

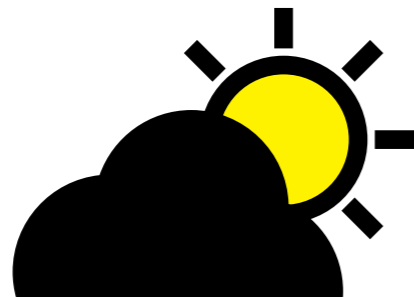
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The Green Issue



UNHCR
The UN Refugee Agency



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UNHCR Innovation partners with people inside and outside of UNHCR to innovate with and for refugees.

We work collaboratively with refugees, academia, and the private sector to creatively address challenges faced by uprooted or stateless people worldwide. Whether it's co-developing mobile tracking technology for distributing supplies with UPS, or applying IKEA's flat-pack principles to designing shelter, if there's a more efficient, more sustainable way to meet refugees' needs, we will find it, learn from it, and promote it.

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A CRITICAL TIME FOR REFUGEES AND THEIR ENVIRONMENT (AGAIN)

By **Andrew Harper**
Head of Service,
UNHCR Innovation



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Since that original article was published not much has changed, with the exception that there are twice as many refugees, and the level of environmental destruction has accelerated.

In 2002, Ray Wilkinson wrote that it was a critical time for the environment. Looking 10 years into the past, he referenced then-High Commissioner Sadako Ogata, who said in 1992 that the “relationship between refugees and the environment has been long overlooked.”

Wilkinson reflected that in the decade since, not much had changed. “Environmental projects are often still regarded as ‘luxuries’ to be implemented only when more urgent matters are attended to,” he wrote then. Now it is our turn to look back and reflect.

Since that original article was published not much has changed, with the exception that there are twice as many refugees, and the level of environmental destruction has accelerated.

We’re seeing a continuous cycle of conflict in many parts of the world, while simultaneously facing population movements as a product of climate change. Climate change in itself acts as a threat multiplier that impacts a populations’ access to water, food security and livelihood opportunities. These events – while at a shallow glance may seem unconnected – can ultimately fuel or exacerbate geopolitical conflicts that catalyze new waves of displacement.

Megatrends that we are already witnessing today could lead to humanitarian crises of epic proportions. While the true scale of these challenges remains unknown; it is our responsibility to look to the future, to be strategic in our attentiveness to these issues, and to ensure we are prepared as an organization to respond to the possibility much greater needs.

Desertification, rising sea levels, overwhelmed sanitation systems, and polluted or scarce water are likely to force hundreds of thousands more people to migrate. Not only will the international community have to protect and assist them, but it will also have to deal with the subsequent immense environmental pressure on the places they move to.

Out of the 30 countries hosting the

largest numbers of refugees, 20 are least developed countries, already struggling to meet their citizens’ needs and protect ecologically sensitive areas.

When refugees transit into a new place, they can further aggravate these environments, and in no small way. Thousands of metric tons of forest are cut down every day by people desperate for any kind of cooking or heating fuel. Chatham House reported last year that 80 per cent of the 8.7 million refugees and displaced people in camps in Africa have absolutely minimal access to energy, with high dependence on traditional biomass for cooking and no access to electricity.

The environment is not just a refugee specific issue; refugees are both responding to and exacerbating ongoing environmental catastrophes.

Neglected issues

UNHCR Field offices and partners admit they are overwhelmed dealing with energy and environment challenges. Despite our knowledge that a dollar spent on prevention in this sector usually saves us eight or ten times that amount in response, there’s been too little investment in making our camps and our systems environmentally responsible.

I recently visited Tanzania, where UNHCR’s refugee camps are 100 percent reliant on fuel obtained by nearby forests. Hundreds of tons of wood are being consumed every single day. This massive deforestation threatens the stability of the ecosystems on which both refugee and host communities rely for their livelihoods and health. Further, it is not a safe way to provide energy and it certainly isn’t sustainable.

In light of the above, there have been some positive changes since Commissioner Ogata wrote in 1992 and since Wilkinson wrote in 2002. There is now far more global recognition of the urgent need to attend to our environment and the human causes of its degradation.

On UNHCR’s part, we are fully aware of the implications of environmental health and

how refugees both affect it and are affected by it.

We know how important it is from a protection perspective that women and children do not have to go in search of wood, and that our capacity to provide water and adequate shelter relies on the services provided by local ecosystems. We also recognize that competition with host communities for natural resources is a major source of conflict for many refugees, and a barrier to feeling safe and welcome.

We see that governments in countries where refugees have felled every tree for kilometers around a camp become less welcoming, and less likely to extend local integration as a durable solution. In fact, governments have told us fixing the way refugees interact with the environment in their countries is among their top priorities.

And we are taking important steps to make our projects more responsible and more sustainable. A wood conservation project in Ethiopia taught refugees and locals to construct woodless homes, plant trees and collect dry, fallen wood instead of killing living plants, which they used in fuel-efficient stoves.

A project in Uganda tested a green energy program that created a production facility for energy-saving stoves and biomass briquettes with support from UNHCR and other Safe Access to Fuel and Energy consortium partners.

Additionally in Rwanda, UNHCR is partnering with a social enterprise based in Kigali to provide refugees and host community members with a safer and environmentally friendly household cooking solution. A recent pilot project showed that a highly efficient micro-gasification stove paired with locally produced pellets from renewable biomass sources can be a cost effective, sustainable, and affordable option. The project also facilitated the creation of jobs for refugees in pelletizing and retail facilities. These interventions can reduce the exposure of women and children to toxic emissions by up to 98% as well as reduce the amount of wood needed to cook meals by 80-90%.



For this to happen, UNHCR needs a holistic policy. Instead of focusing on the river that runs past the refugee camp, let's look upstream—literally and figuratively.

We are also working with the country operation in Jordan and key partners such as the IKEA Foundation, KfW, and the Saudi Development Fund to expand the use of solar energy.

Looking to the future: What a green refugee camp looks like

Of course there is so much more we could do. UNHCR and partners need to prioritize sustainable energy as well as initiatives linked to waste production, poaching, and land erosion, in order to better protect the environment. We need to ensure that we have the right staff, with sufficient resources to implement programs which both support the refugee and host communities, which in turn strengthens the overall protection environment.

It is a vision of “green” refugee camps, where people do not consume wood in excess of what they grow or can be renewed; where they earn income from restoring vital ecosystem services that were previously faltering. Where trees and shrubs are used for fruit and to stabilize the soil near waterways and prevent erosion.

In this vision of a green refugee camp, people collect water and reuse it, and use solar energy or wind turbines instead of diesel generators. Green spaces in the camp provide places with shade and a sense of community. Sanitation facilities are set up smartly, to avoid polluting and even allow waste to be a part of the energy solution.

Community awareness about energy and the environment is effectively disseminated as everyone has connectivity and it is a core module in an enhanced learning environment. Shelters are built to adequately insulate in summer and winter. Where possible, refugees are able to grow products for their own use and sale.

The green refugee camps we envision contribute to a wider environmental strategy, rather than degrading it.

The key to achieving this vision is to understand and support the vision of host governments for how refugees can fit into their national environmental policies. What matters is the vision of host communities

who want to reap benefits from the natural world without feeling threatened by competition or left out of new approaches. We need to find ways to allow everyone to recognize that coordinated, serious actions for protecting the environment provide win-win opportunities to meet everyone's needs now and into the future.

For this to happen, UNHCR needs a holistic policy. Instead of focusing on the river that runs past the refugee camp, let's look upstream—literally and figuratively. We need to concern ourselves with energy and the environment in a much more complete way: a more serious, sustainable and respectful way.

Supporting our staff to rise to the challenge

There's a lot of enthusiasm about technology and about innovation. But what would be really innovative would be putting in place sustainable environmental strategies that connect with national strategies, which we would then find financial or development partners to support.

We need to start slowing the rates of environmental harm and start looking to see whether we can use refugee camps as a place to pilot good ideas and introduce best practices that host communities and governments can learn from and adopt. We need to work with refugees, our environmental staff in the field and their partners, in addition to other experts to see if we can start turning the tide from destructive practices to sustainable ones.

At UNHCR Innovation, we strive to help people identify the challenges, the options, and the solutions. We have a role to play in guiding some of these discussions, forging partnerships, enabling pilots and broadening the list of possible answers. We also need to be actively looking to refugee and host communities, who often have their own appropriate solutions, and find ways to support these from the bottom-up.

UNHCR Innovation is looking for ways to explore waste-to-value options, embed environmental education into curricula, and find innovative funding models with the private

sector and test existing energy delivery models such as “pay-as-you-go.”

We want to help refugees, host communities, and governments find ways to restore ecosystems, and create mechanisms where displaced people can earn an income through sustainable natural resource management, thus linking environmental and energy issues with livelihoods and community resilience.

We also hope to foster serious conversations with other actors on how to get more dedicated, knowledgeable partners who are as passionate as UNHCR is about getting results on these issues. We need their help getting data about energy needs, consumption and alternatives. We need to work with governments to understand their priorities when it comes to energy replacement. From host country academic institutions to start-ups to development organizations, we need partners who are genuinely interested in addressing these issues.

For that to happen, UNHCR has to advocate with a stronger voice. We need better baseline data about costs and usage when it comes to energy and the environment—sorely lacking in most circumstances. We need more staff to help get data, strategize, and innovate.

We should not expect huge changes in a year or even several. But at a certain point we must turn this ship around.

Kofi Annan wrote in the 2015 Chatham House report that the energy costs borne by refugees and humanitarians are “unnecessarily high, whether measured in terms of finance, the environment, health or security.” He said that entrepreneurship and technology, applied systematically, could respond to the needs of the uprooted and their hosts.

“Getting this right could yield significant benefits for humanitarian organizations, host authorities and governments and above all for the livelihoods and dignity of the forcibly displaced.

In another decade, someone else will look back and reflect on this article and how we have evolved as an organization. Let that person conclude, “We got it right.”



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“It’s all about protection, from the physical side and the financial side,” says Paul McCallion, Renewable Energy Officer at the Energy Unit.

Sexual and gender-based violence (SGBV), one of the most terrible consequences of conflict, is also one that often goes under-reported – and therefore unaddressed – because of cultural taboos that silence its victims. Now, UNHCR is fighting the issue upfront with a range of innovative, scalable and community-based programs that are changing the way different units can collaborate with each other.

Since 2013, the agency has been exploring innovative solutions to SGBV thanks to funding from the U.S. Bureau of Population, Refugees and Migration (BPRM). Senior Protection Officers have been deployed on the ground and a range of programs such as refugee trade cooperatives and female-only internet cafés have been rolled out in different operations. In 2014, UNHCR launched a unique collaboration between the Protection/SGBV Unit, the Energy and Environment Unit and UNHCR Innovation to crowdsource community-based solutions to fight SGBV. Together, these units have worked on addressing fuel and energy poverty – two sources of conflict that also lead to environmental degradation, and disproportionately affect women and girls.

“It’s all about protection, from the physical side and the financial side,” says Paul McCallion, Renewable Energy Officer at the Energy Unit. “We’re trying to reduce the risk exposure, whether it’s the collection of firewood, finding a less expensive way to charge solar lanterns, or helping people reduce their dependence on unhealthy fuels like kerosene.”

Crowdsourcing innovation

During eight weeks in 2014, UNHCR Innovation invited its staff and implementing partners to submit concept notes on UNHCR Ideas, the agency’s online idea management platform. Nii Ako Sowa, Public Information Associate in Ghana, proposed a project based on the production and use of biomass briquettes, which are made out of biodegradable materials and used as low-emission cooking or heating fuel. His concept was enhanced by the input of other Ideas participants, who suggested connecting the briquettes project with the promotion of clean cookstoves, and ended up as the first runner-up in the Challenge.

“One refugee told me this is the kind of project they want to see,” recalls Nii Ako, who is

now in charge of rolling out the project in Ghana. “Because they feel they will gain skills that will make them more marketable upon their return to their countries.”

Opening up to the private sector

SAFE from the start has been particularly successful in Uganda, where it has been implemented in the Nakivale refugee settlement, and is now being replicated in Kyaka II. In Nakivale, UNHCR has partnered with a local business to run the briquette-making operation, employing both refugees and Ugandan nationals. And women groups have been set up to sell the briquettes on the local market, in partnership with a microfinance company.

Andrew Mbogori, Head of Office of the Sub-office in Mbarara, Uganda, says partnering with the local briquette company required building trust on both sides, because the private sector has traditionally been left out of humanitarian operations in the settlements. The partnership seems to be paying off; by February of this year, UNHCR had distributed about 300 tons of sustainable briquettes to refugees, and another 50 tons were sold by women groups. The goal is to meet 25% of energy needs in Uganda’s settlements through briquettes. “This has accrued double results of assisting in conserving the environment and improving family incomes for refugee women.” Mbogori says.

Scaling up

Now, the Uganda operation is scaling up the project to install streetlights to enhance security in certain parts of the settlement and provide an additional source of power through solar energy.

Various other briquettes and streetlights programs are being replicated in other countries, included Cameroon and Ghana, where the idea was initiated. The challenge for UNHCR will be to adapt these programs to the local context. “What we’re hoping to formulate is lessons learned, success stories or failure stories. The briquettes project could be applied to different countries depending on vegetation and the topography. What works in Ghana many not in any way remotely be useful in Chad.” says Paul McCallion. “The learning in the course of that process is immense.”

SAFE from the start:

Fighting sexual and gender-based violence through bottom-up innovation

By **Abdullahi Mohamed Adow**
Liter Of Light Participant



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HOW I BEGAN MANUFACTURING SOLAR LIGHTS FOR MY COMMUNITY

My name is Abdullahi Mohamed Adow. I'm a 33-year-old refugee from Somalia, currently living with my family (my wife and our eight children, and my mother) in Dollo Ado, Ethiopia. We arrived here in 2009, after the situation in Somalia became too dangerous for us to stay.

Living in the camp is not easy. We are struggling to adapt to a rural setting, and due to safety concerns, we can't always walk outside after dark. The situation is especially difficult for my children, for whom there is little opportunity for education. The hardest part for me is to live in a situation of dependence; I wish I could provide for my family by myself, but I can't secure a job in spite of my skills and work experience.

So when UNHCR came with the solar lighting training project, I immediately decided to get involved.

This was the opportunity for us to finally start making something with our own hands, and gain a little bit more independence by gradually taking charge of the lighting system in the community. After years living in the camp, this was something none of us could dream of.

The training

I was among nine refugees (six men and three women) who participated in the training with UNHCR to learn how to manufacture solar lights. Three members of the host community also took part (two men and one woman). During two weeks, we learned the names of electrical components, how to assemble them, and how to make use of locally available components. We were also taught how to manufacture and install the lights using water bottles, both for the street and for households. We produced a total of 57 lights; the street

lights were installed in public places such as main roads, junctions, playgrounds, mosques and markets.

In general the lights have worked fantastically in terms of assembly and installation. They have also had immeasurable impact on our community; they facilitate greater freedom of movement and ensure security in public places. Children use them to study at night, and people can go to the market when it's dark.

Overcoming challenges

However we have also been facing challenges; we have now run out of most of the electrical components as well as the solar panels that were initially provided to us, but we are still doing maintenance and repair work on the lights that have already been installed.

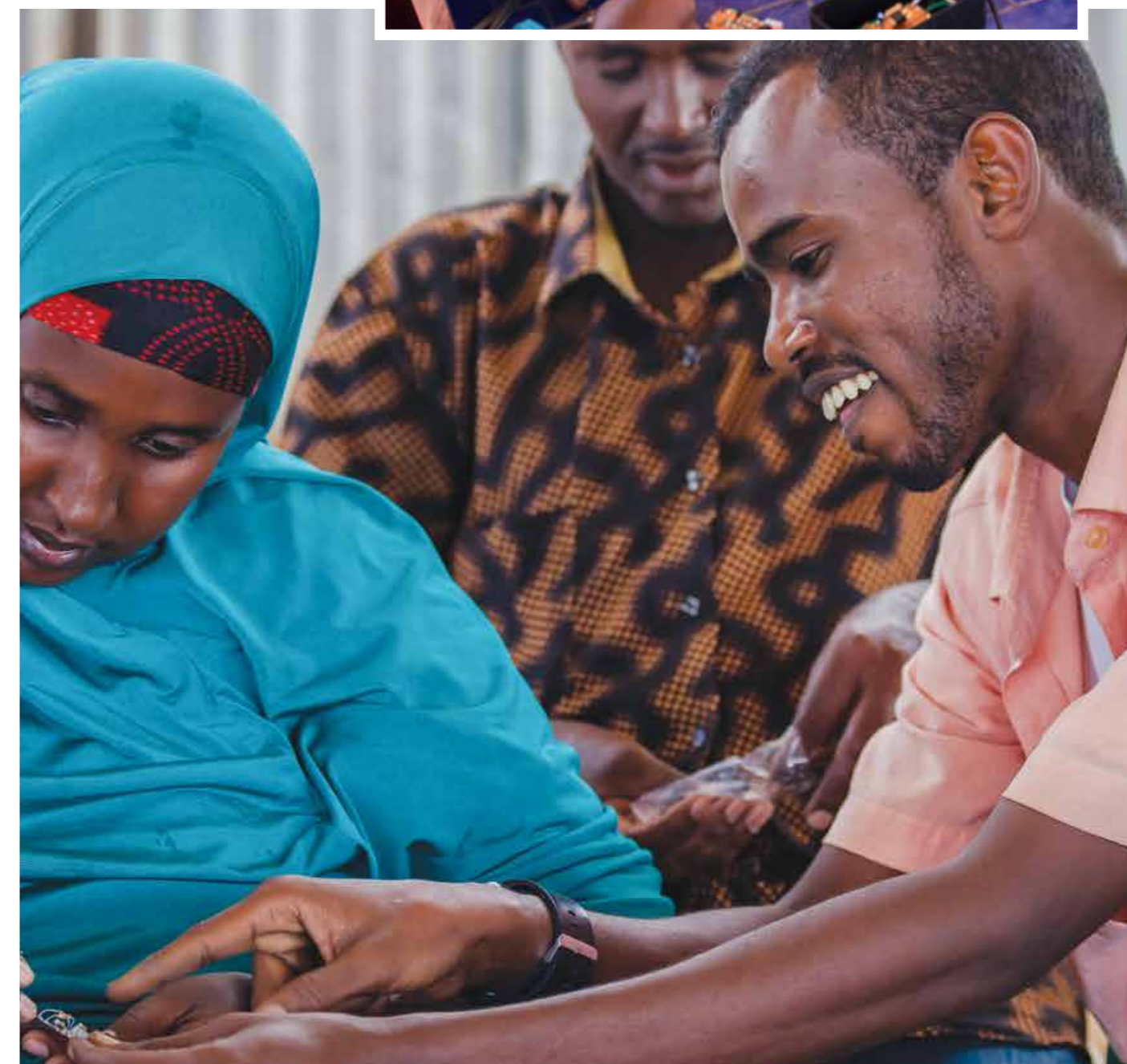
What's more, some of the lights stopped working after the batteries malfunctioned, and 19 street lights were stolen. I have been communicating by email with our facilitators in Geneva to determine the cause of the breakdowns; we think the size of the cables that have been sourced locally may be at fault. Our ongoing dialogue has allowed me to receive other valuable feedback and tips.

It would also be helpful to get refreshment training to make sure our skills are up to date. Finally, we need to secure better electrical components and batteries to avoid malfunctions in the future.

I'm happy we've been able to keep in touch with the team in Geneva, and that we've received support from them. I hope we can soon fix those issues and produce more lights for the rest of the community.

“

Living in the camp is not easy. We are struggling to adapt to a rural setting, and due to safety concerns, we can't always walk outside after dark.



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The Greener Fuel

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In September 2016, a Rwandan social benefit company called Inyenyeri did something no private sector business had ever done before in the country. It opened shop inside a refugee camp. Its partnership with UNHCR and the clean cooking fuel option it offers refugees may be the answer to the interconnected energy, environment and protection issues people have faced here for decades.

Inyenyeri leases one of the world's cleanest cooking stoves to refugees and sells them biomass pellets to burn in it.

"It's such a beautiful project because it's not really a project, it's a business model," says Rwanda-based Livelihoods Officer Jakob Oster. "It's going to address a lot of issues at the same time. Not just protection, not just energy, not just livelihoods, not just the environment, it's all those things combined. That's what makes this quite unique."

The dirty downsides of traditional cooking

In Rwanda, virtually all of the 150,000 refugees depend on firewood and charcoal for cooking. The problems inherent in this longstanding way of life are manifold; women and their young children spend hours by smoky fires, inhaling toxic fumes that cause disease and death. An estimated 225 refugees in Rwanda die every year from causes related to the indoor air pollution.

As forests are depleted, refugees and members of the host community alike must travel increasingly farther to collect enough for their families—a task that typically falls to women. Women in Rwandan camps have reported being attacked and sexually assaulted while foraging for wood in nearby forests or fields. The chore of collecting firewood also eats up time they could spend on livelihoods activities or training.

Children's time is wasted, too: With dirty charcoal stoves, children often spend hours getting water and scrubbing pots instead of going to school, studying or playing.

Depleted forests caused more than 29 percent of refugees in Rwanda to come into conflict with members of the host community, who suffer just as acutely when the forests are cut down for kilometers surrounding the camp.

The environmental impact of this reliance on traditional cooking methods is also devastating. Degrading forests releases carbon dioxide into the air, leaves the soil prone to erosion and, in Rwanda's hilly terrain, can lead to floods and mudslides. At least 60 people died in 2016 from deadly mudslides caused by heavy rains. Most of them were children.

The problem is not limited to Rwanda. Globally, 80 percent of refugees depend on traditional biomass for cooking, leading to the burning of 64,700 acres of forest every year.

A greener kind of fuel

Inyenyeri provides another option. It leases clean-burning Mini Moto gasification stoves to clients for free and provides any needed support, maintenance or repairs. The stoves burn densified wood pellets that patrons purchase from Inyenyeri monthly, or whenever they need more.

The stoves and pellets, mostly composed of eucalyptus branches that are dried, chipped and compressed into pellets, use up to 95 percent less wood than traditional three-rock fires or charcoal stoves. They also burn about 99 percent cleaner—about on par with natural gas, which is cost prohibitive for most in Rwanda.

The dense fuel source also burns much more consistently than charcoal—a nice perk for refugees whose traditional dishes often simmer for hours. Inyenyeri's first repeat customer from within Kigeme refugee camp was a woman who ran her own small dairy business. "She came in to buy more pellets saying she was so happy with the stove because it cooked her milk perfectly," says Suzanna Huber, Inyenyeri's Legal and Policy Advisor. "Refugees are not just using it for their families but also to make money. That's exactly what we want."

When refugees become customers

UNHCR-Rwanda is undergoing a paradigm shift—one where refugees are empowered to make decisions as consumers. By 2015, refugees in three of Rwanda's six camps were receiving direct cash transfers from the World Food Program instead of food rations. The remaining three are expected to make the shift in 2017.

Inyenyeri is the first private sector partner to sell directly inside Kigeme refugee camp, but Oster expects others to join it soon. The country operation is already working with a soap company and sanitary pad business that sell their products in the camps through refugee sales agents and plan to set up production in the camps.

"This is a brand new type of partner for UNHCR," Oster says. "A social enterprise has the potential of becoming inherently self-sustaining."

As UNHCR turns to innovative partnerships to address energy and environmental concerns, enterprises like Inyenyeri present an opportunity to take a novel approach. Energy and environment initiatives have typically suffered from a shortage of voluntary funding. But when refugees become consumers of more energy-efficient technologies, they can exercise choices that benefit both their resources and the environment's.

With new purchasing power, refugees are making the decision to become Inyenyeri customers. The company launched a pilot in Kigeme refugee camp at the start of October 2016 and had 100 families immediately sign up and complete

their first payment.

"The demand is there: everyone knows charcoal and firewood are dirty fuels," says Huber. "If they had a choice they wouldn't be doing it."

Initial feedback is roundly positive from refugees using their new stoves and pellets. A young couple Oster visited with in November, for instance, told him how their baby used to suffer from the smoke when they cooked indoors with wood. Now, they can cook, keep the baby warm and heat water for his baths while keeping him healthy.

The mother, who used to get in "trouble" collecting firewood, now sells the family's firewood rations to buy Inyenyeri pellets.

Giving refugees a choice

An average refugee household of five that signs up with Inyenyeri can expect to spend a bit less than \$6.70 on 30 kilos of pellets each month. That's 17 percent of their World Food Program cash allowance—a typical percentage for sub-Saharan African energy consumers and less than they would otherwise spend on charcoal.

Inyenyeri's business model is succeeding outside refugee camps, where it operates a for-profit business in the city of Gisenyi and surrounding rural areas. It serves 1,300 customers with an 80 percent customer retention rate after two years and routinely turns interested clients away because it does not have enough stoves.

The company is looking for funding that will allow it to expand and produce more pellets. "There's so much demand but the model is capital intensive, as we need to build the infrastructure to produce pellets and buy stoves in order to create revenue," says Huber.

If Inyenyeri does get the investment it needs to scale, refugees stand to benefit even more: Inyenyeri is considering building a pelletizing factory just outside Kigeme camp, an initiative that could employ an additional 15 refugees. If all households in the camp became customers it could hire another 20 retail associates on top of that to help run the shop and train new customers on using the stove and pellets.

The company requires at least \$500,000 in order to build the factory.

In the meantime, Inyenyeri and UNHCR are taking note of refugee interest even before firewood has been monetized—a step that Oster says is right around the corner for Inyenyeri refugee customers, who will have the choice of whether or not to switch to cash transfers instead of firewood.

More than 500 refugees are currently signed up on Inyenyeri's waiting list.

"Households, on their own initiative, with their own money...have chosen to sign up and pay for Inyenyeri's solution," Oster says. "It's really simple. I think that's the beauty of it. The complexity is the scaling up of it and securing enough investment."

“This is a brand new type of partner for UNHCR,” Oster says. “A social enterprise has the potential of becoming inherently self-sustaining.”



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A FUTURE-LOOKING ENVIRONMENTAL APPROACH

Refugees in Tanzania find a safe life in a stable country whose government and people are welcoming. But the intense demands they've placed for decades on a sensitive, rural landscape is degrading the environment, and causing relations to deteriorate. When refugees and host community members must walk up to 15 kilometers in search of firewood to use as cooking fuel, they exist in a precarious environmental, political, and humanitarian situation—one that UNHCR is now addressing.

There is no global strategy on the environment as there is for livelihoods, shelter and other sectors. So an environment and wellbeing strategy, now being crafted by UNHCR Tanzania, is setting a new standard in how country operations mitigate the impact of refugees on their environment.

"It's all-encompassing and very holistic," says UNHCR consultant Mark Gibson, who is drafting the strategy. "The national and local Government, along with our environmental partners have been very supportive of its development."

Addressing the old problems and preventing the new

The 250,000 refugees currently living in Tanzania are 100 percent dependent on collecting wood for cooking and other energy needs.

UNHCR has tried to address the ongoing damage; it moved to providing transitional shelters, launched a selective logging campaign that implored refugees to take only what they needed from the forests and worked with environmental partners to raise 1.3 million tree seedlings in 2016 alone.

But having a strategy in place to protect and



restore the environment will be a leap forward, where previously only small steps have been made.

The strategy presents a lofty and comprehensive vision of what the relationship between refugees and the environment could look like. It seeks;

"To ensure refugees are hosted in a way that prevents, minimizes, and/or remediates environmental damage through interventions that are culturally acceptable, sustainable, and respectful of the dynamic relationships between natural resource use, environmental quality, health and wellbeing and the needs of the refugee and host communities."

The strategy lays out a plan for conserving and managing environmental concerns, for example through alternative cooking fuels and energy efficient cooking methods. It presents ideas for improving water security and conservation, replacing trees that have been felled for firewood and construction, and sustainably improving food security and waste management.

It also suggests Innovation Villages, where new farming or construction methods can be piloted and demonstrated to build acceptance and enthusiasm among residents who might be hesitant to make changes.

Ultimately, it aims to establish the environmental impacts associated with refugee camps in Tanzania and develop ways to deliver long-term, evidence-based improvements to environmental protection and resilience.

Coming together to protect and restore

Created at the request of the government, the strategy deals with the three existing camps in Tanzania, highlighting areas where efforts need to

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"To ensure refugees are hosted in a way that prevents, minimizes, and/or remediates environmental damage through programmes that are culturally acceptable, sustainable, and mindful of the dynamic relationships between natural resource use, environmental quality, health and wellbeing and the needs of the host community."

be stepped up and identifying priorities in the face of limited resources.

Along with national NGOs, the Ministry of Home Affairs is providing input to the strategy through its Environmental Coordinator, and District Natural Resources Officers are supplying local context. Most importantly, the strategy aims to unite refugees and members of the host community in Environment and Wellbeing Committees that can voice concerns, relate previous experiences and launch their own projects.

"We need to consider refugees' own needs and cultures," says Gibson. "We need to incorporate their knowledge and experiences. These committees are really important to capture their understanding of the environment and traditional management techniques."

Gibson anticipates that having a strategy in place will help UNHCR get financial support for environmental initiatives, provide mechanisms to inform donors about how UNHCR is addressing environmental needs, and where funds are most needed.

Partners were in agreement about the strategy's holistic scope. But Gibson acknowledges that environmental initiatives can be tough to implement with a shortage of dedicated environment and energy staff and short-term funding associated with humanitarian emergencies.

"The core mandate of UNHCR isn't environmental protection," Gibson says, "so it requires additional effort to engage others and drive change when people are focused on other issues that have much more of a humanitarian aspect: protection, shelter, education and WASH. But the environment cuts through all of these, so it really does need to be mainstreamed."



Mainstreaming environmental protection

Operational activities at UNHCR tend to be responsive, reacting to emergencies without time to plan for the future. The Tanzania strategy integrates environmental management into camp management activities, and looks forward by outlining ways the government can open pre-identified spaces for refugees in an environmentally conscious way.

And since environmental impacts result from activities in every sector from shelter to education, pretty much everyone needs to be familiar with ways to mitigate them. The strategy UNHCR Tanzania is creating makes environmental protection everyone's concern, and responsibility.

"The innovation, I feel, is really engaging the host community and refugee community and actually putting a value to environmental interventions either through cash-based initiatives or livelihoods so we're managing it through an economic process," Gibson says. "Because people don't value the resources until it starts costing them."

He hopes the strategy can be used beyond Tanzania, to inform other operations and any future global strategy for the environment.

"This is a significant step being taken by UNHCR and I really would like to see it benefit refugees, the host community, but hopefully also see it rolled out in a global context."



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The POWER of CITIES

By **Hans Park**
Architect & Design,
UNHCR Innovation



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We live in an increasingly urban world which is shaping our environments and our future. Currently, over half of the global population live in cities and it is estimated that this percentage will rise to 70% by 2050. Cities are both the culprits and the source of innovative solutions to megatrends such as climate change. So, as existing cities grow bigger and new cities are formed, sustainable urbanization is key for a healthy planet. Displaced populations are also part of this trend of increasing urbanization, as 60% and 80% of all refugees and IDPs - respectively - live in urban areas. More refugees and IDPs are moving into urban areas to avoid camp settings that may lack opportunities, such as employment and access to services.

As cities change and constantly morph along with people's needs and demands, they find it more difficult to deliver services to their citizens in scale and on time, which calls for even more innovative solutions. Urbanization comes with various forms of expansion, and lines between formal neighborhoods and self-established informal settlements, such as Kibera in Nairobi or refugee settlements, such as Nakivale in Uganda, are becoming increasingly blurry. What can we learn from this expansion and these blurred lines, and how can governments, whether local or national, ensure that cities remain a platform for continued sustainability, humanity, and imagination for all?

1. First, let's ditch those categories

"We have to redefine established and widely used concepts such as 'slum', 'suburbanization', or even 'gentrification' as these concepts no longer adequately describe highly complex and specific processes which have developed along with the rapid speed of urbanization taking place in the past decades. They not only fail to describe reality in many cases but are also misleading our perception of it," says Dr. Naomi Hanakata, an architect, urban designer, and urban sociologist based in Singapore.

One way of moving forward would be to re-think how we categorize cities and the forcibly displaced populations living in them. In the future, as cities continue to grow organically as places where people from all walks of life mix, categories will be more difficult to hold on to for long periods of time, and staying ahead of the curve will be difficult. Instead, we should listen to the voices of urban citizens, which include the forcibly displaced, and ask them how they interpret their environments and how they want to organize themselves around the spaces they live in.

Coming back from a 6-week mission in Bidi Bidi, our Emergency Lab says that in the recently established Bidi Bidi settlement in Northern Uganda, the different zones of the settlement have completely different personalities. Despite the policy and approach to keep these zones almost identical in terms of services provided, these

zones have developed and are developing in different directions. The personalities differ because of the people - both refugees and host communities, the social structures, and even variables such as population flow, which have a profound effect on the nature of people's lives.

Take another example of the Za'atari refugee camp - many times referenced as the fourth largest city in Jordan. From a legal, governance, and infrastructural point of view, there are nuances that will define one place a 'camp' and another place a 'city'. But, labels can be misleading and often fail to describe the complete picture on the ground. Therefore, we should be careful in labeling urban spaces based on only top-down and master-planning perspectives, because these labels rarely help us understand the real dynamics and complexities of urban spaces, and can misguide our interventions.

2. Let us change

"Evidence shows that, when given the option, refugees and IDPs reorganize their immediate environment to suit their specific needs. We have seen how displaced people use their extremely limited resources to adapt pipelines in camps, re-shape their shelters, re-direct camp roads, open shops, create markets, and even create micro-economies" says Ruxandra Bujor, a camp management expert working with UNHCR in Geneva.

Forcibly displaced populations help shape and advance the social experiment that is the city. It is a good reminder that displaced people can not only have a positive effect on the economies of the host communities, for example, but as they re-interpret their environments, they challenge the urban status quo and push for new social, legal, and spatial norms in cities.

An article by the [Brookings Institute](#) shares some insights on how German cities are dealing with an increase in the refugee population over a short time period. According to the article, integrating refugees into larger cities is a complex

challenge that more squarely rests on the shoulders of local rather than national governments. And, a focus on how to design cities with the integration of displaced populations in mind is needed. Cities, such as Hamburg and Berlin, have been innovative and have expanded the role of civil society, the use of technology to promote community participation, and the rapid building of non-traditional housing. Cities have also helped reform restrictive federal laws to be more responsive to local needs and circumstances.

3. Refugees and IDPs are part of the solution to megatrends

"60% percent of the world's refugees are in urban areas. In some cities, they represent more than the 'existing or traditional' minority group. Both socially and spatially, refugees tend to create a glue-type component in a city, filling the gaps and tying up loose ends" says James Leon-Dufour, an architect and Information Management Officer at UNHCR. The humanitarian field is at the forefront of witnessing the greatest shift from a rural to an urban world, and so we now have the opportunity to steer urbanism to something that is inclusive and sustainable by amplifying refugees' voices that they are part of the solution in urban areas.

There is little doubt that cities will have to be more innovative in how they address the causes of climate change, social unrest, poverty, and other challenges. Truly innovative solutions come from places that are diverse and where empathy, readiness to change and openness are part of the culture - not merely a talking point or something never acted upon. To stay relevant and a source for good, urban citizens and governments need to learn to build a culture of innovation. A good place to start is to learn how the forcibly placed use innovative processes to build communities in an effective, efficient and human-centered way. Any other way of building a city will not be innovative, environmentally-friendly or socially-sustainable.



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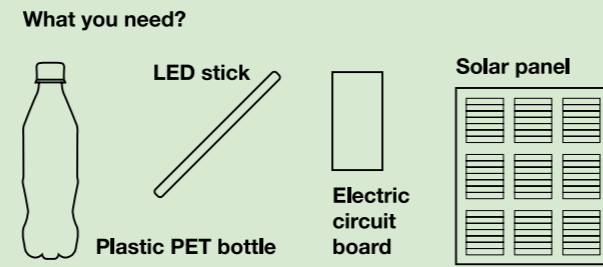


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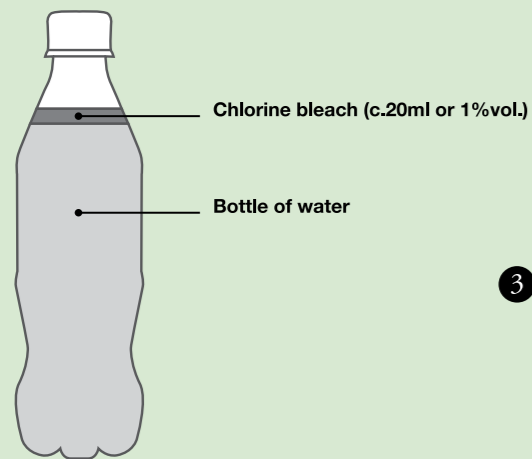
HOW TO BUILD YOUR OWN LITER OF LIGHT

Source: Liter of Light YouTube Channel.



To learn more about the Liter of Light project, go to page 10.

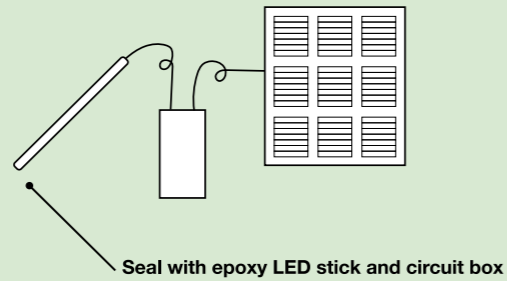
1 Mix Chlorine bleach and water in a PET bottle



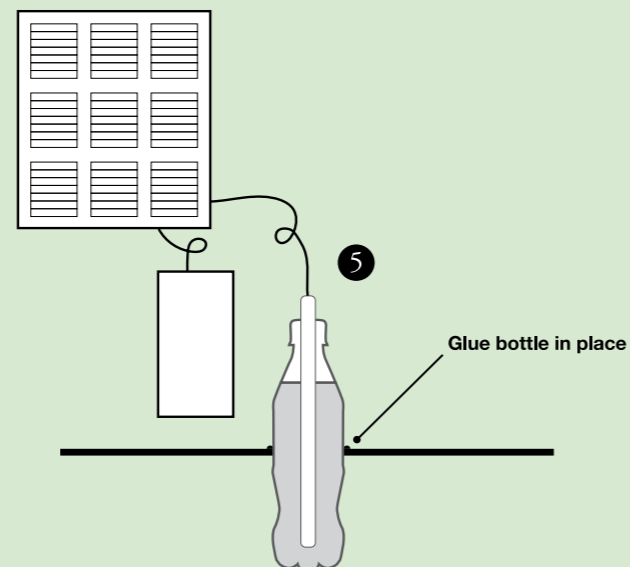
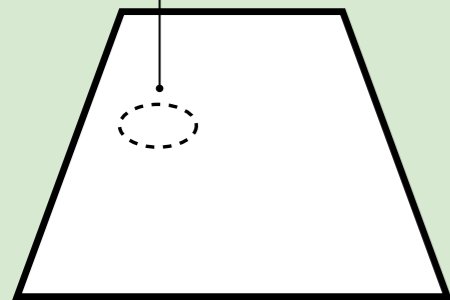
2 Create a hole in the bottle cap, the size of the LED stick



3 Connect LED stick and solar panel with circuit box



4 Cutting a hole in the roof (often corrugated tin sheet)



Inserting the bottle half-way in and glue in place



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