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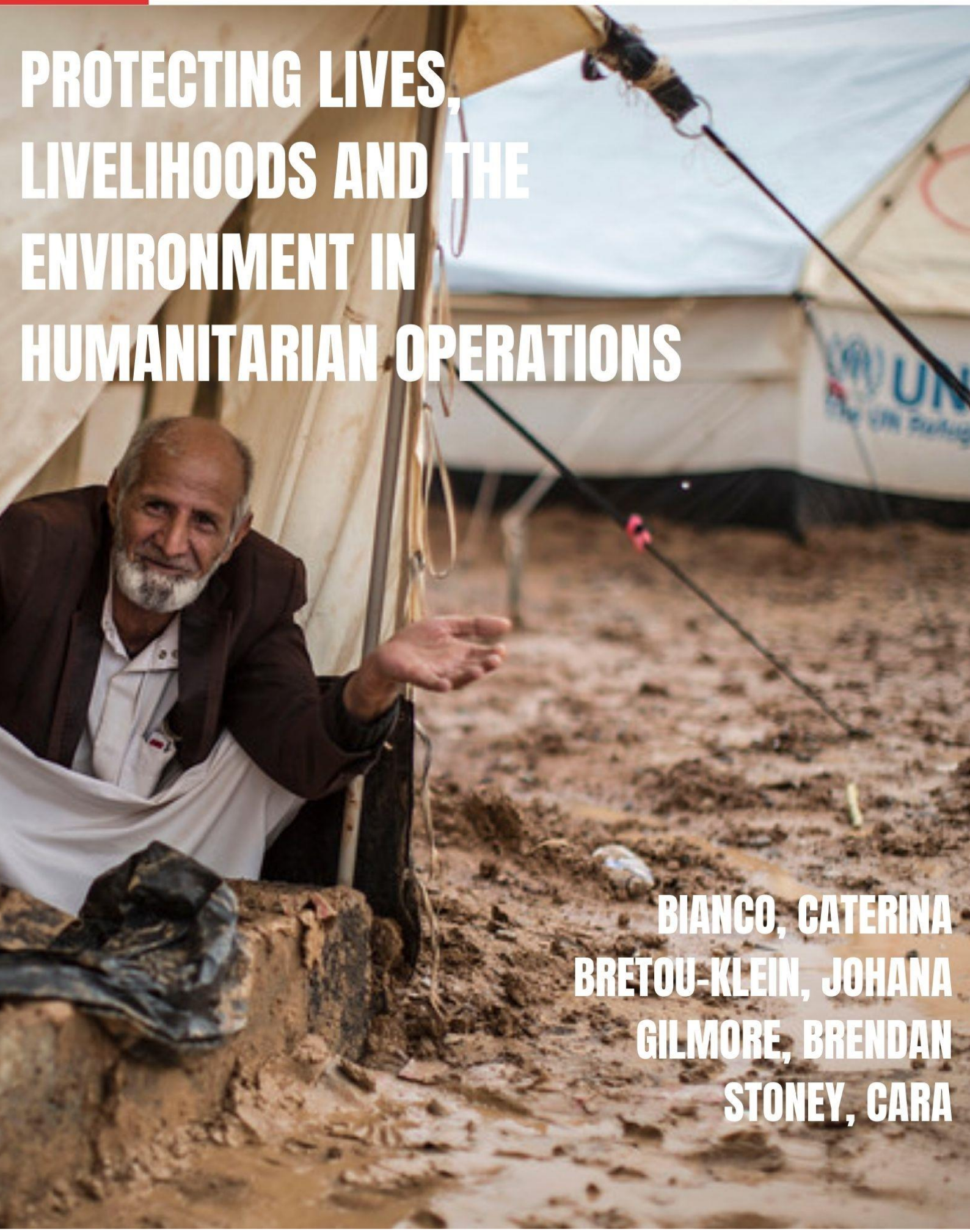
PROTECTING LIVES, LIVELIHOODS AND THE ENVIRONMENT IN HUMANITARIAN OPERATIONS



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Acknowledgement and Disclaimer

This report has been prepared for the United Nations Environment Programme (UNEP) / Office for the Coordination of Humanitarian Affairs (OCHA) Joint Environment Unit by a consultancy team from The London School of Economics and Political Science (LSE). The views expressed are those of the authors and do not reflect those of the JEU nor the LSE.

Cover Photo: OCHA/Iason Athanasiadis, February 2018.[1] "Iraqi Man in flooded IDP camp".

Chapter I Photo: Nichole Sobecki, 2017.[2] "Dheg Mohamed dismantles her home on a plain outside Aynabo, Somaliland. She had to relocate after successive seasons without rain left her well dry".

Chapter II Photo: OCHA, 2020.[3] "Binish, Idleb governorate: 16 displaced families, originally from Marret Al-Numan countryside south of Idleb, now live in a damaged school in the town of Binish".

Chapter III Photo: OCHA/Phillip Kropf.[4] "Water trucked into a displacement camp housing families displaced from Sa'ada. Water stress lies at the heart of Yemen's instability and has been worsened by ongoing conflict".

Chapter IV Photo: OCHA/Iason Athanasiadis, October 2014.[5] "Khanke, Iraq: cement foundations like these have been constructed by UNICEF with funds provided by the Kingdom of Saudi Arabia, as part of a project that will provide basic WASH facilities to 20,000 people".

The Icons are from UN (2021)[6] and ICRC (2020A).

[1] OCHA. (2021). Photo Gallery. Retrieved from: https://ocha.smugmug.com/Countries/IRQ/Hesham-YoussefRashid-Khalikov-/i-77tvVJZ/0/b7ef05da/L/MYA_9034-L.jpg
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Glossary

Adaptive Capacity: The property of a system to adjust its characteristics or behaviour, in order to expand its coping range under existing climate variability, or future climate conditions. In practical terms, adaptive capacity is the ability to design and implement effective adaptation strategies or to react to evolving hazards or stresses (Brooks and Adger, 2004).

Climate Change: A change in the state of the climate that persists for an extended period: typically, for decades or longer. It refers to any change in climate over time, whether owing to natural variability or as a result of human activity (ICRC, 2020A).

Cluster System: The institutional architecture of the UN crisis response in which the Global Cluster Lead Agency (GCLA) works closely with the Emergency Relief Coordinator (ERC), Inter-Agency Standing Committee (IASC), OCHA, Humanitarian Coordinator (HC), Humanitarian Country Team (HCT), Cluster Members, and local organisations to plan, coordinate, and direct humanitarian action.

Coping Mechanisms: Short-term reactive or unplanned responses to moderate the impact or, sensitivity to, exposures, which can vary depending on the severity of hazards and duration of exposure (Bennet et al., 2016; Pritchard et al., 2020).

Deforestation: The conversion of forested areas to non-forest land use such as arable land, urban use, logged area or wasteland (Tejaswi, 2007).

Environmental Harm: The direct (such as depletion of natural resources, oil spills, loss of wildlife and food insecurity) and indirect (such as the collapse of environmental governance, local institutions, and public services) impact of conflict on civilians, the negative impact of civilian coping mechanisms on natural resources and ecosystems, as well as the deleterious impacts of humanitarian operations if not properly managed.

Livelihoods: The capabilities, assets (including both material and social resources) and activities required for a means of living. It is considered sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resources base on which it relies (UNEP, 2011).

Protection: Measures to limit the impact of hostilities on civilians and civilian objects to ensure respect for the rights of all individuals in accordance with international humanitarian law, applicable human rights law, and refugee law (OCHA, 2021D).

Protection Risks: Hazards and threats to the physical, emotional, and psychological well-being of civilians resulting from direct and indirect impacts of conflict on shelter, food and nutrition, water and sanitation, health, livelihoods, land, and property (Handbook for the Protection of Internally Displaced People, 2010). Further, risks are experienced and responded to differently due to the characteristics of individuals, such as "minority status, gender, sexual orientation, age, or other diversity factors" (IASC, 2016, 8).

Protracted Crisis: Situations in which a significant portion of a population face heightened risk of death, disease, and breakdown of their livelihoods over an extended timeframe (Humanitarian Coalition, 2021).

Resilience: The ability of individuals, communities, institutions, and systems to anticipate, absorb, adapt, respond to and/or recover from shocks and stressors caused by conflict, violence and hazards of various kinds without compromising their long-term prospects (ICRC, 2020A).

Sustainability: The reconciliation of environmental, social, and economic demands. Sustainable development is development that meets the needs of the present generation without compromising

the ability of future generations to meet their needs (World Commission on Environment and Development, 1987).

Sustainable Livelihoods Approach: The conceptual framework that comprises civilian capabilities and assets (including physical, natural, financial, human, social, and political assets) which enable adaptation and resilience to external hazards and shocks (OECD, 2012).

Vulnerability: Condition brought about by physical, social, economic, environmental, and political factors or processes that increase the susceptibility of a community or individuals to a specific shock or hazard. The term describes a person or group's inability to anticipate, cope with, resist and/or recover from the impact of natural or man-made shocks or hazards without compromising their long-term prospects (ICRC, 2020A).

Acronyms

CEOBS	Conflict and Environment Observatory
CRRF	Comprehensive Refugee Response Framework
CERF	Central Emergency Response Fund
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ERW	Explosive Remnants of War
GBV	Gender-Based Violence
GLCA	Global Cluster Lead Agency
GPC	Global Protection Cluster
HNO	Humanitarian Needs Overview
HPC	Humanitarian Programme Cycle
ICRC	International Committee of the Red Cross
IHL	International Humanitarian Law
JEU	Joint Environment Unit (UNEP/OCHA)
LSE	The London School of Economics and Political Science
NEAT+	The Nexus Environmental Assessment Tool
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
REA	Rapid Environmental Assessment
UN	United Nations
UNEP	United Nations Environment Programme
UNSC	United Nations Security Council
WASH	Water, Sanitation and Hygiene

Executive Summary

Humanitarian practitioners are tasked with saving lives in exceptionally challenging operating environments characterized by conflict, scarcity, neglect. In the face of these obstacles, natural resource management and sustainable development have historically been viewed as an 'invisible' issue. Today, there is increasingly widespread recognition that protecting civilians and protecting the environment are fundamentally intertwined and inseparable objectives. The challenge for the United Nations (UN) institutional architecture, and the Global Protection Cluster (GPC) in particular, is translating this objective into practice. This report is structured around four Chapters:

Chapter I frames the impetus for this study before turning to the scope, research objective, and methodology. Commissioned by the United Nations Environment Programme (UNEP) / UN Office for the Coordination of Humanitarian Affairs (OCHA) Joint Environment Unit (JEU) in partnership with The London School of Economics and Political Science (LSE), this study examines the protection of civilians from environmental harm during protracted crises. Through a mixed methods literature review, survey analysis, and practitioner interviews, the report examines environmental dynamics, civilian protection during crises, and opportunities to better address the nexus between protection risks and coping strategies.

Chapter II examines the environmental dynamics that characterise conflict and protracted crises, including legal protections for the environment, direct and indirect harm, exogenous variables, and the scope of existing guidance materials. Civilians in conflict-affected areas are impacted by both direct and indirect environmental harm that increase vulnerabilities during protracted crises. Other exogenous variables, such as climate change and COVID-19, exacerbate these dynamics. The assessment of several existing tools and guidance led to the identification of notable gaps regarding the nexus between conflict, natural resource management, and protection risks. Practitioners participating in this study conveyed a feeling of being overwhelmed by existing best practice tools while simultaneously demonstrating limited exposure in the application of these instruments in practice.

Chapter III scrutinises the role of the humanitarian system at the macro and micro level with particular focus on environmental mainstreaming, systemic integration, and bottom-up durable solutions. Humanitarian actors face practical challenges in designing and implementing appropriate interventions. Developing durable solutions that support adaptive capacity and resilience of conflict-affected and displaced populations is needed to protect civilians from environmental harm. Once considered a 'development problem', it is empirically undeniable that natural resources and environmental infrastructure directly impact the long-term prospects of crisis response and post-conflict reconstruction. It is imperative to promote systemic integration of environmental considerations into response planning and operational management, along with robust data collection, community engagement, context-specific analysis, and ongoing monitoring.

Chapter IV presents concluding recommendations that synthesise the preceding analysis. Pragmatically achievable interventions for humanitarian actors are emphasised. The identified recommendations are intended to advance the integration of environmental programming in protection sector responses as part of the broader humanitarian response, strengthen civilian protection through greater consideration of coping strategies and protection risks that have direct or indirect links with the environment, and improving existing programmatic frameworks for supporting sustainable livelihoods.

The recommendations are based on three thematic categories:

1. **Mainstreaming and Prioritising the Environment in Operational Planning.** This involves the systematic integration of the environment into the Humanitarian Programme Cycle (HPC) and other relevant tools, ensuring effective coordination through data sharing platforms, and promoting training for environmental assessments. Recommendations for donors and governments focus on the need for effective accountability mechanisms, environmental monitoring at the global and national level, and earmarking funding to promote bottom-up programming and community engagement. Humanitarian actors, including contractors, should ensure budget for environmental data collection at the local level to increase context-specific responses.
2. **Addressing Environmental Vulnerability and Resilience of Conflict-Affected Communities.** This involves consideration of how civilian coping strategies impact and are shaped by natural resources, including associated protection risks and how these can be mitigated. Humanitarian actors are encouraged to work with communities and local actors through participatory approaches, including in operational implementation. This includes, for instance, the analysis of climate vulnerabilities in the context of protection risks and livelihoods, and developing mitigation plans for environmentally related protection risks, especially in the context of gender dynamics.
3. **Strengthening and Adapting Existing Frameworks.** This involves the promotion of best practice tools providing guidance on the environment and protection nexus for Cluster Leads, as well as ensuring adherence to International Humanitarian Law (IHL) before, during, and after conflict. Similarly, donors should promote awareness and training on materials addressing the protection-conflict-environment nexus. Humanitarian actors are recommended to engage local communities to identify protection risks, livelihood strategies and coping mechanisms.

This report represents an important milestone in the effort to increase awareness and responsiveness to the complex conflict-environment-protection nexus. Specific focus is on the linkages between humanitarian protection, livelihoods and coping strategies, natural resource management, and environmental or civilian infrastructure. The protection of civilians cannot be undertaken in isolation from rigorous environmental planning and management across at all levels and stages of humanitarian operations.

CHAPTER I

CHAPTER I – Introduction

This chapter frames the environmental dynamics facing humanitarian operations in protracted crises before detailing the study scope, research design, and methodology.

1.1 Background

Protracted crises present enormous practical challenges to humanitarian actors. The delivery of lifesaving assistance, establishing security, and advocating for adherence to international law are core objectives for the Global Protection Cluster (GPC) and broader humanitarian system. Contrastingly, natural resource management and sustainable development have historically been considered 'second tier' considerations by the protection sector. Nonetheless, recent years have witnessed a paradigm shift as it is now widely accepted that operational programming must account for the deleterious impacts of conflict on the environment and civilians (UNSC, 2019). However, discussion is ongoing on how to effectively address these environmental dynamics to better protect civilians in crisis. This report attempts to fill this gap through rigorous analysis of how civilian protection, natural resource management, and infrastructure development intersect. Specific focus is on strategies that the humanitarian system can adopt to account for and respond to environmental harm.

An ongoing challenge for policymakers and practitioners alike is scrutinising the *nexus* between civilian protection and the environmental impact of conflict. The most recent *Protection of Civilians in Armed Conflict* annual report recognises the long-term environmental consequences of conflict as communities suffer from "habitat destruction, direct loss of wildlife from poaching... overexploitation and degradation of natural resources, and increases in soil, air and water pollution" (UNSC, 2020, 42). Armed conflict leaves deep wounds with societal healing hindered by the lasting effects of political destabilisation, economic depression, infrastructure destruction, and social disruption. It also affects the environment, with both direct and indirect consequences for civilian health, livelihoods, and resilience to hazards associated with climate change (ICRC, 2019). Although the environment has often been considered a 'development problem', civilian protection and environmental protection must be understood as synonymous over the long-term.

The linkages between the "scarcity-degradation-conflict cycle" and climate change are complex (Partow, 2008, 162). Nevertheless, crisis response operations can better account for the long-term civilian protection risks from environmental degradation through careful analysis, strategic planning, and adaptive implementation. This report will contribute to this objective through a defined research agenda established between the United Nations Environment Programme (UNEP) / Office for the Coordination of Humanitarian Affairs (OCHA) Joint Environment Unit (JEU) and The London School of Economics and Political Science (LSE).

1.2 Scope and Research Objective

This report focuses on the intersection of civilian protection and environmental degradation resulting from conflict. It analyses environmental factors exacerbating protection risks in complex crises. This will involve consideration of direct and indirect effects on civilians from environmental degradation, including the impact of climate change. This analysis will be driven by three primary, interlinked research questions:

1. What kind of environmental situations or dynamics affect civilian protection activities?

2. How can the humanitarian system better address environmental dynamics of conflict to reduce protection risks?
3. How can the links between sustainable environmental management and civilian protection be better addressed in best practice guidance?

This research scope was originally defined in the Terms of Reference presented in *Annex I*. These research questions will structure the analytical prism for this report to generate actionable and impactful recommendations. It is important to note that although the temporal scope of the study is limited to the conflict-environment-protection nexus in protracted crises, there are natural linkages with post-conflict reconstruction, long-term economic development, and climate change adaptation. This has implications for the framing of the environment in this study to encompass 'environmental or civilian infrastructure', as detailed in Chapter II. These linkages and the changing nature of conflict have necessitated that this study examine both urban and rural contexts.

1.3 Methodology

To answer the guiding questions, a mixed-methods approach involving desk-based research was adopted, including a practitioner survey, specialist interviews, and a comprehensive literature review. The literature review encompassed academic publications and grey literature (including best practice professional tools) to identify gaps in the integration of the environment into operational protection standards.

The survey was designed to scrutinise the conflict-environment-protection nexus from multiple perspectives. The survey was distributed to several notable humanitarian organisations targeting senior practitioners and policy makers. In total, 19 survey responses were received from 22 December 2020 – 8 February 2021. While the number of respondents is small, it enabled a purposive sample of practitioner perspectives. The survey questions can be found in *Annex II*.

Complementing the survey, five semi-structured interviews were conducted with seven interviewees[7] working in humanitarian operations variously focused on civilian protection and environmental management. Each interview lasted for approximately one hour and questions were semi-structured to reflect the differential expertise of participants. Illustrative questions are presented in *Annex III*. Interviews were recorded, transcribed, and coded to allow a structured assessment of thematic topics and recurring discussion points. It is important to acknowledge the positionality of the interviewers and the participants. Participants brought different perspectives to the discussion, from protection practitioners to high-level policymakers, which delivered a breadth of perspectives to the coding analysis. Additionally, the LSE researchers adopted a theoretical perspective analysing status quo operational processes and systems from an external vantage point.

The survey and interviews were conducted in accordance with LSE's Research Ethics Policy and Code of Research Conduct.

[7] Some interviews had more than one interviewee.

CHAPTER II

CHAPTER II – Deconstructing Environmental Dynamics in Protection Programming

This chapter frames the environmental dynamics that shape protracted crises and prospects for long-term recovery. This encompasses the scope of legal protections for the environment in conflict; direct and indirect dimensions of environmental harm; the effect of climate change and COVID-19; and the strengths and weaknesses of existing guidance.

2.1 Civilian Protection and Environmental Management During Crises

The environment is defined in International Humanitarian Law (IHL) as "everything that exists or occurs naturally, such as the general hydrosphere, biosphere, geosphere, and atmosphere... [and] includes natural elements that are or may be the product of human intervention, such as foodstuffs, agricultural areas, drinking water, and livestock" (ICRC, 2020B, 15-16). The environment is directly protected through specific legal protections and prohibitions, as well as indirectly by general rules regulating the conduct of hostilities and the use of particular weapons (ICRC, 2020B). Most notably, Additional Protocol I prohibits "methods or means of warfare which are intended, or may be expected, to cause widespread, long-term, and severe damage to the natural environment" (Article 35, 3). It also explicitly prohibits attacks that "destroy, remove or render useless objects indispensable to the survival of the civilian population", including drinking water, agricultural supply chains, and irrigation systems, for example (Ibid, Article 54, 2).

In spite of legal protection, targeting of the environment, natural resources, and/or infrastructure is an increasingly common conflict tactic in the 'new wars' proliferating since the 1990s (Kaldor, 2013). Sowers et al. (2017) paint a compelling picture of how 'environmental infrastructure' is now often a central target for conflict parties. In this context, environmental infrastructure is defined as "systems of providing water, energy, waste, and sanitation that sustain human livelihoods and well-being" (Ibid, 411). However, it is important to note that other

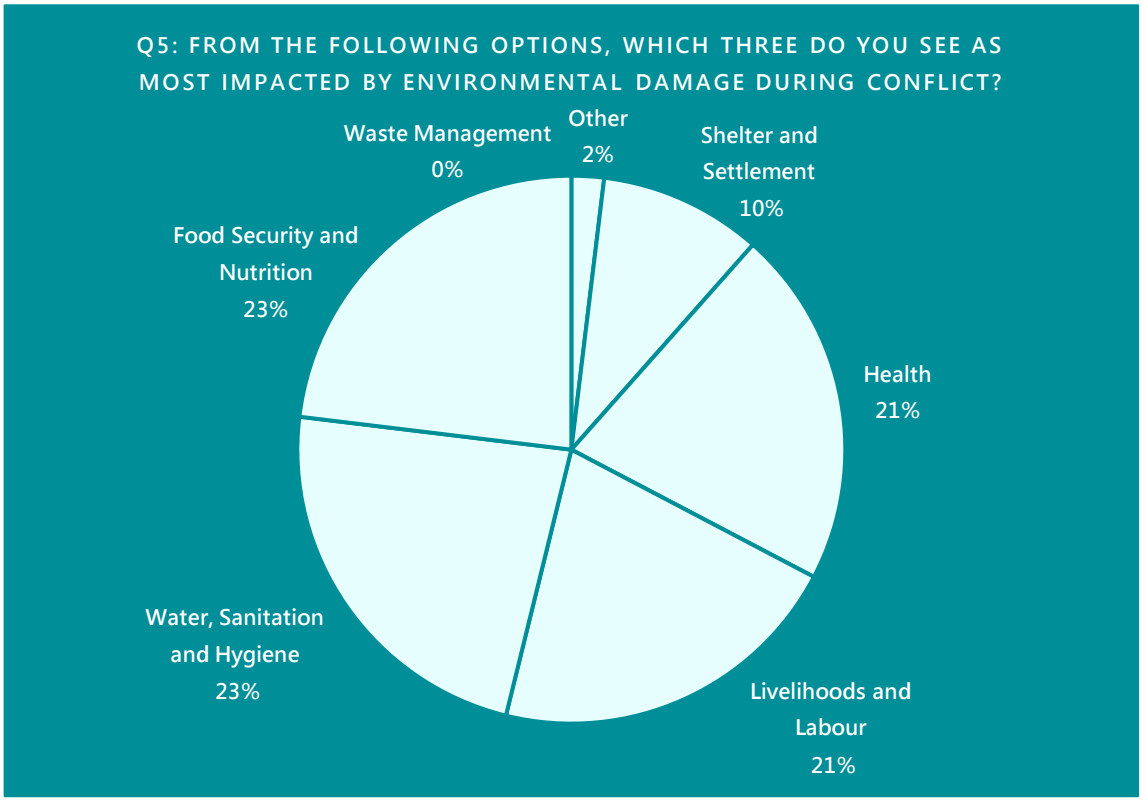


Figure 1: Survey Answers for Q5 (N=19)

forms of 'civilian infrastructure' are often the subject of intentional targeting. This includes agricultural installations (such as agro-processing hubs, storage and distribution facilities, logistics warehouses, irrigation systems, and public markets), as well as oil refineries, rigs, and wells. The objective of attacking civilian infrastructure of this nature is often to make the environment unviable for local populations.[8] The importance of environmental or civilian infrastructure cannot be understated, nor can the complexity of linkages and overlap between these systems. This complexity is illustrated in *Figure 1*, which presents survey perspectives on the type of infrastructure most impacted by conflict (including livelihoods as an inseparable issue).

The impact of conflict on environmental resources is fundamentally important to post-conflict reconstruction (Jarvie, 2016). However, civilians in urban environments are particularly vulnerable to the impacts of environmental or civilian infrastructure destruction as a result of the 'urbanisation of humanitarian crises' (Archer and Dodman, 2017). For this reason, the conflict-environment-protection nexus is framed broadly as encompassing natural resources and ecosystems (covering forests, water reservoirs, and agricultural farmland), as well as man-made physical infrastructure (covering water supply, health care, shelter and housing, sanitation, and waste management).

2.1.1 The Life Saving Imperative and Invisibility of the Environment

In spite of the generally wide recognition that natural resources and environmental or civilian infrastructure are integral to reducing vulnerability and promoting climate resilience, the 'life saving imperative' often takes precedence during emergency operations with limited planning time and constrained resources. Regardless of background, all interviewees communicated the importance of understanding this 'hierarchy of issues' when trying to address protection in armed conflict situations.

For example, Interviewee 2 commented "*the environment in conflict is not a priority for people, it's generally invisible unless there are large fires and it gets better attention, but beyond that it was a struggle to... engage people*". Similarly, a survey participant opined that *"environmental issues are almost completely overlooked"*. Attempting to explain this in pragmatic terms, protection practitioners emphasised the "*problem of prioritisation – when you have a hot emergency like a displaced population, you tend to go for the normal cluster aspects*". This implicit hierarchy is acknowledged in academic literature. For example, Nagoda et al. (2017) assert humanitarian assistance primarily addresses the symptoms of crises but does not address the root causes. Tafere (2018) notes how the humanitarian imperative is prioritised over environmental considerations, which fails to address the linkages between protection and the environment.

Similarly, environmental conservation and natural resource management are viewed as 'development issues' to be addressed after reconstruction and stabilisation. Interviewee 7 framed this as *"lets save the people first and then we'll worry about the environment"* despite the need for humanitarian actors to *"link the two and see how best to protect people within an environmental context, or how by protecting the environment you can protect people"*.

[8] It is notable that the Agenda for Humanity does not account for the targeting of environmental or civilian infrastructure despite this originally being featured as part of the Humanitarian Summit consultations.

Fundamentally, lack of access to sustainably managed natural resources and environmental or civilian infrastructure has disastrous effects on livelihoods and long-lasting peace, thereby undermining resilience to hazards (Jensen and Lonergan, 2012).

2.1.2 Inseparability of the Environment and Protection

Despite acknowledging that the environment is not a humanitarian priority, the majority of interview and survey participants stressed the inseparability of the environment and protection. One participant observed "*we cannot just silo these two parts of humanitarian action and not recognise they are completely interconnected" (Interviewee 4).* Another concluded civilian protection is incomplete without addressing environmental risks and harm given that they are *"two sides of the same coin and you can't really do one without the other" (Interviewee 2*).

Treating the environment as an 'invisible' issue neglects the complex and interlinked protection challenges arising from environmental harm. All interview participants emphasised the need to reframe 'protection' to account for the fundamentally important role of the environment. However, Interviewee 3 observed that the GPC is simply "*not equipped"* to fully integrate the environment into humanitarian needs review and impact assessments.

Particularly important in this context is acknowledging that humanitarian operations must account for 'aggravating environmental factors' that directly impact protection risks. This includes ungoverned access to natural resources, poor environmental governance, inadequate resources, and high environmental fragility (UNHCR, 2009C). These aggravating factors exacerbate protection risks associated with economic coercion, illicit crop production, illegal mining, modern slavery, sexual exploitation, and physical violence (R4V, 2020). It is impossible to effectively address these protection risks without ensuring humanitarian programming is informed by the unique environmental hazards in different contexts.

2.2 Environmental Protection and Humanitarian Outcomes

Addressing the conflict-environment-protection nexus is complex and contextually dependent. However, effectively protecting civilians from environmental harm requires a nuanced understanding of both direct and indirect impacts of conflict on the environment, as well as consideration of wider factors.

When asked about the most critical issues in the relationship between environmental risks and protection of civilians, interviewees consistently focused on complexity and context as recurring terms. For example, Interviewee 1 opined that *"there's not one specific thing which stands out because of the complexity and the context related nature of [these] issues deserve more attention to understand…country-specific or even regional concerns".* Technical approaches to the protection of civilians often target the physical dimensions of vulnerability, overlooking deeper environmental, political, economic, historical, cultural, and social aspects.

The complexity of protecting civilians from environmental damage in protracted crises necessitates context specific analysis. This was considered by all interviewees as paramount for civilian protection. Environmental damage during conflict has differential impacts on populations in urban and rural areas, due to different geographical configurations, livelihood options, food systems, and political, social, and economic dynamics. Ekong (2000) argues rural people have been historically attributed certain characteristics such as low levels of mobility, the

use of agriculture as the main industrial activity, closeness to nature, greater exposure to physical elements, smaller sizes of communities and lower population density. For example, it is common belief that rural livelihoods are strongly linked to natural resources, while urban dwellers are more dependent on environmental or civilian infrastructure (Archer and Dodman, 2017).

As a consequence, explanations on the different sources of vulnerability characterising rural and urban people are based on similar assumptions. However, these generalisations simplify different forms of vulnerability to environmental harm experienced by civilians. As Rigg (2012) argues, rural populations are heterogenous, characterised by differences in livelihoods, gender, ethnicity, and religion. Today, rural populations are characterised by higher levels of mobility, disembedding households, differentiated production activities, and stronger links to urban areas (Ibid). Interviewees underlined how the protection of civilians from environmental harm lacks a context specific analysis that acknowledges the heterogeneous, complex, and dynamic relationship between rural and urban areas. This is due in part to limited data collection and the lack of monitoring mechanisms for contextually varied vulnerabilities considering the different types of hazards and shocks experienced in rural versus urban regions.

2.2.1 Direct and Indirect Environmental Harm

It is possible to define two categories of environmental harm affecting civilians during protracted crises. The first refers to physical damage caused directly by conflicts manifesting in the short term (Solomon et al., 2018). Examples of direct harm include the depletion of natural resources, oil spills, chemical contamination, presence of landmines and unexploded ordnance, human displacement, food insecurity, loss of wildlife, loss of water and food supply, reduced access to healthcare, and degradation of environmental or civilian infrastructures (Jensen and Lonergan, 2012).

Landmines and other Explosive Remnants of War (ERW) represent direct environmental damage caused by the conflict and affecting the health conditions of civilians. Damage includes loss of lives, physical injuries, and psychological distress (Kakar et al., 1996). ERW contamination impacts livelihoods as they destroy "food security as well as access to safe water and to vaccination and health facilities in general" (Duttine and Hottentot, 2013).

The second category refers to the indirect impacts of conflict on the environment shaped by other factors, usually manifesting over the long-term. Examples include the collapse of environmental governance, local institutions, and public services. The disruption of institutional and structural frameworks pushes people to engage in unsustainable activities, including overgrazing and deforestation, as a result of contracted economic and job opportunities and poor law enforcement (Jensen and Lonergan, 2012; Boer and Zwijnenburg, 2020).

In Syria, deforestation driven by firewood collection caused loss of carbon sinks and soil degradation. Similarly, in Yemen, desertification has been exacerbated by farmers fleeing their lands due to the lack of irrigation and agricultural management. This in turn causes increased costs for governments to cope with climate stresses and recover from environmental damage, undermining fiscal resources and credible environmental governance.

It is important to note that indirect harm can be caused by humanitarian operations that fail to integrate environmental concerns into programmatic planning. Examples include depletion of

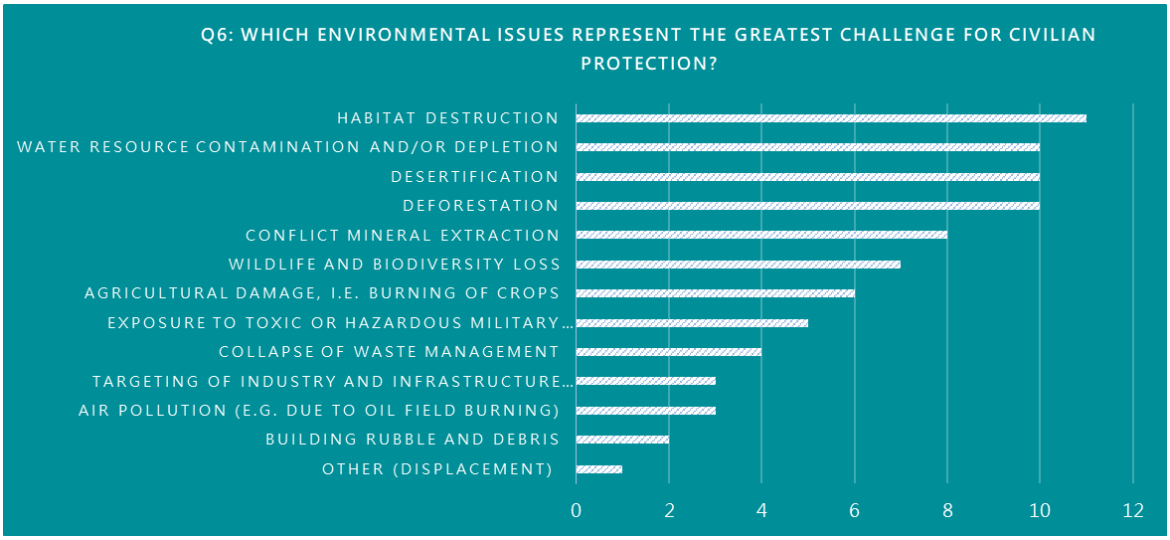


Figure 2: Survey Answers for Q6

groundwater aquifers, deforestation from firewood extraction, soil degradation from distressed cultivation strategies, inappropriate site selection, and fish stock depletion resulting from support for aquaculture by humanitarian actors (GFDRR, 2017C; JEU, 2014).

Figure 2 illustrates the wide array of direct and indirect environmental consequences of conflict that survey respondents (N=19) considered a threat to civilian populations.

2.2.2 Climate Change and COVID-19

The categorisation of environmental harm would be incomplete without accounting for exogenous variables such as climate change and the COVID-19 pandemic. These variables are essential elements to consider as they exacerbate the effects of direct and indirect environmental damage caused by conflicts. Interviewees widely viewed climate change as a central dimension in protracted crises as it increases the potential severity of external hazards with a negative feedback loop for civilian vulnerability and adaptive capacity. There was general consensus that differentiating between environmental damage caused by climate change versus other factors is challenging. For example, Interviewee 2 observed that the impact of climate change *"is fairly nuanced with relatively subtle effects... it is not always straightforward and often quite difficult to isolate from human induced factors".* Despite this complexity, Interviewee 3 concluded that it is clear *"climate change impacts the protection of civilians in conflict situations, exacerbating the situation on conflict-affected populations, ramping up the humanitarian needs".*

Interviewee 7 mentioned degradation of environmental or civilian infrastructure as an example of the correlation between environmental damage caused by conflict and climate change. Conflicts lead to protection issues related to displacement, injury, death, but also lack of access to water and the subsequent destruction of food sources. Climate change works as an external force accelerating the depletion of natural resources, deforestation, and desertification.

Like climate change, the COVID-19 pandemic has significantly complicated the nature of humanitarian response by impeding coping strategies and increasing vulnerabilities for at risk civilians. The pandemic has presented numerous logistical and institutional challenges with both short-term and long-term effects. Short-term difficulties include the funding cuts, travel

restrictions, limited agricultural production, and loss of income (Clapp and Moseley, 2020). For displaced populations, the pandemic has deepened pre-existing inequalities, increased violence and discrimination, halted access to food and basic needs, and worsened already precarious health conditions (OCHA, 2020). Particularly important for humanitarian actors is accounting for the impact of COVID-19 in limiting the adaptive capacity and resilience of displaced persons without access to humanitarian aid and effective medical services.

The COVID-19 pandemic is also impacting the nature of humanitarian protection. Due to an increased reliance on remote activity, the quality and coherence of humanitarian protection has been impacted. Reduced mobility impacts the ability of practitioners to carry out evaluation and accountability mechanisms. This is especially true in the case of environmental protection and monitoring, where a lack of data greatly impedes the quality of protection given. Furthermore, this global crisis has resulted in the diversion of funding, reducing the potential for effective environmental protection. Overall, the pandemic is reinforcing pre-existing vulnerabilities and dynamics in humanitarian protection whilst also creating new lines of exposure, greatly impacting the quality and efficiency of the assistance delivered.

2.3 Guidance and Tools to Address the Environment in Humanitarian Protection

Humanitarian practitioners have access to numerous guidance materials and tools intended to improve environmental outcomes in protection operations. Although important and necessary instruments, Interviewee 3 opined that the range of guidance materials has caused people to "*feel completely overwhelmed*". Despite this perspective, survey respondents demonstrated limited experience with the practical application of several best practice *protection* and *environment* guidance and tools, as illustrated in *Figure 3* and *Figure 4*.

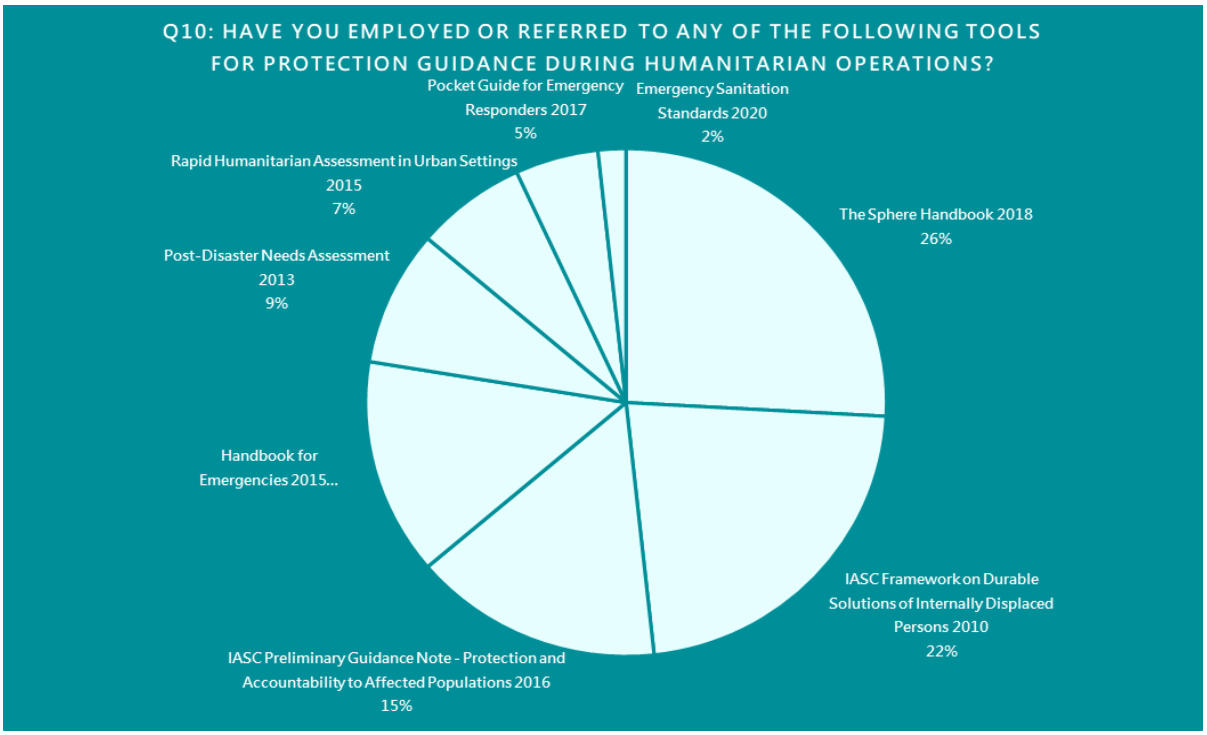


Figure 3: Survey Answers for Q10 (N=19)

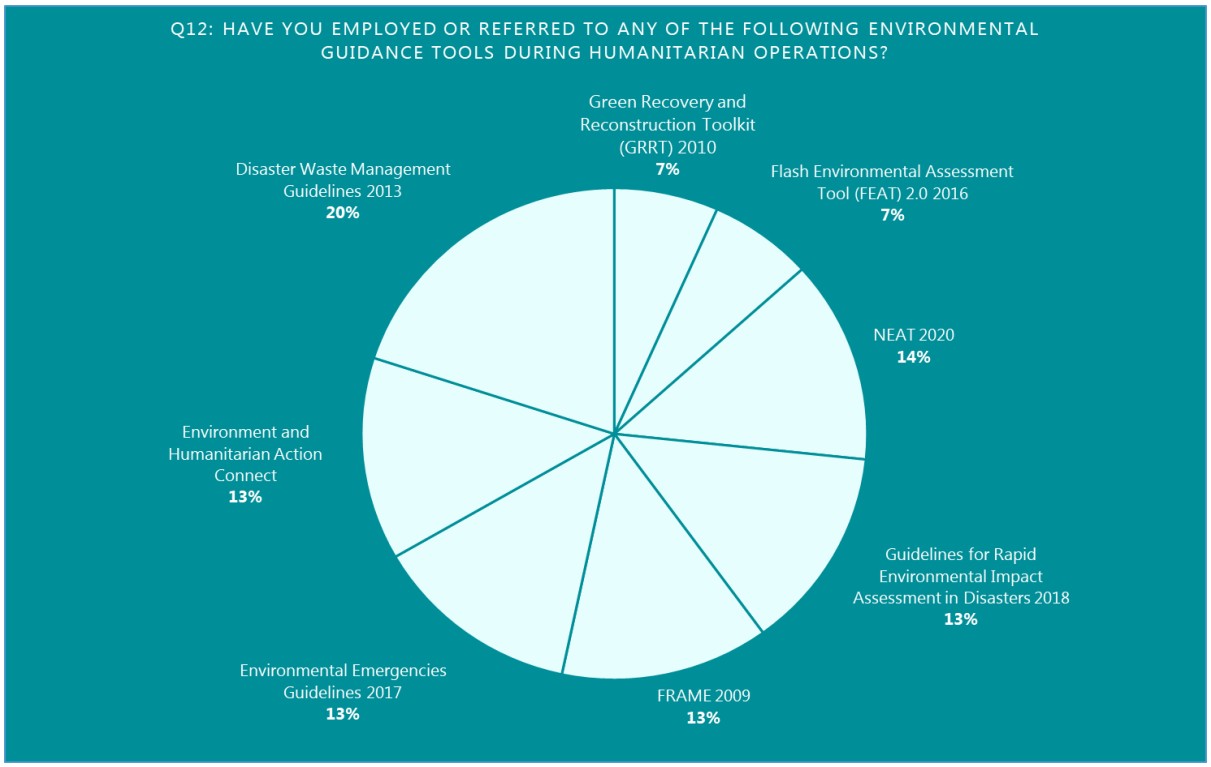


Figure 4: Survey Answers for Q12 (N=19)

The survey results are indicative of an information deficit and lack of awareness of available tools. It is imperative that these instruments are mainstreamed with clear instruction and training provided to practitioners on practical application in humanitarian operations. Importantly, despite the general lack of familiarity with the surveyed tools, survey respondents scored the effectiveness of the protection and environmental guidance presented in *Figure 3* and *Figure 4* as 4.4/10 and 4.17/10 respectively. In sum, interviewees indicated 'information overload' and 'decision paralysis' when faced with the range of tools and guidance, whereas survey responses point towards a general lack of training and exposure.

In addition to practitioner exposure to and perception of best practice materials, it is important to consider the *substantive effectiveness* of these tools in addressing the conflict-environment-protection nexus. The qualitative assessment of each best practice instrument presented in *Annex IV* is intended to identify relative strengths, weaknesses, gaps, and omissions with respect to environmental dynamics in protection programming. From this analysis, five core thematic trends were identified and synthesised below regarding both positive and negative elements of existing guidance and tools.

Theme I – Environmental Assessments

The effectiveness of Environmental Impact Assessments (EIA) and Environmental Management Plans (EMP) is limited by data availability, the expertise of humanitarian actors, weak integration into the Humanitarian Program Cycle (HPC), and limited funding due to emphasis on life-saving activities. For instance, the Nexus Environmental Assessment Tool (NEAT+) is intended to serve as a user friendly rapid environmental assessment and screening tool (JEU, 2019), but only 10% of survey respondents indicated prior exposure to this instrument. In addition, while the *Practical Guide to the Systematic Use of Standards and Indicators in UNHCR Operations* (UNHCR, 2006) and *FRAME Toolkit* (UNHCR, 2009C) each provide environmental indicator frameworks, these should be updated with new approaches, systems, and technologies.

Theme II – Natural Resources and Infrastructure

Natural resource management and infrastructure development is a focus of several tools. However, there is significant variance in the level of procedural guidance provided to conduct hazard assessments, identify aggravating environmental factors, design mitigation options, and prepare long-term response plans. For example, the *Sphere Handbook (2018)* highlights the importance of ecosystems and environmental infrastructure, although little detail is given on meeting these standards in practice. Similarly, the *Pocket Guide for Refugee Emergency Responders* (UNHCR, 2017) clearly outlines the 'alternatives to camps' objective, but it does not define necessary activities, indicators, milestones, or useful tools for environmental infrastructure development.

Theme III – Livelihoods and Coping Strategies

Several tools address livelihoods and coping strategies employed by conflict affected and displaced persons as manifestations of adaptive capacity in the face of vulnerability to external hazards. Particularly comprehensive is the *Durable Solutions in Practice Handbook* (Blay and Crozet, 2017), which provides clear guidance on the assessment of livelihoods obstacles. The Handbook usefully provides an illustrative questionnaire to evaluate the contextual environment for livelihood and employment initiatives to ensure support is contextually informed and customized to community needs. The *Guidelines for Rapid Environmental Assessment in Disasters* (Hauer and Kelly, 2018) provide detailed analysis of factors influencing environmental impacts, threats, basic needs, and negative consequences of relief activities. However, livelihood indicators do not address access to natural resources. Similarly, although it provides that guidance "should be developed specifically for each possible negative consequence" with input from communities (Ibid, 89), no instruction is provided on how practitioners should evaluate and mitigate against protection risks associated with different livelihoods and coping strategies.

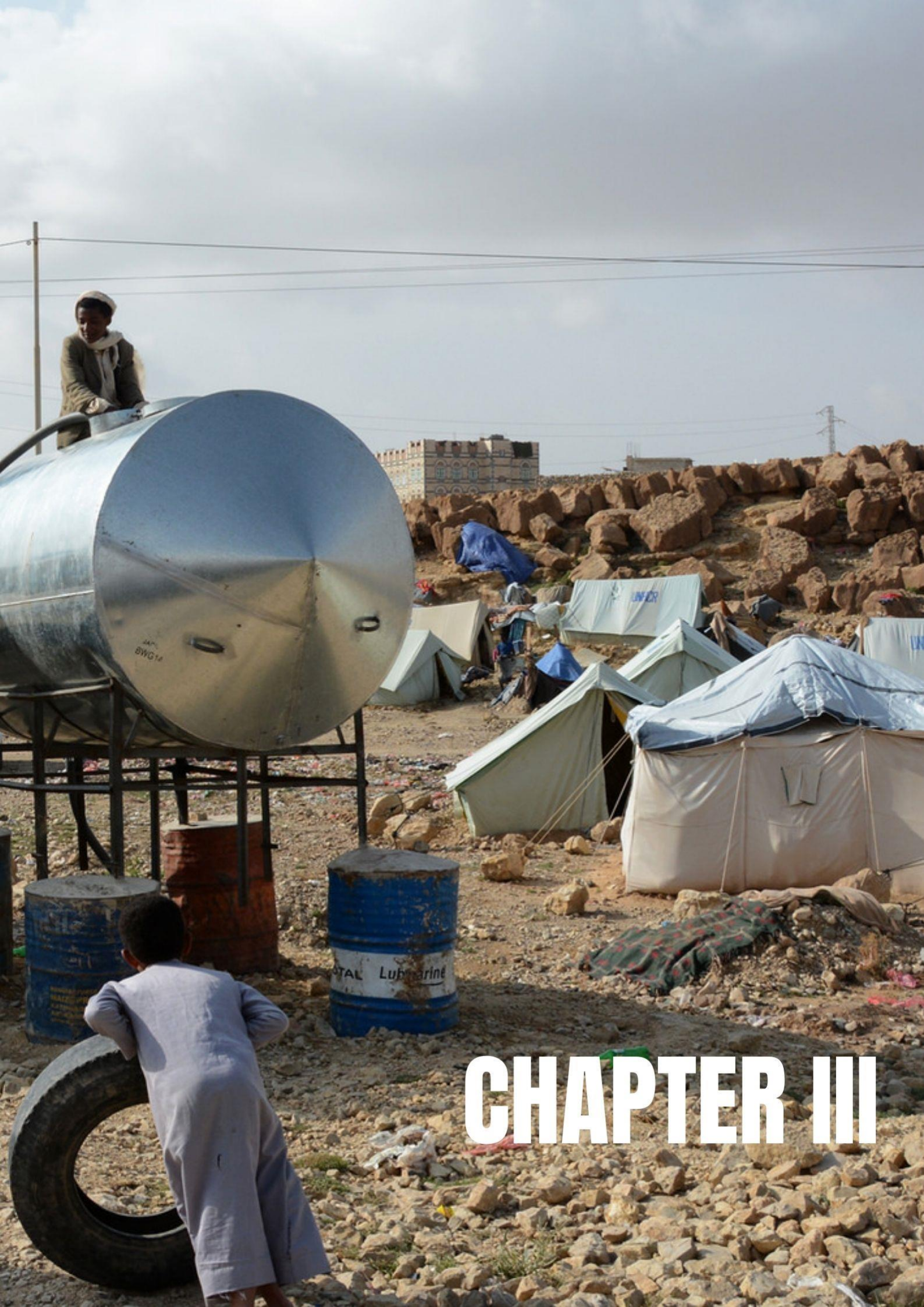
Theme IV – Vulnerability and the Sustainable Livelihoods Approach

The framing of livelihoods as capabilities or assets that enable individuals and communities to cope with or adapt to external stressors is an important conceptual framework that addresses the weaknesses outlined in Theme III. Volume A and B of the *Post-Disaster Needs Assessment (PDNA) Guidelines* (GFDRR, 2013; 2017A-C) comprehensively integrate the principles of Moser's (1998) 'asset vulnerability framework'. This is especially true of the 'Productive Sector Guidelines' (GFDRR, 2017A) that adopts a 'Sustainable Livelihoods Framework' (encompassing physical, natural, financial, human, social, and political assets), with an ecosystem perspective on the relationship between natural resources and livelihoods. A core component of development programming since the 1990s, the Sustainable Livelihoods Approach enables an integrated assessment of vulnerability, livelihood assets and strategies, institutions, and outcomes (Morse et al, 2013). It is noteworthy that among the assessed tools this approach is only featured in the PDNA.

Theme V – Durable Solutions and Bottom-Up Programming

A top-down, directive approach to humanitarian operations is a characteristic of the Cluster System that critics identify as inflexible with limited accountability and poor integration of local knowledge (Konyndyk et al., 2020; Knox-Clarke and Campbell, 2018). However, the *Durable Solutions Handbook 2017* promotes a bottom-up, decentralised, and area-based approach to operational programming (Blay and Crozet, 2017). The rationale is that displaced communities will support operations "that remove obstacles to durable solutions that they themselves have identified and prioritised" (Ibid, I-II). Similarly, the IASC (2016) Preliminary Guidance Note emphasises the need to integrate accountability and grievance mechanisms into the HPC. However, the environment, natural resources, and livelihoods are not discussed as components of long-term solutions. In addition, the *Tool for Participatory Assessment in Operations* (UNHCR, 2006) provides a useful bottom-up, community-centred, and rights-based instrument to structure dialogue regarding protection risks. However, there is a limited focus on the role of natural resources and environmental infrastructure as key components of durable solutions that limit or exacerbate such risks.

These themes are featured components of the analysis presented in Chapter III and subsequent recommendations on how the humanitarian system can more effectively account for the environmental dynamics of conflict to reduce protection risks.



CHAPTER III

CHAPTER III – Addressing Environmental Harm Through Humanitarian Protection

This chapter explores the conflict-environment-protection nexus through a multi-tiered analysis. First, consideration is given to scrutinising the effectiveness of the UN Cluster System and GPC in particular in the context of environmental programming and needs assessments. Secondly, the analysis turns to bottom-up programming featuring environmental integration for durable solutions that reduce vulnerability, improve adaptive capacity, and strengthen resilience.

3.1 The Cluster System and Institutional Constraints

This section will focus on broad-based, macro issues encountered in protecting civilians from environmental harm, and how the protection sector can reduce and address these situations. In terms of data collected, it made logical sense to split the further sections into *macro* and *micro* issues due to the scale they address. The focus of this section is *institutional constraints* which was highlighted as a barrier to the holistic and systematic integration of the environment within protection practice.

The Cluster Approach is structured around 11 distinct 'sectors', each with a designated Global Cluster Lead Agency (GCLA). The objective is to "strengthen system-wide preparedness and technical capacity to respond to humanitarian emergencies" with Coordinators providing leadership and coordination accountability with other key actors (OCHA, 2021A). The GCLA for the GPC is the UN High Commissioner for Refugees (UNHCR). It is notable that there is no dedicated Cluster sector for the environment. While this may be viewed as an institutional constraint, the environment (like gender) is a cross-cutting thematic issue that affects all sectors in different ways. The challenge facing the Cluster System is one of environmental mainstreaming and systemic integration, especially in the context of the Humanitarian Needs Overview (HNO). Effectively mainstreaming and integrating the environment into humanitarian operations must start at the top with strategy development as a complement to bottom-up programming. Without considered analysis of how the environment features as part of the problem from a strategic perspective, the effective integration of environmental considerations into operational responses will be limited.

3.1.1 Environmental Mainstreaming and Systemic Integration

Framed by some commentators as "siloed, parochial, and exclusive" (Konyndyk et al., 2020, 3), the effectiveness of the Cluster System can be limited by sectoral myopia. Similarly, Knox-Clarke and Campbell (2018) highlight differences between actual and expected operational processes with respect to response planning and implementation. Particularly challenging is the holistic integration of environmental considerations into protection sector programming. In this regard, Interviewee 1 commented that "*humanitarian organisations are great at doing their job, but the environmental component is lacking as it's not being properly monitored or looked at, [particularly not] in the context of what the country was like prior to conflict".* This is not to say environmental factors are not currently being incorporated into protection practice during armed conflict situations. However, the compartmentalisation of different issues results in a lack of recognition for the nexus between civilian protection and environmental harm. Although there is intended to be inter-Cluster coordination where more than one Cluster is activated, this has largely defaulted to an information gathering and sharing space. Increasing the influence of inter-Cluster groups regarding operational response planning and environmental integration would significantly improve the effectiveness of the Cluster System.

Related to the need for greater environmental integration and mainstreaming is funding. A key strategy to ensure appropriate budgeting for environmental emergencies in the current system would be to consider applying for Central Emergency Response Fund (CERF) funding (EHA Connect, 2021). This would be particularly effective if CERF and other funding mechanisms required the utilisation of environmental indicators to monitor natural resource management and climatic conditions. A percentage of accessible funding could also be earmarked for environmental activities during operational responses, such as Environmental Impact Assessments (EIAs), Environmental Management Plans (EMPs), and Rapid Environmental Assessments (REAs).

This compartmentalisation limits the ability of humanitarian operations to effectively address the conflict-environment-protection nexus as this is not accounted for from the earliest stages of operational programming. In this regard, the current HNO template provides only a limited reference to the environmental dimension of humanitarian needs assessments and response planning (OCHA, 2019). Although the template calls for an 'environmental profile', no guidance is given on what this should involve nor the scope of this analysis. There is a noticeable gap with respect to the consideration of direct and indirect environmental effects of conflict and how these impact coping strategies of vulnerable populations. There is a need for detailed guidance on environmental assessments during the HPC.

The *Multi-Sector Initial Rapid Assessment (MIRA) Guidance* (IASC, 2015) is intended to support needs assessment as a key component of the HPC strategic planning and prioritisation process. Not only does the MIRA Analytical Framework account for the 'severity of the crisis' with respect to vulnerabilities, risks, and infrastructure destruction, but it also accounts for coping mechanisms of affected populations. Yet, it fails to address the relationship between natural resources, environmental or civilian infrastructure, and coping strategies in both urban and rural areas. Addressing this nexus is a necessary component of a comprehensive multi-sectoral needs assessment, particularly considering the increasing severe effects of climate change on vulnerable populations. There is also a need to not reduce these environmental assessments to simple "box-ticking" and to have comprehensive assessments (Green, 2017). Environmental reporting or audits of organizational practices have been recommended to overcome this challenge and better integrate the environment into humanitarian operations (Parker, 2010).

3.2 Durable Solutions and Bottom-Up Implementation

Although the Cluster System emphasises directive operational coordination and control orchestrated by the GLCA in concert with other key partners, it is notable that Knox-Clarke and Campbell (2018) found the Clusters function in practice with a bottom-up approach to strategy development. Relatedly, Konyndyk et al. (2020) emphasise the impact of an area-based and bottom-up approach to promote accountability and ensuring beneficiary populations and local NGOs directly inform operational planning. This aligns with the focus of the *Durable Solutions Handbook* regarding the implementation of decentralized and area-based approaches to ensure local ownership and buy-in. Considering the importance of incorporating coping mechanisms and livelihood strategies, it is fundamentally important to involve communities in the development of operational strategies that "remove obstacles to durable solutions that they themselves have identified and prioritised" (Blay and Crozet, 2017, I-II).

As noted in Section 2.3, existing tools like the IASC Preliminary Guidance Note (IASC, 2016) and *Tool for Participatory Assessment in Operations* (UNHCR, 2006) both encourage strengthened

accountability through grievance mechanisms and a rights-based approach that give a voice to displaced persons and conflict-affected communities. However, in such tools there is a lack of practical guidance for humanitarian actors regarding the environmental dimension of conflicts, natural resource management, environmental or civilian infrastructure, and sustainable livelihoods. There is no 'easy fix' as the humanitarian system must simultaneously address macro-level environmental integration with micro-level data collection to inform programmes and activities that promote adaptive capacity and resilience.

3.2.1 Data Collection and Evidence-Based Decision-Making

Almost all interviewees mentioned the importance of data collection and environmental monitoring to improve the responsiveness and effectiveness of protection activities. Conducting EIAs and developing EMPs are imperatively important activities to establish a baseline and mitigate foreseeable negative environmental activities. However, humanitarians often lack the data necessary to carry out such assessments and the available tools are typically unsuitable for certain contexts. Furthermore, the results of these analyses are rarely effectively integrated into the HPC. Data collection is recognized as a starting point to overcome this. Indeed, data collection *"[puts] people in a position where they can't any longer ignore the issue or they're prompted to respond because the evidence is there... and they're forced to act" (Interviewee 3).* Similarly, Knox-Clarke and Darcy (2014) highlight the current lack of data-driven decision making and the consequences this has for operational effectiveness.

Although tools like the PDNA (Volume A, 2013; Volume B, 2017) and *Rapid Humanitarian Assessment in Urban Settings* (ACAPS, 2015) feature data collection as core components of the methodological environmental assessment processes, survey respondents and interviewees highlight significant disconnects with operational practice. In the context of the ongoing conflict in Yemen, Interviewee 2 commented that *"there [are] currently no systems for monitoring... levels for groundwater"*. This greatly impacts the capacity and direction of an appropriate protection intervention, where due to a lack of measurement, groundwater levels become an invisible issue. The ICRC (2020, 11) notes "fragile states often host fewer reporting weather stations from which climate data can be gathered" such that "the [Central African Republic] a country twice the size of Germany has only 14 reporting stations, or 0.2 per 10,000 square kilometres", as opposed to Germany's 3.5 stations in the same area. Data collection not only makes issues 'visible' in protection operations, but it accounts for the complexity of varied contextual environments. Indeed, respondents also underlined the necessity for data collection to be context specific.

A contextually informed approach is particularly crucial in the context of refugee camp management. A lack of data collection in the Syrian Arisha Camp resulted in 10,000 people living in a heavily polluted environment, with children *"playing amidst the waste from the oil refineries" (Interviewee 1)*. The lack of data also resulted in the camp being established in a flood prone zone, resulting in significant flooding in 2018. Consequently, Interviewee 1 continued that *"this was the kind of situation where having information on location would have been helpful to think again around locations about the set up"*. Not only is data collection important for individual cases like the Arisha Camp, but systemic integration of environmental assessments in the HNO and MIRA will directly impact the effectiveness of operational planning across the board.

Collecting data assists in reducing vulnerabilities by allowing *modelling* and *projection* processes. Data collection also contributes to "effectively anticipating climate trends, and shorter-term shocks and stresses" (ICRC, 2020A, 41). Environmental monitoring can assist in analysing the impact of refugee and IDP camps on the environment in armed conflict situations (Price, 2017). Hagenlocher et al., (2012) argue remote sensing and satellite imagery can help determine vulnerable environmental habitats, population dynamics and the capacity of areas to withstand pressures. Having this data "can help to strengthen people's resilience, anticipate potential shocks, and adapt" (ICRC, 2020A, 41), especially in the context of climate change. Environmental monitoring should not solely be a concern during armed conflict; multi-temporal remote sensing offers ways of analysing pre-conflict, conflict, and post-conflict environmental changes (Enaruvbe et al., 2019). Participants stressed the need for holistic environmental monitoring in order to witness changes over time, rather than purely acknowledging sudden changes in the environment.

This material needs to be publicly accessible to provide "a vital foundation for the protection of human rights" (Weir et al., 2019, 618). MapX is an example of a public data mapping platform established by UN Environment Programme GRID-Geneva in 2014 to support the sustainable use of natural resources by aggregating data at scale. Lacroix et al. (2017) argue this is one of the first attempts by the UN to consolidate this spatial data which aids decision-makers and stakeholders in understanding land use options and how this can be managed sustainably. A similarly useful tool is the INFORM Risk Index and Severity Index led by the Joint Research Centre of the European Commission, which are open-source indices intended to provide actionable data informing responses to humanitarian crises (European Commission, 2021).

Defined as public engagement "in a scientific project that produces reliable data for use by scientists, decision-makers or the public" (Weir et al., 2019, 618), 'citizen science' has equally immense potential as a data source. According to Interviewee 2, embracing this type of non-traditional information allows *"affected communities to take ownership over environmental issues"*. Technological innovations in crisis mapping have been a catalyst for citizen science, such as the Ushahidi-crisis map in Haiti which directly informed the disaster response (Meier, 2011).

3.2.2 Vulnerability, Adaptation, and Coping Strategies

Coping mechanisms are "short-term reactive or unplanned responses to moderate the impact or, sensitivity to, exposures" (Bennet et al., 2016, 909), which can vary depending on the severity of hazards and duration of exposure (Pritchard et al., 2020). As noted by Pritchard et al. (2020) and Suarez et al. (2018), vulnerable populations are often forced into overreliance on environmental safety nets in the extraction of raw materials and resources (namely farming, fishing, logging, and mining), which can lead to deleterious effects like deforestation and land use change without foresight and careful management. Although rural populations are particularly dependent on natural resources to endure external hazards, coping mechanisms employed by urban populations also impact on the environment, especially when essential infrastructure has been destroyed and livelihood opportunities are resultantly insecure (Pritchard et al., 2020; Barnett and Adger, 2007).

The importance of 'livelihoods and labour' is evidenced by 21.15% of responses that identified this variable as the most impacted by environmental harm resulting from conflict among the available options. Similarly, 'engaging communities/IDPs to understand environmental coping

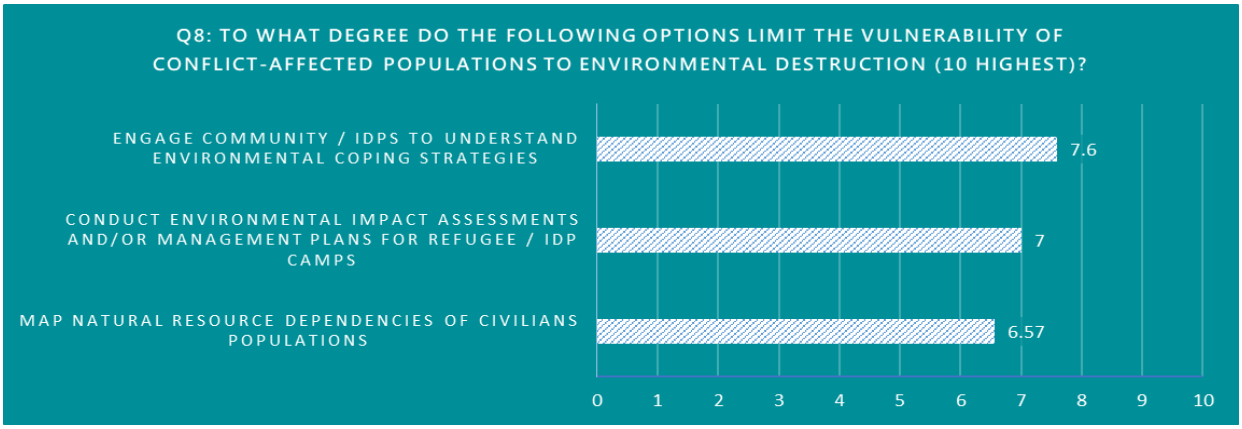


Figure 5: Survey Q8 (N=19)

strategies' was ranked first among all response options at 7.6 / 10 as an integrally important action to limit the vulnerability of crisis affected populations, as illustrated in *Figure 5*.

It is thus unsurprising that the *Durable Solutions Handbook 2017* identifies 'access to employment and livelihood opportunities' as one of the eight key criteria to measure the effectiveness of humanitarian response strategies (Blay and Crozet, 2017). However, truly engaging with livelihoods requires an understanding of how vulnerable populations utilise assets (physical, natural, financial, human, social, and political) to cope with and respond to external shocks and hazards. In this regard, the Sustainable Livelihoods Framework and ecosystem approach adopted by the PDNA Guidelines is particularly instructive (GFDRR, 2017A).

Pragmatic realities necessitate recognition that sustainable and inclusive livelihoods will not always be feasible in crisis situations. However, humanitarian actors must ensure that operational programming accounts for the nexus between livelihoods, coping strategies, and protection risks. In post-conflict contexts, careful consideration needs to be given to protection risk associated with crisis-driven coping strategies, especially regarding informal or illicit environmental economies such as oil refining and bunkering, illegal mining, charcoal production, and cultivation or processing of illicit crops. Relatedly, consideration must also be given to the relationship between these informal or illicit livelihoods and conflict financing or modern-day slavery, which create significant protection risks associated with child labour, trafficking, and sexual slavery. Relatedly, the IASC (2016, 8) highlight how various protection risks are "shaped by characteristics such as minority status, gender, sexual orientation, age, or other diversity factors".

Particularly important in this regard is gender-based violence, as highlighted by Interviewee 7 when *"refugees were going into the forest to collect firewood... but the authorities would beat them up whenever they caught them – it was mostly women... so we put in place an alternative fuel mechanism, compressed rice husks, but there was this big scam because the refugees would get the free rice husks and send it back to the lorry"*. Similarly, the lack of proximity to water sources created by poor camp location gives rise to additional gender-based violence risks as women and girls disproportionately bear responsibility for collecting water (IUCN, 2020). An

important consideration in this context is the difficulty in developing protection interventions that do not also create unforeseen protection risks. This example illustrates the complex interplay between environmental coping mechanisms, vulnerability, and civilian protection. It raises important questions of whether alternative mechanisms are successful in what they seek to achieve and how the protection sector can better implement effective and sustainable responses.

Box 1: Firewood Collection and Protection

Environmental coping strategies are often heavily influenced by gender, illustrated by the example of firewood collection. Castañeda Camey et al. (2020) highlight the increasing use of GBV to assert control over natural resources and maintain power imbalances. Castañeda Camey et al. (2020) similarly comment on how gender-differentiated roles, such as women being responsible for firewood collection, can serve to reinforce vulnerabilities and place women in dangerous situations (Sommer et al., 2014). A study in Chad by UNHCR (2014) found out of 673 surveyed refugee households, 42% reported incidents of GBV during firewood collection over a six-month period (Global Alliance for Clean Cookstoves, 2016, in Castañeda Camey et al., 2020). Intersectional vulnerabilities can also become compounded, meaning female refugees are increasingly vulnerable to traditional power structures and their status as a displaced person. Understanding patterns of how GBV is exerted across environmental contexts is imperative for the protection of civilians and has important ramifications for the environment and protection nexus. In terms of how environmental harm can be limited, UNEP (2016) advocate restoration of the environment to ensure safer firewood collection, the importance of safeguarding and building resilience, and the need to incorporate women into decision-making around these issues.

Environmental coping mechanisms are particularly prominent in refugee and IDP camps. Both the interviews and academic literature presented in this study highlight social and cultural tension over access to resources in the aftermath of conflict, that either cause or exacerbate displacement. Scholars, policy makers, and practitioners stress the importance of considering the environment for camp management (Price, 2017), and the increased demand for natural resources. A common issue arising within the literature is deforestation in proximity to refugee and IDP camps and how this increases environmental degradation. Ronald (2020), Solomon et al. (2018) and Enaruvbe et al. (2019) conducted research on the relationship between deforestation and displacement, and the additional environmental pressure due to surges in the demand for fuelwood. Interviewee 1 noted a similar experience in Syria where *"we are doing research on deforestation which is driven by firewood collection... people need firewood for heating and cooking but in the long-term there's climate implications because you lose carbon sinks and have degradation of soil".* This highlights how unsustainable environmental coping mechanisms have implications for climate change. Consequently, it is imperative to consider how coping strategies provide a necessary aspect of livelihoods during conflict, and yet can increase vulnerability in the long run through environmental degradation.

3.2.3 Building Resilience in Conflict-Affected Communities

Building resilience within conflict-affected communities is another important area to address environmental harm. Nagoda et al. (2017, 129) argue that "vulnerability is complex, and its root causes are often multidimensional... lasting solutions to humanitarian crises require that root causes for vulnerability are identified and addressed". Interviewees highlighted how, in the context of climate change and the COVID-19 pandemic, the protection sector needs to ensure capacity and resilience-building within communities on a structural and individual level. This enables more effective civilian protection from both direct and indirect environmental harm.

Linking Protection with Development

Interviewee 7 highlighted how *"the humanitarians consider that the environment is more of a development matter".* Data collected from both the interviews and survey suggest the environment and environmental harm are often considered as long-term development issues. As such, indirect environmental harm and resilience-building can be missed in protection operations. However, "simply waiting for conflicts and instability to be over to support people's adaptation is not an option" (ICRC, 2019 ,39). Interviewee 4 similarly noted *"how we help communities to be resilient in the face of [environmental] degradation... is about ensuring they are safe, ensuring they have access to water, ensuring they have access to food and so on and so forth... and this is about the survival of people".* This point highlights building resilience within conflict-affected communities is also a short-term issue and particularly paramount for displaced populations (Pinto et al., 2014). As such, for the protection sector to successfully protect civilians from direct and indirect environmental harm, it needs to address resilience-building in order to bridge this divide between short- and long-term harm.

Box 2: Climate Change and Protection

Climate change is often dismissed in protection operations, and as Interviewee 2 conveyed there is "*an issue of time horizons which is problematic for humanitarian response which looks like six months maybe a year".* However, "environmental resources are often cited as important for households coping with hazards in the Global South" (Pritchard et al., 2020, 1), and in the context of climate change, environmental resources are declining in quantity and quality (Barnett and Adger, 2007). Interviewees shared ways their organisations are integrating climate resilience into operations through 'low cost' and funding solutions such as "*adapting the type of seeds you use... building walls to protect from flooding" (Interviewee 4);* or in the case of Yemen, *"[a] historical approach they took to irrigation [was] to ensure that their interventions are sensitive to climate change... in repairing water storage systems and terraces" (Interviewee 2).* The latter also integrates a bottom-up approach considering "*that those climate and environment considerations are reshaping people's realities"* by taking a historical approach which "*speaks to people's identities" (Interviewee 4).* There is a need for increased implementations of 'low cost' and historical approaches to build climate resilience.

Structural Resilience Building

Due to the impacts of conflict on states' capacities to provide essential services and protection, it is important for the protection sector to contribute to building resilience on a structural level. Interviewee 1 commented on how conflicts *"have impacts on the governmental infrastructure with their ability to deal with [environmental] implications because you lose expertise, equipment, the capacity to do recovery work... so they're already more vulnerable to the*

Box 3: Yemen's Waste Management Crisis

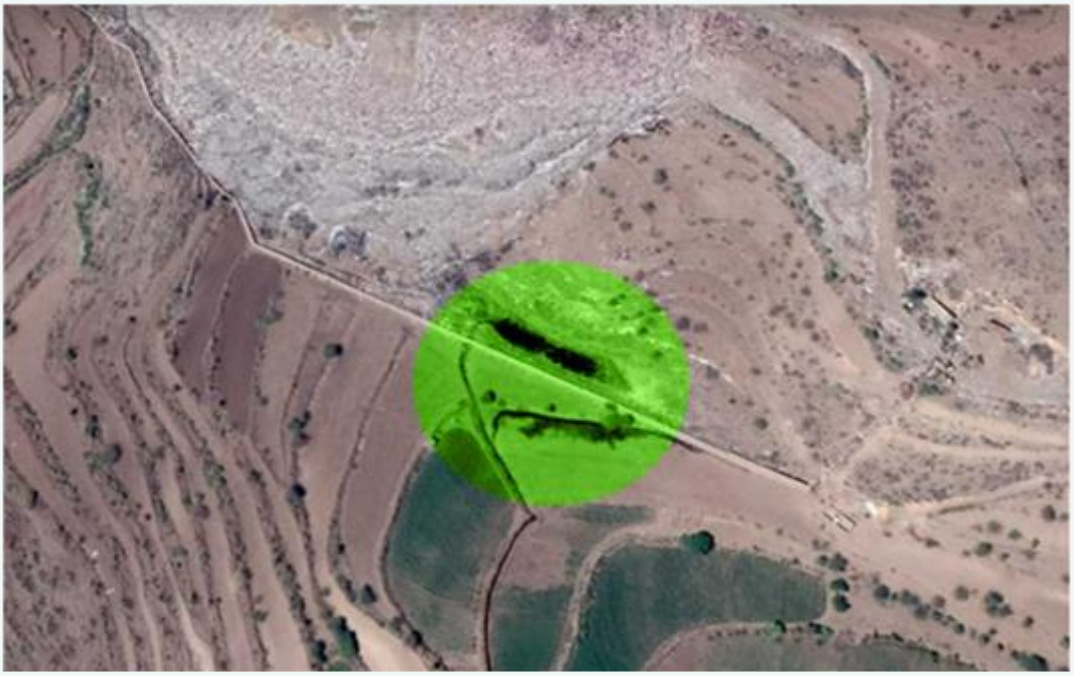


Figure 6: Satellite imagery of the unlined landfill north of the Yemeni city of Ibb shows leachate escaping the site. In the highlighted area it can be seen filling irrigation channels in agricultural terraces downslope. Source: CEOBS (2019).

The war in Yemen has led to a disruption of the country's waste management infrastructure, greatly impacting the protection of civilians (CEOBS, 2019). Even before the war "around 60% of the waste generated in Yemen went uncollected and was dumped, burned, or buried, usually in illegal dumps and dry riverbeds" (Republic of Yemen, Ministry of Local Administration, 2009, N.P.). Years of bombing, lack of resources and budget have led to a total disruption of the waste management system and greatly contributing to groundwater and air pollution causing "high levels of allergies, asthma, skin irritations and gastrointestinal diseases" (CEOBS, 2019, N.P.). It has also greatly impacted soil composition, negatively affecting the country's agriculture, and subsequently people's livelihoods (CEOBS, 2019). Ignoring this structural issue has had grave consequences on the protection of civilians. Survey respondents highlighted how 'ineffective waste management' constitutes a *"specific environmental factor that created additional challenges for civilian protection"*. Yemen's waste management crisis is an important example of how

implications of climate change". Similarly, Interviewee 2 posed *"the problem is because the environmental governance in most of these countries affected by conflict is knocked out, you lose the monitoring systems which are in place on the ground".* Pinto et al. (2014) argue viewing resilience as a form of 'pre-shock' intervention rather than a long-term issue will provide further clarity and aid in effective programming.

During protracted crises, there can be a loss of environmental governance and capacities to address environmental harm in the short-term through new equipment and expertise, and in the long-term through improved monitoring systems. Because of this, it is important for protection operations to support structural resilience building. This can be done through increasing awareness, increasing local budgets and adhering to IHL. Interviewee 4 advocated *"respect for IHL will help people be resilient in the sense that their environment may be spared, infrastructure will be spared and facilities, and this is a key component in ensuring that people can continue to survive in those environments".* Ensuring structural resilience-building through protection of environmental governance, infrastructures and facilities is thus an important aspect of protection operations to successfully protect civilians from environmental harm.

In summary, the consideration of the environment as a 'development issue' has created barriers for the linking of environmental harm and civilian protection. Resilience-building within conflict-affected communities is an essential strategy for addressing environmental dynamics within protection practice and ensuring an environmentally sustainable response.

CHAPTER IV

CHAPTER IV – Recommendations and Conclusion

This chapter provides a succinct list of targeted recommendations intended to improve the integration of environmental protection programming with specific focus on the nexus between conflict, civilian protection, natural resource management, and environmental or civilian infrastructure. These recommendations are presented in *Table 1*.

Table 1: Recommendations

Thematic Category	Targeting	Recommendations
Mainstreaming the Environment in Operational Planning	Global level: IASC, Cluster Leads, OCHA National level: HCTs [9]	Systematically integrate the environment into the HPC and other planning tools, such as the HNO, MIRA, humanitarian response plans, appeals, and other humanitarian response strategies
		Ensure coordination of analysis between different actors through the use of information sharing mechanisms and platforms, for instance MapX and the INFORM Risk Index and Severity Index
		Expand funding for environmental assessments and account for the need to ensure humanitarian staff include environmental experts
		Promote training and capacity building support for operational staff on EIA, EMP and rapid environmental assessments, such as with the NEAT+ tool
	Donors and Governments	Integrate environmental monitoring systems into accountability and reporting mechanisms
		Support improved environmental monitoring at the global and national level through dedicated funding, specifically in the conflict context where government mechanisms may be lacking capacity or incapacitated
		Require the utilisation of environmental indicators and integration of monitoring plans and safeguards into humanitarian planning and response
		Extend financial support to expand training for GPC coordinators and inter-cluster coordinators on the conflict-environment-protection nexus
		Earmark funding for activities that promote bottom-up environmental programming, community engagement, and protection interventions, especially as part of the

[9] Inter-Agency Standing Committee (IASC); Emergency Relief Coordinator (ERC); Humanitarian Coordinator (HC), Humanitarian Country Team (HCT).

		COVID-19 response
	Humanitarian Actors	Ensure budget for environmental data collection on a local level to increase context-specific data (include civilian training for data collection)
Addressing Environmental Vulnerability and Resilience of Conflict-Affected Communities	Global level: IASC, Cluster Leads, OCHA National level: HCTs	Develop strategies to consider how affected people's coping strategies related to natural resources contribute to protection risks, and how these can be mitigated
	Donors and Governments	Fund environmental governance strengthening activities and sustainable livelihood development programmes in humanitarian contexts
		Emphasise structural resilience building by financing activities that address vulnerabilities and livelihood assets
	Humanitarian Actors	Engage communities in participatory approaches to operational implementation, especially in livelihoods related to natural resources
		Increase low-cost solutions to build climate resilience (see GRRT) and analyse climate vulnerabilities and protection risks before developing livelihood and coping strategy interventions
		Identify and develop mitigation plans for environmentally related protection risks, especially gender related issues, by building on best practices such as those related to women and cooking fuel
Strengthening and Adapting Existing Frameworks	Global level: IASC, Cluster Leads, OCHA National level: HCTs	Promote the use of best practice tools that provide guidance on the links between environmental coping strategies and protection risks
		Promote respect for and adherence to IHL before, during, and after conflict
		Account for environmentally related protection risks in modernised guidance and new practitioner tools
	Donors and Governments	Promote awareness raising and training on guidance materials that address the conflict-environment-protection nexus
	Humanitarian Actors	Engage local communities to identify protection risks and livelihood strategies or coping mechanisms

Conclusion

The protection of lives, livelihoods and the environment have been the three guiding pillars of this research. Although broad in scope, the core objective of the report has been to emphasise the increasing interconnection between preserving lives, livelihoods, and the environment, and ultimately demonstrating how the protection of civilians in conflict cannot be separated from environmental protection. The report has explored how the environment continues to be considered as an invisible, second-tier issue by protection organisations, and yet, the inclusion of environmental strategies saves civilian lives and livelihoods. Analysing protracted crises and armed conflict provided a specific lens for investigating how destruction and degradation of the environment causes problems for civilians, and how this environmental harm can be addressed by the protection sector.

The second chapter sought to understand the broader links between the environment and humanitarian protection. Firstly, the report underlined how environmental protection is legally defined and how interview and survey participants themselves considered the importance of the environment within protection practice. Through exploring the complexity of environmental contexts, and wider factors such as climate change and COVID-19, the research painted a broad picture of how different types of environmental harm intersect with civilian protection. Additionally, this section addressed how the environment is currently incorporated into best practice guidance and tools. The research revealed a lack of engagement with the most well-developed tools, such as NEAT+, and systemic inefficiencies and gaps across the board.

Regarding how the protection sector can address environmental harm through humanitarian protection, the report then discussed the role of institutional constraints and issues experienced at the local level. A lack of environmental mainstreaming and isolating of issues across protection practice highlighted a strong need for the systematic integration of the environment within the protection sector. Coupled with responses from interview and survey participants, the HNO provides strong evidence of unsuccessful environmental integration into humanitarian analysis at the macro level. Data collection and the importance of environmental monitoring is another key solution for how protection risks can be limited. To achieve an environmentally sustainable response, practices at the local level, such as unsustainable coping mechanisms contributing to livelihoods, cannot be neglected by protection measures due to the implications of wider environmental damage. The depiction of the environment as a long-term, development issue has created barriers for the linking of environmental harm and civilian protection, and engagement needs to be improved to ensure effective protection. Data and evidence informing protection responses also needs to take into account civilian perspectives, especially through citizen science pathways. Technocratic data collection at the global level has limitations; citizens impacted by protracted crises should be increasingly involved and take ownership of context-specific, durable solutions.

Finally, the concluding recommendations settled on three key areas for how best practice guidance can be improved. The importance of mainstreaming the environment into operational planning, addressing environmental vulnerability and resilience in conflict-affected communities and strengthening existing frameworks, are central areas for addressing and improving practice surrounding the environment and protection. These recommendations are largely targeted at the protection sector and how the GPC, humanitarian actors, and donors can better account for the environment within the protection of civilians.

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ANNEX I –Terms of Reference

Original Terms of Reference

Organisation and Department: United Nations Environment Programme (UNEP) and UNEP/OCHA Joint Environment Unit.

Project Working Title: Protecting lives, livelihoods, and the environment - study of environment and protection links in humanitarian responses.

Background: The UNEP/OCHA Joint Environment Unit is the United Nations entity tasked with addressing the environmental dimensions of emergencies and plays an important role in harnessing knowledge and guidance aimed at strengthening the environmental sustainability of humanitarian action. UNEP coordinates the UN's environmental activities and assists countries in implementing environmentally sound policies and practices.

An increasing number of people need humanitarian assistance, where the COVID-19 pandemic has exacerbated needs and demands for funding. Coupled with the environment and climate crisis, these needs are expected to increase in the future, and to also lead to increased displacement. Key for the humanitarian response to these crises is protection of affected populations, where environmental factors can be causes or drivers of humanitarian needs for people on the move and host communities. Environmental economies can also become both coping strategies and protection risks for affected populations, due to the potential for protection violations such as child labour, forced labour, modern slavery and gender-based violence. The humanitarian protection sector and the environment are subsequently closely linked. Negative environmental impacts from protection responses can be mitigated, and the protection sector response can also be an entry point for low-cost and simple ways to improve environmental management. A better understanding of these links and ways to address them in humanitarian crises is key to protecting people affected by crises and fundamental for an environmentally sustainable humanitarian response.

Question: What kinds of environmental situations or dynamics affect humanitarian protection in different contexts (e.g. urban, rural)? How can the protection sector address these environmental situations and reduce protection risks while promoting an environmentally sustainable response? How can the protection sector support an environmentally sustainable humanitarian response? What guidance and best practices already exist and what type of guidance should be developed to better address the links between sustainable environmental management and protection?

Objective: The study would review available guidance on addressing environment links in humanitarian protection programming, identifying key gaps but also best practices in specific humanitarian crisis responses. A general review of environment-related situations likely to have an impact on humanitarian protection may be developed. The findings would inform the development of environmental guidance for the protection cluster, linking to ongoing work by UNEP and JEU to distil and disseminate environmental guidance for humanitarian settings to the Inter-Agency Standing Committee constituency. Findings would be incorporated into the Environment and Humanitarian Action Connect (https://ehaconnect.org) knowledge hub.

Methodology: Literature review of existing environmental and protection policy and guidance documents, coupled with a general assessment of environmental economies and activities which

may form part of the livelihoods and labour strategies of populations affected by humanitarian crises. Desk research coupled with a survey and/or interviews with humanitarian protection practitioners and other actors.

Contact: UNEP/OCHA Joint Environment Unit (unepocha@un.org)

Amended Terms of Reference

Revised Questions:

- What kind of environmental situations or dynamics affect civilian protection operations?
- How can the humanitarian system better address environmental dynamics of conflict stabilisation to reduce protection risks?
- How can the links between sustainable environmental management and civilian protection be better addressed in best practice guidance?

Revision Rationale:

- Together with the client, we decided to focus the study on protracted crises as well as narrow the questions to those outlined above. This was because of the word limit of the report as well as because of the professional focus of our interviewees and surveyed participants.

ANNEX II – Practitioner Survey

Description: This research is being conducted by a team of researchers from the London School of Economics and Political Science in partnership with the United Nations Environment Programme (UNEP) / Office for the Coordination of Humanitarian Affairs (OCHA) Joint Environment Unit. The research scope is focused on strengthening the understanding of the nexus between civilian protection and environmental harm in conflict situations. This research will provide qualitative and quantitative data to complement desk-based research and practitioner interviews. The results of this survey will be used in the preparation of guidance material for protection and environment sector practitioners.

The survey is targeted to persons working in the area of protection of civilians, with a particular focus on protection of civilians in armed conflict.

An open definition of 'Environmental Harm' is employed which includes resource and pollution issues such as natural resource overexploitation, biodiversity loss, food insecurity, uncontrolled pollution, ineffective waste management and greenhouse gas emissions.

Please note that all answers are anonymised. The first question is for statistical purposes only, all personal information will remain confidential and will not be published or linked to your organization.

Q1: Please provide your position and organisation (confidential and not for publication)

➔ Textbox answer

Q2: Do you consent to the publication of anonymized survey responses?

➔ Textbox answer

Q3: Which of the following technical areas best align with your professional focus?

➔ Multiple choice answer:

- Protection of civilians
- Strengthening adherence to international humanitarian law
- Prevention of Gender-based violence
- Ensure housing, land, and property rights
- Addressing needs of displaced people and migrants
- Addressing needs of vulnerable groups
- Ensuring access to justice
- Protecting human rights
- Other

Q4: Have you encountered any specific environmental factors that created additional challenges for civilian protection?

➔ Textbox answer

Q5: From the following options, which three do you see as most impacted by environmental damage during conflict?

➔ Multiple choice answer:

- Water, Sanitation and Hygiene (WASH)
- Food Security and Nutrition

- Health
- Shelter and Settlement
- Waste management
- Livelihoods and labour
- Other

Q6: Direct and indirect environmental damage during conflict may cause harm to people's health and livelihoods, as outlined in the latest Report of the Secretary-General on Protection of Civilians in Armed Conflict S/2020/366. In your experience, which environmental issues represent the greatest challenge for civilian protection (choose up to 5)?

➔ Multiple choice answer:

- Habitat Destruction
- Wildlife and biodiversity loss
- Air Pollution (e.g. due to oil field burning)
- Deforestation
- Desertification
- Conflict mineral extraction
- Agricultural damage, i.e. burning of crops
- Water resource contamination and/or depletion
- Targeting of industry and infrastructure facilities such as water treatment plants
- Exposure to toxic or hazardous military remnants
- Collapse of waste management
- Building rubble and debris
- Other

Q7: Which of the following examples do you think are the most effective approaches to protecting civilians from environmental harm caused by conflict? (Select and manually reorder)

➔ Ranking and reordering:

- Conduct Environmental Impact Assessments and/or Management Plans for Refugee / IDP Camps
- Map Natural Resource Dependencies of Civilians Populations
- Engage Community / IDPs to Understand Environmental Coping Strategies
- Account for Gender Dynamics in Refugee / IDP Settlement Planning
- Consider Differential Contextual Dynamics in Operational Planning (e.g. Urban vs. Rural Settings)
- Develop Strategies to Strengthen Food Production Systems
- Establish Effective Waste Management and Recycling Systems
- Provide Green Resilient Livelihood Training and Skills Development Programs
- Coordinate with Institutional Actors Charged with Environmental Management
- Fundraise for Health Infrastructure and Systems Investment
- Analyse Agricultural Value Chains / Supply Chains Impacting Food Insecurity
- Promote Adherence to Laws / Guidelines on Natural Environment Protection During Conflict
- Document and Share Information on Environmental Damage in Humanitarian Contexts
- Consider Gender, Age, and Diversity to Establish Environmental Dependencies
- Establish Accountability/Conflict Resolution Mechanisms
- Inclusion of Local Community in Assessment and Monitoring

- Use Natural Resource Management for Environmental Peacebuilding
- Engagement with Humanitarian Organisations in Clearance Activities and Land Restoration
- Sustainable Resource Management (including renewable energy production)
- Restore Ecosystem Services such as Reforestation Programmes
- Restore Water Supply and Sanitation Systems / Infrastructure
- Other

Q8: Of your top three selections in Question 8, to what degree do they limit the vulnerability of conflict-affected populations to environmental destruction? (0 lowest; 10 highest)

➔ Grading out of 10:
- Question connected to the previous one, so the top three appear

Q9: In your experience, which countries might present useful case studies in terms of protecting civilians from environmental harm and why?

➔ Textbox answer

Q10: Have you employed or referred to any of the following tools for protection guidance during humanitarian operations?

➔ Multiple choice answer:
- Post-Disaster Needs Assessment 2013
- Rapid Humanitarian Assessment in Urban Settings 2015
- The Sphere Handbook 2018
- IASC Framework on Durable Solutions of Internally Displaced Persons 2010
- IASC Preliminary Guidance Note - Protection and Accountability to Affected Populations 2016
- Pocket Guide for Emergency Responders 2017
- Emergency Sanitation Standards 2020
- Handbook for Emergencies 2015
- Other

Q11: How well do the above-mentioned protection guidance tools address the environment-protection nexus? (0 lowest; 10 highest)

➔ Grading out of 10

Q12: Have you employed or referred to any of the following environmental guidance tools during humanitarian operations?

➔ Multiple choice answer:
- Nexus Environmental Assessment Tool (NEAT) 2020
- Flash Environmental Assessment Tool (FEAT) 2.0 2016
- Framework for Responding, Assessing, Monitoring and Evaluating the Environment in Refugee-Related Operations (FRAME) 2009
- Environmental Emergencies Guidelines 2017
- Guidelines for Rapid Environmental Impact Assessment in Disasters 2018
- Disaster Waste Management Guidelines 2013
- Green Recovery and Reconstruction Toolkit (GRRT) 2010
- Environment and Humanitarian Action Connect
- Other

Q13: How well do the above-mentioned environmental guidance tools address the environment-protection nexus?

➔ Grading out of 10

Q14: Do you have any further comments (recommendations for further work, expectations for study, other)?

➔ Textbox answer

ANNEX III – Practitioner Interview Questions

Q1: Please tell us a little bit about your organisation and your current role there?

Q2: Could you please tell us a little bit about your professional background?

Q3: Have you received any internal or external training with regards to protecting civilians from environmental harm?

Q4: Do you believe that the protection sector can effectively protect civilians from environmental harm or limit the harm?

Q5: Does your organisation account for environmental harm in civilian protection during protracted crises?

Q6: Does your organisation follow guidelines or mechanisms to ensure a more environmentally sustainable response to the protection of civilians during protected crises?

Q7: In your experience, have you witnessed cases (e.g. specific situations or case studies) where, during a protracted crisis, civilians have been effectively protected from environmental harm? **OR** Have you witnessed cases where it failed? What was the nature of the environmental harm? How did it impact on civilian livelihoods? How was it addressed?

Q8: What role does data and data collection play in the environmental and civilian protection nexus?

Q9: Would you argue that climate change has a great impact on exacerbating the environmental harm suffered by civilians during a protracted crisis?

Q9: From your experience, do you think the COVID-19 pandemic is exacerbating the environmental harm suffered by civilians during protracted crises? In what way and to what extent? What will be the long-term impact?

Q10: Do you have any contacts/suggestions for people we should contact to have a broader perspective on the issue? Do you have any best guidance or tools you recommend us to look at?

Q11: Is there anything else you would like to add about the work you are doing / have done, or any other comments?

ANNEX IV – Best Practice Tools and Guidelines Matrix

Tool	Description
Nexus Environmental Assessment Tool (NEAT) 2020	The Nexus Environmental Assessment Tool (NEAT+) is intended for use by practitioners to identify issues of environmental concern in emergency situations to identify potential vulnerabilities and risks before designing longer-term recovery interventions. While useful for multiple purposes, the tool should structure environmental information gathering and the identification of potential mitigation measures. Although conducting Environmental Impact Assessments (EIA) and developing Environmental Management Plans (EMP) are best practices approaches, humanitarian actors face several challenges. These include a lack of available data to establish an environmental baseline, lack of awareness and accessibility for tools suitable for specific contexts, poor integration of environmental assessments into the Humanitarian Programme Cycle (HPC), and weak uptake of assessment results. The latter point is particularly important considering the lack of environmental expertise and unavailability of funding which is often prioritized for life-saving activities. Consequently, the NEAT+ tool is intended to be a user-friendly rapid environmental assessment tool where expertise and funding may be lacking. The 'Environmental Sensitivity' tool allows for an assessment of environmental risks and vulnerabilities in conflict-affected contexts, differentiated into three modules: 1. Shelter 2. Water, Sanitation and Hygiene 3. Livelihoods and Food Security Application of the NEAT+ tool allows for a customised assessment to identify potential environmental risks categorised as High, Medium, or Lower Concern, from which early-stage mitigation guidance is generated to reduce the likelihood of risks materialising. NEAT+ is a flexible tool suitable for utilisation as a screening assessment, but it less comprehensive than an EIA and is not intended to replace more detailed analysis. In addition, the NEAT+ tool was "originally designed as a tool principally for rural displacement contexts" and "it does not work as well for pure urban contexts" (JEU, 2020, 26). Nonetheless, it has been tested in peri-urban and rural contexts with slight modification. An urban adaptation is currently under consideration by the JEU.
The Sphere Handbook 2018	The Sphere Handbook is structured around the Humanitarian Charter and Minimum Standards, Protection Principles, and Core

	Humanitarian Standard. It is intended for use by practitioners planning, managing, or implementing humanitarian operations. The Handbook includes four technical chapters in key sectors: 1. Water Supply, Sanitation and Hygiene Promotion 2. Food Security and Nutrition 3. Shelter and Settlement 4. Health Specific consideration is given to environmental impact in humanitarian response. The Handbook promotes the need to understand "how affected people are dependent on the environment for their own recovery", and how "a vicious circle of social and environmental degradation" threatens countries and regions with high poverty rates and institutional fragility (Sphere Handbook, 2018, 19). Of particular relevance is Commitment 3 – Communities and people affected by crises are not negatively affected and are more prepared, resilient, and less at-risk as a result of humanitarian action. In this regard, it is acknowledged that humanitarian responses can cause environmental degradation, such as "soil erosion, depletion or pollution of groundwater, overfishing, waste production, and deforestation" (Ibid, 62). Degradation of this character can exacerbate the severity of complex crises and weaken the resilience of conflict-affected peoples to external hazards. Moreover, the Handbook also recognises that "[e]cosystems are essential to human well-being" and impacts "on the environment must be addressed as a cross-sectoral issue, as this may cause further and lasting damage to lives, health, and livelihoods" (Ibid, 82-83). Consequently, it is specified that "local management of natural resources should be integrated into programming" (Ibid, 83). It is only in the Shelter and Settlement section/chapter that environmental sustainability is designated as a standalone standard (Standard 7). An important acknowledgement in Shelter and Settlement Standard 7 is that natural resource dependency is a more pressing issue for people in rural areas. However, it is noted that urban environments nonetheless depend on large quantities of natural resources (such as timber, sand, and cement).
Guidelines for Rapid Environmental Impact Assessment in Disasters 2018	The Guidelines were developed as a means for practitioners to identify and analyse the general context of a disaster or conflict, factors which may have an environmental impact, unmet basic needs of affected populations, and the potential negative environmental consequences of relief operations. A technological, natural, or political disaster or crisis, which includes armed conflict,

	is the intended operating context for the utilisation of the Rapid Environmental Impact Assessment. The Guidelines feature an organisation level assessment and community level assessment which enable a synthesised analysis of critical issues and priority actions, including indicators, mitigation options, and potential initial responses. These assessments are structured as follows: Module I · Context Statement · Task 1: Factors Influencing Environmental Impacts · Task 2: Environmental Threats of Disasters · Task 3: Unmet Basic Needs · Task 4: Negative Environmental Consequences of Relief Activities Module II · Task 1: Community Information Collection · Task 2: Community Assessment Summary
Pocket Guide for Refugee Emergency Responders 2017	The Pocket Guide is intended for use as a field resource that defines UNHCR's approach to protection and empowerment, delivering humanitarian response, and leading and coordinating operations. The Comprehensive Refugee Response Framework (CRRF) adopted by the UN General Assembly in 2016 forms the basis of the agency's operational approach. The CRRF is intended to provide "support for immediate and ongoing needs (including protection, health, and education), assistance to national and local institutions… and expanded opportunities for durable solutions" (UNHCR, 2017, 32). The CRRF promotes an 'alternative to camps model' which emphasises the need to collaborate with national systems and local authorities. As part of this model, humanitarian actors are expected to examine sustainable settlement strategies, like transforming a camp into an administrative area in either an urban or rural environment. This necessitates an assessment of "physical and environmental infrastructure" to determine the viability of alternative settlement locations (Ibid, 38). In urban environments, refugees and displaced people typically settle in marginalised areas through unplanned camps that lack access to public services (water, sanitation, shelter, power). This often adds additional pressure to already impoverished communities, which can lead to conflict without proper precautions. The Guide notes that access to livelihoods may be possible in urban areas.

	In rural environments, displaced populations are often dependent on accessible natural resources with decidedly weaker infrastructure and public services. The Guide recommends adherence to EIA best practice, contextually informed settlement planning, assessment of natural resource availability and absorptive capacity, and review of logistics infrastructure. In addition, it provides that "environmental consideration must be integrated into physical planning and shelter programmes from the start of an emergency… and the use of local resources… can have significant impacts on the environment" (Ibid, 45).
Environmental Emergencies Guidelines 2017	The Guidelines are intended to assist practitioners navigate environmental emergencies, which are defined as "a sudden onset disaster or accident resulting from natural, technological or other human-induced factors, or a combination of these, that cause or threaten to cause severe environmental damage as well as loss to human lives and property" (JEU, 2017, 3). The damage resulting from environmental emergencies is defined as including "secondary environmental consequences from… man-made disasters such as industrial accidents, transport accidents, chemical spills, and a multitude of other emergencies" (Ibid).
Durable Solutions in Practice Handbook 2017	The Handbook is intended for use by practitioners as a practical methodology for a bottom-up approach to durable solutions planning in the context of displacement-affected communities in post-conflict and post-disaster settings. Specific focus is on identifying and implementing decentralised and area-based approaches initiated by or developed with support from local authorities. This is a result of past experience with the difficulties of implementing top-down approaches that lacked local ownership and buy-in. The rationale underpinning this Handbook is that displaced communities are more likely to support operational plans "that remove obstacles to durable solutions that they themselves have identified and prioritised" (Blay and Crozet, 2017, I-II). A five-step methodological approach toward the creation of durable solutions is established by the Handbook. The five-steps are based on the view that durable solutions require one of three options to be met: 1. Return of displaced persons to their place of origin or habitual residence 2. Local integration in areas where displaced persons have sought refuge 3. Settlement elsewhere in the country However, to measure the true effectiveness of each option a set of eight criteria are identified based on the IASC Framework on Durable Solutions for Internally Displaced Persons (2010).

Protection and Accountability to Affected Populations in the Humanitarian Programme Cycle 2016	The Guidance Note is targeted at Humanitarian Coordinators and Humanitarian Country Team members to promote the integration of accountability mechanisms into the HPC). The intended outcome is improved protection outcomes in crisis situations. Specific focus is on examining how humanitarian actors can protect civilians from physical, psychological, and sexual violence, rights violations, and exploitation. Protection risks are identified as being "shaped by characteristics such as minority status, gender, sexual orientation, age, or other diversity factors" (IASC, 2016, 8).
Flash Environmental Assessment Tool (FEAT) 2.0 2016	The Flash Environmental Assessment Tool (FEAT) Pocket Guide is intended for use by disaster response practitioners to conduct rapid environmental field assessments. The Tool is structured as an 'impact triangle' assessing the type of hazard, quantity being dealt with, and character of the risk exposure. In this context, 'impact' is defined as "significant acute and/or long-term harmful effects on humans and the environment" (JEU, 2016, 4). Hazards are specifically identified as Gas, Liquids, Gas, Vapor, and Solids, which are differentiated as Physical, Health, or Environmental in character. Receptors are denoted as Human, Fishing Area, Soil, Groundwater, Agricultural Area, Nature Reserve, or Critical Infrastructure.
UNHCR Handbook for Emergencies 2015	The Handbook offers a detailed overview of UNHCR's refugee emergency preparedness and response procedures and systems, including best practice reports, standards, and tools related to the Global Protection Cluster. In the most recent iteration in 2015, the Handbook has been compiled as a digital repository for a diverse array of guidance materials. The Handbook is organised in seven entries covering seven main topic areas and is periodically re-organised and updated to reflect current policies and best practices. Of particular relevance are four instruments summarised below. **1. Handbook for the Protection of Internally Displaced People, 2010** The Handbook intends to provide comprehensive, operational guidance and tools for the protection of IDPs by improving the understanding of protection risks faced during complex emergencies. The 'Protection Risks' section includes the limited enjoyment of basic services deriving from direct and indirect harm caused by conflicts, including shelter, food and nutrition, water and sanitation, health, livelihoods, land and property. Although in this section the Handbook considers direct and indirect impacts of conflict, environmental protection is sparingly mentioned. The environment is presented as a cross-cutting and

	thematic issue, but little tangible guidance or best practice approaches are provided. When describing protection risks associated with shelter, one point briefly mentions the importance of including environmental considerations within comprehensive planning activities. The section about protection risks associated with water and sanitation, dedicates the last and shortest of six recommendation points to "ensuring minimum environmental damage". The Handbook provides that international actors should "[w]ork with the displaced and host communities to prevent and mitigate pollution, depletion of natural resources such as water and firewood, and over-grazing or use of land. For example, help to identify and negotiate the allocation of alternative land to displaced communities, and support programmes that protect and restore natural resources and habitats, such as water preservation and/or reforestation programmes. Ensure that environmental concerns are taken into account when planning, implementing, monitoring and evaluating humanitarian programmes and projects, including in particular those relating to shelter, water and sanitation, and early recovery" (Handbook for the Protection of Internally Displaced People, 2010, 447). **2. Practical Guide to the Systematic Use of Standards and Indicators in UNHCR Operations 2006** The Practical Guide is intended to provide quality protection to the population of concern in a consistent manner. The Standards are used to carry out a Gap Analysis by comparing the current situation with the desired outcomes. The Indicators are categorised by Country, Urban, Camp and Returnee level and broken down into themes and subthemes. The sub-theme "environment" figures under the theme "Water, Sanitation, Shelter and Environment" at the Camp level, and the only indicator developed with reference to the environment seeks to identify to what extent environmental considerations have been integrated into protection programmes and aims to implement the Environmental Action Plan. **3. UNHCR Environmental Guidelines, 2005** The UNHCR Environmental Guidelines acknowledge the importance of integrating environmental concerns in the UNHCR programmes and addressing the nexus between refugee protection and the environment: "The state of the environment will have a direct bearing on the welfare and well-being of people living in that vicinity, whether refugees, returnees or local communities" (UNHCR Environmental Guidelines, 2005, 5). However, natural resource management is not dealt with in a consistent manner, leading to

	suboptimal outcomes in the protection of refugees and IDPs. The Guidelines intend to offer a better understanding of responsible and efficient community management of natural resources, to integrate environmental considerations into UNHCR programmes. **4. UNHCR Tool for Participatory Assessment in Operations 2006** Participatory Assessment is defined as "a process of building partnerships with refugee women and men of all ages and backgrounds by promoting meaningful participation through structured dialogue". The goal is to identify protection risks and mobilise collective action. The tool provides a ten-step guide that UNHCR Field Offices should follow in order to conduct effective Participatory Assessment with a bottom-up, participatory, community owned, and rights-based approach.
Rapid Humanitarian Assessment in Urban Settings – Technical Brief 2015	The Technical Brief is intended to support practitioners addressing the unique dynamics and pressures that impact refugees and displaced persons in urban areas, which represent the location for an increasing number of humanitarian operations. It acknowledges that the "lack of experience and resources has caused the humanitarian community to struggle [with] emergencies in urban contexts" (ACAPS, 2015, 5). A resultant need for the adaptation of existing assessment tools to the urban environment is identified. However, this Brief is intended to serve as 'a starting point' for improved needs assessments in urban areas and guidance on rapid assessments, but it is not intended to serve as a more comprehensive assessment with long-term perspective. The environment is only mentioned with reference to the need for environmental assessments. Contrastingly, infrastructure is framed as networks in the Technical Brief as systems that extend across urban spaces to provide "electricity, water supply, drainage and sewage⋯ [and] logistics networks and supply chains, such as airport, ports, vehicle pools, major transport routes, freight corridors, and public transport" (Ibid, 18).
Disaster Waste Management Guidelines 2013	The Guidelines are intended for use by practitioners in the context of *disaster aftermath* when dealing with "solid and liquid waste that threatens public health, hinder reconstruction, and impact the environment" (JEU, 2013, 3). Failure to manage disaster waste is framed as creating negative environmental and social externalities when dumped in an uncontrolled setting. Potential categories of disaster waste include: concrete, steel, wood, clay, and tar from damaged buildings and infrastructure; household furnishings; parts from the power and telephone grids such as electrical poles, wire, electronic equipment, transformers; waste

	from disaster settlements and camps including food waste, packaging materials, excreta, and other wastes from relief supplies. Guidance is provided on the four phases of emergency operations: Emergency, Early Recovery, Recovery, and Contingency. Specific consideration is given to the long-term sustainability of operations with respect to the handover of waste management to either municipal authorities, private contractors, and/or community-based organisations.
Post-Disaster Needs Assessment Guidelines (Volume A, 2013; Volume B, 2017)	The Guidelines are targeted at humanitarian actors when completing post-disaster recovery assessments and planning through a standardised framework to address procedural requirements. The scope of this instrument extends to capture multidimensional impacts of disasters to assist reconstruction and recovery from a "human, socio-cultural, economic, and environmental perspective" (GFDRR, 2013, 10). In order to structure the assessment, the Guidelines Volume A provide a template toolkit to analyse four sectors with several sub-sectors: · Social (health, education, culture, housing, land and settlements) · Productive (agriculture, livestock, fisheries, employment and livelihoods, commerce and trade, industries) · Infrastructure (energy, water and sanitation, transport, telecommunications, governance, and public infrastructure) · Crosscutting (macroeconomic and poverty analysis, social impacts, environment, disaster risk reduction, gender) The methodological approach features rigorous data collection and field visits, data analysis, needs assessment and prioritisation, and consultative meetings. The output is a robust assessment on the state of "human, natural, cultural, financial, social, and physical capital" (Ibid, 101). Also featured is a qualitative assessment of short- to long-term infrastructure needs for successful stabilisation and recovery. In addition, guidance is also provided on the analysis of risks and vulnerabilities that pre-date and may be exacerbated by a disaster. This assessment considers environmental, socio-political, and conflict risks that can negatively impact on key vulnerabilities (namely social, economic, environmental, and institutional vulnerability). Developed later in 2017, Volume B of the Guidelines are differentiated by sector-specific chapters. Of particular importance is the Environment (Crosscutting) Sector (GFDRR, 2017C), Productive Sector (GFDRR, 2017A) and Community Infrastructure Sector

(GFDRR, 2017B) chapters. These are summarized succinctly as follows:

- **Environment (Crosscutting) Sector*:*** designed to support a post-disaster recovery strategy that is environmentally sustainable across sectors due to the crosscutting nature of the environment. Particular focus is on evaluating recovery strategies from an ecosystem services perspective. Impacts associated with reconstruction and repair to damaged infrastructure (e.g. deforestation, quarrying, waste pollution) without due environmental controls" (GFDRR, 2017C).
- **Productive Sector:** structured around the conceptual Sustainable Livelihoods Framework, which consists of four key elements:
    1. Vulnerability Context
    2. Livelihoods Assets and Activities
    3. Structures and Processes
    4. Livelihood Strategies and Outcomes

  Livelihoods are defined as "the capabilities, assets – both material and social – and activities required for a means of living… [which] is considered sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets and provide net benefits to other livelihoods locally and more widely (GFDRR, 2017A, 1)._Livelihood assets are defined as including the following:
    - Physical Assets – agricultural infrastructure, farm machinery, equipment, tools, livestock, seeds, markets, and processing facilities
    - Natural Assets – access to farmland, water, forests, fisheries
    - Financial Assets – savings, income, credit, loans, remittances
    - Human Assets – labour power, knowledge, education, skills
    - Social Assets – community organisations, social networks, kinship
    - Political Assets - power, access, and influence

  In addition, in line with Volume B – Environment (Crosscutting), this chapter adopts an ecosystem perspective that accounts for the relationship between natural resources and livelihoods. This necessitates consideration of sustainable management strategies for land, water, forests, wetlands, soils, and other resources in support of equitable resource use.
- **Community Infrastructure Sector**: focused on supporting community infrastructure reconstruction, encompassing physical assets and facilities that are "socially, economically, and operationally linked with community lives and livelihood

	options, ensure basic services… as critical lifelines for survival" (GFDRR, 2017B, 3). Regarding cross-sectoral coordination, the Guidelines note that "infrastructure recovery is inherently connected to livelihood recovery… [as an] effective vehicle for creation of employment and channelling cash resources to local economies" (Ibid, 11). Community infrastructure is grouped in six categories: 1. Connective Infrastructure 2. Protective Infrastructure 3. Socio-Economic Structures 4. Water and Sanitation Lifelines 5. Energy Lifelines 6. Communication Lifelines
Green Recovery and Reconstruction Toolkit (GRRT) WWF 2010	This Toolkit features 10 Modules that are designed to address provide practitioners with guidance on how to integrate environmental considerations into long-term recovery strategies and plans. This includes guidance related to impact assessment, strategic site planning and development, construction, water and sanitation, and livelihoods. Each Module provides an overview of sector objectives with focus on capacity building through a 'trainer's guide'. Specific focus is on 'green solutions' in disaster recovery, although coping mechanisms and protection risks are not a featured component of this analysis.
Framework for Responding, Assessing, Monitoring and Evaluating (FRAME) the Environment in Refugee-Related Operations Toolkit 2009	The FRAME Toolkit is designed for use by operational managers and field staff to systematically undertake technically sound environmental assessments, with regular monitoring and evaluation. The objective is to streamline and integrate environmental management in refugee and returnee operations, particularly in circumstances where "local community members might gain from any intervention relating to improved management of natural resources" (UNHCR, 2009A, 1). The imperative role of environmental assessments in the context of refugee camp or settlement is acknowledged, with specific consideration to the urgent need for security, shelter, and sustenance. In this context, the 'environment' is defined as "natural features such as flora and fauna, water quality and quantity, tree cover and soil fertility…[and] also includes specific social, health, and economic aspects" (Ibid). The impacts of a failure to conduct rigorous environmental assessment and monitoring are identified as a primary constraint on the effectiveness of refugee operations. In Module III - Rapid Environmental Assessment, specific consideration is given to key aggravating factors. This extends to the detrimental effect that "ungoverned access to natural resources" can have, such as "deforestation, soil erosion, and loss of livelihood"

	(UNHRC, 2009B, 15). The environmental implications of several other aggravating factors are considered, including: · Poor local environmental governance · Lack of self-sufficiency · Lack of supplies, resources, or skills · Lack of capacity to absorb waste · Poor environmental resilience and high fragility Importantly, the Module identifies income Generation as a possible risk resulting from humanitarian operations. In response, the 'environmental standard or best practice' is framed as finding "alternatives to environmentally unfriendly activities (charcoal making, wood cutting, illegal hunting) promoted" (UNHCR, 2009B, 26).