb is the result of two dynamics coming together: WFP's concern to strengthen capacity and systems for early warning of multiple natural hazards by using the most advanced information technology; and Central America's situation as one of the most disaster-prone regions in the world, exposed to multiple natural hazards and using conventional means of information gathering, often separately, to monitor hazards and manage its risk.

SATCAweb is a logical outgrowth of WFP's experience in global early warning. In 2004, WFP developed a web platform for this, HEWS web,¹ which gathers and presents the latest bulletins and warnings on possible droughts, floods, hurricanes, tsunamis and other hazards in Asia, Africa and Latin America. The system was developed with the collaboration of scientific institutions including the United States National Oceanic and Atmospheric Administration (NOAA), Dartmouth Flood Observatory, the United States Geological Service (USGS), the Smithsonian Institution and United Nations agencies. HEWS web was launched at the World Conference on Disaster Reduction in Kobe, Japan, in January 2005, and was considered to be "the first global clearing-house for early warning information on natural hazards" (United Nations, 2005).

In 2006, WFP sought similar success in developing an early warning system for Central America. SATCAweb represents an innovative investment in strengthening capacity in risk management and early warning in the region. Over the last 30 years, constant natural hazards in Central America, such as droughts, floods, hurricanes, earthquakes, volcanic eruptions and the effects associated with the phenomena of El Niño and La Niña, have caused losses and damage estimated at more than US\$10 billion.²

As a subregional initiative managed by WFP's office in El Salvador, SATCA was developed within the framework of SICA and in close collaboration with SICA's Centre for the Coordination for the Prevention of Natural Disasters in Central America (CEPREDENAC). Scientifically, it has benefited from the collaboration of international and regional partners such as NOAA, the National Aeronautics and Space Administration (NASA), Dartmouth Flood Observatory,

USGS, the Benfield UCL Hazard Research Centre, the International Research Institute for Climate and Society (IRI), the Hydrologic Research Centre, Tropical Storm Risk, InfoAgro, Water Resources, Mesoamerican Famine Early Warning System Network (MFEWS) and the Water Centre for the Humid Tropics of Latin America and the Caribbean (CATHALAC).

SATCA brings together scientific institutions, national governments and humanitarian actors around the common theme of mitigating the potential impact of disasters, especially among the most vulnerable and food-insecure populations in Central America. It promotes South-South cooperation with institutions such as the National Service for Territorial Studies (SNET) and Civil Protection in El Salvador, and the Permanent Commission for Contingencies (COPECO) and National Meteorological Service in Honduras.

Since its inception, the system has developed through cooperation with national institutions. It was launched on 1 November 2006 at a meeting attended by representatives of national institutions responsible for monitoring natural hazards, issuing warnings and providing humanitarian aid. Agreement was reached regarding the scope, opportunities and challenges of establishing the system in Honduras and El Salvador.

A major challenge was that scientific and disaster management information sources throughout the region were using different technological languages and systems, nomenclatures, etc. In addition, the information produced was often not shared or adequately organized. Each institution had its own methods: some monitored only one hazard at a time; others, such as Civil Protection, also issued warnings and managed responses; and some also carried out early warning analysis and forecasting, using the media to disseminate the information to a wider audience. Even the colour coding used to represent warning levels sometimes differed from country to country, generating confusion that affected decision-making on regional humanitarian actions. Another serious challenge was that not all national services were generating information that could be incorporated into SATCA.

To overcome these challenges, WFP provided institutional strengthening to its regional partners, focusing on technical and technological aspects and on establishing common standards for early warning information management throughout the region. Although the aim of developing an operational monitoring system for early warnings of multiple threats has been achieved, countries have found it difficult to assume responsibility for managing the initiative at the national level.

Currently SATCAweb provides the following important services:

- Early warning and emergency preparedness information: Using a platform for collecting, integrating analysing, visualizing and disseminating

information to a large audience of actors and partners, the SATCAweb homepage provides summaries of the latest warnings across the region. The platform is 90 percent automated and is easy to navigate. Maps are used to illustrate events, with simple clicks providing access to increasingly detailed information.

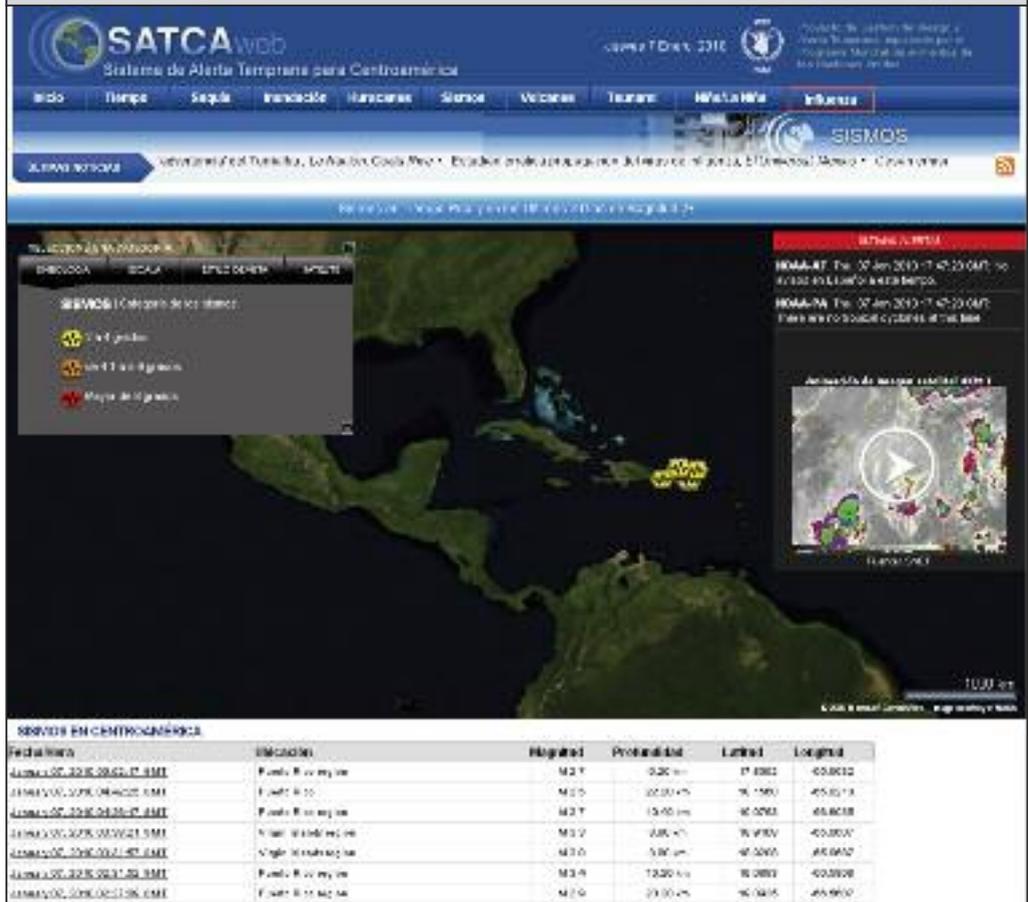
- The Advanced System for Warning Dissemination (SADA): Using a variety of communication technologies, SADA allows the national institutions responsible for issuing alerts by e-mail, SMS and fax, to notify their target audiences and the general public about potential hazards and the actions to take. These notifications can be of different levels, depending on the severity of the phenomenon.
- Early impact tool and geo-assistant: This collects information on populations and infrastructure that are vulnerable and at risk and combines it in a common system, using maps. It can use local-level information to provide rapid estimates of the expected impact of a potential emergency, informing users, allowing them to take preparedness measures, and facilitating an early assessment of emergency requirements. This tool was recently used in El Salvador during a Pacific tropical depression and Hurricane Ida, in November 2009.

Direct enquiries account for 22 percent of total visits, but SATCAweb is also visited from references and links on various websites, which provide 46 percent of visitors. Search engines provide 31 percent of the total traffic.

In El Salvador and Honduras, the National Meteorology Service and SNET use SATCA to keep themselves informed, and SATCAweb is included as a direct link in many of the web pages of other disaster tracking sites.

Future plans include using SATCAweb to gather information at the municipal and local levels and providing maps with more detailed information. SATCAweb aims to become a knowledge management centre for early warning information that will enable the region to manage effectively the threats from natural hazards and their possible impacts on food security.

Figure 17.1 Main page of www.satcaweb.org



Central America Flash Flood Guidance (CAFFG)

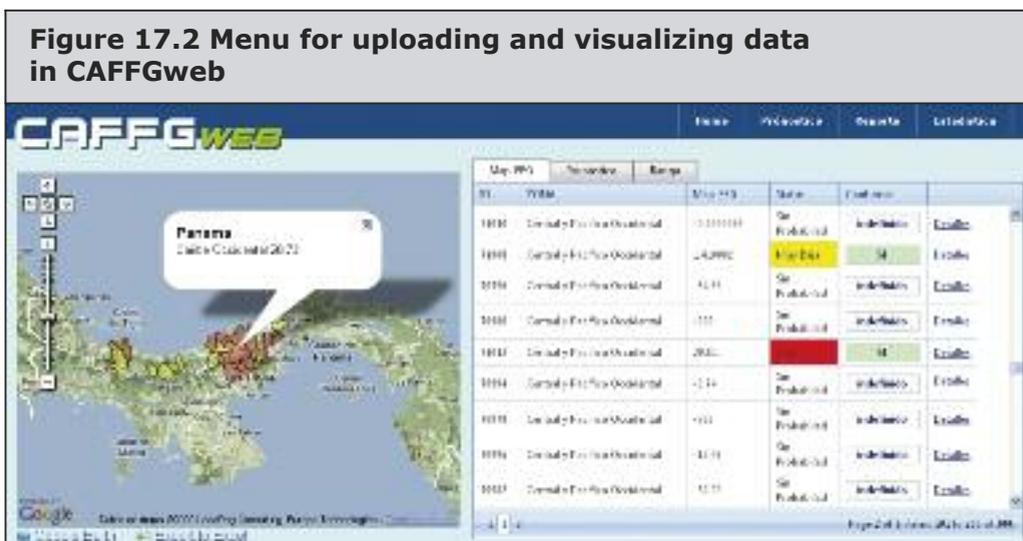
CAFFG is a model for determining the impact of intense rainfall and hurricanes in the Central America subregion. It was developed by the Hydrologic Research Center (HRC), sponsored by United States government institutions, and in collaboration with Central American institutions under the coordination of SICA’s Regional Committee of Hydraulic Resources (RCHR). It provides guidance for estimating what volumes of rainfall in small river basins will produce overflowing and, ultimately, flooding. It uses data such as satellite information to estimate precipitation, soil absorption and rainfall forecasts. Because its use and interpretation require trained meteorologists, CAFFG was designed exclusively for the meteorological services of Central American countries: Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and

Panama. To begin with, however, only Costa Rica was operating CAFFG to its full potential as an early warning tool, so in 2006, WFP and RCHR started to collaborate on improving its use regionally.

Since then, WFP has contributed to testing CAFFG during rainy seasons and improving it with various inputs and regional collaboration. In 2008, CAFFGweb was developed to link CAFFG to Google Maps; through this, many processes were automated, the work of meteorology services was facilitated, the monitoring and analysis of results were improved, and maps of flood risks were made available for periods of three, six and 12 hours for consultation by Civil Protection, local disaster management services, response groups, communities and the general public.

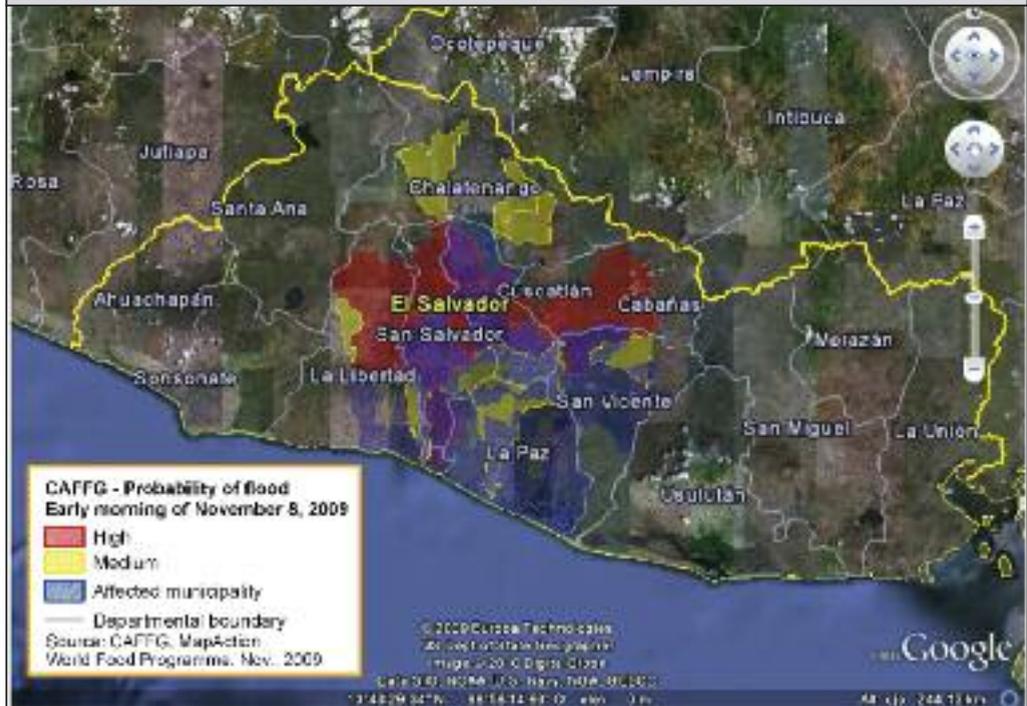
In addition, CAFFG can easily incorporate relevant geographic information, such as populated areas, hydrologic networks and landslide-prone areas, as well as a module for estimating the potentially affected population in sub-basins at risk of flooding. These options provide further elements for guiding decision-making. The use of Google Maps in its interface allow CAFFG to incorporate geographic information without requiring map servers or specialized Internet software.

Figures 17.2 and 17.3 show some of the interfaces of CAFFGweb.



CAFFGweb outputs can be exported through standard protocols, for sharing information with other systems and commonly used applications such as KML, GeoRSS, CSV text files, Microsoft Excel and ESRI shapefile.

Figure 17.3 CAFFG results – floods in El Salvador, 8 November 2009



Sources: RCHR and WFP.

Figure 17.3 gives an example of CAFFG results for the 8 November 2009 floods in El Salvador. Although areas that the system identifies as high-risk, in red, are somewhat displaced to the north owing to atmospheric circumstances, CAFFG also showed that there was potential for important flooding in the affected region, alerting to the risk. Through continuous use of the tool, national teams will be able to refine the models for producing alerts on potential floods.

In association with CRRH, WFP elaborated regional meteorology forecasts for Central America and the Caribbean, which are published daily during the hurricane season in the WFP EPR news service *Emergencies Update*.

Monitoring of basic grain prices in Central America

Much of the Central American population is affected by child undernutrition and food insecurity, and an increase in the price of staple foods has a significant impact on the vulnerability of these people. Early warning on food price rises allows WFP to prepare for possible interventions in response to food insecurity crises caused or aggravated by a lack of purchasing capacity at the household

level. Since 2009, WFP has been working closely with SICA's Central American Agriculture Council (CAC) to improve the availability of and access to information on food prices. These efforts focus on optimizing the information system on wholesale prices for basic grains and other staple products, and improving information management and the presentation and transfer of data to users. CAC provides SICA with an institutional link between the agriculture sector and other Central American integration bodies, and is formed of national ministers of agriculture.

The price monitoring system allows:

- storage and maintenance of a historical database of prices;
- queries, by country, product and/or group of products, such as a basic food basket;
- generation of graphs, by product and/or country;
- identification of values that are outside the normal range, and automatic e-mail alerts to national focal points and the system's regional administrator;
- automatic SMS and e-mail alerts to decision-makers when prices increase above established ranges;
- presentation of maps in Google Maps at the national and/or sub-national levels;
- storage of information on market locations, collection centres, distribution networks and market flows.

Market flow maps

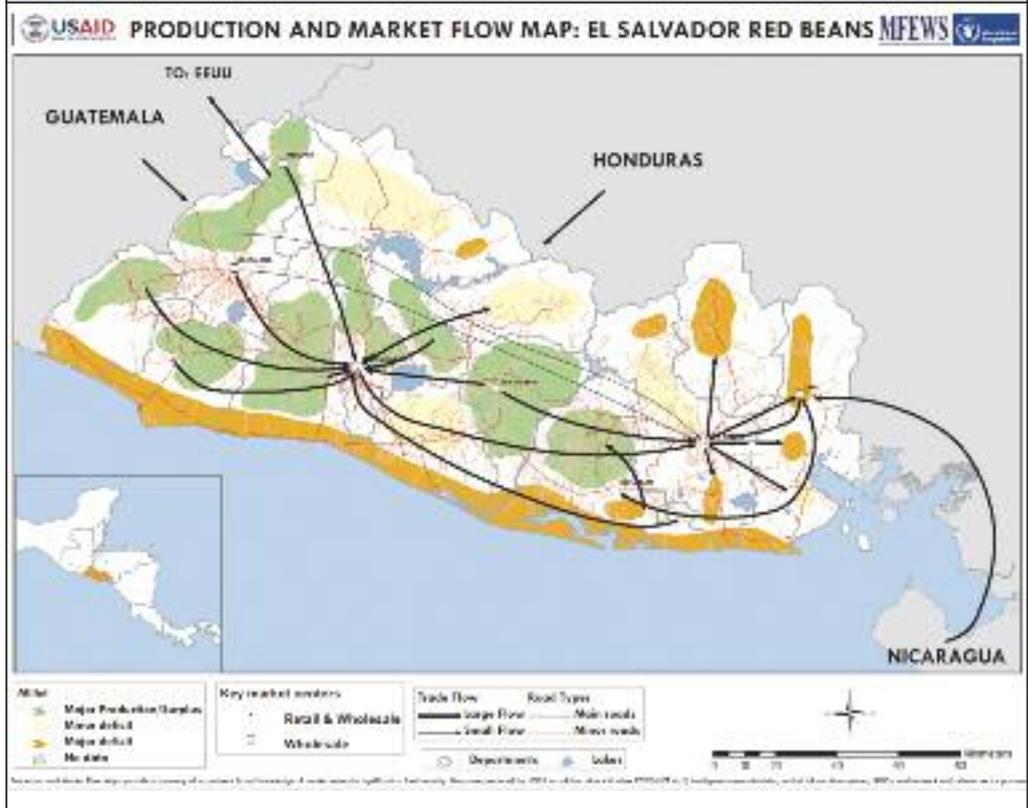
WFP has joined an MFEWS and CAC initiative to produce schematic maps that show the main flows of basic grains within countries and throughout the Central American subregion, where markets are closely interrelated and interdependent.

Such maps have been generated at workshops where participants are the main players involved in the planting, storage, distribution and commercialization of grains, as well as institutions for agriculture, food security and nutrition.

Maps are available for the staple grains of each country, identifying the main markets and distribution centres. Generation of the maps involves the integration/updating of agricultural calendars for planting and harvesting, and provides a space for interaction among producers, marketers and the technical staff of institutions and organizations that monitor crops and/or provide technical assistance.

The maps provide valuable information for identifying areas that may suffer from food deficit if affected by socio-economic or natural events.

Figure 17.4 Red bean production and market flows in El Salvador



Sources: MFEWS and WFP.

5. Networking

Partnership among humanitarian participants are critical to effective response in emergencies. In general, governments in Latin America and the Caribbean have good capacities, so are the primary partners for WFP.

5.1 Capacity development

WFP has supported national governments and institutions in strengthening their preparedness and response capacity, with particular emphasis in areas where WFP has recognized expertise and a comparative advantage: logistics, vulnerability analysis, needs assessments and food procurement. By providing training and technical assistance to the LACERN initiative over the last four years, WFP has established itself as an important technical partner for national counterparts and regional institutions. It now has a central role in disseminating

best practices and EPR experiences among governments in the region through its knowledge management platform and in-house technical expertise.

LACERN's subregional hubs have served as centres of excellence for seminars and training courses involving personnel from national counterparts, United Nations agencies and NGOs. More than 350 people have been trained in various aspects of preparedness and response interventions.

For example, in 2006, staff from WFP's national counterpart in Peru, the National Programme for Food Assistance (PRONAA), were trained in the WFP emergency food security assessment (EFSA) methodology at the El Salvador and Ecuador hubs. PRONAA later funded and carried out two assessments using the methodology in areas of the Peru highlands affected by frosts and in southern areas affected by the high-magnitude earthquake of August 2007. The results were used to align WFP and government responses and food distributions to vulnerable populations.

Other successful examples are the capacity development activities carried out in middle-income countries. WFP has no operational offices in these countries, but governments have requested its technical assistance and expertise in augmenting their EPR capacities. Following floods in 2007 that left more than 1 million people displaced, provincial governments in Mexico contacted WFP for logistics support in managing warehouses and for training in contingency planning, as their own plans had proved inefficient during the flood response. WFP held workshops for government personnel in two provinces, supporting the government's own preparedness activities and tools. In Panama, following floods in 2008, the civil protection authority requested WFP to provide training in warehouse and commodity management, as that aspect of the response had been particularly weak during the emergency. WFP held a week's training course in Panama for civil protection personnel from all provinces, and presented a series of lessons learned from the operation, which was greatly appreciated.

These examples show the positive results of capacity development initiatives in technical areas where WFP can provide wider food assistance, including in middle-income countries that have the means to provide food aid in response to minor emergencies, but may lack the expertise to do so effectively and efficiently.

5.2 Coordination

Latin American and Caribbean governments have created regional intergovernmental institutions for coordinating and promoting preparedness and response actions. These technical institutions are normally part of wider political agreements that create regional bodies, sponsored by donor countries and agencies. WFP has been collaborating with these institutions as part of its regional EPR strategy, aligning frameworks and priorities for ensuring the

protection of food security during crises and emergencies. Partnering regional humanitarian organizations has also been important to WFP, and forms the basis for inter-agency preparedness activities in the region.

The Caribbean Community (CARICOM)

WFP and CDEMA signed a cooperation agreement in Panama in March 2007. This understanding strengthens the agencies' partnership for building strong, effective and efficient capacity at the national and community levels so that countries in the region can improve their mitigation and management of the effects of recurrent natural disasters. From CARICOM institutions, CDEMA is the main partner of WFP and participates in the Eastern Caribbean Donor Group for Disaster Management.

WFP's regional bureau is currently developing a strategy for strengthening the region's capacities in preparedness, assessment and response to disasters, and for incorporating food security dimensions into the preparedness, disaster risk reduction and livelihoods recovery efforts of national and regional institutions. The strategy has been designed to support CARICOM countries, and is in line with their Comprehensive Disaster Management Strategy and Framework.

Central American Integration System (SICA)

WFP has advanced its regional EPR strategy through partnership with SICA, drawing on SICA's regional influence and recognition to mobilize political and financial support for priorities shared with WFP and addressing food security, undernutrition and emergency preparedness and response.

The complementary strengths of SICA and WFP will help ensure stronger engagement among institutions towards a truly integrated approach to food security, early warning, risk reduction and disaster response in the subregion.

Risk, Emergency and Disaster Task Force (REDLAC)

REDLAC is the Regional Inter-Agency Standing Committee for Latin America and the Caribbean, created in 2003 to improve information exchange, discussions and organization of joint efforts in preventing and mitigating the impact of crises and emergencies. The group's main strategy is to improve disaster response in the region through a consensual approach that emphasizes better coordination and exchange of information. As well as its ad hoc meetings whenever emergencies occur in the region, REDLAC meets monthly. Members include all the regional bureaux of United Nations agencies located in Panama, the Red Cross, NGOs, donors and subregional institutions. The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) acts as the group's

executive secretariat and is responsible for facilitating communication among members, organizing meetings, and keeping records of agreements and decisions. To improve the coordination of emergency operations, working groups on information management, risk reduction, disaster preparedness and logistics have been established.

The Regional Inter-Agency Logistics Coordination Group is led by WFP and consists of diverse humanitarian organizations, including United Nations agencies, NGOs, international organizations, donors and foundations. The group provides a platform for logistics information sharing, addresses humanitarian logistics issues and supports preparedness and capacity building projects that have a positive impact on humanitarian logistics. The group started with only four members, expanding to 11 over the last two years. It has improved inter-agency logistics arrangements for the region, by establishing a stockpile of relief items in Panama and a database of suppliers and freight forwarders. REDLAC has coordinated inter-agency logistics capacity assessments in several countries, and humanitarian cargoes have been consolidated for transportation to disaster-affected areas, saving resources for all partners.

6. Conclusions

WFP's preparedness tools and response capacities in the Latin America and the Caribbean region are based mainly on the pre-positioning of food and non-food items in subregional depots, the development of information systems for preparedness and early warning, the creation of an emergency response roster, capacity strengthening for WFP staff and partners, coordination with other humanitarian actors, and facilitation of South-South cooperation within the region. Its most important role in this has been as the facilitator of coordination among governments and partners, creating a regional network of capable practitioners for humanitarian emergency response.

The Latin American and Caribbean model shows that WFP has the necessary competence to enhance the emergency preparedness and response capacities of counterparts and partners. In regions such as Latin America and the Caribbean, where governments generally have the means to provide food for their populations when disasters strike, WFP has an important role in promoting the development of preparedness and early warning tools that assist the forecasting of disasters, preparing and anticipating effective and efficient response interventions, and responding to disasters that exceed the capacities of national governments.

The network and tools developed in Latin America and the Caribbean are innovative for WFP, not only because of their focus on preparedness rather than

response, but also because they consider national and regional institutions the main players and partners in disaster management activities. This represents a move away from WFP's traditional role of providing emergency food aid, towards the use of WFP's capacity to offer wider food assistance, in cooperation and agreement with governments and partners.

¹ www.hewsweb.org.

² CEPREDENAC, Regional Context: www.sica.int/cepredenac/contexto_reg.aspx.

Information and communications technology in food assistance

Edgardo Yu

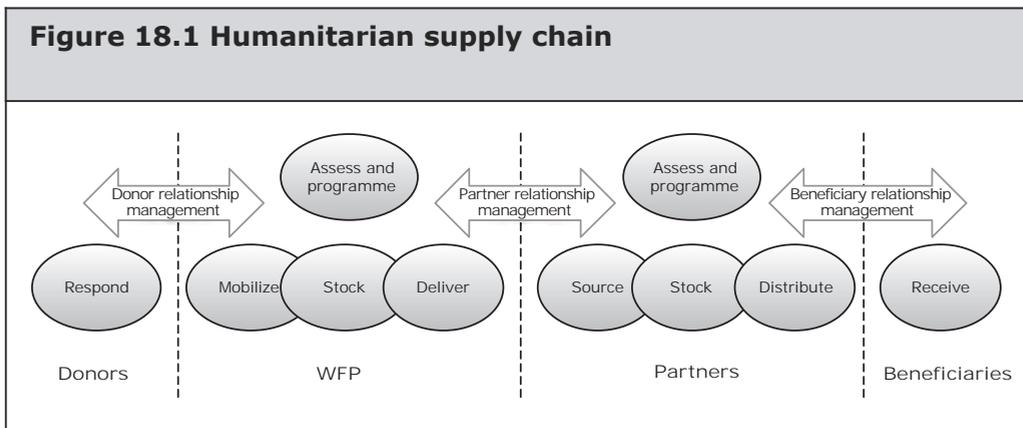
1. Introduction

Information and communications technology (ICT) refers to the range of technologies that allow the gathering, exchange, retrieval, processing, analysis and transmission of information. The rise of ICT as a tool for general interaction is evident from the wide acceptance of the Internet as a platform for communication and knowledge sharing, and from the pervasive adoption of mobile communications all around the world. Internet users grew from 183 million people in 1998 to 1.542 billion in 2008. During the same period, subscribers of mobile cellular telephones grew from 490 million to 4.1 billion (International Telecommunications Union, 2009).

These developments, more social than technical, have had an impact on the way global organizations conduct business. Humanitarian organizations are no exception. Most stakeholders – donors, United Nations agencies, civil society, non-governmental organizations (NGOs) and even beneficiaries – now rely on technology to varying degrees. This has led to changes in the ICT functions of humanitarian organizations such as WFP, where information technology has evolved to the point where it not only provides operational support, but has also begun to change and enable programmatic activities through new capabilities. In particular, ICTs in food assistance programmes have advanced from being personal productivity tools to becoming tools for extending and optimizing end-to-end supply chain processes. This chapter examines the various approaches and trends in the use of technology to support the mobilization and delivery of food assistance.

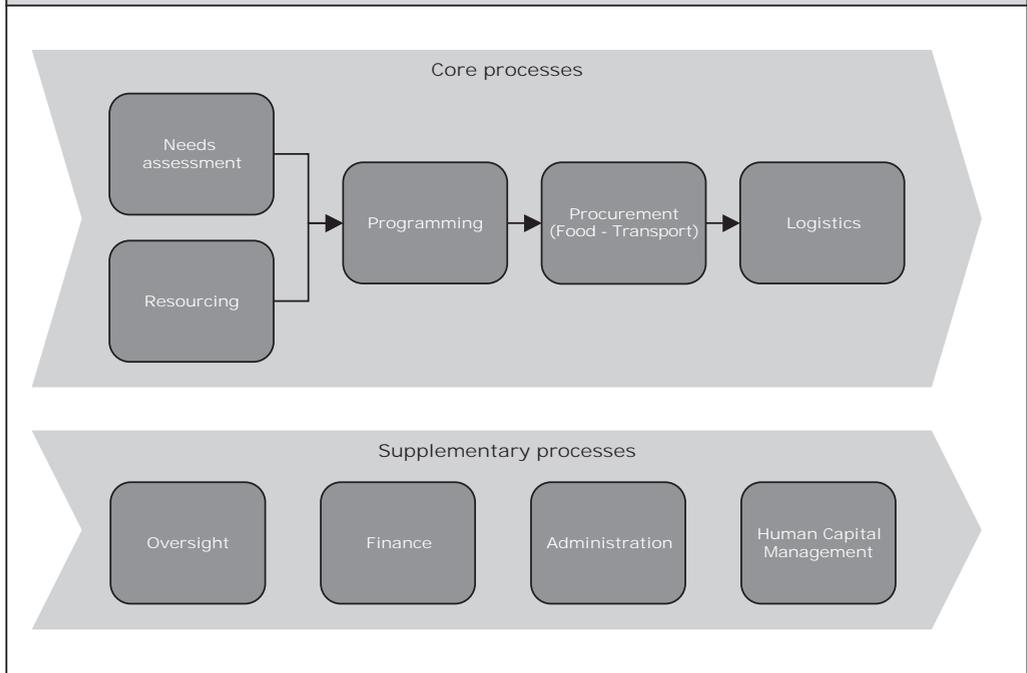
2. The humanitarian supply chain

A *supply chain* is defined as a system of organizations, people, technology, activities, information and resources involved in moving a product or service from supplier to customer.¹ In the context of food assistance, this refers to the process of delivering commodities or other assistance from donors to beneficiaries. This is not a single chain, however, but a series of linked supply chains in which WFP's internal supply chain forms the core, facilitating the delivery of food assistance from donors to the implementing partners that distribute it to end beneficiaries. Figure 18.1 shows the series of supply chains in this process.



Three critical processes connect these supply chains from the point of view of WFP: *donor relationship management* involves working with donors to understand country needs, mobilize resources and report on the overall results and outcomes of food assistance; *partner relationship management* involves working at the country-level with governments and implementing partners, to manage demand and set up the mechanisms and capillary distribution channels needed to bring food assistance to distribution points; and *beneficiary relationship management* refers to partners' processes in managing the distribution of assistance to beneficiaries.

Within each individual supply chain, organizations have critical core processes, such as needs assessment, resource mobilization, programming, procurement, warehousing, transportation, and monitoring and evaluation. These are facilitated by supplementary functions, such as financial management, human capital management, project management and oversight. These processes are represented in Figure 18.2.

Figure 18.2 Organizational processes

These process frameworks are the basis for applying the technologies needed in food assistance. To streamline the whole end-to-end supply chain, organizations and practitioners must optimize both internal and interconnecting processes. Information technology supports this interconnectivity by providing the foundation for implementing business processes (Ross, Weill and Robertson, 1995). In this context, ICTs are deployed in two dimensions:

1. The information systems that are used to link and support the core and operational processes within each organization are called *line-of-business* systems. The goals for ICT are to ensure that essential processes and information are integrated through solutions and applications. In food assistance scenarios, these applications range from those supporting basic finance, administration and logistics, to solutions supporting food monitoring, assessments, distribution and camp management activities.
2. Technologies are also used to provide the platforms and tools through which knowledge can be shared and collaboration and communication can occur among various stakeholders involved in the process; these technologies are sometimes called *productivity tools*. The goals for ICT include fostering a learning culture through communities of practice involving geographically

separated peers, providing voice communication services for workers in remote or insecure areas of operations, or supporting information sharing for staff with intermittent online access. Technology solutions to support these include websites, forums, learning management systems, instant messaging tools and content replication tools.

The ICT challenge has always been to ensure that there is adequate application support to allow the automation of critical transactional processes, and that appropriate technology is in place to encourage the desired collaborative and knowledge sharing behaviours to support these processes.

3. Technology framework

WFP's use of information technology can be classified into three broad areas (Figure 18.3):

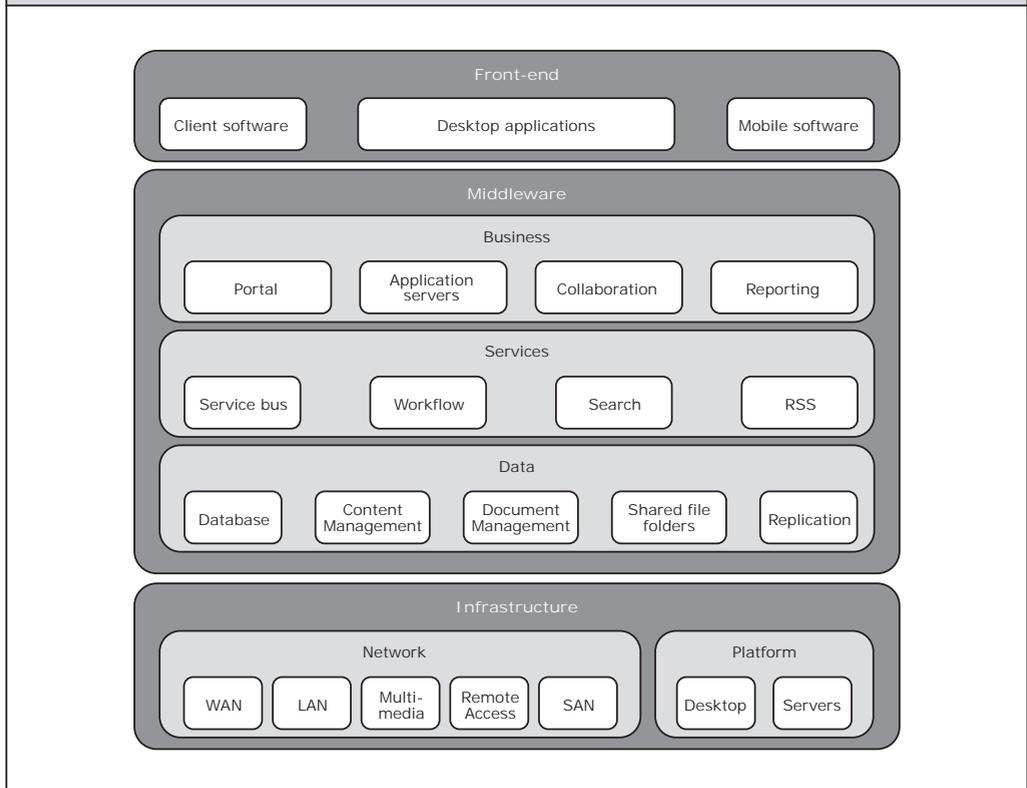
- *Front-end services* refer to technologies that are directly handled by end-users, and may include software, hardware or communications technologies.
- *Middleware services* refer to the underlying technologies to support the tools that end-users utilize, typically solutions or technologies such as databases, workflow or mail systems, Geographic Information Systems (GIS) and others that make up the application platform.
- *Infrastructure services* refer to the basic server, operating system or telecommunications services on which both middleware and front-end services rest.

Adapting technology to new processes revolves around customizing components of this model to suit process or collaboration requirements. This could mean adapting existing technologies or techniques to address old problems in new ways, or putting together new technologies to deliver a new business capability.

3.1 Supporting the food assistance supply chain

Within WFP, a significant portion of core organizational processes are automated through *enterprise resource planning* (ERP) software systems. ERP provides an integrated, standard operating environment essential for the smooth functioning of a global organization. As a ready-to-use package, adoption of an ERP system typically means conforming to some of the best practice processes used in industry. WFP's ERP system supports the basic supplementary processes that allow the delivery of food assistance – from fund management, asset management, financial management, budgeting, procurement and travel, to human capital and ocean transport management.

Although ERP systems cover extensive areas of operation for a global supply

Figure 18.3 Technology framework

chain, as commercial off-the-shelf solutions they cover only a portion of the processes needed by a humanitarian agency. Other solutions are needed to manage processes unique to the food assistance scenario. Sometimes, special operating environments or poor infrastructure drive the choice of technologies used.

One of the challenges in deploying an ERP system is to bring it to the hands of the people who need to use it. To this end, WFP has built a robust satellite-based global telecommunications network called *FOODSAT*, which connects offices in 89 capital cities. *Thin-client computing* technologies from Citrix were deployed to deliver applications to all connected offices. In thin-client computing, servers host the main computer software, and client personal computers (PCs) are used only to host graphical user interfaces. This approach has allowed WFP to lower the client PC requirements and minimize the impact of deployment. More significant, it minimized the bandwidth requirements needed in the global network, helping to reduce operational costs.

3.2 Mapping technologies

The availability and usefulness of Internet-based map information services such as Google or Bing Maps have driven home the value of maps and location-based services in general. These are based on *GIS* technologies to collect, build and inventory spatial data and maps. Such technologies integrate and apply spatial and non-spatial databases for integrated analysis, and are used to communicate and share geographic knowledge.

In food assistance, these technologies support processes related to, among others, food security analysis, contingency and emergency planning, early warning systems and logistics planning, by integrating data captured in the field with spatial data to support decision-making, as displayed in Figure 18.4.

For example, GIS technologies are used in WFP's Emergency Preparedness and Response Web (EPWeb)² and in the GeoNetwork Opensource³ service, which provides a publicly available repository for geo-referenced databases, cartographic products and other related data (for more details on emergency preparedness tools see chapter 17).

Figure 18.4 WFP's EPweb



Convened by WFP, with government support, this portal brings together information, expertise, knowledge databases, discussions and contacts in a joint effort to manage knowledge and strengthen the capacity of Latin American countries to design and implement effective programmes for combatting hunger and malnutrition. The portal has become a vibrant community of food security practitioners in Latin America, and is being replicated elsewhere in the world.⁵

4. Mobile technologies

Hand-held devices, personal digital assistants (PDAs), mobile phones or smartphones allow information to be stored at the point of capture and, in the case of mobile phones or smartphones, may be used to communicate the results back to office. In the context of food assistance, these technologies are typically used in field data collection processes, when conducting household surveys related to food security and vulnerability assessments. Entering information at the point of capture improves data quality and security, reduces data access time and eliminates the use of printing materials.

For the past ten years, hand-held devices have been extensively used for WFP data collection in the South Africa and Asia regions. WFP has developed PDASurvey⁴ software for creating questionnaires in the field. This has been used in at least 15 countries in more than 50 assessments. Questionnaires are created by the staff running the surveys, without assistance from software developers. A key innovation is the use of global positioning systems (GPS), ensuring transparent geo-referencing, with use of external GPS terminals as the preferred approach, to conserve PDA power.

For PDAs, non-volatile memory cards such as SDCards are used for the manual transfer of both data and programs, making archiving simple and secure. With the increasing availability of mobile cellular networks, projects have been implemented using these networks as the data transport mechanism. In general, adoption of this approach has remained fairly limited, owing to infrastructure and capacity constraints. In food assistance, recent pilot deployments have utilized mobile phones for staff and food monitors to send cross-border trade information from border locations in various countries; short message services (SMS) or text messaging is used to transport the data being captured. This requires careful user training, as it is up to the operator to ensure that the SMS message containing data is in the expected format. Data entry errors are dealt with by the back-end system, verifying correctness via return SMS. Although it has limits, this technique is low cost and works in settings where survey or monitoring staff have cellular equipment.

4.1 Combining hand-held and wireless communications technologies

Recent developments within WFP have enhanced mobile standards by investigating ways of merging mobile computing platforms with wireless radio communications technologies. The need for this arises from the data collection and dissemination requirements of humanitarian workers in locations where radio or satellite phone are the only telecommunications means available. The *Emergency Preparedness Information Centre (EPIC)* project is an initiative to enhance WFP's field information systems and communications capability by redefining mobile computing and communications standards. It replaces the current legacy radio infrastructure, which supports only voice communications, with a new standard able to support voice and application integration over wireless. Hand-held devices – extensible with add-on tools such as barcode readers, radio frequency identification (RFID) readers and GPS terminals – can now provide capability to automate processes in locations without publicly available technical infrastructure, such as those found at WFP's final distribution points. Wireless connectivity may be provided via VHF, WiMax, WiFi or even cellular technologies, where these exist.

EPIC will allow the streamlining of commodity hand-over and tracking processes through the use of location-stamped electronic waybills or proofs of delivery, and will facilitate monitoring and evaluation by supporting household surveys and food distribution monitoring, even in remote places without cellular or commercial telecommunications coverage.

As well as its use as a mobile data-entry platform, the EPIC device is also the primary security telecommunications tool, capable of sending and receiving text messages integrated with instant messaging, e-mail and voice communications. In areas with security issues, the device's position can be traced from a central console, which is useful for tracking staff for safety and security purposes.

5. Beneficiary identification

One of the challenges in food assistance has been to ensure that assistance goes to the right beneficiaries. A number of mechanisms have been explored, from voucher and coupon modalities to those relying on biometric identification for distributing food. Food ration cards are typically used in general distribution. In some countries, these have been turned into voucher-based processes augmented by technology. Important examples are:

- distribution of vouchers via SMS, such as in the Syrian Arab Republic, where beneficiaries are well-equipped with mobile phones (chapter 5);
- smartcards containing beneficiary identification, such as those issued in

India, where assistance is redeemed from authorized distributors who, on handing over food assistance, detract its value from the smartcard;

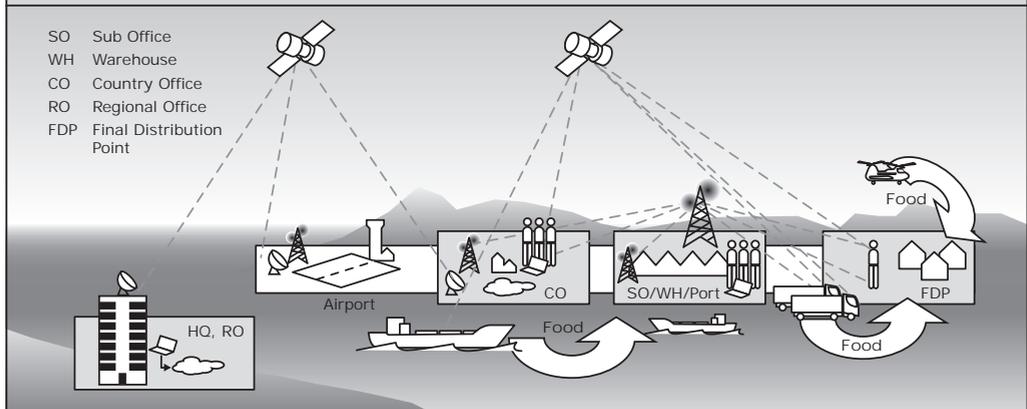
- food ration cards that include biometric data – photos and other biometric information – such as in Pakistan, where beneficiaries follow a biometric identification process based on retina scans during distribution;
- biometric information such as fingerprints, used to identify beneficiaries in, for example, camps managed by the Office of the United Nations Commissioner for Refugees (UNHCR) in Kenya and the United Republic of Tanzania.

The use of biometrics to identify beneficiaries is in its early stages at WFP, but there is a clear case for continuing with it, as a way of reducing multiple registrations and fraud. Biometrics use at other United Nations agencies, such as UNHCR, has led to increased accuracy in beneficiary enumeration, but important challenges remain. Policies on data protection issues must be in place, especially for cross-border needs. Processes must ensure that the biometric information is used for only its intended purpose. Technology needs to ensure that accuracy is high, and that the identification mechanism is culturally acceptable to the beneficiary population.

6. ICT in emergencies

Food assistance interventions during emergencies have unique requirements. Sudden-onset emergencies typically require the deployment of complete supply chain infrastructure, supported by ICTs with no lead times and short deployment times. WFP's planned food response – how and where to deliver food assistance – is the key factor in designing an ICT response. The number, size and location of offices and warehouses determine the requirements for information technology, telecommunications and power infrastructure, and associated staff support. The ICT infrastructure being deployed must support information and communication flows between country and sub-offices. For larger emergencies, command and control may need to be equally visible from regional offices and Headquarters. Figure 18.6 shows the overall concept of operations for ICT deployments in emergencies.

The deployment process relies on a quick needs assessment by a senior ICT officer, deployment of stand-by emergency assets, and increase of ICT support and infrastructure coverage as other staff arrive in the operational area. Response times from assessment to initial deployment can be as little as 24 hours, as *fly-away ICT kits* able to support small offices are always ready for deployment. Fly-away kits contain pre-configured ICT equipment that when

Figure 18.6 ICT emergency concept of operations

installed, provides self-contained ICT services for up to 25 staff. They include laptops, hand-held radios and wireless network equipment for setting up an office, and a satellite (VSAT) terminal to connect the office to global networks.

Emergency response personnel are on call to provide the first support in case of an emergency. In addition, an extensive network of stand-by partners composed of technical staff from private or government emergency units are available to engage and support the surge capacities needed in a wide-scale emergency response.

7. Linking the humanitarian supply chain

This chapter has illustrated some of the ways in which WFP uses technology and technological techniques to fulfil its role as the provider of food assistance in development and emergencies. Looking to the future, WFP continually seeks to leverage appropriate information technology for its operations, while remaining sensitive to business efficiencies and organizational norms. Tighter integration with donors and partners is the goal for technology, increasing facilitation and linkages in the flow of food assistance from donor to beneficiary, and providing a return path of information from beneficiaries to donors.

To respond to the needs of the times and to optimize the humanitarian supply chain, donor, WFP and partner supply chains must be connected. Situated between donors and partners, WFP is well placed to serve as the catalyst and provide the critical linkages for a unified humanitarian supply chain. Such process integration can be accelerated through the use of appropriate information technologies.

- ¹ http://en.wikipedia.org/wiki/supply_chain.
- ² EPWeb is managed by the Emergency Division, WFP.
- ³ GeoNetwork Opensource is managed by the Vulnerability Assessment and Mapping Unit, Emergency Division, WFP.
- ⁴ There has been increasing use of open-source software (OSS) in this area. OSS allows end-users the right to use and change the code, and is typically free of charge.
- ⁵ Through a project between the Economic Community of West African States (ECOWAS) and WFP (2010).
- ⁶ PDASurvey was created by the Vulnerability Assessment and Management Unit, Emergency Division, WFP.

19

Logistics for food assistance: delivering innovations in complex environments

Emma Quinn

1. Introduction

As WFP's food assistance becomes increasingly sophisticated and multi-faceted, the supporting logistics operations become more complex and multi-modal. Each year, WFP distributes close to 5 million mt of food, reaching an average of 95 million beneficiaries across some of the toughest terrain on the planet. On any day, WFP operates an average of 60 aircraft, 40 ships and 5,000 trucks, moving food and other assistance to where it is needed. A strong presence in 80 countries, combined with extensive local networks and technical expertise, allows WFP to manage these large-scale and complex logistics operations.

Although its focus remains on moving food and saving lives, WFP is aligning itself within the One United Nations initiative by providing services that include the transport and storage of general cargo and non-food items, the transportation of humanitarian aid workers and donors, coordination of the logistics response on behalf of the humanitarian community, and the provision of training for humanitarian logisticians from other international organizations. WFP is at the forefront of humanitarian logistics, as demonstrated by its leadership of the Logistics Cluster, its management of the United Nations Humanitarian Air Service (UNHAS) and the United Nations Humanitarian Response Depot (UNHRD) network, and its role as a logistics service provider to 40 other humanitarian organizations.

The importance of time sensitivity in relation to supply chains is particularly clear when people's lives are at stake. However, the logistics situation is often

complicated by the heightened risks that WFP now faces in the more complex environments in which it operates. The humanitarian stakes are high regarding timeliness, given the sophisticated global media and high expectations of donor governments.

This chapter details WFP's logistics capacity and practices and its engagement as an inter-agency logistics service provider. It then explores the challenges and risks arising from ever-increasing humanitarian needs.

2. Logistics' many roles in WFP

2.1 Context and objectives

WFP's delivery of some 5 million mt of food aid a year to some of the world's most remote and poor locations is, in itself, quite an achievement. Despite the dependence on voluntary donations – which take time to arrive – assistance has to reach the right place at the right time, entailing huge logistics challenges. WFP's logistics capacity also has to adapt to the different demands of emergencies, protracted crises and development contexts.

In unpredictable emergencies, such as the Indian Ocean tsunami, the Kashmir earthquake or the Haiti earthquake, WFP has suddenly to turn its attention to hundreds of thousands of people who were living normal lives until yesterday, but who now depend for their survival on the food that WFP can deliver. These people cannot wait weeks or months; their needs are immediate, so WFP's response must be.

The Sudan, where WFP is carrying out its biggest operation, provides an example of the challenges that confront WFP even in operations where the locations needing food aid and the time frame for delivering that aid are known in advance. It was known at the outset of 2009 that food assistance would be needed in the Sudan for 6.3 million people affected by conflict. That meant delivering some 665,568 mt of commodities at a total cost of about US\$872 million in the face of uncertainties over funding,¹ security problems, large-scale population displacements, seasonal floods that made huge areas inaccessible by land for months at a time, and a long logistics chain dependent on a fragile and neglected transport infrastructure.

Under the current country programme in Egypt, WFP is mandated to support the reform of national food subsidies by providing technical assistance to the government through its Food Subsidy Reform Project. The food subsidy system accounts for a major part of the Government of Egypt's safety net programme, in terms of both costs and coverage. In early 2009, the Minister of Social Solidarity requested WFP to undertake a study to assess the efficiency and effectiveness of

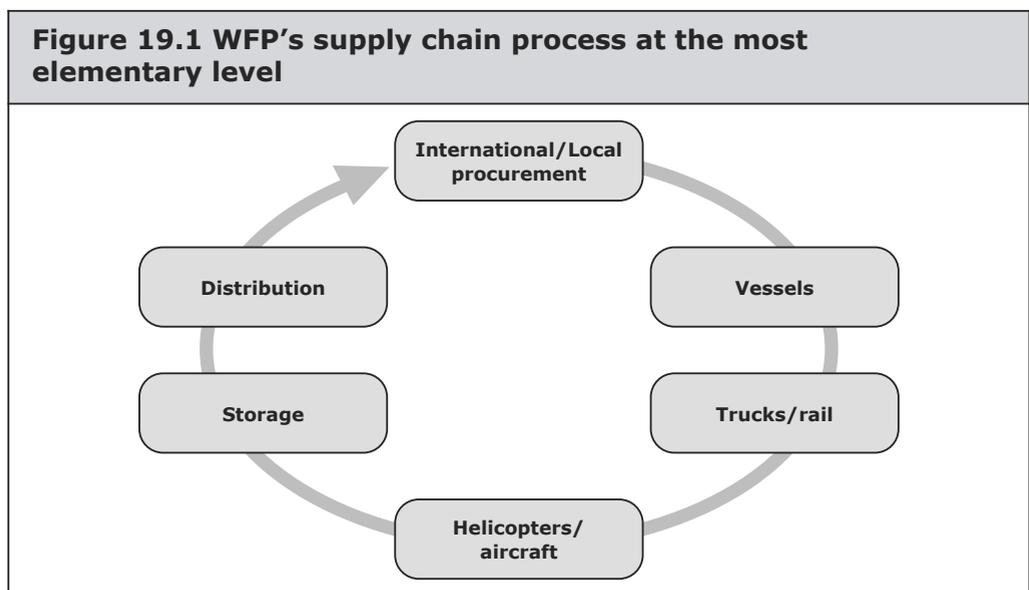
the food subsidies, and to quantify the administrative costs, leakages and wastage associated with each stage of the system's supply chain, which comprises mainly wheat flour/balady bread and ration card commodities. In March 2010, the minister announced the government's intention to consolidate the scattered production of subsidized balady bread into a single industry, with mega-mills and bakeries located at ports and outside cities, in line with recommendations made by the joint WFP/TNT case study of the supply chain.

The primary objective of WFP's logistics activities is to ensure that commodities are transported in the most efficient, timely and cost-effective manner (WFP, Transport Manual, section 1.2). To achieve this objective, WFP Logistics:

- maintains strategically pre-positioned stocks of operational support equipment and ready-to-eat food items that can be deployed quickly;
- maintains emergency staff rosters and standby partnerships for the immediate deployment of technical experts;
- mobilizes assets, including all-terrain trucks, helicopters, aircraft, vessels and landing craft;
- provides strategic airlifts, including on behalf of other organizations, for the transport of relief cargo.

2.2 Core activities

The supply chain shown in Figure 19.1 illustrates WFP's core logistics activities: procurement, transportation, storage and distribution.



Procurement

For WFP, the food aid supply chain begins with procurement – the purchasing of food/commodities that are appropriate for those who need it/them and that can be made available quickly and cost-efficiently. Whenever possible, WFP buys food locally or regionally and mainly from developing countries, while strictly maintaining high standards of quality. Approximately half the food WFP distributes is produced in the country or region where it is needed. Procurement in countries that receive WFP assistance, and in developing countries in general, can have the added benefit of contributing to national economies, benefitting farmers, producers, traders and food processors. It can also encourage the development of local infrastructure, such as transport, warehousing, quality surveillance and technical services.

Shipping

For shifting millions of tons of food across the world, ships will continue to be the staple means of transport for the foreseeable future, even as WFP increases its local and regional purchases. WFP's shipping service transported more than 2.71 million mt of food aid in 2009, chartering 112 vessels and filling 55,000 20-foot containers. At any time, the shipping unit is managing a floating stock of more than 300,000 mt of food, some of which can be diverted from its original destination as part of a first-wave deployment in an emergency. This flexibility was vital, for example, in the early days after the Haiti earthquake in 2010 and in the Indian Ocean tsunami, when WFP logistics took the lead in shipping, airlifting and trucking thousands of tons of food and other supplies into affected areas.

Surface transport

At any time, WFP has about 5,000 vehicles, operated by local transporters, on the road. If local markets lack the necessary vehicles, WFP establishes its own fleet. If existing warehouses are insufficient, WFP erects its own. Where seasonal flooding is likely to make roads impassable, WFP pre-positions food to last until the waters subside.

In land-locked regions of sub-Saharan Africa, home to millions of WFP's beneficiaries, trucking is the most effective way of delivering aid. WFP Logistics is constantly seeking new overland routes and operational solutions to reduce costs and speed up and simplify the supply chain.

In mid-2004, WFP achieved a major breakthrough in supplying refugees from the Darfur conflict in camps in eastern Chad, when it reached agreement with the Government of the Libyan Arab Jamahiriya to open a 2,800 km land corridor across the Sahara desert, from the port of Benghazi; since then, more

than 208,000 mt have travelled through this Libyan corridor.

In countries such as the Sudan and the Democratic Republic of the Congo, WFP undertakes emergency rehabilitation projects to ensure that surface transport routes remain open to the extent possible, thereby reducing transport costs and assisting timely deliveries.

2.3 Inter-agency logistics services

United Nations Humanitarian Air Service (UNHAS)

When transporting life-saving supplies quickly to remote, inaccessible or hostile areas, or providing safe transport for relief workers, WFP often relies on aviation. In 2003, the High-Level Committee on Management mandated WFP to manage aviation services for all United Nations agencies, non-governmental organizations (NGOs) and implementing partners. This led to WFP's founding of UNHAS. WFP Aviation regularly charters fixed- and rotary-wing aircraft, ranging from the 12-seater Cessna caravan to the Antonov-124 freighter and the MI-26 helicopter, with payloads of 120 and 20 mt respectively. In 2009, WFP Aviation transported 324,000 passengers and 12,400 mt of food and other supplies to more than 200 destinations in 14 countries, and carried out 135 medical and 782 security evacuations.

In 2009, UNHAS served more than 700 United Nations agencies, NGOs, international organizations, donors, media and diplomatic personnel. In the most insecure areas, WFP Aviation provides a safer, quicker and cheaper transport option for humanitarian workers reaching beneficiaries, conducting assessments, monitoring projects, and mobilizing resources through donor and media visits. The problem with air supply, however, is the extremely high cost, which is many times higher than those for delivering goods by train, barge or road.

United Nations Humanitarian Response Depot (UNHRD) network

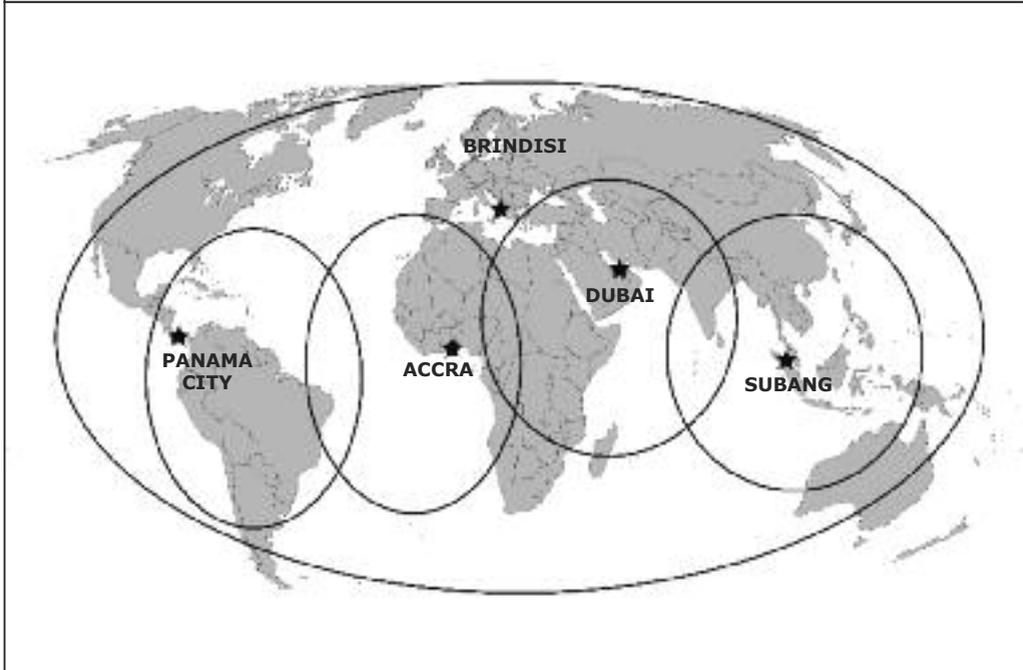
Moving cargo across the world is time-consuming. Since 2003, WFP has been working to reduce response time by establishing five strategic locations around the world for storing essential relief items for WFP and the wider humanitarian community.

The first UNHRD was set up in Brindisi, southeast Italy, in 2000, for stockpiling rapid-response and survival equipment and emergency shipments of food supplies, ready to send anywhere in the world within 48 hours.

Building on UNHRD Brindisi's success in responding to sudden-onset emergencies, WFP has established four additional humanitarian response depots (HRDs): Panama City, Accra in Ghana, Dubai City, and Subang in Malaysia. The UNHRD network supports WFP's corporate goal of being prepared to respond

to four large-scale emergencies at any time, and supports the emergency response efforts of United Nations, international, government and non-governmental organizations.

Figure 19.2 UNHRD network



WFP has standardized the design, stocks and operational protocols of depots throughout the network:

- *Strategic location:* All HRDs are located on the premises of an international airport, close to seaport and surface transport hubs.
- *Free storage:* The UNHRD network offers free storage to United Nations, international, government and non-governmental organizations.
- *Design:* The network offers state-of-the-art warehouses with features such as cold chain and assembly facilities. The depots have at least 5,000 m² of closed storage, 5,000 m² of open storage and ample space for offices and training.
- *Real-time stock tracking:* All depots have advanced warehouse management systems that provide real-time status reports of stocks, for better supply chain visibility and faster decision-making.

- *Procurement arrangements:* WFP has special arrangements with suppliers to provide stocks such as virtual and white stocks – which are stored at UNHRD premises at the supplier’s risk – that can be acquired through the UNHRD network at competitive rates.
- *Training facilities:* Depots offer fully equipped indoor/outdoor training facilities suitable for conducting emergency simulations.
- *Staging areas:* Depots serve as regional staging areas through which all in-kind bilateral aid can be channelled and transported to crisis areas, creating a “pull” rather than a “push” system.

In 2009, the network performed nearly 455 shipments on behalf of more than 25 organizations; an increase of more than 200 percent since 2008.

As well as responding with emergency relief items within 24 to 48 hours of an emergency anywhere in the world, the HRDs also guarantee cost benefits through their proximity to potential crisis theatres, thus reducing transport costs. In the Myanmar emergency, it cost US\$9,180 per metric ton to transport relief items from HRD Brindisi, compared with US\$4,900 from HRD Dubai.

The Haiti earthquake emergency of 2010 demonstrates the strength of the network. Four of the five HRDs were activated immediately after the earthquake, with HRD Panama serving as the staging point and frontline responder for augmenting logistics and transporting operational support equipment as quickly as possible into the affected areas. A total of 35 shipments of humanitarian relief items were sent, including prefabricated office and accommodation units, mobile warehouses, toolkits, blankets, jerry cans, generators, electrical distribution kits, and ablution units.

The Logistics Cluster

WFP’s expertise in logistics meant that in 2005, as part of United Nations reform, it was mandated to lead logistics operations whenever a humanitarian emergency requires a joint response from United Nations agencies and the humanitarian community. The Logistics Cluster is a group of agencies and organizations working together. As the global lead of this cluster, WFP is responsible for ensuring that each emergency has a well-coordinated, efficient and effective logistics response, not just for WFP and its food distributions, but also for the larger humanitarian community.

The cluster approach aims to strengthen overall response capacity and the effectiveness of responses through:

- (i) ensuring sufficient global capacity is built up and maintained, including increased preparedness and technical capacity; common standards,

- monitoring and advocacy, surge capacity and standby rosters; joint training, joint stockpiles and pooled resources; and adequate, timely and flexible humanitarian financing;
- (ii) ensuring predictable leadership;
 - (iii) reinforcing the concept of partnerships – clusters – among United Nations agencies, the International Red Cross and Red Crescent movement, international organizations and NGOs;
 - (iv) strengthening accountability;
 - (v) improving strategic field-level coordination and prioritization in specific sectors/areas of response.

To ensure that life-saving relief cargo reaches affected populations in time, WFP leads the Logistics Cluster by coordinating logistics and, if needed, augmenting logistics infrastructure and providing common logistics services for the humanitarian community. Since its first activation during the Pakistan earthquake response in 2005, the cluster has supported the response in more than 30 emergency operations and has trained more than 200 logisticians from 30 organizations, to strengthen preparedness and build capacity for more effective and coordinated responses.

The cluster team gathers data on logistics networks around the world, identifying the major players in each region, the coordination structures that are in place, and where problems might arise in an emergency. When an emergency occurs, the cluster then deploys a team, including members of other United Nations agencies and NGOs, to assess the situation and decide on the scale of logistics response, whether it be simply collecting and sharing information, or making a whole fleet of aircraft, vessels and trucks available for use by the humanitarian community, as was the case during responses to the Myanmar cyclone in 2008, the Philippines flood in 2009, and the Haiti earthquake in 2010.

The response to Cyclone Nargis in Myanmar demonstrated the strength of this system. The Logistics Cluster comprised 39 organizations using common logistics services, including an air-bridge between Bangkok and Yangon and surface transport inside Myanmar, which transported 15,856 mt of life-saving humanitarian cargo within three months: 4,005 mt of relief items were flown into Yangon via the air-bridge, in 203 rotations; 170 containers moved a total of 534 mt of cargo by sea; helicopters made 918 rotations to 156 remote locations in Myanmar, carrying 912 mt of food and non-food items, such as shelter, medical and hygiene materials, family kits and water purification units; and 10,405 mt of relief items were delivered by road and boat/barge.

Service provision

In 2009, WFP provided logistics services to humanitarian organizations in 40 countries, increasing its partnerships and coordination with other humanitarian actors and making more efficient use of its own logistics capacity in procurement, shipping, aviation, warehousing and surface transport.

2.4 The importance of partnerships

WFP could not undertake logistics at this scale on its own. Partnerships among humanitarian participants are critical to effective responses in emergencies. Much of WFP's success over the years has been due to the strength of its partnerships with governments, other United Nations agencies, the NGO community and, increasingly, the private sector.

WFP utilizes private sector partners to increase the effectiveness of emergency operations without adding administrative burdens. Major private partners are the Boston Consulting Group, TNT, Caterpillar, Citigroup, Unilever, DSM, the Vodafone Group Foundation, the United Nations Foundation, the Bill and Melinda Gates Foundation, the ELMA Relief Foundation and the Howard G. Buffett Foundation.

Private sector partners also contribute to WFP's coordination of logistics for the wider humanitarian community. Logistics Cluster operations are supported by logistics emergency teams (LETs) established by TNT, UPS and Agility. In 2008, 11 international and 200 national staff from LET-supported emergency operations were deployed, including in China, Haiti, India, Mozambique and Myanmar.

The private sector raised more than US\$1 million for the WFP emergency operation in the Philippines following flooding caused by a series of tropical storms. TNT dispatched two cargo flights of high-energy biscuits to the disaster zone. Following the Padang earthquake in Indonesia, rapid response teams, trained through support from Vodafone and the United Nations Foundation, helped establish information and communications technology and logistics support.

Standby partnerships

Since 1996, WFP has relied increasingly on agreements with standby partners to augment its emergency response capacity. These partners provide technical expertise in service areas, primarily logistics, aviation, information management and information and communications technology.

In 2009, WFP's operations were augmented by 106 deployments of personnel provided by standby partners; of these, 104 were in-kind contributions. The deployments, with an estimated value of US\$7.8 million, came from a range of international NGOs, governments and commercial organizations. Several of WFP's standby partners deploy full service packages of

staff and equipment, such as the self-sustaining base camp support modules sent to Haiti immediately after the earthquake – comprising tents for accommodation, dining, showers, ablutions and recreation plus support staff to run the camp – and the truck fleet, equipped with management staff and maintenance support, deployed in eastern Congo.

2.5 Information management and training

WFP has long recognized that good information systems are the key to effective and efficient supply chain management. It aims to achieve a flow of information from the point where requirements are needed directly to the supplier's logistics and replenishment system. Table 19.1 summarizes the information products, operational tools and training available for WFP staff and partners.

Table 19.1 Information products, operational tools and training for WFP staff and partners

Products and tools	Training
<ul style="list-style-type: none"> • Logistics Operational Guide • UNHRD Warehouse Management System • Fleet Management System for WFP truck operations • Relief Items Tracking Application • Flight Management Application • Customs Information Guide • Transport Manual, Warehouse Manual, Food Storage Manual • Monthly WFP Logistics Bulletins, sent to all logistics officers globally • WFP Logistics Blog • Logistics articles on the corporate website • Internal and external logistics portals 	<ul style="list-style-type: none"> • Logistics response training • Emergency response training • Technical field operation training • Surface transport contracting and port operations management training • Service mindset e-learning training, containing theory, tools and exercises for putting service at the centre WFP's way of working • Medical logistics training, on the logistics handling of medical items • Continued training on cluster awareness and deployments • Certification in Humanitarian Logistics, through the Fitz Institute • Management training

3. High-stake logistics

3.1 Global increases in the demand for logistics capacity

Growing humanitarian needs are driving up the demand for logistics capacity. WFP's operation of its logistics apparatus is evolving in line with the increasing demand for its resources, in support of not only WFP operations, but also those of other United Nations agencies, NGOs, international organizations and governments.

The following subsections highlight examples of growing humanitarian needs and their impact on WFP logistics.

Rising freight costs: sky sails save fuel

In 2009, WFP chartered two ships powered by sky sails to ship cargoes from Europe to Asia. A sky sail is a magnum-size kite that uses wind power to provide pulling power, so the ship's engines can work on reduced power and save fuel. Under ideal weather conditions, the use of sky sails can reduce fuel consumption by 30 percent, which equates to 4.5 mt of fuel per day. With a 30-day average transit time, this dramatically reduces WFP's carbon footprint and transport costs.

Constrained food supply: benefits of real-time tracking of WFP containers

WFP moves approximately 55,000 containers through more than 150 ports every year, assisted by 67 international and regional shipping lines. In 2009, it initiated a pilot system that allows it to track and monitor the movement of containers. Users can pull detailed reporting schedules and updates directly from the system, and WFP hopes it will soon be able to monitor more than 90 percent of its shipping traffic. The system has already shown its worth: a delay in the delivery of pulses to Port Sudan for relief operations in Darfur was identified while the pulses were still in transit, and other stocks could be redirected to fill the gap and maintain the pipeline.

Constrained food supply: pre-positioning and advance financing

WFP uses advance financing mechanisms to ensure regular food supplies in particularly high-risk areas. For example, in February 2010, WFP's early warning system highlighted the risk that the hunger season in the eastern Sahel area of West Africa was going to occur two to three months earlier than usual, owing to poor rainfall in 2009. Advance financing mechanisms were activated to ensure that life-saving food commodities were delivered on time, and could be pre-positioned prior to commencement of the rainy season in June.

In May 2009, as in every year, WFP began dispatching food to areas of

Afghanistan that would be cut off by snow in winter. Although the Afghan winter does not start until October, it is vital to start pre-positioning food early in areas such as Darwaz, in the remote northeast, where it takes months to deliver relatively small amounts. Cut off from the rest of Afghanistan by a 5 km wall of mountains, Darwaz can only be reached by boat across the Amu Darya River from Tajikistan. An NGO took the food across the river in small rubber boats that could transport only 1 mt at a time. More than 1,000 boat trips were needed, navigating their way through strong river currents, frequent border closures and complex customs paperwork. When the food reached the Afghan side of the river, it was loaded on to donkey caravans, which carried it up steep mountains to 70 final distribution points. Darwaz is just one of almost 200 districts in Afghanistan where food is pre-positioned each year for winter.

Rising food and fuel prices: the impact on WFP's logistics operations

For WFP, the overall cost of feeding a hungry person was an average of 50 percent higher in 2007 than in 2002. The confluence of high oil prices and high world prices for grains created a challenging operating environment given the large scale of WFP's logistics apparatus and purchases on the open market. Transport costs contributed to the cost increase, with the price of oil rising by 165 percent and freight rates by 40 percent. In 2007, WFP transported 2 million mt of food assistance by sea at a cost of US\$235 million. It managed to obtain competitive rates despite volatility due to rising fuel prices and an imbalance in cargo supply and demand. WFP sometimes used this imbalance to its advantage, such as when it was able to move rice from Karachi to Bangkok at US\$1 per metric ton.

WFP has also offset rising transport costs by supporting the rehabilitation of railways and roads in countries where it operates. For example, in Southern Sudan, WFP manages a large-scale project to improve road access and increase the transport capacity of the road network. In addition to benefitting the local economy as a whole, these improvements have had a direct impact on the costs of WFP deliveries. With 2,732 km of road rehabilitated, ten major bridges installed and 367,284 m² of mined area cleared, WFP's convoy turnaround times have improved by 100 percent, trucking capacity in the region has increased, and transport rates have gone down. Improved road access allows the pre-positioning of stocks ahead of the rains, reducing the need for airdrops by 90 percent – they occur only when roads become inaccessible during the rainy season – and resulting in decreased transporters' rates. For example, for the April to November rainy season, transporter rates decreased from US\$0.44/km/mt in 2007 to US\$0.34 in 2009.

3.2 Risk management

WFP's core business is responding to complex emergencies. It can seldom choose not to work in these environments, and very rarely stops or suspends operations – only in response to extreme violence or the host government's refusal to allow aid. WFP can therefore not avoid risk, and must manage it through methods of transferral, reduction or acceptance.

WFP recognizes that a critical factor in risk management is the ability and willingness to alter existing mitigation measures quickly to adapt to any change in the risk. Any risk management solution must comply with WFP's core humanitarian principles of neutrality and impartiality: WFP cannot take, or be perceived to be associated with, any side in a conflict, and aid is provided on a strictly non-political basis. The provision of assistance is based purely on need, with no group, people or area being favoured.

These principles are not only ideals, but also practical risk management. Many armed groups view the humanitarian community as having political motives. Any perceived lowering of standards of neutrality and impartiality would reduce these groups' acceptance of WFP, risking staff safety and preventing food from reaching the population.

Complex operating environments and their challenges

In complex environments, WFP's operations are often larger than any of the other actors in the country. In Somalia, for example, WFP was forced to expand its operation 12-fold between 2005 and 2009. By mid-2009, it was distributing 50,000 mt of food to more than 3 million people, about half the population, every month. This was delivered, often in convoys of more than 100 trucks, to more than 1,000 distribution sites across the country. Such a scale may preclude some risk management options available to smaller ventures.

The following highly volatile situations are characterized by a number of factors that heighten the risks for WFP.

Insecurity perpetuated by State and non-State actors: Fragmented conflicts with multiple opposing sides, regularly changing front lines, and weak central governments are common. Ideological and ethnic divisions complicate matters further. Sides often prevent aid from reaching people in their enemies' territory, while trying publicly to associate themselves with WFP. Agreements with leaderships often fail to safeguard against attack or looting from their militias. In some cases, terrorist groups establish a presence and view the humanitarian community as a legitimate target, as witnessed by the attacks on United Nations offices in Baghdad, Algiers and Peshawar in recent years.

A highly polarized and intrusive political context: To gain access, WFP may have to talk to all the sides in a conflict. This often earns WFP criticism from the country's government, elements of the media, and political bodies. At the same time, donors and the media may put pressure on WFP to respond to the emergency without talking to the rebels controlling the area. In such instances, WFP is almost certain to receive public criticism from one side or another.

Lack of access: Insecurity regularly results in WFP staff being unable to travel to the areas they need to reach, sometimes for considerable periods. Needs assessments and monitoring of the delivery, distribution and impact of food aid cannot be carried out in person, and alternative remote-controlled methods must be sought. This lack of access extends to the international NGOs that usually undertake food distributions for WFP. This results in reliance on local NGOs whose capacity is smaller, forcing WFP to coordinate the use of many more NGOs than normal and to deal with reduced quality and timeliness of reporting.

Limited infrastructure and deployable assets: Chronic conflict results in damage and decay to infrastructure. Trucks are scarce, old and often controlled by the few people with the finances needed to undertake WFP operations. Some of these people may have links to parties to the conflict, and attempts to introduce additional trucks into the market are violently opposed. Transporters know that humanitarian aid will continue regardless of the challenges, so charge exorbitant rates. These factors complicate attempts to diversify the transporters used, and affect the wider humanitarian community whose cargo WFP transports through its leadership of the Logistics Cluster.

Increased risk of losses: Attacks on and looting and taxing of aid are common, and seen as lucrative and legitimate by many armed parties. There is high risk of loss in these environments, and WFP's tolerance for loss is limited by its public nature and funding: donors expect minimal losses, and instances of loss are reported by the media, causing reputational damage for WFP. There is a widespread expectation that WFP will lose no more in a complex environment than it would in a stable setting.

Product "branding": Donors usually require that the aid they donate to WFP be packaged with their own markings. In some complex environments, there are elements that oppose interventions by certain nations, and that block aid with these States' markings. WFP therefore faces a dilemma between gaining access to an area/population and fulfilling its donors' requirements. Donors sometimes

allow aid to be unmarked, but WFP does not generally have the freedom to “re-brand” the products it distributes.

Short budget cycles: Although WFP may be present in a country for decades, the life span of a particular project is usually only one to three years, after which a new intervention must be approved. There is therefore little scope for planning beyond a relatively short time horizon.

Existing risk management in complex environments

WFP has corporate controls that it implements to the extent possible in all operations. These controls, and challenges in their implementation in complex environments, are highlighted in the following paragraphs.

Operational data: All WFP interventions are based on detailed needs assessments that define the scope – the location and number of beneficiaries – and composition of the required food aid supply. Sometimes, owing to insecurity, assessments are undertaken using indirect means and secondary or tertiary data.

Contracting: WFP has corporate contracting guidelines. Contracts are approved by the WFP country director, with larger ones requiring clearance from Headquarters. Agreements with NGOs for distributing food to beneficiaries follow similar guidelines. Prior to the shortlisting or contracting of a company, its name and those of its shareholders are checked against the United Nations 1267 sanctions list, and a financial and operational analysis is undertaken. This covers financial records, previous experience and assets owned/controlled. To ensure that WFP can depend on a pool of companies with a minimum level of capacity/reliability, it adds companies through annual shortlisting exercises.

Commodity tracking: WFP’s Commodity Movement, Processing and Analysis System (COMPAS) tracks food all down the supply chain, from when it is procured or donated in kind, to when it reaches the hungry poor. A worldwide network of nearly 400 data entry stations, documenting millions of dispatches and receipts, logs food movements from thousands of warehouses around the world, entering data on everything from waybills to distribution reports, so that cargo movements and stocks are visible from everywhere.

Ensuring the prompt and accurate registration of millions of transactions in COMPAS, to provide up-to-date reports for project managers, emergency task forces and donors, is a huge challenge, particularly during an emergency when access to the information required can be difficult. COMPAS is vulnerable to the breakdowns/delays experienced in any information technology system operating

in a remote environment. The heavy data entry component requires a considerable number of staff. WFP intends to replace COMPAS with a SAP-based product that will improve data consistency and timeliness, and allow the incorporation of commodity tracking data from donors and NGOs, to provide a single picture of movements from time of donation up to point of distribution.

Distribution monitoring: WFP deploys food aid monitors at distribution sites to oversee the delivery of food by transporters, its hand-over to NGOs, and its distribution to the population, by NGOs. In insecure areas, it is not always possible to deploy food aid monitors, resulting in reliance on the integrity and accuracy of NGO reporting. NGOs are required to provide regular reports on the food they have received and distributed; the figures are compared against those in COMPAS. NGOs are paid for the amount of food they report distributing, once COMPAS confirms this. When access is possible, WFP staff visit distribution sites and beneficiaries after distributions to check the performance of the distribution, any problems occurring afterwards, the effects of the food aid on the area's food security situation, and the need for adjustments in future distributions.

Annual auditing: Operations are audited once every two years, or annually in complex environments. WFP's Office of the Inspector General, reporting directly to the Executive Director, follows up on any alleged discrepancies. However, lack of access to an area hinders audit teams, resulting in greater reliance on secondary data.

Innovative risk management practices

WFP recognizes that it faces increasing risks in complex environments, and that corporate risk management approaches and techniques require continuous analysis and reappraisal to make them as effective and applicable as possible in the most complex of its interventions. In early 2010, WFP Logistics embarked on a review of new and innovative risk management techniques that it may consider putting into practice to bolster existing safeguards. In several complex environments, WFP has already devised specific risk management measures to enhance the corporate system. The following are some of the risk management technologies or methods which WFP is currently using or exploring for feasibility of possible future use.

Monitoring: In inaccessible areas of Afghanistan, WFP has outsourced needs assessments and monitoring. Programme assistance teams that are not subject to WFP contract or United Nations travel restrictions have been trained in the same skills as WFP food aid monitors and are tasked directly by WFP staff,

thereby incorporating them operationally, if not contractually, into WFP efforts. This has improved the implementation and accountability of WFP's projects. In parts of Somalia, a system of triangulation is used, whereby information on distributions is collected from transporters, NGOs and communities, whose reports are cross-checked against each other. Satellite imagery is used to track populations, and harvest yields to refine figures for future distributions.

Audit: Compliance teams of WFP technical experts work with country offices in complex environments to analyse the offices' range of systems, including financial, supply chain and distribution monitoring, and to ensure that standards meet corporate levels. Compliance team members also learn about the specific challenges faced by these operations, and bring this information back to Headquarters to be factored into corporate safeguards.

Transportation: Piracy greatly reduced the number of vessels willing to sail to Somalia, threatening to halt WFP's deliveries to the country. Ninety percent of WFP food assistance for Somalia is shipped by sea from Mombasa and ports in South Africa, but the waters off Somalia are among the most dangerous in the world: pirates made 60 attacks on shipping in 2008, the worst year on record in the region. In November 2007, for the first time in its history, ships carrying WFP food travelled to Somalia under the escort of warships, from France, Canada, Denmark and the Netherlands. In December 2008, the European Union made a commitment to provide escorts for WFP for up to a year. Naval escorts have been an effective deterrent against the pirates: ship owners reported that the presence of a warship deterred pirates from attacking ships in the area. Without escorts, WFP's maritime supply route would have been under threat; when naval escorts were temporarily suspended for a short period, some shippers refused to load WFP food for Somalia. In August 2008, the United Nations Security Council commended the governments that had provided naval escorts for humanitarian vessels and called on Member States to continue providing such escorts.

WFP recovers 100 percent of the cost, insurance, freight (CIF) value of any food lost, which transfers financial liability to the transporter, although the risk of reputational damage remains. In Somalia, WFP levies security bonds on transporters, which deposit 30 percent of the CIF value of all the cargo in their custody into WFP's bank until delivery of the food is confirmed. WFP therefore already holds 30 percent of any monies it may need to recoup. Instances of losses and looting have fallen substantially, with transporters making greater efforts to ensure that looting does not occur, or that food is recovered quickly from looters.

Media: In several operations, WFP has recruited local media officers who speak the local language and have knowledge of local media structures, personalities and agendas. They allow WFP to communicate to the population through the full range of media, using the most appropriate messaging.

Tracking: Bar code and radio frequency identification (RFID) technologies serve similar functions. Both can be attached to a product, and contain information that can be collected through either using a scanner, such as at supermarket checkouts, or emitting radio waves for a short distance. While bar codes are printed on the outside of packaging and can be damaged, RFID chips are incorporated into the packaging and are therefore more durable. WFP could use either to serve the same tracking function as COMPAS, with bar codes/RFID chips being scanned at each link in the supply chain. A benefit would be the speed at which information is uploaded, as manual data entry is no longer required. It would also allow tracking at the bag/carton level, rather than the batch level as is currently the case. At present, WFP knows the number of bags it has from a particular batch, but cannot trace the progress of a specific bag. However, it is unclear whether this level of detail is required for the efficient and effective delivery of large quantities of homogeneous product. Although, for example, every parcel that DHL delivers is unique and destined for a specific address, WFP operations usually deliver no more than five commodities, and deliveries are made in batches.

Although the cost of the technology has decreased over recent years, and the durability of RFID chips overcomes the problems of unreadable bar codes, potential drawbacks remain. The technology requires that a scanner for reading the information be present at each distribution site. Unless considerable numbers of scanners are purchased, the number of final delivery points – the last point in the WFP supply chain – that could receive distributions at the same time would be limited to the number of available scanners. In Somalia, WFP stencilled a code on to each bag destined for the inaccessible area of Afgoi, with details of the transporter, distributing NGO and distribution site. By reading the codes on bags being sold in markets across Somalia, it was possible to tell how much food was coming from Afgoi, which distribution site it was coming from, and to which markets it was being taken. This helped identify the percentage of commercially sold WFP food that came from Afgoi. However, systems such as these cannot distinguish between food aid that has been stolen to sell and that being sold legitimately by the beneficiary who received it.

A more serious problem is the negative attitude of many armed groups in countries such as Somalia towards the use of technologies of this kind. Some agencies caught using Global Positioning Systems (GPS) and Thuraya satellite phones have been attacked and expelled from Somalia, accused of spying. The

deployment of any sort of electronic tracking system in an environment such as Somalia therefore has the potential to undermine WFP's neutrality and impair its security and access.

WFP introduced GPS tracking devices on its own trucks, but the majority of its transport is carried out by local trucks, owing to the vast number of vehicles required and the desire to promote growth of the local economy. It is not possible to apply GPS tracking technology to ever-changing fleets of local trucks, which may work for WFP only intermittently. However, there is scope for considering the implementation of GPS tracking on local fleets that are dedicated to WFP operations.

Technology: Information technology initiatives are under way to link the supply chains of donors, WFP and NGOs. An Emergency Preparedness Integration Centre system, currently under design, will integrate applications such as communications, a barcode/RFID reader and GPS into a single device. This will allow NGO partners to enter distribution data directly into the WFP system, although certain organizational alterations will be required first.

A planned upgrade of WFP's FoodSat satellite communication system will extend the service from country and regional offices to all locations where WFP works, and allow the implementation of more advanced technological solutions.

Educating the market: Commercial companies make considerable efforts to prepare the market for the introduction of a new or updated product, so as to gain the widest acceptance possible. WFP has established methods for sensitizing communities and beneficiaries about the rations they can expect, but there may also be scope to learn from other organizations – whether humanitarian or not – working in similar complex environments about how to inform host governments, the media and the public at large on major issues relating to WFP, thereby pre-empting potential critics of WFP by providing them with full information. Issues such as food quality, new or unfamiliar food types, and WFP's adherence to humanitarian principles could be addressed in this way.

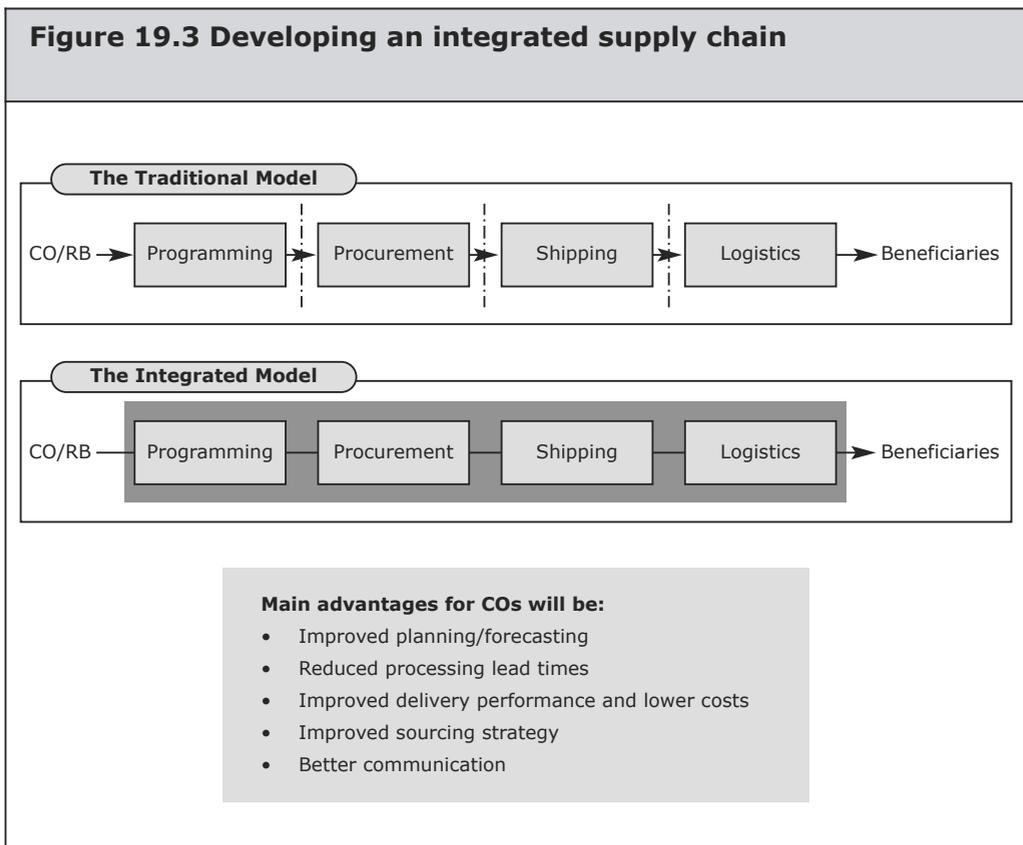
Outsourcing: Many companies and militaries choose to transfer risk through outsourcing functions. WFP does something similar by using NGOs to implement the distribution phase of operations. In Afghanistan the food aid monitor role has been outsourced to externally contracted staff in those areas of the country with the worst security and access. As inaccessibility for WFP staff continues to be a key characteristic of operations in many complex environments, further discussion of the possibility and suitability of outsourcing assessment, sensitization and monitoring functions may be useful.

3.3 Integration of WFP's supply chain

All supply chain actors within WFP – from the Resource Mobilization to the Programming, Procurement and Logistics units at Headquarters, regional bureaux and country offices – have one overarching objective: to meet beneficiaries' needs. This requires a reliable, agile, scalable supply chain with the capacity to adapt timely and efficiently to different types of requirements.

The different actors in WFP's supply chain take related but independent decisions to meet country offices' requirements. However, the best decision for an individual unit may not necessarily be the optimal decision for the overall process. Decisions are best reached through an integrated supply chain.

Work to develop an integrated supply chain started in late 2004, supported by Boston Consulting Group. Since then, some recommendations regarding resourcing, such as working capital financing, have been implemented, and other activities regarding planning and execution are evolving.



Source: Devised by Boston Consulting Group in cooperation with WFP.

Other cross-divisional initiatives have had positive impacts on WFP's operational efficiency:

- The Advanced Purchase Facility has demonstrated that lead times can be significantly reduced. Aspects of procurement, ownership and the costs of pre-positioning stocks require further discussion among all the supply chain actors.
- Use of the requested time of arrival as a realistic target for the service units – Programming, Procurement and Shipping – has led to the development of lead time standards (2006) and the release of the lead time tool (2006), which is currently being upgraded and linked to the new WFP Internal Network and Global System (WINGS) II.
- Introduction of the import parity form (2006) aims to assist country offices in their new (pre-)assignment activities. Its first objective is to justify the country office's recommended procurement type – local, regional or international. Recognizing that the form contained a number of inconsistencies, WFP Logistics, in collaboration with the Programming, Procurement, Shipping and country offices, is designing a new tool that automatically gathers information on commodity sources, prices and lead times, and presents this to the user, who can then adjust the items as necessary. Launch of the new import parity form is foreseen for July 2010.
- The Strategic Resource Allocation Committee (SRAC) was established in 2009 to oversee the strategic prioritization of resources allocation, including extra-budgetary funds and advance financing; to maintain strategic overviews of needs and shortfalls in WFP operations; and to identify the impacts of these so that areas for major appeals and fundraising can be prioritized.

These initiatives are enhancing WFP's efficiency and can be leveraged through an integrated supply chain, to achieve maximization of resources.

The most important benefit of the integration of WFP's supply chain is the timely fulfilment of beneficiaries' needs, including through the minimization of pipeline breaks. An overall vision of needs and the resources available allows the impact of the Advanced Purchase Facility to be maximized, making it an efficient rapid response system. Country offices will benefit from more reliable estimates of feasibility, lead times and costs. The combination of information availability, visibility of needs, and prioritization of resources allocation will promote quicker and more efficient responses in an emergency.

4. Looking ahead: logistics in the face of increasing challenges and complexity

WFP has supported national governments and institutions and humanitarian actors in strengthening their preparedness and response capacities through improved supply chain management and logistics. The provision of logistics services to other humanitarian organizations and governments is already an everyday activity for many WFP country offices. Where WFP has its own infrastructure, it is committed to increasing its operational efficiency and the impact on beneficiaries' lives by using excess capacity to support other organizations. By doing so, WFP is building stronger partnerships.

The Purchase for Progress (P4P) initiative will require logistics staff to manage complex collection networks for small quantities from multiple remote locations and/or to deliver training in storage and handling to farmers' organizations. As WFP pilots more electronic voucher systems, WFP Logistics will need to continue working with governments, as in the Syrian Arab Republic, to enhance their capacity to work with automated supply chains.

In countries such as Somalia and, to some extent, Afghanistan, lack of access, dilapidated and scant infrastructure, frequent scarcities of viable partners, and continual incursions into WFP's neutrality and impartiality by various parties all conspire to hamper the application of corporate norms. In such contexts, what starts as an operational risk, if not acknowledged and managed effectively, can escalate into a reputational risk.

¹ Over the years, WFP has been forced to put millions of beneficiaries in the Sudan on half rations for several weeks because donations have dried up.

20

Engaging in a multi-actor platform: WFP's experience with the Productive Safety Net Programme in Ethiopia

Fithanegest Gebru, Ugo Gentilini, Sonali Wickrema and Arega Yirga

1. Introduction¹

Global interest in social protection and safety nets has increased remarkably in recent years (Gentilini and Omamo, 2009). Among various initiatives, Ethiopia's Productive Safety Net Programme (PSNP) is emerging as a beacon of innovation for many countries in the region and beyond (Maxwell *et al.*, 2010). Launched in 2005, it has been defined as the “biggest social protection instrument in Africa and one of the biggest programmes in the world” (Save the Children, 2008: 2), and is supported by a large volume of documentation on impacts and operational arrangements.²

The purpose of this chapter, however, is not to review the evidence on the overall performance of the PSNP, but rather to look at the PSNP “with a WFP lens”, identifying WFP's main roles as one of several actors supporting the PSNP, and deriving core lessons from this engagement over time. These emerging lessons are likely to be important in not only framing the direction of future debates in Ethiopia, but also informing similar initiatives under way in other contexts.

The chapter is structured as follows: the next section lays out the evolution and features underlying the PSNP; section 3 presents core roles played by WFP as part of the multi-actor platform; and section 4 identifies lessons and challenges that emerged from the first years of PSNP implementation. The latter include a number of WFP-specific features, as well as issues of broader relevance.

2. Inside the PSNP

2.1 Origins

In early June 2003, the Prime Minister's office convened an extraordinary session of key government officials, donors, the United Nations and NGOs to initiate a major campaign to reduce hunger and food insecurity. The New Coalition for Food Security in Ethiopia was born. The Coalition was tasked with identifying strategic interventions to address and reverse the critical levels of food insecurity in Ethiopia.

The work of the Coalition was informed by the large-scale food crisis that hit Ethiopia during the course of 2002 and 2003, described as "...one of the most widespread and severe emergencies ever to strike Ethiopia." (Lautze *et al.*, 2003: 41). As the crisis worsened, the government released a new Food Security Strategy. For the first time, a Government of Ethiopia recognized openly that "unpredictable shocks do not suddenly lead to acute food insecurity unless people are already very poor, as is the case of the chronically food-insecure." This acknowledged that food crisis in Ethiopia was mainly a development problem: an inability to manage the risks associated with the erratic weather experienced by Ethiopia. And that many in rural areas actually faced chronic acute food insecurity.

Grounded in the principles of social protection, the PSNP evolved from the work of the Coalition. While responding to a humanitarian need, the PSNP's design was informed by the need to support households to better manage their risks while addressing the causes, rather than the symptoms of crisis.

2.2 Overarching features

Four core features underpin the PSNP approach and shaped its design: the PSNP's nationally led platform for harmonization; its multi-annual approach; its entitlement and productive-oriented approach; and its integration within a broader food security framework. These elements are briefly described in the following paragraphs.

(i) *A harmonized multi-actor platform, founded on strong government engagement and commitment:* Launched in 2005, the PSNP is a partnership between the Government of Ethiopia and a group of donors.³ Donors providing cash have pooled their financing in a World Bank multi-donor trust fund that provides direct budgetary support to the government. Those providing food each channel their food separately, although the food remains within the unified budgetary framework for a single government-led programme coordinated by the Food Security Coordination Directorate (FSCD) of the Ministry of Agriculture and Rural Development. All partners have also agreed and strictly adhere to a

unified stream of technical advice and monitoring and evaluation.

(ii) *Multi-annual and predictable approach to planning and financing*: The PSNP is designed to move away from the previous inadequate response of annual relief appeals for emergency food assistance to address chronic acute food insecurity. Instead, its primary design feature is its provision of multi-annual, predictable assistance to an identified group of the chronically food-insecure, to help them manage risks and overcome their food insecurity. This includes using recently established forward-looking funding modalities, such as integrated risk financing mechanisms.

(iii) *Entitlement-based and productive-oriented approach*: As households' perceptions of risk are a determinant of their participation in development opportunities, the PSNP attaches particular importance to ensuring that beneficiaries receive adequate and timely transfers. The transfers, in cash or food, are designed to manage the food risk of the households, and are provided as part of asset creation or productive activities, whenever possible. According to the Programme Implementation Manual (PIM), the objectives of the PSNP are "to provide transfers to the food-insecure population in chronically food-insecure *woredas* [districts] in a way that prevents asset depletion at the household level and creates assets at the community level" (Government of Ethiopia, 2006: 1). As a result, 80 percent of beneficiaries are included in public works programmes, and the remaining 20 percent – those unable to work, orphans, and pregnant and lactating women – receive direct support or unconditional transfers.

(iv) *Part of a broader strategy to enhance food security*: The PSNP began as a component of the government's food security strategy, and is now fully integrated into one overarching Food Security Programme 2010–2014 (Government of Ethiopia, 2009), which includes the PSNP, Complementary Community Investments (CCI), the Household Asset Building Programme (HABP), and a resettlement programme. Together, these form a package of targeted interventions designed to support beneficiaries in achieving sustainable food security, and thereby decreasing their reliance on publicly provided assistance through "graduation".⁴

2.3 An evolving approach

Over the past five years, although there has not been any structural reorientation of the PSNP's conceptual approach and operational arrangements, some important streams of change are clearly discernible. It could be suggested that five main shifts are putting the PSNP on to a more convincing developmental path. These features, summarized in Table 20.1, revolve around transfer selection, the approach used for public works, the system's response to additional

needs, the inclusion of communities in the planning stage, and linkages to other food security interventions.

Table 20.1 Shifts in the PSNP approach, 2005 to 2009	
2005	2009
Cash-first principle	Pragmatic use of cash, food and mixes, based on prevailing conditions
Focus on transfer composition and delivery: entitlement approach	More attention to assets: initial steps towards incentive-oriented approach
Contingency plans and traditional emergency response system	Risk financing system
Focus on building public assets at the community level	More public and private community and household assets: links to CCI
Graduation through linkages to other food security interventions	Incorporation of other food security interventions: HABP

Among these developments, an area of lively debate has been transfer selection. This debate has become far less polarized than it was a few years ago, although – as discussed in the following sections – some operational issues remain. In general, the debate on what to give – primarily cash transfers – has shifted towards a more pragmatic and realistic discussion of what is most appropriate in a given context and time.

At the same time, the sharp focus on the mechanics of selecting and guaranteeing the transfers – essentially the entitlement approach – may have overlooked a number of critical issues. These include technical standards and community bottom-up ownership – to ensure that communities can fruitfully engage in planning and benefiting from an intervention – which require deliberate planning, capacities and investments. These considerations are receiving renewed attention in the new Food Security Programme 2010–2014, thereby improving the prospects for wider and more sustainable impacts on food security.⁵

Funding levels and composition have also evolved significantly. The PSNP budget for 2010–2014 is more than US\$2.1 billion,⁶ representing an increase of about 50 percent from 2005–2009, when total costs were US\$1,449.2 million. When the HABP is included, the total consolidated budget is more than US\$2.2 billion (Table 20.2).

Table 20.2 PSNP and HABP budget, 2010–2014	
Component	US\$ million
PSNP	
Transfers and other costs*	1 936.2
Risk financing	160
Institutional support	77.4
Total PSNP	2 173.5
HABP	83.3
Total PSNP and HABP	2 256.8

* Other costs include contingencies, capital and administrative budget.

Source: World Bank, 2009c.

The Government of Ethiopia is expected to provide a total of US\$183 million, or about 8.4 percent of total PSNP costs.⁷ Overall, the PSNP is very significant for the Ethiopian economy: its budget constitutes about 1.2 percent of gross domestic product (GDP) – almost as much as the national budgetary allocations for health, at 1.4 percent of GDP – and about 62 percent of total *woreda* expenditures in PSNP areas (World Bank, 2009c).

3. Exploring WFP's roles

3.1 The incubation period 2002–2004: policy formulation and consensus building

In past decades, much has been written on Ethiopia and the inability of emergency food assistance to address the vulnerability that led to annual calls for relief needs. Nevertheless, it was not until 2002 that the government began to assert leadership in explicitly recognizing food crisis as a developmental problem. The New Coalition for Food Security established a multi-sector technical working group, including government, the United Nations, donors and NGOs. WFP was an active and vocal member of this group, not only because of its leading role in emergency response but given its experiences and successes with the MERET project (chapter 10). The group also included a significant focus on the available knowledge surrounding social safety nets as conceptualized by some donors (Raisin, 2003; World Bank, 2003).

The objective of the Coalition was to develop a strategy of targeted interventions that built on current successes with a pragmatic view of scaling-up what was already working on the ground. WFP had a clear advocacy role – that is, to ensure that the Coalition developed a strategy that maintained capacity for an adequate and timely response to humanitarian needs while seizing the opportunity to promote the known success of MERET in helping to manage weather-related risks and provide links to development opportunities.

The Coalition agreed to focus on the 15 million most food insecure people in Ethiopia, as identified in 2004. The strategy led to three multi-annual programmes, including: the PSNP; the Protection of Basic Services Programme supporting community-based health, education, and water/sanitation; and the Public Sector Capacity Building Programme to support regional and district administrative capacity.

Following the work of the Coalition, an initial group of donors⁸ agreed to come together to assist the government in developing a safety net – the PSNP – for the 5 to 6 million chronically food-insecure households. WFP joined the group, recognizing that this would require it to relinquish its control over the design of its main programme, the emergency operation. Nevertheless, as the PSNP proposed to take over a large part of WFP's humanitarian caseload, WFP felt that staying out of the group was not an option if humanitarian needs were to be met. Partners saw WFP's role mainly in fulfilling the interest of the government and donors in scaling up the MERET approach.

Moving from policy debate to programme design required a significant amount of consensus building among partners with disparate views. The partnership group included strong voices against food transfers, those who saw it as a necessary evil that should be phased out as soon as the PSNP cash transfers could be given everywhere. There were also clear divides within the donor group on the relative weight of entitlement versus productive aspects of the design, and on conditional versus unconditional transfers. Similarly, there were also divides between the government and donors on some of the principles of safety nets, the criteria for graduation, and aspects of community targeting and implementation of community works.

Negotiating through the different perspectives of partners to achieve a harmonized design absorbed a significant amount of staff time over an eight-month period. Senior programme staff and the country director all contributed to this process. In addition, the Ethiopia Country Office requested support from the Policy Division, especially in relation to the policy debates underlying critical design aspects of the PSNP such as the entitlement versus productive focus and the cash/food mix for transfers.

The challenges in consensus building among the donor group created rifts

that weakened the ability of partners to effectively advocate with the government on a range of design and implementation issues. This resulted in the launch of the PSNP immediately to 5 million people without some of the design aspects that most of the donors desired. Therefore, shortly after implementation began, a donor working group (DWG) was established supported by a full time team dedicated to donor coordination. A Donor Coordinator was assigned, with the rotational Donor Chair, to establish harmonized positions among the donor group and be the main interlocutor with the government.

Significant investment in coordination – full-time staff and a budget for retreats/workshops – was essential to enable the donor group to build consensus on policy, design and implementation supervision issues. Consequently, all partners agreed to suppress their individual voices with the government in favour of the collective. While a critical achievement in terms of coordination, this has led to challenges for WFP with its dual role as a partner among donors and as a United Nations agency providing capacity support to the government. See sections 3.5 and 3.7 for further discussion.

3.2 Targeting

The geographic coverage of the PSNP was determined in 2004 based on the *woredas*/districts that had received the most relief food assistance over the previous ten years. By 2009, the PSNP was targeting about 7.5 million rural people in eight regions, reaching 290 of the country's 710 *woredas*.⁹ The number of beneficiaries receiving cash or food transfers varied significantly over the implementation period 2005 to 2009, increasing by about 2.7 million in five years (Table 20.3). Of critical importance to the evolution of the PSNP was the government's decision to implement the PSNP at scale immediately, without a pilot phase.

Table 20.3 Numbers of PSNP beneficiaries, 2005 to 2009

Year	Total
2005	4 830 000
2006	7 192 072
2007	7 200 000
2008	7 575 728
2009	7 574 530

Source: Government of Ethiopia data.

Households in the selected *woredas* are targeted according to the following criteria for chronic food insecurity:

- households that faced continuous food shortages, usually with food gaps of at least three months, in the past three years and that received relief food assistance prior to commencement of the PSNP;
- households that have suddenly become more food-insecure as a result of a severe loss of assets making them unable to support themselves, in the past one to two years;
- households without family support and other means of assistance.

These targeting criteria are verified through a mix of community and administrative mechanisms, and have raised much debate. This stems partly from wider methodological and programmatic concerns regarding the use of rigid targeting criteria in contexts of pervasive food insecurity – where, in practice, household vulnerability profiles are largely similar and the distinction between chronic and transitory needs is often blurred¹⁰ (Nigussa and Mberengwa, 2009).

Study findings warning against the threat of exclusion error problems (e.g., Sharp, Brown and Teshome, 2006) were echoed by WFP’s country programme for 2007–2011, which underscored the scale of predictable food insecurity, highlighting that “... 18 million of the rural population have food gaps ranging from 1 to 12 months and there is low resilience to shocks, inadequate access to development opportunities, and a history of receiving limited long-term aid” (WFP, 2006b: 11).

Based on the MERET experience, WFP has been advocating for more participatory approaches to targeting using mechanisms that enable communities to have a voice in identifying intra-community vulnerability profiles and that emphasize the importance of community social capital in managing the collective risks posed by environmental causes. WFP has also consistently advocated for giving communities more responsibility for planning, designing and implementing programmes. In general, however, WFP’s opportunities for shaping the design of the PSNP targeting system have been limited (WFP, 2007a). Although it acknowledges the importance of community in implementing natural resource risk reduction interventions, the PSNP has retained its focus on the individual household. Targeting therefore focuses on managing the risks to households individually, through predictable multi-annual transfers or the entitlement approach, rather than collectively, through community-led natural resource rehabilitation or the productive approach.

Surveys and studies undertaken since 2005 find little or no inclusion error – people in the PSNP tend to be the poorest in their communities – but there

are significant concerns regarding exclusion errors, which were found to have two aspects. First, members of polygamous or large households were often excluded from assistance, because the transfer was insufficient to ensure an adequate diet for all household members; it has been agreed that the new Food Security Programme must cover all members of a household. The second aspect of exclusion relates to community members who are as poor as PSNP beneficiaries but not included in the programme; evidence shows that many *woredas* use the PSNP contingency fund to provide some assistance to these households. In addition, following two years of large-scale crisis in 2008 and 2009 and continued large-scale drought in 2010, it is understood that previously marginal families are likely to have fallen into chronic food insecurity. However, donors and the government have agreed that the scale of the PSNP cannot be increased to accommodate these additional households at present. It is hoped that they will be able to enter the PSNP as existing beneficiaries graduate.

Some adjustments to the targeting criteria have been made under the new Food Security Programme, and targeting will also have to reflect the pending decision regarding the “3-6-9” pilot, which envisions three, six or nine months of support to programme participants, according to their food gaps. Studies are currently gauging the feasibility and appropriateness of this approach to calibrating support.

3.3 Design and implementation of interventions

Since 2004, WFP has played an important role in developing the PIM, particularly by providing technical guidance for public works programmes. As mentioned in section 2, these interventions were primarily designed from an entitlement rather than a community planning perspective. They included such activities as gully control, and road and bridge building and maintenance, defined as “labour-intensive community-based activities which are designed to provide employment for chronically food-insecure people who have labour”¹¹ (Government of Ethiopia, 2006: 25). In this, WFP’s main contribution has been to make entitlement programmes more development-oriented, particularly by emphasizing the objectives and impacts related to watershed management, as well as to transfer entitlements.¹²

The inclusion of community-based participatory watershed development (CBPWD) guidelines as a central part of the PSNP public works programme arises from the commitment and vision of government actors, as well as WFP’s.¹³ This has led to the institutionalization of critical aspects of effective CBPWD, which were mainstreamed through the roll-out of capacity building initiatives.

WFP also contributes to the predictability of interventions. For example, before PSNP commencement, WFP helped to enhance the predictability of the

previous Employment Guarantee Scheme (EGS), a relief system for public works. This paved the way for the PSNP's current public works system.

Although WFP's ideas were not widely reflected in early programme documents, they were effective in raising awareness about important practical and technical issues, such as the issue of public works implementation on private land.¹⁴ In 2005–2006, WFP advocated for adding a note to the PIM allowing the treatment of private land under certain conditions.¹⁵ This disclaimer was instrumental in inducing the current attention to integrated watershed management, including on private land.

Finally, WFP has been proposing ways of enhancing the linkages between public works and direct support components of the PSNP, arguing that although some people are unable to *create* assets, they may still be able to *manage* them. This perspective has the potential to reduce the dichotomy that stigmatizes those receiving direct support as less productive than those engaged in physical works (Carucci, 2006). However, this approach has not aroused much response from the PSNP group, which is more concerned that implementation of direct support *requires* beneficiaries to work, rather than *encouraging* them where appropriate.

3.4 Transfer trends and composition

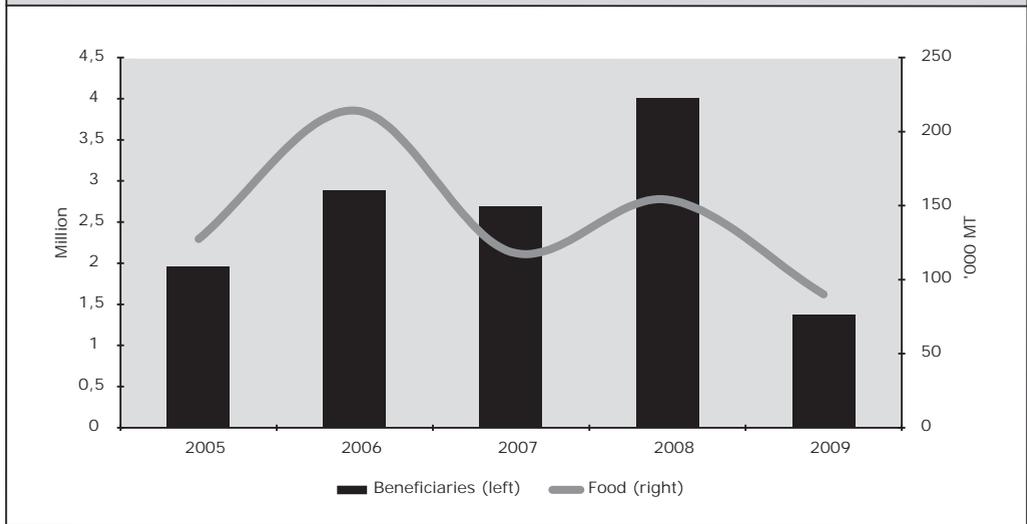
In the PSNP, beneficiaries receive transfers in either cash or food. The selection of transfer modalities hinges on several factors, including:

- proximity to food-surplus areas;
- availability of active markets;
- the communities' preferences;
- experience of and capacity for managing food and/or cash.

In the absence of an adequate information management system, the PSNP started by providing cash transfers based on only the last two factors. As described in the following paragraphs, it is only since the 2008 crisis that significant efforts have been made to assess the market availability of food before deciding on transfer appropriateness.

WFP has been providing large shares of the PSNP's food transfer component, and has not been involved in providing cash transfers.¹⁶ On average, WFP has provided about 140,800 mt of food per year since the launch of the PSNP (Figure 20.1). More than 37 percent of PSNP beneficiaries were supported by WFP over the period 2005 to 2009.

Figure 20.1 WFP beneficiaries and food transfers under the PSNP, 2005 to 2009



Source: WFP country office data.

At present, the PSNP operates two transfer rates:

- Cash transfers are set at 10 birr/day, or 50 birr/month.¹⁷
- Food transfers are set at 3 kg of cereal/day, or 15 kg/month.¹⁸

In general, maintaining parity between these transfer levels has proved to be challenging. For example, a recent study showed that decisions on transfer selection were heavily influenced by the prevailing relative values of transfers, “... rather than factors causing these differing values (market integration, distance from surplus areas etc.)” (Save the Children, 2008: 20). High food prices made food transfers more valuable and cash transfers riskier, because of eroded purchasing power (Devereux *et al.*, 2008), so communities’ preference shifted overwhelmingly towards food transfers.

This is part of the broader discussion around the cash-first principle, mentioned in section 2. The principle states that “cash should be regarded as the primary form of transfer, unless market conditions significantly reduce the value that the beneficiaries receive”.¹⁹ However, as PSNP implementation advanced, there was evidence that the implementation and value of cash transfers could be severely restricted by adverse market and capacity conditions. At the same time, there was wider recognition that cash and food transfers are not mutually exclusive, and that they should be deployed flexibly, based on conditions on the ground. This led to the initial allocation of 60 percent of beneficiaries receiving

cash and 40 percent food, moving to almost half of beneficiaries receiving food and the rest cash five years later.²⁰

Such a shift was partly the result of PSNP cash transfers' failure to keep up with the sweeping increase in food prices over 2007/2008 (Save the Children, 2008), the response to which entailed ramping up emergency programmes (Maxwell *et al.*, 2010). Evidence shows that this food price inflation translated into a clear preference among sampled beneficiaries for food only – and to some extent for the cash and food mix – as opposed to cash-based support²¹ (Table 20.4). In the words of Sabates-Wheeler and Devereux (2010), “PSNP food recipients have enjoyed accelerated income growth relative to cash recipients, whose income gains have been compromised by inflation. Not surprisingly, therefore, beneficiary attitudes are hardening against cash and in favour of food transfers”.

Table 20.4 Beneficiaries' preferences, 2006 and 2008

Transfers	Received		Stated preference	
	2006 (%)	2008 (%)	2006 (%)	2008 (%)
Cash only	15	21	9	3
Food only	19	26	55	84
Mix (cash + food)	66	53	36	13
Total households*	100	100	100	100

*Surveyed households = 960

Source: Sabates-Wheeler and Devereux, 2010.

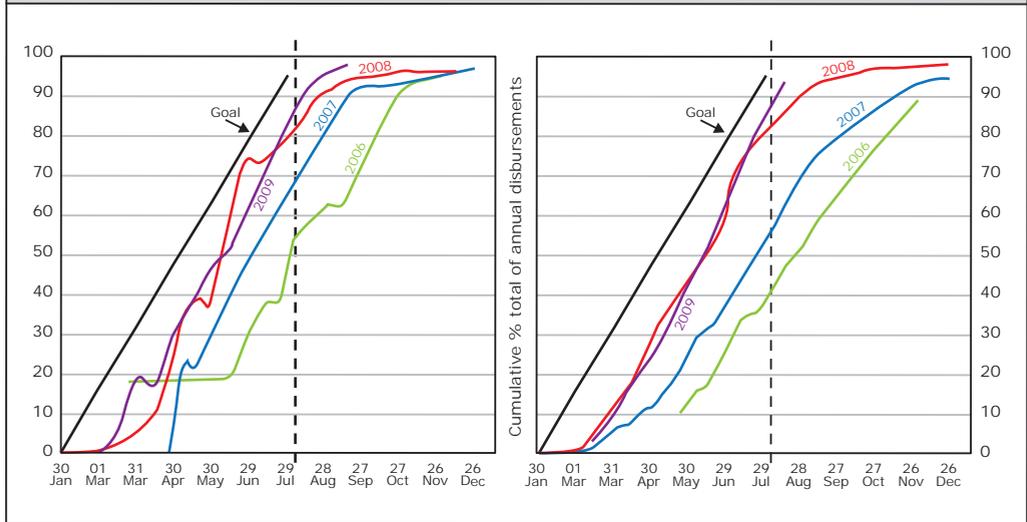
Disbursements of both cash and food have yet to meet the optimal timing (Figure 20.2), but performance has improved remarkably over the years.

Improvements in the timing of disbursements can be attributed to various procedural, administrative and process enhancements, such as installation of the Payroll Attendance Sheet System (PASS)²² at the *woreda* level.

3.5 Capacity building

As well as being one of WFP's Strategic Objectives (SOs), building national capacity is part of the mandate of the United Nations as a whole. Here too, however, donor partners in the PSNP felt that WFP should follow the principle of moving in consensus, providing its support only in areas where donors collectively agree that it should be involved. This is particularly relevant because

Figure 20.2 Timeliness of food (left) and cash (right) transfers, 2006 to 2009



Source: Government of Ethiopia, Information Centre Reports 2006 to 2009.

of WFP's dominant role in Ethiopia, its close relationship with the government, and the perception that WFP is a major factor in maintaining the food-first approach to food insecurity. Although working in consensus is coherent with WFP's policy framework for capacity building, it has created strains in the relationship between WFP and donors in the DWG, and WFP has had to manage these carefully.

Donors relied heavily on WFP staff's support to the building of community and *woreda* capacity for using the PSNP to implement the natural resource rehabilitation achieved by MERET. Since 2005, WFP has supported CBPWD technical training for more than 700 government staff, who have in turn trained more than 5,000 community development agents in about 200 PSNP districts. WFP facilitated the printing and distribution of 15,000 copies of training modules on technologies and 23,000 copies of CBPWD guidelines.

However, the capacity enhancement achieved by MERET goes far beyond training and guidelines. First, at the community level, MERET depends on community management committees to provide the planning and ownership that is the foundation of its success. The PSNP's community food security committees were not given the same level of support, guidance and training. Second, the WFP country office and sub-office staff involved in MERET have technical backgrounds and close partnerships with local technical experts, allowing them to provide much hands-on guidance to the development agents

and community members implementing MERET. This kind of support was not possible at the scale of the PSNP, although the PSNP benefitted from the capacity that MERET had already created among technical staff in some regions and *woredas*, resulting in examples of very effective and high-quality public works. This led the donors and government to encourage WFP to invest more heavily in leveraging MERET's capacity results for the PSNP and, to a certain extent, to blame WFP when that capacity did not emerge consistently across PSNP sites.

The government and donors initiated the PSNP with a focus on building capacity to deliver cash, and the extensive food management infrastructure did not receive the same level of capacity strengthening measures. When Ethiopia was hit by the 2008 crisis, which was predominantly an economic shock leading to food market failure, the hardest hit region was market-integrated SNNPR, resulting in a large-scale nutrition crisis and child mortality. SNNPR had been one of the PSNP's most successful regions, shifting almost entirely to cash-only transfers by 2007. The experience of 2008 both reawakened interest in maintaining a food response capacity and led to a more rational and appropriate mix of cash and food transfers to beneficiaries.

In the areas of needs assessment, targeting and monitoring capacity, WFP's role in vulnerability analysis and mapping (VAM) and its large field-based network of monitors were also viewed with caution. While valuing the benefits of WFP's ability to support capacity in these areas, donors were concerned that WFP had a tendency to work on its own – taking decisions and working directly with the government, without appropriate consultation.

WFP has taken steps to communicate its interactions with government to the DWG and to seek the participation of coordination team members. Strong partnership and collective action are key to an effective PSNP, and to WFP's capacity building support.

3.6 Risk financing

The anticipation of major crises, and thereby the prevention or mitigation of their humanitarian implications, is firmly enshrined in the PSNP principles of predictability and timeliness. To address additional needs, the PSNP includes contingency resources for 20 percent of its value, but this may not be enough to meet these needs. Risk financing is the process of analysing, estimating, costing and funding additional temporary needs, beyond the 20 percent programme contingency.²³ The new risk financing measures may therefore greatly enhance the predictability and risk management capacity of the PSNP.

Decision-making for risk financing is informed by a wealth of information generated by multiple tools, including the index-based weather insurance products²⁴ presented in Chapter 8. In many aspects, risk financing entails a

different business model from that for traditional emergency response mechanisms (Government of Ethiopia, 2009). Risk financing is not designed to replace traditional emergency response systems entirely, but rather to limit their use to shocks of larger scale, longer duration and wider magnitude. Risk financing is an innovative and institutionalized feature of the PSNP, designed to address *ex-ante* transitory and localized needs in a predictable, timely and flexible manner.²⁵

WFP was one of three partners, together with DFID and the World Bank, to put risk financing clearly on the PSNP agenda. This occurred in 2006, when the successful drought insurance pilot was under way (Chapter 8) as a collaborative effort involving WFP Headquarters, the World Bank and the WFP Ethiopia country office. It brought to the government's attention the idea of using objective analysis to predict large-scale emergencies, assess the likely livelihood damage of such emergencies, and safeguard resources for responding in ways that protect livelihoods. As a livelihood protection and promotion programme, the PSNP was the ideal instrument for developing this theory into practice.

Beginning with collective advocacy work, the three partners worked through the DWG to raise awareness of how donor risk financing funds could perform a similar task to private sector insurance, by providing a commitment for payout based on an objective analysis of livelihood damage. WFP engaged at both the analytical level, by developing the analytical tools, and the operational level, by helping to develop the processes and procedures for triggering and disbursing risk financing. The resulting programme design was approved in 2009.

3.7 Leveraging multiple capacities

WFP also plays a number of less visible and subtle roles, which are more difficult to quantify, but no less important than those already described. For example, as the only United Nations agency in the PSNP group, WFP's intervention has helped to resolve lingering divergences in views among actors,²⁶ and its dual engagement in both relief and PSNP programmes has helped to relax some potential institutional tensions.²⁷

4. Lessons and challenges

4.1 General issues

Capacity

Although the government and donors have made significant efforts to enhance programme capacity, relevant gaps often hamper effective and efficient PSNP implementation. Limited capacities are a major bottleneck for ensuring the design and application of technical standards, community-based planning, and information management and reporting. Official documents highlight the need to upgrade *woreda*-level capacities to implement the volume of operations and standards required. In particular, there is need for investments in financial infrastructure, tools, equipment, databases and staffing, including through continuous training at the *woreda* level to address the high level of staff turnover.

Sustainability, ownership and institutional arrangements

In Ethiopia, implementing complex programmes with multiple donors, departments or ministries demands sound common principles of engagement and coordination (World Bank, 2010b; Slater *et al.*, 2006). For example, coordination across government departments for PSNP public works needs to be more effective to reduce the fragmentation in oversight; enhancing institutional and operational coordination with the natural resource management department may improve the quality and impacts of public works interventions. Financially, although the overall sustainability of the PSNP hinges on several factors – graduation, food price trends, number of beneficiaries beyond 2014, etc. – the prospects for funding the PSNP domestically in the medium term appear very limited.²⁸

Reconciling entitlements and incentives

According to discussions with key informants, and the findings of various evaluations, WFP has been a flexible and open-minded counterpart in PSNP discussions (WFP, 2007a), although it been trying to persuade actors to adopt a more community-based and incentive- rather than entitlement-oriented approach, instead of administrative, household-only mechanisms. In the early days of conceptualizing the PSNP, WFP staff often wanted to propose “a new approach with an old tool”, but they are often confronted by “an old approach with a new tool”. A major concern is that simply shifting beneficiaries from a relief administrative list to the PSNP administrative list is not generating a new development paradigm.²⁹

Graduation

Evidence shows that the PSNP generated positive benefits at the household and community levels. However, there is significant geospatial variation, and the overall livelihood impacts may have been below initial expectations (Gilligan, Hoddinott and Taffesse, 2009; Devereux *et al.*, 2008).³⁰ For example, when gauged with a graduation lens, performance has been quite modest. According to initial targets, all beneficiaries under the PSNP were supposed to graduate from it by 2009. By that year, however, only 104,846 households had done so – about 1.3 percent of total beneficiaries.³¹ For the new phase, the Government of Ethiopia has laid out targets for graduation that are significantly ambitious, envisaging a scenario in which up to 80 percent of beneficiaries graduate.³²

Application in pastoralist areas

Although the PSNP is now expanding into pastoralist areas, implementation is often hampered by a range of issues, notably institutional capacities, security and the viability and relevance of approaches developed in other contexts within the country, such as the highlands. According to recent assessments, the PSNP roll-out in pastoralist areas is bound to remain a pilot initiative, and food requirements will be addressed under the relief system.

Timeliness versus quality

The PSNP design began with a clear statement favouring the timeliness and predictability of transfers over the quality of public works. Quality was initially seen as almost a positive “externality” of a programme aimed at protecting livelihoods. In development programmes such as MERET, transfers are often delayed until quality inspection assures that minimum standards have been met, but from the beginning it was agreed that quality of work should never delay PSNP transfers. The importance of quality to the outcomes of the PSNP has become more clear, and is being managed by greater efforts to support communities’ capacity to plan and implement appropriate works.

4.2 WFP-specific issues

Exit strategy

WFP initially supported the PSNP through the recovery component of a protracted relief and recovery operation (PRRO) (WFP, 2004c), but members of WFP’s Executive Board expressed concerns about issues related to exit strategies. The Government of Ethiopia laid out an overall graduation strategy, which proved ambitious, and WFP presented its exit strategy the following year (WFP, 2005c). This information was provided as an annex to the PRRO, and

detailed how WFP supported the general shifts underlying the PSNP: a deliberate transition from relief to productive investments, a strong preference for local purchase, a methodical shift from in-kind food transfers to cash-based transfers, extensive capacity building, strengthening of monitoring and evaluation systems, and integration with other food security programmes.³³

Reporting

The PNSP provided an opportunity for demonstrating WFP's ability and involvement in harmonized programming, but harmonization became problematic in the context of reporting and financial contributions. WFP's own reporting requirements did not easily accept a harmonized or joint report; therefore, although WFP agreed in principle to a single reporting requirement, it had to submit its own separate reports. The same applied to reporting on financial contributions.

Technical expertise and the evidence base

An important factor in determining WFP's engagement has been its ability to offer and document expertise in highly relevant domains. For example, its technical expertise on watershed management has been crucial in garnering support and credibility among the PSNP group. Sustained investments in technical expertise and documented evidence on practices and impacts will be an important basis for WFP's engagement in safety nets globally.

Engagement capacity

The PSNP requires intensive, systematic and continuous engagement from WFP and partners. WFP has made investments to enhance its internal capacity, such as by creating a unit dedicated to the PSNP and MERET, but engagement remains very demanding. For example, it has been estimated that the large number of technical groups involved³⁴ have required more than 500 missions and meetings over the past five years. This is equivalent to about 100 meetings per year, or approximately one every three working days. As each mission requires the attendance of an average of three WFP staff, it can be claimed that at least one WFP staff member is engaged in a PSNP-related mission every day of the year. This puts a lot of pressure on WFP's capacity and priority-setting, and implementing a similar arrangement in other contexts where WFP operates may be challenging.

Strategy and vision

Engagement in the PSNP group has required strategic planning and vision by WFP management over the years. For example, an evaluation concluded that “... it is important to highlight the level of vision, initiative, risk-taking and the huge amount of additional work and effort that was required [by WFP] to become a respected member of the policy consortium. (...) By working to depolarize debate and shift the focus away from the simplistic cash or food discourse towards one of how best to use food to allow a smooth transition, WFP Ethiopia is continuing to strengthen trust and confidence” (WFP, 2007a: 39). Navigating through contentious debates and building a trusting working relationship with central actors has required long-term strategic vision and commitment, especially in the first years of inception and implementation.

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- ¹ The authors benefited enormously from discussion with actors involved, at various stages, in the PSNP. Special thanks go to Mohamed Diab, Felix Gomez, Georgia Shaver, Al Kehler, Paul Turnbull, Volli Carucci, Yihene Zewdie, Hans Vikoler, Mulugeta Dessalegn, Ezgimelese Tecleab, Tariku Alemu, Belay Seyoum, Messele Egziabher, Patrick Mullen and Wout Soer.
 - ² The donor coordination team in Ethiopia recently produced three CD-ROMs including main PSNP reports for the period 2005 to 2009, for a total of about 2,500 documents. In addition, there is a wide range of grey literature, working papers and peer-reviewed articles not included in the collection.
 - ³ There are nine donor agencies in the group: the Canadian International Development Agency (CIDA), the Department for International Development (DFID), the European Commission, Irish Aid, the Netherlands, the Swedish International Development Cooperation Agency (SIDA), the United States Agency for International Development (USAID), WFP, and World Bank. SIDA and the Netherlands joined the group at a later stage.
 - ⁴ Graduation from the PSNP is defined as the move from being chronically food-insecure to being food-sufficient: “A household has graduated when, in the absence of receiving PSNP transfers, it can meet its food needs for all 12 months and is able to withstand modest shocks” (Government of Ethiopia, 2007: 1). The graduation from food insecurity is achieved through support from the other components of the Food Security Programme.
 - ⁵ For example, CCI includes mixed community and household-level interventions, and combined private-public initiatives. The new programme also envisions a wider adoption of practices developed under MERET (see chapter 10), and a new component, the HABP, providing microcredit and other financial services to improve graduation prospects.
 - ⁶ In 2009, project documents indicated an expected total financing gap of US\$526.5 million of total estimated costs (World Bank, 2009c).
 - ⁷ However, as local officials remarked, donors discussed their contributions to the PSNP within the framework of broader PSNP-HABP operations, and pledged their support on the understanding that the Government of Ethiopia would provide substantial resources to the HABP and other components of the overall Food Security Programme. It is estimated that the government will provide about US\$250 million for the HABP, in addition – and off budget – to the resources provided by donors, i.e., US\$83.3 million for institutional capacity building, product development, etc. When these factors are considered, the share of government funding in total PSNP and HABP funding rises to about 17.2 percent.
 - ⁸ The World Bank, the European Commission, USAID, DFID, CIDA, IrishAid and WFP.

- ⁹ The eight regions are Ahmara with 2,519,829 beneficiaries, SNNPR with 1,459,160, Tigray with 1,453,707, Oromiya with 1,438,134, Afar with 472,229, Somali with 162,671, Dire Dawa with 52,614, and Harare with 16,136.
- ¹⁰ Community members' perception of programme participation – “all members deserve support, but some more than others” – and their gauging of entitlement may not match the more selective intra-community criteria designed by planners, of “only some members get support”. There is evidence that in some cases a significant portion of the beneficiary list changes from one distribution cycle to the next. This may signal community arrangements for involving all members, including those who do not meet PSNP targeting criteria.
- ¹¹ In 2009, PSNP public works were operational in almost a third of Ethiopian *woredas*, generating an estimated 190 million workdays of labour. Each year, the PSNP initiates roughly 34,000 public works projects that focus on soil and water conservation, social infrastructure and roads.
- ¹² For example, WFP contributed to the PIM output and activity section with lists of possible outcomes, such as improved land productivity and soil fertility restoration.
- ¹³ These guidelines were initially developed under the MERET programme, and subsequently mainstreamed nationally by the government (Government of Ethiopia, 2005a).
- ¹⁴ In highly eroded and marginal environments it is not always easy to distinguish between private and public land. For example, as small private lands become eroded they tend to be abandoned, and are subsequently used by communities for other purposes, hence becoming *de facto* public. However, the holistic and integrated logic of watershed management requires that the *whole* catchment area be treated with appropriate interventions, and not just those areas within the administrative boundaries delineated by private-public distinctions.
- ¹⁵ According to the note, “public works activities should be on community land at the community level. However, on an exceptional basis, works activities can be done on private land (i) that are critical for watershed management, (ii) for female-headed households that have no labour” (Government of Ethiopia, 2006: 9).
- ¹⁶ WFP's policy on the use of vouchers and cash transfers was released in 2008 (WFP, 2008d).
- ¹⁷ In other words, households receive up to US\$137 per year. In 2005, the wage was set at 6 birr/day, or half the level it will be in 2010, when it is increased to 12 birr/day.
- ¹⁸ In addition, 1.5 kg of pulses and 0.5 litres of oil are provided monthly, when resources are available. In most cases, however, PSNP food rations consist of cereals only.
- ¹⁹ Memorandum of Understanding between the Federal Democratic Republic of Ethiopia and Funding Partners Supporting the Productive Safety Net Programme, 2005.
- ²⁰ For a global review of the theoretical and practical issues around the cash versus food debate, see for example Gentilini, 2007a.
- ²¹ The way the monitoring systems are set up makes it difficult to capture consistent trends in the mixed cash and food option over 2005 to 2009. A household could receive one, two or three months of one transfer, and the remaining month(s) of the other, but the government reporting system tends to classify all of a household's transfers as only one or the other. However, disaggregated data for 2009 show that about 929,000 beneficiaries received only cash, 1,872,000 only food, and about 4,773,000 a combination of both.
- ²² PASS is a computer-based system designed to address critical bottlenecks in the transfer process and to improve fiduciary control. Starting in 2010, beneficiaries will receive “client cards”, which will be a tool for providing them with proof of payments.
- ²³ The process is based on four components: (i) *early warning systems*, designed to signal the need for a response as early as possible; (ii) *contingency plans*, offering a framework for response; (iii) *contingency financing*, including readily available resources for timely disbursements; and (iv) *adequate institutions and capacities* to support the whole process.
- ²⁴ Other tools include livelihoods impact analysis sheets, the livelihood early assessment protection model, the convergence of indicators technique, and expert consultations. For a comprehensive description of each tool, see IDL Group, 2009.

- ²⁵ The *belg* rains (small rains) failed again in 2009, prompting the government to launch an emergency appeal for 6.2 million people. PSNP contingency budgets at the *woreda* and regional levels had already been used earlier in the year to provide a rapid response to the emerging situation. Government and the PSNP donor group therefore decided to scale-up the coverage of the PSNP, using risk financing resources, as had been done successfully in 2008. Additional transfers were provided to 6.4 million PSNP beneficiaries at a cost of US\$63.6 million.
- ²⁶ This included support for developing and clarifying the definition of “landless” people, who are excluded from PSNP support; the original definition did not take homestead land into account.
- ²⁷ FSCD, which manages the PSNP, was supposed to absorb beneficiaries from DRMFS, the body in charge of relief.
- ²⁸ As mentioned, the Government of Ethiopia funds about 8 percent of the PSNP, or 17 percent if its HABP contribution is included. In Ethiopia, aid accounts for about 50 percent of gross capital formation (World Bank, *World Development Indicators 2009*, Table 6.15, p. 376).
- ²⁹ Donor agendas may also have motivated such approaches. For example, DFID is committed “...to double to 16 million the number of people [in Africa] moved from emergency relief to long-term social protection programmes by 2009” (DFID, 2006: 60). In the White Paper released in July 2009, DFID states “...our aim is to help build social protection systems to get help to 50 million people in over 20 countries over the next three years” (DFID, 2009: 25).
- ³⁰ Studies such as Gilligan, Hoddinott and Taffesse (2009) reflect the broader relevance that experimental and quasi-experimental evaluations are gaining in the area of impact evaluation. The main advantage of these approaches centres on their ability to quantify and attribute impacts to given interventions in an objective, controlled, robust and scientific way. WFP has already used those techniques for programme impact assessments in Sri Lanka (chapter 6), Bangladesh and Uganda, and is in the process of expanding their application to other initiatives.
- ³¹ This includes 18,538 graduated beneficiaries in 2008 and 86,308 in 2009; there were no graduations in 2005 to 2007. Data were provided by FSCD on 29 December 2009. Overall, however, the issue of graduation has generated lively debate, both conceptually and practically. See for example Slater (2009) for a discussion of programme graduation versus deselection.
- ³² The 2010–2014 programme introduces some new nuances. For example, households that are making progress towards graduation could move to a reduced level of assistance for a year or two prior to moving off the programme.
- ³³ The new PRRO 10665 includes a full section on hand-over strategy (WFP, 2007e).
- ³⁴ These include bodies such as the Joint Coordination Committee; the DWG; the Rapid Response Team; the Public Works Impact Assessment mission; the Joint Review Implementation and Supervision mission and its seven thematic working groups on general management, financial management, procurement, roll-out to pastoral areas, public works, risk financing, and the HABP; the Public Works Technical Committee; the Pastoral Task Force; the Monitoring and Evaluation Technical Team; the Risk Financing mission; and the Food Management Task Force.

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Country implementation of the Strategic Plan: the case of Uganda

Stanlake Samkange, Paul Howe and Marco Cavalcante

1. Introduction

In June 2008, WFP's Executive Board approved a new Strategic Plan, which marked a historic shift in direction by indicating that WFP would move from being a food aid to being a food assistance organization. In practice, this change implied that WFP would no longer start with the tool – food aid – and determine how best to use it to support humanitarian and development objectives. Instead, it would begin with the problem – hunger – and identify the range of tools that were most appropriate for addressing hunger sustainably in a particular context.

WFP Uganda was one of the first country offices to pioneer the new approach. The centrepiece of its efforts is the development of a country strategy for 2009–2014, in consultation with the government and partners. The strategy identifies three new priority areas for the office, in line with the corporate plan: (i) emergency humanitarian action; (ii) food and nutrition security; and (iii) agriculture and market support. As the country strategy was developed and translated into new programme activities on the ground, WFP Uganda introduced a number of innovations – and faced a series of challenges – that provide critical lessons for the organization as it makes this far-reaching shift in approach.

This rest of this chapter is divided into four sections: section 2 describes what the Country Strategy 2009–2014 was designed to achieve; section 3 summarizes the process and the methodology used for preparing the document; section 4 explains the process of translating the plan into a new programme portfolio; and section 5 identifies some of the critical challenges and key factors for success.

2. A strategic document for the national level

The arrival of a new country director at the end of June 2008 followed the approval of the new WFP Strategic Plan 2008–2011¹ and provided impetus for the comprehensive strategic review that was launched by the WFP Uganda country office in July 2008. The strategic review aimed to:

1. establish a strategic approach for WFP's work in the country;
2. align WFP's activities in the country with the new WFP Strategic Plan;
3. reposition WFP as a major development actor in Uganda.

2.1 Establishing a strategic approach for WFP's work in the country

WFP's activities in Uganda range from emergency response to protracted relief, and medium- and longer-term development activities. Ensuring the maximum effectiveness of WFP's efforts in the country requires an approach that is comprehensive, focused and coherent. This means having a clear conception of WFP's role in Uganda, its comparative advantages, and its potential for longer-term impacts, and includes the need to disentangle short-term emergency and protracted relief activities from recovery and medium- and longer-term development activities. The strategic review aimed to achieve not only greater coherence for country office activities, but also reduced overlap among programmes, and greater transparency.

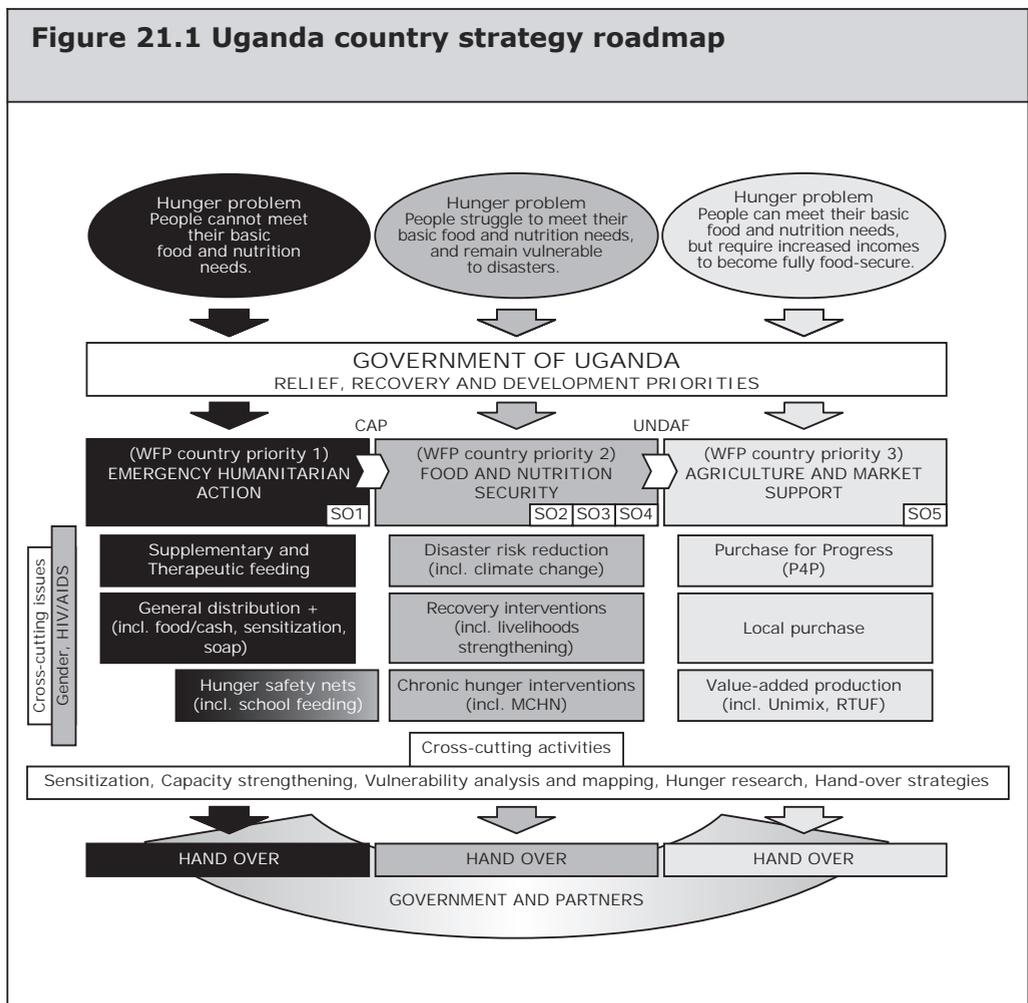
2.2 Aligning WFP's activities in the country with the new WFP Strategic Plan

For WFP Uganda and other country offices, the WFP Strategic Plan 2008–2011 meant shifting from a focus on how best to deliver food aid, towards a focus on providing hunger solutions – including food aid and other direct food transfers, but not limited to these. The Strategic Plan emphasizes the importance of effective emergency response, while underlining the need for WFP to focus on prevention, including disaster risk reduction and adaptation to climate change. It highlights the importance of effective recovery efforts as well as WFP's core role in helping to address chronic hunger and its root causes.

The WFP Strategic Plan 2008–2011 acknowledges governments' primary role in addressing hunger issues, and the importance of WFP in supporting and reinforcing that role. Strategic Objective (SO) 5 not only prioritizes capacity strengthening of governments, country authorities and institutions, but also links WFP's efforts to broader national development plans, goals and efforts. Because the Strategic Plan has also expanded the range of tools at WFP's disposal, country offices such as Uganda are empowered to offer a different range, type and set of hunger solutions. Conceptually, the approach of the new Strategic Plan requires deeper analysis of the causes and potential solutions to hunger problems in any

given context. Achieving the plan’s objectives also implies greater strategic and policy alignment and a more proactive approach to governments and partners than was necessary in the past.

Although the Strategic Plan identifies clear objectives and opens up new possibilities for WFP country offices’ responses, the prioritization of objectives in each country context is the responsibility of the individual WFP country office. WFP Uganda therefore had to determine which of the corporate SOs fit with the particular challenges and circumstances in Uganda, and what level of priority each should be given. Government’s views were of fundamental importance, and the perspectives of in-country donors, United Nations agencies and other development partners on the ground had also to be taken into account (Figure 21.1).



2.3 Repositioning WFP as a major development actor in Uganda

WFP's mandate from the United Nations General Assembly is both humanitarian and developmental. In Uganda, as elsewhere, the balance of WFP's efforts during the past decade have been heavily weighted towards the humanitarian side, as the organization worked to help Uganda deal with the consequences of internal conflict in the north and insecurity and recurrent droughts in the northeast. Between 2005 and 2007, humanitarian relief operations accounted for more than 90 percent of WFP assistance in Uganda, but with the subsequent cessation of hostilities in the north and the gradual return of displaced persons to their homes, Uganda faced – and continues to face – an enormous challenge to ensure recovery, reconstruction and sustainable development.

The challenge for WFP Uganda was to shift its activities and approach to respond to the changing situation and the new focus on recovery and sustainable development. The new WFP Strategic Plan provides a framework and some additional tools for achieving this, but the task of making WFP relevant in a changing environment is a strategic challenge for the country office and a major focus of its strategic review process.

The aim of repositioning WFP through the country strategy was to align the organization with the priorities and strategies of the Government of Uganda, identifying gaps and needs where WFP has a comparative advantage for providing solutions. There were two main challenges: (i) identifying and articulating effective WFP recovery and development responses that go beyond food aid; and (ii) in a very competitive aid environment, persuading donors and other development partners that WFP activities focused on development are worth supporting and funding. Once these issues were addressed, the country strategy could serve as a framework for WFP's move to a food assistance approach in Uganda.

3. Process and methodology

Preparing the Country Strategy Document for WFP in Uganda (2009–2014) was a lengthy and dynamic process, which lasted about six months and was undertaken in three phases:

- the preparatory phase;
- the decision phase;
- the consultation phase.

3.1 The preparatory phase

During the preparatory phase, a team of three to four people prepared a comprehensive background document on the development situation in Uganda. This document was divided into four sections, covering:

- an overview and analysis of hunger in Uganda;
- the policy context and a summary of existing government development strategies, including a chapter on region-specific strategies;
- the state of current development/humanitarian assistance to Uganda, including an analysis of WFP's current *positioning* with its partners and other development actors operating in Uganda;
- an analysis of WFP's impact in Uganda to date, looking at existing programmes through the lens of the new corporate SOs.

The purpose of the background document was to set parameters for the discussion, generate new lines of thinking through a critical analysis of ongoing activities, and reflect on what WFP's new strategic direction might mean in Uganda.

The document is about 50 pages long and took about two to three weeks to prepare. It is for internal use only, and includes numerous quotations and excerpts from official documents.

3.2 The decision phase

During the decision phase, the country office hosted a four-day meeting attended by all senior WFP staff, including the heads of all sub-offices and country office units. Prior to the meeting, all participants were sent a copy of the corporate Strategic Plan and the background document via e-mail.

Table 21.1 outlines the programme for the four-day meeting.

Table 21.1 Programme for the Uganda Country Office decision-making meeting	
Day	Areas discussed
1	<p><i>Overview of the corporate strategic plan</i></p> <p>Discussions were led by the country director. Participants were taken through each of the SOs, their related goals and how these should be interpreted. This helped staff to gain a thorough understanding of the corporate Strategic Plan, how it differs from previous plans, and the strategic implications of moving from food aid to food assistance.</p>

Table 21.1 Programme for the Uganda Country Office decision-making meeting (cont.)

Day	Areas discussed
2	<p><i>Overview of the background document</i></p> <p>Discussions were again led by the country director. Participants were taken through each section of the background document, leading staff into a common understanding of the development challenges facing the country, and the existing policy and strategic frameworks for addressing these. There was an extended discussion on WFP's impact in Uganda and WFP's comparative advantages.</p>
3	<p><i>Setting priorities</i></p> <p><u>Morning session:</u> Discussions were facilitated by the country director. Participants discussed possible priorities for the country office, taking into account the corporate Strategic Plan, the needs and situation in Uganda, and WFP's comparative advantages in Uganda. The resulting list of potential priorities included humanitarian emergencies, HIV/AIDS, education, agriculture and market support, food and nutrition security, government capacity building, disaster preparedness, climate change and community empowerment.</p> <p><u>Afternoon session:</u> The list of potential priorities was submitted to all senior staff, who were asked to vote for the three most important ones. There was clear consensus on the three selected, which became the country office's priorities.</p>
4	<p><i>Drafting</i></p> <p><u>Morning session:</u> Drawing on the background paper and the senior staff discussion, the drafting group from the country director's office prepared a "zero draft" of the country strategy, nine to ten pages long. In addition to the new country office strategic priorities and some proposed targets, the draft included a hunger analysis, the government policy context and strategic framework, WFP's comparative advantages, and three proposed goals for each priority.</p> <p><u>Afternoon session:</u> The country director, supported by the drafting group, presented the document in plenary, for preliminary reactions. Discussion focused on framing the goals and targets under the three priority areas.</p>

3.3 The consultation phase

During the consultation phase, the zero draft was shared with multiple actors. The purpose of this was to achieve consensus on the strategic framework that would drive WFP programming in the country over the coming years.

The first round of consultations was conducted internally. The document was circulated to all senior staff, including heads of sub-offices – who were tasked with organizing meetings with their own staff at which to present the

document, explain the process being undertaken and solicit comments to be forwarded to the drafting team. Senior staff then reconvened in Kampala for two days to discuss the feedback and inputs from the field and make further adjustments to the text. This was critical in creating a sense of *ownership* and *understanding* of the document within the country office and sub-offices.

The second round of consultations involved colleagues from the regional bureau and Headquarters in Rome. The country director circulated the draft strategy to the deputy executive directors, the regional and deputy regional directors, and division directors in Rome. This was critical in ensuring that it reflected the corporate strategy and took into account the regional context.

The third round of consultations was conducted with the Government of Uganda. The country director had informal discussions with main government counterparts about the general approach and direction, but did not circulate a text.

The fourth round of consultations was conducted with donors. The country director and the head of programme held bilateral discussions with ambassadors and senior staff from donor and potential donor countries. The document was circulated by e-mail, and a meeting was organized later so that the country office could receive donors' collective feedback and comments, mostly at the programme officer level. This was critical in ensuring donor understanding and buy-in for the process, the approach and the conclusions.

The fifth round of consultations was conducted with partner United Nations agencies. The country director and head of programme had bilateral discussions with United Nations agency representatives and their senior staff. The document was again circulated by e-mail to all the relevant agencies, and a meeting was organized with United Nations representatives so the country office could receive their collective feedback and comments. This was critical in ensuring that the document was in line with the broader United Nations direction and the work being conducted by other partners.

The final round of discussions and consultations was again with the Government of Uganda. This time, the country director had formal bilateral discussions with ministers and government counterparts, at which the strategy and the proposed priorities, goals and targets were discussed. The document was circulated by e-mail to all the relevant ministries, and the country office received their collective feedback and comments at a meeting with senior officials. This was critical in ensuring that the document was correctly aligned to government policies, plans, strategies and priorities.

Bilateral briefings and discussions on the draft country strategy were held with WFP's principal non-governmental organization (NGO) partners, in Kampala by the country director and head of programme, and in the field by the heads of sub-offices.

A final draft – officially the third draft – incorporating feedback and comments received throughout the consultation phase was circulated to all actors. This draft was then sent to the Strategic Review Committee at Rome Headquarters for final discussion and approval.

4. Implications for the programme portfolio

To implement the new direction outlined in the country strategy, WFP Uganda needed to realign its programme portfolio. The process of translating the country strategy into a new set of activities on the ground involved a series of linked steps: preparing new project documents; designing sub-office roadmaps; altering annual work plans; and setting new outputs for individual staff members (Figure 21.2).

4.1 New project documents

The first step in this process was the preparation of a new set of project documents for approval by WFP’s Executive Board in Rome. Although this required a significant investment of time, it also provided two important opportunities for innovation: first, it allowed WFP Uganda to help reshape the standard project categories; and second, it provided a chance to outline a model for activities that reflected the new corporate strategic direction.

Reshaping project categories

In October 2008, WFP Uganda had two basic project documents that served as the approved frameworks for its activities: a protracted relief and recovery operation (PRRO), and a country programme. The PRRO covered a range of interventions from emergency responses, such as general food distributions, to recovery activities, such as food for work and school meals, in drought-affected Karamoja, conflict-affected Acholi, and the refugee-hosting west. The country programme focused on development-oriented activities, such as school meals and mother-and-child health and nutrition (MCHN) in Karamoja, and local purchases in surplus-producing parts of the country.

In many ways, these documents were typical of those found in WFP offices around the world. The PRRO had been criticized because, like many others in WFP, it brought together a variety of different activities under a single project. This type of document was sometimes disparagingly referred to as a “super PRRO”. For donors, the fundamental problem with a super PRRO is that they cannot be sure how their contributions would be spent, as the PRRO document covers such a wide range of activities. Unless a contribution is earmarked, the funds might be used for recovery activities that are not consistent with the strictly humanitarian intent of a donor’s allocation. While smaller and not as closely scrutinized, the

country programme overlapped with the PRRO in terms of both activities, such as school meals and food for work, and geographic focus, such as Karamoja, creating confusion about the differences between the two programme categories.

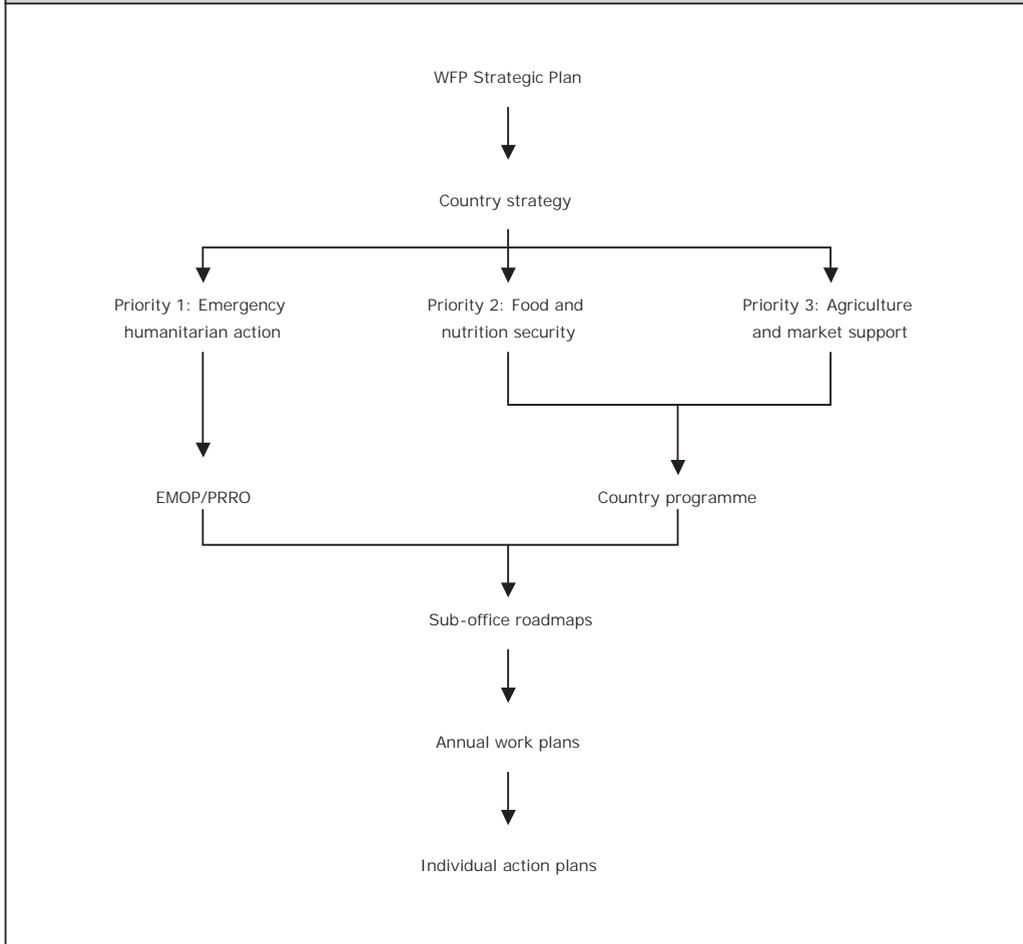
The country strategy therefore presented an opportunity for reshaping and restoring clarity to the programme categories in line with the new corporate direction. Under this approach, the country office's priority 1 – emergency humanitarian action – was translated into an emergency operation (EMOP) and a new PRRO. Both operations focus exclusively on *humanitarian* responses, thus addressing concerns about the ambiguity of purpose in the super PRROs. The EMOP and PRRO categories are designated for distinct situations. EMOPs are to be used for one-off crises such as droughts and floods that threaten food security for a limited period. In Uganda, this category is being used for the humanitarian response to the drought in Karamoja. The PRRO category is to be used for more protracted crises that require assistance over a prolonged period, such as interventions to support refugees and internally displaced persons in Uganda.

Country office priorities 2 and 3 – food and nutrition security, and agriculture and market support – are both covered by a new, expanded country programme, which incorporates *all* recovery and development activities, creating a clear demarcation from the humanitarian focus of EMOPs and PRROs. This re-categorization has had far-reaching implications. It is now viewed as a model throughout WFP, and a committee has been established at WFP Headquarters to ensure that future PRROs follow a similar approach and division of labour.

Developing models for new activities

Taken together, the priority areas identified in the country strategy form a continuum of food security. At one end, emergency humanitarian action supports people who need assistance to survive. In the middle, food and nutrition security is directed at those who are no longer at risk of dying but who are still struggling to meet their nutritional needs. At the other end, agriculture and market support focuses on smallholders who are able to meet their needs and produce some marketable surplus. The priority areas thus deal with different types of hunger problem, and the project documents need to lay out appropriate solutions for each.

In the EMOP and PRRO, WFP Uganda focuses on a clear nutritional objective for emergency humanitarian action: to stabilize or reduce global acute malnutrition rates. In keeping with the approach of using appropriate tools to address hunger in specific contexts, the country office took as its starting point the conceptual framework for malnutrition and analysed the immediate causes of hunger in each locality. Recognizing from the assessment data that inadequate dietary intake and disease contribute to high acute malnutrition rates, the

Figure 21.2 Uganda country strategy implementation process

responses were designed to address both of these immediate causes.

Regarding dietary intake, the focus is on not only the quantity but also the quality of the food. Corn-soya blend has been added to the emergency ration – an innovation that allows general distributions to have a greater impact on acute malnutrition levels. Cash, combined with nutrition messages, is planned for areas where markets are functioning. To help address disease, the country office has introduced soap into the ration, as a way of improving hygiene and sanitation. Recognizing that general distributions provide an opportunity for reaching a large number of people, WFP plans to work with partners to communicate messages on disease and other relevant topics through drama, dance and visual aids. In this way, WFP can leverage its contact with the

communities and assist other United Nations agencies and NGO partners in reaching them with critical messages.

Addressing priorities 2 and 3, the country programme proposes ways of supporting government efforts to address the medium- and longer-term causes of hunger. Under food and nutrition security, the focus is on three issues: disaster risk reduction; recovery, which involves strengthening and diversifying livelihoods; and addressing chronic hunger.

This third component illustrates particularly well the new problem-based approach. Stunting rates, which are used to measure chronic hunger, are at their highest in two very different parts of Uganda: the semi-arid, drought-prone Karamoja region in the northeast; and the green, wet southwest region in the opposite corner. However, the causes differ: people in Karamoja have difficulty with access to enough food; while those in the southwest have trouble selecting the right kinds of food. In response to these differing causes, the interventions also vary: food is an integral part of the MCHN and school meals activities in Karamoja; while sensitization campaigns using dance, radio, posters and local champions form the centrepiece of efforts in the southwest.

The goal of agriculture and market support is to link smallholders to markets so that they are able to sell their surpluses, improve their incomes and thereby move towards greater food security. The strategy used builds on WFP's already extensive programme of local procurement in Uganda. In the past three years, the country office has bought in-country more than US\$50 million-worth of maize and beans for WFP activities in Uganda and the region. WFP's purchases therefore account for a very significant proportion of the demand for quality maize and beans in the country, which puts WFP Uganda into a good position for stimulating production from the demand side.

On the supply side, the country programme identifies two links in the value chain that need particular strengthening: post-harvest handling, and market infrastructure. Post-harvest losses in Uganda are among the highest in sub-Saharan Africa, reaching 40 percent for some commodities. The country programme indicates that WFP will work with groups of smallholder farmers to improve their techniques and thus increase the amount that is available for consumption and marketing. However, the markets also face serious constraints regarding infrastructure. Working with the Uganda Commodity Exchange, WFP Uganda plans to help establish a series of warehouses equipped with cleaning, drying and grading equipment, which will enable smallholder groups to store their surpluses, meet East African quality standards and reach large buyers such as WFP through the warehouse receipt system. Together, the interventions on the supply and demand sides should stimulate the rapid development of a more competitive, open market, to the benefit of smallholders.

4.2 Sub-office roadmaps

Once approved by the Executive Board, the project documents provided a new framework for WFP's activities in Uganda. It was then necessary to translate the broad brushstrokes of the project documents into concrete plans at the sub-office level. WFP Uganda has 13 sub-offices across the country. This geographic coverage is a distinct comparative advantage for implementing projects in line with district goals and plans. The next step in the process was therefore the development of sub-office roadmaps – an innovation for WFP in Uganda.

Consistent with the timeframe of the country strategy, the sub-office roadmaps outline a five-year plan for achieving the outcomes contained in the project documents. Bringing together all sub-office staff, one-day focus sessions were held at each sub-office to identify where WFP wants to go, where it is now, and how to get from where it is today to where it wants to be.

The first part of the day focused on a visioning exercise, creating a common view of how the areas served by the sub-office would look in five years time if the outcomes of the project documents were achieved. The second part involved a mapping exercise to review the *current* situation. Staff discussed the food security indicators and physically mapped the existing activities of government, WFP and partners. From this, the group identified gaps in programming that would hinder its ability to achieve the vision.

The third and final part of the day was completion of the roadmap. After reviewing a set of programming principles, such as geographic focus, thematic focus, impact, sustainability and equity over time, the sub-office staff mapped out locations for activities, showing how they would combine over the five years to achieve the vision. The results were documented and discussed with local government as a proposal for WFP's support to the district plans.

4.3 Annual work plans

As the sub-office roadmaps outlined the focus over a five-year period, the next step was to elaborate the specific activities that would be carried out during the following year. Based on the roadmaps, sub-offices prepared short implementation plans for their proposed activities. These plans outlined the basic hunger problem, the proposed hunger solutions, the implementation modality, such as cash and/or food, the partners involved and main areas of concern. A budget, activity calendar and procurement plan were included as annexes.

The implementation plans were consolidated into binders and presented at an annual work plan meeting, where heads of sub-offices presented their proposed plans and costs to their peers and senior management. Based on the presentations, the budget overviews and the resources that were likely to be

raised, the country director selected plans for approval. This selection formed the basis of the annual work plan for sub-offices and the central office in Kampala.

4.4 Individual action plans

The agreed work plans and their outputs and outcomes were the starting point for developing individual action plans for each staff member – whether in administration, programme or logistics. Working with a supervisor, each staff member was set output targets. At mid-year and the year end, progress against the indicators is reviewed and coaching on performance given.

This process helped to ensure a clear translation of the corporate strategy into individual-level action plans. Each individual staff member's activities support the annual work plan, which in turn is aligned with the sub-office roadmap. The roadmaps are designed to achieve the aims laid out in the project documents, which are based on the priority areas identified in the country strategy. The country strategy itself reflects the new corporate direction. In this way, all the activities of individual staff members systematically align with and implement the new corporate Strategic Plan, helping WFP to make the shift from food aid to food assistance.

5. Major challenges and factors for success

Although introduction of the country strategy and the shift in programme activities have been largely successful in Uganda, the country office faced several serious challenges. The first is that the process took time. It took almost a year and a half to move from preparatory work on the country strategy through the approval of new project documents to the development of individual action plans. There was a risk that the country office would lose morale and focus during this process. However, because the shift in direction was signalled early, through identification of the country strategy's priority areas, the office had a clear direction, which staff and partners could understand and support during this period of transition.

The second challenge related to staff capacity. The new activities required a different set of skills – strategic planning at the outset and then technical programming. Rather than terminating staff who lack the appropriate background, the country office has focused on staff development, setting aside funds to support the training and skills development of core staff members. Where required, the country office has recruited people with the required skills to join WFP.

WFP's existing rules and procedures posed a third challenge. They too had to be redesigned to reflect the historic shift set out in the corporate Strategic

Plan. WFP Uganda's efforts posed several questions: Could WFP really achieve nutrition-related outcomes? Was it possible for WFP to purchase warehouses and cleaning, drying and grading equipment? Could WFP receive and report contributions that were not tied to a rate per tonne of food? How would budget formats need to be adjusted? Working closely with the regional bureau and Headquarters, answers have been found to these and other, unforeseen issues.

Despite these difficulties, the Government of Uganda, partners and donors have widely praised and supported the new approach. The following are key factors that contributed to this success:

- *Alignment with government strategy:* From the outset, it was emphasized that the priorities and direction of the country strategy needed to support the government's strategy, otherwise the approach would not be sustainable. Because of efforts in this area, the government has strongly backed WFP's strategy, which has given donors and other partners confidence in the new direction.
- *Systematic process for implementation:* Each step in the process was carefully managed to ensure that it aligned with the country strategy. By following a logical process, staff and partners could understand the changes and feel confident that they reflected the fundamentally new approach for WFP.
- *Wide and regular consultations:* Perhaps the most important factor for the success in Uganda was the wide and regular consultations at every major step in the process. However, this does not mean that the country office determined its new direction solely through consultative meetings. Instead, at significant moments – such as the development of the country strategy and the sub-office roadmaps – WFP first discussed the issues internally. These internal processes resulted in a clear, thought-out approach that could then be discussed and modified by government and partners.

The Uganda country office was also fortunate in having strong leadership and supportive partners in the government and donor agencies. However, each of the factors for success is replicable and could assist other country offices – and WFP more broadly – in transitioning from a food aid to a food assistance organization.

¹ The Strategic Plan was subsequently extended to 2013 by the Executive Board.

22

Hand-over in Namibia: from food aid to social protection for orphans and vulnerable children

Baton Osmani

1. Introduction

The Government of Namibia and WFP ran a joint two-year food support programme for approximately 90,000 orphans and vulnerable children (OVCs) in northern Namibia. The programme ran from April 2006 to April 2008 and was the second phase of WFP food assistance targeting OVCs in northern Namibia. The first phase, also implemented in cooperation with the government, was an emergency operation (EMOP) from mid-2004 to mid-2005 in response to the severe drought that affected Namibia in 2003. The primary intention of the second phase of food assistance was to help strengthen support for OVCs in Namibia by providing them with food assistance and facilitating their inclusion in the government-led Child Welfare Grant (CWG) system. During the programme, the overall number of OVCs receiving CWG in programme areas increased by more than 40,000.

This chapter gives an overview of the context that led to the OVC programme, its design, operational implementation, achievements and lessons learned.

2. Context, design and implementation

2.1 High HIV/AIDS prevalence resulting in rapid increase of OVCs

Although classified as a lower middle-income country, Namibia has one of the highest Gini coefficients in the world, at 74.3,¹ revealing the high income disparities existing in the country. Despite progress towards reaching United

Nations Millennium Development Goals (MDGs), previous gains in achieving MDGs 4 and 5 have declined: the under-5 mortality rate has increased from 62 deaths per 1,000 live births in 2000, to 69 in 2006/2007; and the maternal mortality rate has doubled since 1992, from 225 per 100,000 live births, to 449 in 2006/2007.²

With the world's fifth highest HIV/AIDS rate, of 17.8 percent,³ Namibia has been hit hard by the HIV/AIDS triple effect, and the epidemic is the main driver of a rapid increase in the number of OVCs. Its Human Poverty Index value of 17.1 ranks Namibia as 128th among the countries for which the index has been calculated.⁴

Food availability at the national level is adequate, but access to food at the household level remains a concern, with 29 percent of children under 5 years of age stunted –chronically malnourished⁵– meaning that almost one in three Namibian children under 5 is not getting adequate nutrition and care to ensure proper growth and development. This situation is compounded by recurring natural disasters such as droughts, locusts and floods, mainly affecting northern rural parts of the country, where more than half of the population of 1.9 million people live, heavily reliant on rain-fed subsistence agriculture and social protection.

It was against this background that the joint government/WFP programme was developed, targeting 90,000 OVCs in the six administrative regions of northern Namibia.

2.2 Forming a partnership: a joint WFP/government programme

The Ministry of Gender Equality and Child Welfare, the government body cooperating with WFP on this programme, is charged with ensuring the legal care and protection of children in Namibia. Under its leadership, a collaborative process involving various stakeholders resulted in a National Plan of Action for OVCs for the period 2006 to 2010, supplementing the national OVC policy. In this national plan of action, activities were designed to provide temporary food assistance to needy families caring for OVCs and to review and facilitate the uptake of CWG by the neediest OVCs.

The Ministry of Gender Equality and Child Welfare took over CWG implementation from the Ministry of Health and Social Services in 2004, when 18,800 OVCs were receiving this benefit nationally. By the beginning of the programme, national coverage had already expanded significantly to 45,340, under the auspices of the Ministry of Gender Equality and Child Welfare, but it was clear that many more OVCs were still not benefiting from CWG.

The initial emergency phase of WFP's food assistance to OVCs, which concluded in mid-2005, was carried out in partnership with the Emergency Management Unit of the Office of the Prime Minister. Given the Ministry of

Gender Equality and Child Welfare's central roles in ensuring the well-being of OVCs in Namibia and as the custodian of the CWG system, it was appropriate for WFP to form a partnership with the Ministry for the second phase of OVC food assistance. This was launched by a Letter of Understanding signed in April 2006.

The Ministry and WFP identified implementing partners for regional programme delivery through a broad consultative process in late 2005. Consultation and advice were sought from the regional council of each region where the project was to be implemented, and agencies' profiles were taken into account. Catholic Aids Action (CAA) was selected as the implementing partner in Oshana, Omusati and Kavango regions; the Namibia Red Cross Society (NRCS) for Caprivi and Ohangwena regions; and the Evangelical Lutheran Church in Namibia (ELCIN) Aids Action for Oshikoto region. The Ministry of Gender Equality and Child Welfare formalized implementing partners' involvement in the programme and at the field level. In early 2006, a national management committee (NMC), comprising the Ministry of Gender Equality and Child Welfare, WFP and NGO implementing partners, chaired by the ministry and with WFP as secretariat, was established to provide policy guidance and oversight at the national level. Similar regional management committees (RMCs) were established in the regions, chaired by the regional councils. The RMCs provided vital operational guidance and coordination at the regional/constituency level, enhancing the delivery of assistance to beneficiaries.

The second phase of the OVC food support programme in Namibia had the primary objective of contributing to the government's initiative to strengthen and absorb all OVCs into the national social safety net system. The food package was designed to meet the basic food needs of food-insecure OVCs, while accelerating their inclusion in the government's CWG scheme.

This OVC food support programme was an integral part of the national action plan for OVCs, and was fully aligned with national OVC policy and the government's development framework, Vision 2030. The programme was also integrated into the United Nations Development Assistance Framework (UNDAF) for Namibia and aligned with both WFP's Strategic Objectives (SOs) on hunger and the MDGs.

2.3 Implementation involving many actors

Based on stakeholder consultations in October 2005, three main activities or entry points were identified for delivering food assistance to OVCs. The programme's main activity, *OVC support*, provided individual rations to food-insecure OVCs pending their inclusion in CWG. As this ration was likely to be shared with other household members, OVC food support would contribute towards family resources, thereby freeing up income to pay for other needs, such

as education and health, and easing the household burden of supporting OVCs.

Supplementary feeding was planned as part of integrated health and nutrition services for malnourished children under the age of 5. Unfortunately, discussions on the modalities for carrying out this activity were inconclusive, and it was not implemented. Small-scale *micro-projects* were implemented to promote food security with outcomes focusing on OVCs, such as home/school gardening and Junior Farmer Field and Life Schools.

Food procurement and logistics

In line with WFP policies, the local and regional procurement of commodities was prioritized whenever possible. During the programme, 16,403 mt of food was distributed, of which 14,736 mt of maize meal was procured locally from Namibian suppliers. Regional procurement was the option of choice for the other three commodities in the food basket – pulses, vegetable oil and corn-soya blend (CSB) – mainly owing to lack of availability in local markets and regional price competitiveness. A total of 969 mt of CSB and 337 mt of pulses came from South African suppliers. Only 208 mt of vegetable oil was sourced from international markets, and 154 mt of canned meat was received internationally as an in-kind donation.

Logistics for the operation were shared by WFP, the Ministry of Gender Equality and Child Welfare and implementing partners, according to a clearly defined division of responsibilities. Given the vast geographical area covered by the programme, with more than 750 food distribution points, the establishment of a functional logistics system capable of responding to the monthly cycle of food deliveries can be considered a significant operational achievement.

The Ministry of Gender Equality and Child Welfare provided a regional warehouse for each of the six regions, namely in Ondangwa, Outapi, Rundu, Katima Mulilo, Omafo and Onulaye, each staffed with a ministry and an WFP storekeeper. Food commodities procured through the WFP procurement system were transported to the regional warehouses by WFP-contracted transporters. Food releases were made daily from the regional warehouses, following monthly distribution plans prepared for each region and agreed by the ministry, WFP and implementing partners at the regional level. Transportation from the regional warehouses to the final distribution points was contracted by the ministry, with WFP reimbursing 50 percent of the costs.

The reliability of privately contracted transporters was variable, and government-supplied trucks often had to fill in when arrangements with private transporters failed. At the final distribution points, food was distributed to the OVCs' care givers by the implementing partners, using calibrated measures and beneficiary distribution lists that were updated monthly. Over the course of the

operation, only 11.916 mt of food was lost or damaged, representing less than 0.01 percent of the total distributed, which is well within acceptable limits for an operation of this size.

Beneficiary targeting

Guidelines on setting beneficiary selection criteria emphasized the importance of local community involvement and included a simple checklist to facilitate the OVC registration process; the guidelines were translated into six local languages. Both WFP and implementing partner staff were trained in administering the checklist, and a basic coding system was designed to protect the integrity of the process. The criteria used to assess vulnerability focused on food security aspects of the OVC's household, as well as eligibility for CWG, which was critical to the success of the programme's exit strategy. A simple point-scoring method was applied to ensure that OVCs with the highest vulnerability scores regarding food insecurity were enrolled in the programme, until regional quotas, which were established using macro-level data, were reached.

Beneficiary registration lasted from April until the end of December 2006, with a total of 90,824 OVCs enrolled into the food support programme, representing 94 percent of the target. Table 22.1 gives an overview of regional targets and actual registration.

Table 22.1 Actual OVC registrations versus targets, by region			
Partner	Region	Target	Actual registration
NRCS	Caprivi	6 522	6 947
NRCS	Ohangwena	22 505	18 882
CAA	Omusati	20 754	20 814
CAA	Oshana	13 367	13 159
CAA	Kavango	18 393	18 438
ELCIN	Oshikoto	14 459	12 584
Total		96 000	90 824

A community and household surveillance (CHS) system, designed by WFP and partners to monitor food assistance programmes, indicated that programme targeting could have been improved to reduce the inclusion of "non-needy" beneficiaries. The need to review the assumption that all orphans are vulnerable

was also highlighted, as the characteristics of OVCs were found to be inextricably linked to poverty and household food insecurity rather than simply orphanhood.

Food distribution

Food distributions began on 24 April 2006, the day the project was officially launched, and increased steadily over the remainder of the year as registration progressed. Monthly distribution plans were prepared and agreed at RMC meetings. At the national level, WFP balanced food supply with the monthly distribution plans, to avoid unnecessary accumulation of food stocks at the regional level.

The NMC developed announcements for local radio and distribution points, informing the beneficiaries about distribution schedules and the importance of applying for CWG, as well as the eligibility criteria and procedure for doing so. Implementing partners identified up to five volunteers for each constituency, who were given food rations as an incentive to facilitate food distributions. The planned daily ration for each OVC consisted of 360 g of maize meal, 50 g of pulses, 20 g of vegetable oil and 100 g of CSB.

Lack of donor funding led to a major pipeline break in December 2006, which brought the distributions to a complete halt in January 2007, threatening the programme's viability. Fortunately, donors responded to this crisis, and new contributions allowed distributions to resume in February 2007. However, contributions were insufficient to procure the full food basket, and only maize meal, comprising 68 percent of the ration, was distributed from this point on, with the exception of one contribution of 154 mt of canned meat, which was used to substitute pulses for four months. The distribution of maize meal ensured the

Table 22.2 Total food distributions, by commodity type and region (mt)

Region	Maize meal	Pulses	Canned meat	Vegetable oil	CSB	Total
Caprivi	1 199	39	14	34	81	1 366
Ohangwena	2 068	34	30	15	96	2 243
Omusati	2 480	61	24	30	195	2 791
Oshana	3 402	54	34	42	218	3 750
Kavango	3 643	87	32	52	174	3 988
Oshikoto	1 945	61	20	34	205	2 265
Total	17 736	337	154	208	969	16 403

programme's operational integrity, albeit with a reduced ration, enabling the continuation of social mobilization around food distribution points, which was critical to OVCs' uptake of CWG. In total, 16,403 mt of food was distributed to more than 90,000 OVCs in the two years of the programme. Table 22.2 shows the quantities of food distributed by commodity type and region.

3. The hand-over: social mobilization and transfer to CWG

In June 2006, a team of local consultants was commissioned to review the mechanisms associated with the CWG system and to help identify potential bottlenecks that could hinder the systematic absorption into CWG of OVCs receiving food assistance.

The review provided several key recommendations such as the recruitment of Ministry of Gender Equality and Child Welfare staff at the constituency level tasked with facilitating the transfer of OVCs to the CWG system and the widening of eligibility criteria for CWG. The Ministry recruited more than 100 volunteers, who were assigned to the 58 programme constituencies – larger constituencies received two volunteers each. The number of OVCs per care giver eligible to apply was increased from three to six, and the value of the OVC household income threshold for qualifying for CWG was increased from N\$600 to N\$1,000. Such measures increased the number of OVCs eligible to apply for CWG, and heightened community awareness of the importance of this process.

On completion of beneficiary registration in December 2006, the implementing partners' lists of food beneficiaries were computerized and the OVC data entered into a database. A local software company designed a computer program enabling the Ministry of Gender Equality and Child Welfare and WFP to carry out monthly cross-checks between the ministry database of OVCs receiving CWG and the programme's food distribution lists. This was valuable in identifying OVCs who had started to receive CWG and removing them from food assistance. The database system had the flexibility to reinstate names that were erroneously removed when field verification confirmed this was the case. Names could also be removed manually if field evidence showed a child to be in receipt of both food assistance and CWG.

The social mobilization campaign was essential for explaining to food recipients the importance of applying for CWG, so that all eligible OVCs could be transferred from food assistance to CWG within the programme's life time. To assist beneficiaries facing difficulties in obtaining the copies of documentation needed to support their CWG applications, mobile photocopiers were deployed to the field in remote locations. More than 100,000 grant application forms were printed and distributed to OVC care givers at food distribution points, using the

programme's logistics structures. Two stakeholder workshops were carried out in February and September 2007 to facilitate transfers from food assistance to CWG and to troubleshoot any associated operational issues that were impeding this important process. Throughout 2007 and the beginning of 2008, maintaining regular food distributions was absolutely essential to the success of the social mobilization taking place around food distribution points.

According to the project design, transfers to CWG were expected to take-off in the second quarter of 2007, with 20,000 OVCs being removed from food lists and included in CWG every quarter until March 2008. However, by the end of the programme only 25,082 OVCs had been removed from food lists; a significant number, but considerably fewer than planned. Of these, 13,945 OVCs were positively identified as having been transferred from food aid to CWG, while 4,922 removals were to eliminate duplicate OVC names from beneficiary lists. A further 6,215 OVCs reached 18 years of age during the programme, so were no longer eligible for the transfer to CWG.

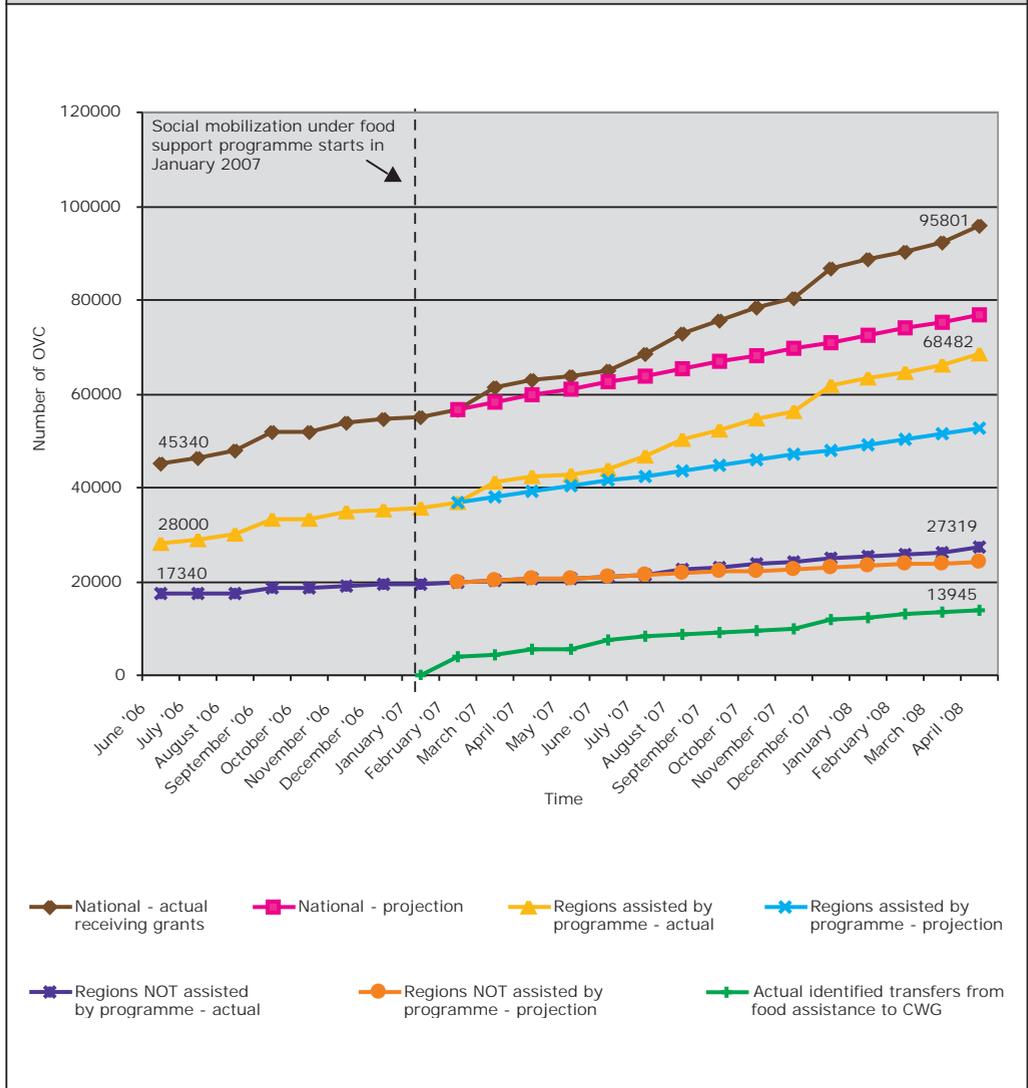
Inconsistencies between the food lists and the CWG lists was a critical issues, with major differences in the spelling and presentation of OVCs' names, dates of birth and care giver details. It is estimated that in addition to the 13,945 positively identified OVCs who transferred from food assistance to CWG, a further 11,000 food beneficiaries took up CWG but were not removed from the food lists owing to data inconsistencies and the complexity of cross-referencing names with the computer software.

As shown in Figure 22.1, the numbers of children receiving CWG in the six programme regions increased at a significantly higher rate than it did in the regions not receiving food assistance. Over the two years of the second phase of OVC food support, the Ministry of Gender Equality and Child Welfare increased CWG coverage in the six programme regions from just 28,000 in April 2006 to 68,482 at the end of April 2008, an increase of more than 40,000 children. This success may be largely attributed to the catalytic effect of the food assistance and social mobilization, which can reasonably be estimated to have resulted in the uptake of at least 16,000 more OVCs into the CWG system than would otherwise have been the case.

Another issue identified was the cases where OVC care givers were not aware that a biological parent was already receiving CWG on behalf of a child, meaning that some OVCs were not benefiting from the CWG issued in their names. At an estimated 45 percent of programme beneficiaries,⁶ far more food-insecure OVCs than originally expected were not eligible for transfer to CWG, because they were not orphans or because their care givers were unable to produce the documentation required to qualify for grants. A major ongoing challenge is the identification of a suitable mechanism for supporting the many very food-

insecure OVCs who currently do not qualify for CWG or do not have the necessary documentation to apply. The absence of documentation is often compounded by absent or unknown parents.

Figure 22.1 Impact of OVC food support programme on uptake of CWG



Source: OVC Food Support Programme

4. Challenges and lessons learned for future programmes

4.1 The programme as a potential model for other countries

At the end of 2006, an external evaluation of the Southern Africa regional protracted relief and recovery operation (PRRO 10310.0) took place across the seven countries of implementation, including Namibia.

The evaluation identified the programme approach in Namibia as “a potential model – for other countries both within and outside the region – for Social Protection Programmes aimed at meeting chronic food and nutrition emergencies related to the HIV epidemic”. The evaluation also noted that the programme “has the potential to provide important regional lessons and guidance”. Positive aspects of the programme included: strong partnerships among the government, WFP and NGO implementing partners; capacity building in social protection; a pragmatic exit strategy; and good practices such as community-based targeting, a social welfare service approach and a staged transfer from food to cash support.

However, the evaluation also identified challenges arising from the limited number of NGOs in Namibia with experience of food aid and the capacity to act as implementing partners, which meant that implementing partners were sometimes overstretched. In addition, failure to convince donors of the merits of the programme approach resulted in chronic underfunding, which had a negative impact on implementation.

4.2 Weak donor support

Donor support for a food aid intervention in a lower middle-income country such as Namibia was weak, despite the programme’s innovative approach and the relative cost-efficiency of delivering food aid as a safety net in Namibia. A study carried out for WFP in 2006 and examining the potential for using vouchers to deliver assistance to vulnerable groups found the alpha value⁷ of delivering in-kind food for the OVC food support programme to be quite favourable under the market conditions prevailing at that time.

Funding shortfalls had negative impacts on programme implementation, almost forcing premature closure of the programme in January 2007, when a complete pipeline break suspended distributions. However, by reducing the ration to maize meal, operational integrity was maintained, allowing critical social mobilization at food distributions to continue uninterrupted. This allowed OVCs’ uptake of CWG – one of the programme’s primary objectives – to proceed as planned, although the nutrition impact will undoubtedly have been compromised as a result of the partial ration cuts.

4.3 Challenges remain, but hand-over was successful

The exit strategy, a key element of the programme, linked food assistance with the established national safety net of CWG administered by the Ministry of Gender Equality and Child Welfare. Beneficiary selection criteria for the programme were designed to include food-insecure OVCs eligible to apply for CWG. This paved the way for OVCs registered into the programme to move from food assistance to CWG. Social mobilization around food distribution points, and an information campaign sensitizing care givers to the importance of applying for CWG were critical activities designed to help increase the number of CWG applications from within the food beneficiary group.

The Ministry of Gender Equality and Child Welfare/WFP OVC food support programme had a significant and positive impact on OVCs' uptake of CWG. This represents a valuable strengthening and expansion of an important government social safety net designed to protect one of the most vulnerable groups in society – OVCs. During the two years of the programme, the number of OVCs receiving CWG in programme areas increased by more than 40,000, which is significantly more than could otherwise have been expected given the rate of increase prior to the programme. CHS also indicated that food support was an appropriate intervention for helping to expand CWG coverage and acting as a temporary safety net, because household food consumption was improved in chronically food-insecure beneficiary households during the programme. However, the increase in CWG coverage was significantly lower than the programme planning targets, highlighting a number of other issues.

The lower than expected uptake of CWG can be largely attributed to two main factors. First, many eligible children or care givers lacked the documentation needed to apply for CWG. The second round of the WFP CHS estimated that many programme beneficiaries fell into this category. Clearly, a concerted effort is needed to improve the population's access to basic documentation, so that those in need can obtain the services and safety nets available from the government.

Second, during the transfer of OVCs from food assistance to CWG it became apparent that as many as 45 percent of programme beneficiaries were not eligible for CWG because they were not orphans. Although this situation resulted from weaknesses in the initial registration of beneficiaries into the programme, it highlights the very important issue of chronic food insecurity and undernourishment among vulnerable children who are not necessarily orphans. The second round of the CHS noted that many children who were not included in the programme would also benefit from social safety net support. This is reflected in preliminary findings from the 2006 Demographic and Health Survey, which show child malnutrition to be a major threat in Namibia, where

30 percent of children under 5 do not receive adequate nutrition and care to ensure proper growth and development.

The high level of engagement in the programme by regional- and local-level stakeholders undoubtedly contributed to its achievements and can largely be attributed to the process of consulting stakeholders from the outset, and involving regional councils in the programme design and selection of implementing partners.

4.4 Concluding remarks

Despite the important achievements of this second phase of OVC food support in catalysing the expansion of CWG coverage and mitigating the impact of hunger for many OVCs, there remain significant challenges in finding longer-term solutions for the many children who still remain at serious risk owing to their exposure to poverty and chronic hunger. Food assistance can continue to play an important and relevant role in the development of essential safety nets in Namibia, particularly for vulnerable groups such as OVCs. However, the future role of food assistance needs to be defined in the context of a comprehensive review of national safety nets, a possible multisectoral approach and appropriate funding models.

In the era of high food prices that threaten to plunge many millions more people worldwide into poverty and chronic malnutrition, the need to build and strengthen safety nets has a new sense of urgency, which demands the attention of all stakeholders.

¹ A Gini coefficient of 0 represents absolute equality, and one of 100 absolute inequality (UNDP, *Human Development Report 2007/2008*).

² Namibia Demographic and Health Survey, 2006/2007.

³ Prevalence in pregnant women, *Report on the 2008 National Sentinel Survey*, Ministry of Health and Social Services, Namibia.

⁴ UNDP *Human Development Report 2007*.

⁵ Namibia Demographic and Health Survey, 2006/2007.

⁶ Namibia Community Household Survey, Round 2, WFP/Ministry of Gender Equality and Child Welfare, December 2007.

⁷ The alpha value compares the cost of delivering in-kind food assistance with the equivalent value on local markets: *Namibia Food Voucher Pilot Project – A Feasibility Study*, John Magistro, November 2007.

Glossary

Cash transfers refer to sums of money provided to beneficiaries. The sum of money provided is linked to the objective of the transfer. When intended to provide access to food (i.e. for food assistance), the amount of cash is generally equal to the local market value of food transfers. Cash transfers can be also provided for non-food purposes (e.g. for shelter or to meet other basic needs), hence entailing different amounts of money to beneficiaries.

Cash-for-work programs include the payment of cash wages in return for labor-intensive work programs designed to create or rehabilitate community or public assets (called community or public works, respectively).

Chronic food insecurity is the state in which food insecurity is prolonged over time due to structural and self-reinforcing factors.

Conditional cash transfers, see conditional transfers.

Conditional transfers feature the provision of transfers in exchange of certain actions by beneficiaries, such as sending children to school or attending health clinics. Transfers include food, cash (i.e. 'conditional cash transfers') or vouchers. Examples include school feeding programs and national flagship initiatives such as *PROGRESA-Oportunidades* in Mexico or *Bolsa Familia* in Brazil.

Coping strategies are means which people use to obtain food, income and/or services when their normal means of livelihood have been disrupted.

Cost-efficiency, see efficiency.

Coupons, see vouchers.

Demand elasticity refers to the responsiveness of the quantity demanded of a good relative to the change in the income of the people demanding that good (income elasticity) or in its price (price elasticity).

Domestic financing refers the funding of programs with national resources raised through tax revenues, budget reallocation of existing resources or commercial/market lending.

Effectiveness measures the extent to which a program reaches its intended objectives (e.g. in terms of impacts, outcomes or outputs).

Efficiency refers to the ability of a program in reaching its intended objectives (e.g. in terms of impacts, outcomes or outputs) at the minimum cost possible.

Emergency reflects a situation that causes widespread human, material, economic or environmental damage, threatening human lives and/or livelihoods and exceeding the coping capacities of the affected communities and/or government.

Experimental evaluations quantify the difference in program impact between beneficiaries (treatment) and non-beneficiaries (control group), where the intervention is randomly assigned to eligible people.

Extra-marginal transfers are in-kind transfers to beneficiaries for an amount that exceeds the amount normally purchased (e.g. a daily transfer of 3kg of wheat to a household that normally purchases 2 kg).

Food aid, see food transfers.

Food assistance refers to the set of interventions designed to provide access to food to vulnerable and food insecure populations. Generally included are instruments like food transfers, vouchers and cash transfers to ensure access to food of a given quantity, quality or value.

Food consumption score is a composite indicator that scores the dietary diversity, food frequency and relative nutritional importance of the different food groups consumed. The higher the value, the more likely dietary diversity will be and the more likely that a household will achieve nutrient adequacy.

Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.

Food transfers refer to in-kind rations of food, which can be sourced locally, regionally or internationally. The terms food transfers and food aid are here used interchangeably.

Food-for-work programs include the payment of food wages in return for labor-intensive work programs designed to create or rehabilitate community or public assets (called community or public works, respectively).

Fortification is the practice of deliberately increasing the content of an essential micronutrient, i.e. vitamins and minerals (including trace elements) in a food, so as to improve the nutritional quality of the food supply and provide a public health benefit with minimal risk to health.

Hunger is physiological phenomenon including painful sensation caused by deprivation from nutrients.

Infra-marginal transfers are in-kind transfers to beneficiaries for an amount less than normally purchased (e.g. a daily transfer of 2kg of wheat to a household that normally purchases 3 kg).

In-kind food, see food transfers.

Innovations include the creation of new products and processes, the application of new products in other domains, or the enhancement of the routines and procedures associated with these applications.

Insurance is contractual agreement whereby one party (insurer) has the obligation – in exchange for a predefined premium – to provide compensation to the other party (insured) in case a predetermined event occurs in the future.

Livelihoods represent the capabilities, assets, and activities required for a means of living to survival and wellbeing.

Macronutrients consist of carbohydrate, protein and fat. These nutrients form the bulk of the diet and supply all the energy needed by the body.

Malnutrition results from the insufficient, excessive or imbalanced consumption of macro- and micro-nutrients and includes undernutrition, overnutrition, and micronutrient malnutrition, the latter often being referred to as ‘hidden hunger’.

Micronutrient powders include a small amount of powder, usually 1 gram, which can be added to food ready for consumption and containing the full daily requirement of vitamins and minerals of the target beneficiary. It is particularly useful for young children who cannot satisfy their relatively high micronutrient requirements from foods fortified for the general population, and who cannot swallow tablets or capsules.

Micronutrients include all vitamins and minerals. Vitamins are either water-soluble, such as the B complex vitamins and vitamin C and generally not stored by the body for future needs, or fat-soluble (e.g., vitamins A and D), which can be stored by the body.

Monetization refers to the sale of commodities provided as food aid on local markets. Those sales are operated by governments or implementing partners in order to obtain currency for other expenses. WFP is generally not engaged in monetization activities.

Near cash transfers, see vouchers.

Non-contributory transfers don’t require beneficiaries to pay premiums or other contributions in order to receive transfers (e.g. insurance schemes).

Non-experimental evaluations quantify the difference in program impact between beneficiaries and non-beneficiaries using multivariate statistical methods.

Persistent food insecurity, see chronic food insecurity.

Poverty lines are thresholds used to measure poverty. Lines can be national (calculated based on income necessary to meet basic needs at local prices) or international (e.g. standard US\$ 1.25 or US\$2/day); they can be absolute (anchored in some absolute standard of living) or relative (e.g. defined in relation to countries’ mean income or consumption); or they can be monetary (e.g. income or expenditure) or non-monetary (e.g. food consumption or literacy).

Price subsidies are full or partial reductions in prices of certain commodities or services. They are normally operated and compensated by governments.

Protection includes all activities aimed at ensuring full respect for the rights of individuals in accordance with the letter and the spirit of the relevant bodies of law, i.e., human rights law, international humanitarian law and refugee law.

Qualitative data include observations that are other rather than numerical; they often involve attitudes, perceptions and intentions.

Quantitative data reflect observations that are numerical.

Quasi-experimental evaluations quantify the difference in program impact between beneficiaries (treatment) and non-beneficiaries (comparison group), where the latter is constructed using methods such as propensity-score matching, regression discontinuity, and double-difference.

Randomized evaluations, see experimental evaluations.

Ready-to-Use Foods are foods that need no preparation before consumption. They range from different types of biscuits or bars used in school feeding or in emergencies (for consumption by all age groups), to products that serve a specific nutritional purpose. Examples of the latter category include lipid-based (e.g. oil and fat), micronutrient and energy dense pastes that are used to prevent or treat malnutrition. These are precooked, and aseptically packed, requiring no refrigeration, and allowing consumption straight from the package. A further distinction may be made between Ready-to-Use Supplementary Foods (RUSFs), generally designed for prevention and treatment of moderate acute malnutrition, and Ready-to-Use Therapeutic Foods (RUTFs), which are generally used for treatment of severe acute malnutrition.

Risk is the probability of an event or hazard from occurring, and thus materializing into a shock.

Safety nets are a sub-set of broader social protection systems. Safety nets mostly include non-contributory transfers, such as in-kind food, cash or vouchers; they can be provided conditionally or unconditionally, and can be targeted or universal in coverage. Safety nets may also include other interventions to improve access to food and basic essentials, such as price subsidies. The terms safety nets, social safety nets, social transfers and social assistance are here used interchangeably.

School feeding includes two distinct and complementary components: school meals and take-home ration programs. See the respective definitions for more details.

School meal programs include the provision of meals or snacks for children at school to encourage enrolment or attendance, improve nutritional status and increase attention in class. They are often complemented by take-home ration programs, with which they form 'school feeding' programs.

Shock is the realization of a given risk, and can be covariate (affecting large number of people) or idiosyncratic (impacting more specific households or individuals).

Social assistance, see safety nets.

Social protection refers to comprehensive systems including safety nets, labour market policies, insurance options (e.g. contributory pensions, health insurance), and basic social services (e.g. in education, health and nutrition).

Social safety nets, see safety nets.

Social transfers, see safety nets.

Stamps, see vouchers.

Stunting is an anthropometric indicator of undernutrition and refers to low height-for-age in children under-five years of age as compared to international standards.

Supplementation is a way to address micronutrient deficiencies. It involves providing supplements of micronutrients to populations identified as deficient or at risk.

Sustainability refers to the ability of an intervention to be economically self-sustained over time.

Take-home ration programs include the provision of food to households to incentivize child school enrolment or attendance. They often complement school meal programs, with which they form 'school feeding' programs.

Targeting refers to the processes and tools aimed at identifying eligible program beneficiaries. Key targeting methods include means-testing (e.g. based on verified income), proxy-mean tests (e.g. based on information on observable characteristics like dwelling, asset ownership or demographic structure), geographic, community-based participatory approaches, and self-targeting.

Therapeutic feeding is the rehabilitation of severely malnourished children by providing special foods that meet their entire nutritional requirements combined with medical treatment.

Transitory food insecurity is the state in which food insecurity affects people for a limited time due to temporary shocks or other factors. Seasonal food insecurity is one form of transitory food insecurity.

Unconditional transfers don't require reciprocal actions by beneficiaries (such as sending children to school) in order to access program transfers. An example is represented by general relief food distribution.

Undernourishment is the condition of people whose dietary energy consumption is continuously below a minimum requirement for fully productive, active and healthy lives (which vary by country, gender and age).

Undernutrition is a form of malnutrition that results from serious deficiencies in one or a number of nutrients and/or morbidity. These deficiencies impair a person from maintaining adequate bodily processes, such as growth, pregnancy, lactation, physical work, cognitive function and resisting and recovering from disease.

Underweight is an anthropometric indicator of undernutrition and refers to low weight-for-age in children under-five years of age as compared to international standards.

Vouchers are used to provide access to a range of goods or services, at recognized retail outlets or service centers. When used for food (i.e. for food assistance), they provide access to commodities for a predefined value or quantity. The terms vouchers, stamps, coupons or 'near cash transfers' are here used interchangeably.

Vulnerability includes both exposure to risks and the ability of people or countries to manage those risks. Such ability includes measures to prevent and mitigate risks ex-ante (i.e. before risks materialize into shocks), as well as ex-post coping with shocks as they realize.

Wasting is an anthropometric indicator of undernutrition and refers to low weight-for-height in children under-five years of age as compared to international standards.

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