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EFFECTIVE HUMANITARIAN RESPONSES REQUIRE COLLABORATIVE ENVIRONMENTAL MANAGEMENT

The approach in Cox's Bazar

Suggested citation: **Effective humanitarian responses require collaborative environmental management: The approach in Cox's Bazar, InterAction (2024).**

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This report is made possible by the generous support of the American people through the United States Agency for International Development/Bureau of Humanitarian Assistance (USAID/BHA). The views expressed in this publication do not necessarily reflect the views of, nor are they necessarily endorsed by, the United States Agency for International Development/Bureau for Humanitarian Assistance (USAID/BHA).

InterAction would like to thank its Member and partner organizations, Shelter and Settlements working Group, Climate Advocacy Working Group, Global Shelter Cluster, Regional Shelter and Settlements Forum participants, Shelter Center, and InterAction's Humanitarian Policy and Practice and Communication Team.

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The series of publications on the impact of Climate Change and Environmental Degradation on Humanitarian Operations summarizes the consultation and research conducted by InterAction, independent principal consultants, and Country Consultants. Regional consultations primarily took place in Amman, Bogota, Dhaka, Dakar, and Geneva, as well as country consultations in Bangladesh, Colombia, and Pakistan. Reports are published in several parts. Please see www.interaction.org for more details.

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The approach in Cox's Bazar

This research was managed by:
Marco Menestrina

With support from:
Mohamed Hilmi, Te'a Williams, Juli King, Rose Worden, Ellie Doblin, and Madelyn Evans

Research Consultant:
Sneha Malani

Copy Editor:
Kate Murphy (*InWords*)

Graphics and Layout:
Livia Mikulec (*The Human Atelier*)

TABLE OF CONTENTS

1 EXECUTIVE SUMMARY

Environmental and climate-related impacts are context specific, resulting from systemic neglect and mismanagement, and exacerbated by conflicts and disasters. These impacts have significant and widespread consequences for society and increase vulnerabilities. They include impacts to ecosystems, agriculture, infrastructure, health, and human habitat. These impacts are interconnected and often complex and context dependent. The consequences can be incremental, long lasting, dynamic, and compounding.

Humanitarian response is still very much focused on the emergency, addressing the need to save lives and reduce immediate suffering. Even in protracted conditions, services continue to focus on emergency and basic life-sustaining needs. Further, it focuses on sectoral needs and time limits. There are acknowledged gaps in coverage, the humanitarian-development nexus, funding models, and local ownership.

There are promising and laudable efforts by individual organizations and within particular sectors. Most of these efforts are voluntary, focused on 'greening' the response or operations, usually meaning reducing carbon footprint and plastic use and reduction in waste, and are centered around mitigation. Limited adaptation measures are also on the rise. Initiatives around anticipatory action mainly focus on early cash distributions, early warning, and preparedness, somewhat mirroring disaster risk reduction practices. These efforts are often small-scale 'pilots' and still isolated.

Organizations participating in this research also acknowledged a system-wide lack of environmental expertise, short funding cycles, non-harmonized donor requirements, and strategic guidance as further impediments to effective environmentally smart programming. Many acknowledged the lack of system-wide climate and environmental priorities, coherence, and urgency.

InterAction's consultations and discussions in multiple countries led to Cox's Bazar energy and environmental practices, which offer worthwhile lessons for establishing collaborative, multisectoral environmental management in future humanitarian responses.

In the aftermath of the Rohingya refugee crisis in Cox's Bazar, Bangladesh, the region's fragile ecosystem has suffered severe environmental damage. The Energy and Environment Technical Working Group (EETWG) was established in 2018 and is dedicated to addressing environmental challenges among different sectors and stakeholders. The EETWG has been crucial in providing technical guidance, documentation, and recommendations. The group has developed a strategy to improve climate resilience in line with the Joint Response Plan and Bangladesh's National Adaptation Plan.

Lessons from EETWG and considerations for future responses

- While individual organizations can undertake helpful interventions independently, a more robust collective global response is crucial. Systems facilitating connections among humanitarian responders, development entities, government agencies, and communities are pivotal for enacting more robust and meaningful changes.
- This report underscores the importance of a multisectoral environmental management group established early in the crisis. Its mandate should extend beyond assessing environmental implications to encompass short- and long-term impacts, available capacity, and viable solutions. Furthermore, the report dispels the notion of a one-size-fits-all solution to environmental challenges, recognizing the inherent context specificity of environmental and climate-related impacts. The imperative for an early, whole-of-system approach in every response is underscored, cautioning against uncoordinated efforts that can lead to maladaptation.
- While individual sectoral efforts to improve and address environmental concerns should continue, a whole-of-system approach is necessary. Addressing environmental and climate concerns is more than reducing carbon footprints and greening operations; it is linked to many underlying vulnerabilities and systemic negligence, mismanagement, and development priorities concerning environmental issues. Humanitarian actors should manage the expectations of the affected communities more transparently, given the limited capacity and resources available.
- For organizations lacking environmental management skills, capacity building can be facilitated through platforms like a multisector environmental management group.
- A data-driven and technical approach is essential, complemented by a thorough understanding of the community's social and economic resilience. Diversifying options and addressing barriers to access, such as livelihood, are integral components. A multisector environmental management group's role in explaining expected impacts using objective data is paramount, bridging the gap between evidence and stakeholder support.
- Optimizing impact through knowledge management is a strategic imperative. A multisector environmental management group should maintain crucial data on environmental impacts in a format that provides a response-wide perspective. Monitoring ongoing environmental activities positions the group to identify gaps and shortcomings, offering constructive criticism and advising on improvements.

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- A data-driven and technical approach is essential, complemented by a thorough understanding of the community's social and economic resilience. This would facilitate the collective involvement of humanitarian groups, technical specialists, communities, and authorities in making evidence-based decisions. Prioritizing dedicated funding for an environmental collaborative mechanism is crucial. Data and evidence are also vital in gaining community, donor, and government support.
- A collaborative environmental management approach is one of many ways to approach an environmentally responsible humanitarian action. The Cox's Bazar response provides promising lessons worth considering for ongoing or future humanitarian operations, but there may be other examples.
- This report is one of three exploring climate and environmental impacts and initiatives within humanitarian operations. While this report looks at collaborative or coordinated efforts in response, the second looks at one sector – Shelter and Settlements. The third report is a compilation of outcomes from a series of regional consultations, webinars, workshops, and interviews.

2 THE HUMANITARIAN SYSTEM LACKS COHERENCE AND A SYSTEMIC APPROACH TO ENVIRONMENTAL MANAGEMENT

Humanitarian organizations regularly assist affected populations in the aftermath of droughts, storm events, floods, and prolonged heat waves. Scientists warn that such events will increase in frequency and intensity because of human-induced climate change. That means that humanitarian needs will continue to increase, with added requirements to safeguard the environment and prevent, mitigate, adapt, and build the communities and their ability to withstand future disasters.

And yet, most efforts to do so continue to be small-scale standalone actions by individual organizations, often working within a single sector within the response. Their efforts are voluntary. While well-meaning, these isolated and discrete initiatives can be detrimental to the desired humanitarian and environmental outcomes.

Environmental management may not seem a priority in emergencies, particularly relative to the need to reduce human suffering. However, environmental quality is inextricably linked with economic sustainability and social sustainability (graphic 1). All three elements of sustainability are embedded in the UN's sustainable development goals, which the humanitarian sector supports.

Graphic 1: *Linkages between the three elements of sustainability*

Therefore, humanitarian responses must manage social and economic needs along with environmental and climate change concerns to meet immediate needs and promote long-term recovery of affected communities after emergencies. The lack of success in doing that to date suggests that the humanitarian system needs to work towards a more collaborative, coordinated, and strategic way to achieve it. While environmental sustainability has been on the humanitarian radar for several decades, its practice has been mediocre, voluntary, and left to implementing agencies to 'mainstream.'

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Currently, there are no agreed system-wide policies. New guidelines and initiatives are emerging. Most practices focus on mitigation, with reducing carbon footprint being the main focus among organizations. Several Clusters have released guidance supplementing The Sphere Handbook.[1] Donor guidance[2] is available, and IASC's Climate Roadmap is under development. Donors have revamped policies,[3] environmental compliances, and reporting requirements with each application vary. Some provide exemptions for emergency programs with conditions.

InterAction studied various country coordination systems to understand current practices and challenges. Disaster and conflict context, the scale and type of the response, the capacity of local institutions, and available resources shape environmental management in each response. Many are in their infancy and vary in focus. Section 1 describes a handful of efforts taken in humanitarian responses based on interviews with Cluster coordinator teams, partners, and UN or NGO staff. In the absence of a focal point for environmental or climate issues in a particular response, the inquiries provide only a snapshot based on interviewees' perceptions and focus on shelter, NFI, or CCCM cluster activities.

1 http://tinyurl.com/4cdyzdvk

2 http://tinyurl.com/2bn8pb47

3 Multi-Donor Policy Landscape Analysis." Environmental Emergencies Centre, Joint Initiative,

3 COUNTRY SNAPSHOTS

3.1 Nigeria

Context

Environmental issues have been discussed within the Camp Coordination, Camp Management, and Shelter sectors, but partners felt there are very few examples of successful initiatives addressing it. Some donors requested environmental programming to be included in proposals, but as humanitarian funding is shrinking, organizations prioritized interventions such as food, water, health, and shelters.

Initiatives

In 2023, funding was made available to engage local NGOs in environmental rehabilitation, which involved planting grasses, fruit trees, and medicinal plants, developing a children's play area, and using wastewater for irrigation.

Environmental concerns are included in the humanitarian response plan but without benchmarks, indicators, or targets. Partners have not systematically prioritized ecological management due to current budget constraints, but there is some discussion of providing 'environmentally friendly shelters' to IDPs. WASH sector partners have conducted an environmental impact assessment.

Occasional awareness raising for the communities is conducted through accountability to affected populations, such as some partners providing tree saplings to households, which can also serve as food for their goats. The military limits the height and density of vegetation to maximize the visibility and security of the camps. Improved fuel sources are being considered, particularly from a Protection perspective, as many attacks are reported by people collecting firewood. Some organizations are providing wood and charcoal brought from other states.

Support

Global efforts are being made to improve energy approaches and related issues. Research papers and guidance notes are being developed with support from country partners. Cluster environment teams are developing guidance notes and

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papers on environment and climate change security in emergencies; however, contextualizing those in practice is challenging.

Challenges

There is a strong correlation between conflict and climate change. While conflict is the main driver for humanitarian response, the impacts of climate change, including desertification and floods, are generating further displacement of climate refugees due to desertification and flooding. This is leading to secondary and temporary displacement in villages. Many people are vulnerable, with a substantial risk of being left behind.

Currently, Nigeria's humanitarian community supports around 7.7 million displaced people. More than half of the budget is allocated towards food, while the remainder goes towards other basic needs like health, water, shelter, and nutrition. Unfortunately, despite recent global meetings where improved shelter materials were discussed, the ongoing response continues to procure firewood and cut trees to make shelters.

Most stakeholders believe the government should do more, but no significant steps are being taken to address environmental concerns.

3.2 Somalia

Context

Facing over 30 years of conflicts and disasters, responses in Somalia continue to operate as a humanitarian emergency, face donor fatigue and have yet to shift from emergency to recovery. Every region of Somalia has different challenges regarding access, availability, market, and culture.

For example, emergency shelter kits typically consist of tarpaulins and wooden poles, while corrugated iron sheeting is used in protracted situations. A technical working group is currently considering environmental challenges in shelter design.

In 2023, the cluster raised awareness of climate hazards and challenges for the partners, and the broader humanitarian community is considering environmental impact. The Cluster is advocating for preparedness but lacks technical resources and human resources.

Initiatives

Partners primarily focus on addressing the impacts of flooding and wind damage. Initiatives are undertaken to develop durable shelters and test different construction methods. One organization is experimenting with mud bricks, but there are concerns about scaling this up for 1500 shelters and the resulting ecological impact of sourcing the earth for the bricks.

Organizations are encouraged to use alternatives to emergency shelter kits and alternatives to timber poles. This often results in externally procured poles. Some partners have distributed imported hybrid shelters, but households have complained about habitability and being unable to use the shelters.

Organizations and government partners received training on the Nexus Environmental Assessment (NEAT+) tool. Government (disaster management) agencies are raising climate change awareness, preparedness, and anticipatory action with communication materials. Some larger organizations are incorporating climate sensitivity into their planning. Climate change mitigation

“There is a lack of harmony between site planning and emergency preparedness.”

is gaining interest among donors. There is an inherent community awareness regarding traditional knowledge, but it can benefit from contemporary scientific knowledge.

Support

Some partners are aware of global efforts and support available on environmental issues, but many have not yet engaged with it. One of the evaluation indicators for the response is whether globally developed guidance and materials have supported field implementation.

Challenges

There is a lack of resources to conduct environmental assessments with occasional consideration, such as during site selection and often when issues arise. The response is seen as driven by product, cost, and coverage and is rarely based on or reflects needs assessments. Some sighted examples, such as thermal comfort and appropriateness, are not being considered.

Currently, there are attempts to include environmental considerations in planning and implementation. With regard to environmental impact assessments, one partner noted, “The best that can be done is to integrate it into site planning.”

Information regarding climate sensitivity in the response is ″lost in translation″ and, therefore, not often considered. Environmental outcomes are not measured.

“There is a lack of harmony between site planning and emergency preparedness.”. Environmental initiatives have been seen to discontinue with change in key personnel.

Limited access to resources and technical equipment (flood level sensors) results in interventions often based on inferences instead of data, with government capacity not fully utilized.

Limited funds have increased reliance on emergency shelter kits. The focus remains on emergency response at the expense of preparedness, although it is widely accepted that climate change triggers emergencies. There are insufficient resources to address the underlying causes.

3.3 Venezuela

Context

The humanitarian situation in 2022 showed some positive developments in Venezuela as the economy stabilized and showed signs of economic growth. However, it will take time to address the significant humanitarian challenges that have resulted from the large-scale economic contraction of the last eight years. The lack of investment in infrastructure limits the provision of essential services such as healthcare, clean water, education, and energy supply. In addition, the most vulnerable people continue to have limited access to economic opportunities and income to meet their basic needs.

Intensified by climate change, the 2022 rainy season, severely affected tens of thousands of people because of overflowing rivers, landslides, and floods that destroyed homes in high-risk areas.

Initiatives

After a prolonged advocacy effort, clusters can now include environmental challenges in Humanitarian Response Plans. For example, the Shelter Cluster included environmental aspects from a DRR perspective, making the impacts of climate change more visible.

Training was conducted on Sphere standards, rapid assessments for buildings, and early warnings for communities, with government personnel involved in solar energy training. DRR awareness materials were disseminated among communities. The Cluster prepared country profiles to help partners understand environmental issues from a shelter perspective.

Currently, evaluation is undertaken on the carbon footprint of NFI items and plastic reduction, as well as to make partners more conscious of how to reduce NFI packaging and waste.

Challenges

The biggest challenges identified were funding availability and the lack of human resources with environmental expertise.

There is acknowledgment of the impact of climate change, with very few practical actions being taken. Partners are unaware of anyone tracking environmental markers within and outside humanitarian response.

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3.4 Bangladesh

Context

As a case study, the Cox's Bazar response in Bangladesh offers worthwhile lessons to establish collaborative, inter-sectoral environmental management in future humanitarian responses.

The remainder of this report describes the structure and objectives of the EETWG in Cox's Bazar. It uses a combination of interviews and document analysis to describe how the EETWG has managed environmental issues, how it has overcome various challenges, and how it will operate in the future. While various efforts are undertaken around the world, Cox's Bazaar provides a more mature response-wide effort. The rest of the report examines the inception, progressions, and lessons from the EETWG.

While Cox's Bazaar is unique, its location, density, legal frameworks, and surrounding ecology are unique, as the approach to environmental sustainability surrounding disaster risk reduction, waste management, energy, and material usage are lessons often taken by other country responses. However, most are isolated and sector-specific efforts. The most significant lesson from Cox's Bazaar is that it was able to set strategic goals for all stakeholders and sectors acting together around common objectives. The EETWG also incrementally improved its achievements, learning along the way. Ensuring communities, local stakeholders, and donors are on board is essential for its near and long-term success.

4 THE COX'S BAZAR RESPONSE DEVELOPED IN AN ENVIRONMENTALLY SENSITIVE AREA

Cox's Bazar is a district in the Chittagong Division of southeastern Bangladesh (Figure 1) along the Bay of Bengal. Most residents depend on natural capital assets and ecosystem services from agriculture, forests, marine and cultured fisheries resources.

The district features densely forested areas, including protected zones, nature reserves, and national parks, which cover over 25% of the region. Approximately 10,849 hectares are designated as protected forest areas, and an additional 11,615 hectares are allocated as wildlife sanctuary, including the Teknaf Wildlife Sanctuary (UNDP & UN Women, 2018; Hossen et al., 2019).

These forests are crucial habitats for various endangered plant and animal species, including the wild Asian elephant (Hassan et al., 2018; Tallis et al., 2019; UNDP & UN Women, 2018).

A pre-2017 refugee influx study revealed that 57% of households, including those of refugee communities, relied entirely on forests for their livelihoods (Uddin & Khan, 2007).

In Cox's Bazar, 960,000 Rohingya refugees are hosted in 33 temporary camps situated near some of those areas of high environmental value on hilly, previously forested land. The large-scale response has led to continued degradation of those areas, increasing their vulnerability to storms, floods, landslides, and cyclones. Climate change impacts are likely to intensify and increase the frequency of those hazards.

4.1. Several environmental issues became apparent

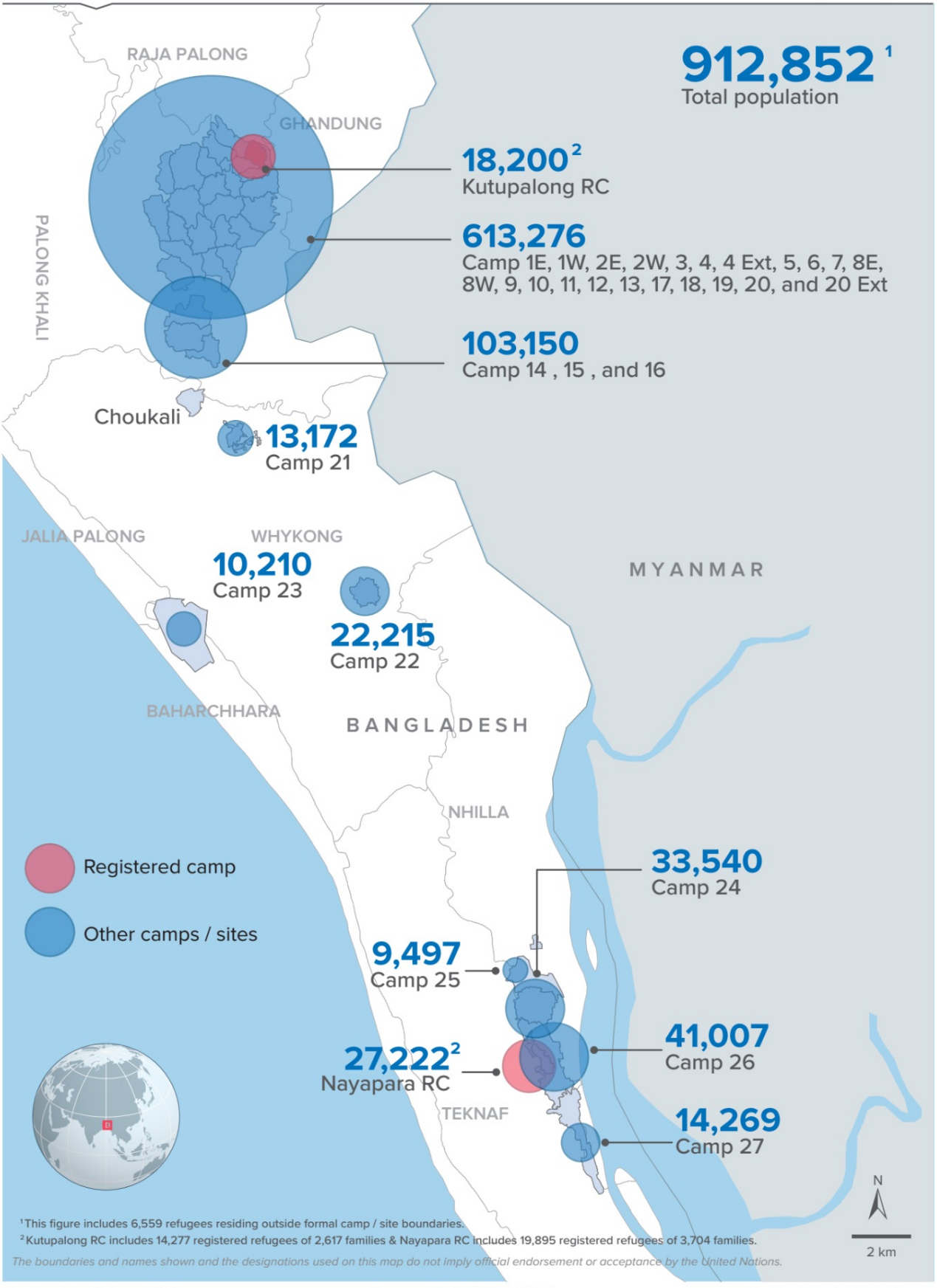
Some of the environmental issues that humanitarian agencies prioritized for active management are:

Water

Increased demand for water for drinking and irrigation raining concerns about contamination,[4] especially around the southern city of Teknaf, one of the longest sandy beach ecosystems in the world, with rich and diverse fauna and flora.

Refugee population density

(as of 15 August 2019)



[1] This figure includes 6,559 refugees residing outside formal camp / site boundaries.
[2] Kutupalong RC includes 14,277 registered refugees of 2,617 families & Nayapara RC includes 19,895 registered refugees of 3,704 families.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Deforestation

The camps occupy over 2,500 hectares of forested land, which was previously protected for its ecological value and which, in common with tropical forests worldwide, acted as a carbon sink that mitigated the impacts of climate change.[5] The forest was somewhat degraded before 2017, primarily due to trees being cut for firewood by the local communities and the early Rohingya refugees. However, the forest was still expanding at that time. However, the rate of deforestation and forest degradation increased in the early stages of the response to clearing space for shelters, developing basic community infrastructure, and meeting demand for firewood.

Deforestation has direct local environmental impacts on habitat value, biodiversity, soil stability, and local surface water quality, partly a function of poor environmental management and inefficient resource use. However, deforestation also releases stored carbon, mainly carbon dioxide, into the atmosphere.

Collecting firewood for cooking posed not only an environmental challenge but also a significant protection risk, especially for women and children. They often traveled large distances from the camps to collect it, exposing themselves to the threat of sexual assault and kidnapping.[6] Tension arose between the Rohingyas and the host community over access to firewood as a common resource.[7]

In 2018, the camps transitioned to liquefied petroleum gas (LPG) as a fuel source, which reduced the demand for firewood, air pollution, and the carbon footprint of the settlement. Despite this, deforestation has continued, although it appears to be at least partially due to local communities seeking access to forest resources rather than solely due to the camp and the associated humanitarian response.

Wildlife

The forests around Cox's Bazar provide important wildlife habitat, including for the endangered Asian elephant. One study[8] estimates that biodiversity around Cox's Bazar has declined by more than 14% since the 2017 influx of refugees. The camps and the host community settlements have blocked many elephant corridors. Deforestation has depleted the elephant habitat and food supply, and the blocked corridors prevent the animals from moving to other areas to meet those needs. Human-wildlife conflict is inevitable as the camps are situated within the elephant's habitat.

The camps are situated on hillocks of sandy soil. Construction of the camps has led to land instability, soil erosion, and increased landslide risk.

Solid waste management

In the early days of the response, there was no organized waste collection in the camps. Earlier, all the solid waste from camps went to poorly managed landfills, resulting in leachate entering the soils and groundwater in the area. The United Nations Development Program estimates that around 10,000 tons of waste are generated every month, which amounts to 460g per person daily[9] (ADRA, 2019). In 2019, the WASH Sector started composting all organic waste. Fecal sludge is treated in a treatment plant. In addition, plastic recycling centers and upcycling centers are aimed at addressing plastic pollution.

Demand for construction resources

To show that it sees the camps as temporary, the government of Bangladesh has only approved materials to construct temporary shelters in the camps. These materials, predominantly bamboo and tarpaulin, require regular maintenance, repair, and replacement. Around 32 million bamboo culms (lengths of the plant's woody stem) were used in the shelter response in the camps between 2017 and 2021. Often, the culms are not treated, reducing their longevity and adding to the ongoing demand for bamboo. Borak bamboo, one of the most commonly used for construction, lasts only 1–2 years if untreated and up to 5 years if treated and isolated from the ground.

Meeting the demand for bamboo has the potential to lead to further deforestation, with its associated environmental impacts. Tarpaulin, procured by the UN from outside Bangladesh, can last up to 2 years. Thus, the shelters in the camps require continuous repair, maintenance, and replacement. Replacement, with the associated transport impacts, adds to the carbon footprint of the response.

[4] https://rohingyaresponse.org/wp-content/uploads/2023/08/Final_Revised_28_5_20-Guidance-Document_Developing-and-Managing-the-Principal-Aquifers-in-Coxs-Bazar_IOM_APPROVED.pdf

[5] https://www.researchgate.net/profile/Mizanur-Rahman-27/publication/280732623_Carbon_storage_in_a_bamboo_Bambusa_vulgaris_plantation_in_the_degraded_tropical_forests_Implications_for_policy_development/links/5c544a83299bf12be3f3cec8/Carbon-storage-in-a-bamboo-Bambusa-vulgaris-plantation-in-the-degraded-tropical-forests-Implications-for-policy-development.pdf

[6] How cleaner energy can also reduce security risks to Rohingya refugees, WFP, November 2017

[7] https://colettesalemi.com/wp-content/uploads/2022/04/Rohingya-Refugee-Camps-and-Forest-Loss-in-Cox-s-Bazar-Bangladesh-An-Inquiry-Using-Remote-Sensing-and-Econometric-Approaches.pdf

[8] https://www.sciencedirect.com/science/article/pii/S2405844023054634

[9] JWSHDVol 12, Issue 8 (https://iwaponline.com/washdev/article/12/8/587/89424/Exploring-waste-and-sanitation-borne-hazards-in)

5 THE RESPONSE REQUIRED INTERSECTORAL ENVIRONMENTAL MANAGEMENT

The Strategic Executive Group, based in Dhaka, oversees the Rohingya response. It is co-chaired by the UN Resident Coordinator, a UNHCR representative, and the Chief of Mission for the IOM.

The government of Bangladesh is primarily responsible for the Rohingya refugee community. The Inter-Sector Coordination Group (ISCG), which reports to the SEG co-chairs, has coordinated the humanitarian response in Cox's Bazar since 2017. The ISCG Secretariat works with the Ministry of Disaster Management and Relief, primarily through the office of the Refugee Relief and Repatriation Commissioner (RRRC) and other government authorities.

The 2023 Joint Response Plan is implemented by the ISCG and the government of Bangladesh. It includes five strategic objectives, one of which is to strengthen disaster risk management and combat the effects of climate change. The same strategic objective was included for the first time in the 2022 Joint Response Plan, but earlier plans did not mention climate change or other environmental considerations.

The fifth strategic objective of the Joint Response Plan

"In coordination with the government of Bangladesh, mitigate the adverse impacts on the environment exacerbated by the Rohingya exodus and their prolonged stay in Bangladesh. This will include efforts to restore ecosystems, promote reforestation, develop waste management plans, and may also require efforts to strengthen disaster coordination mechanisms, promote the use of renewable and cleaner energy sources, and train Rohingya refugees/FDMNs and Bangladeshi first responders to respond to the effects of climate change and disaster risks."

5.1. A technical working group emerged

A separate technical forum was required to manage initiatives such as LPG stoves and portable solar lamps, which partly addressed some known environmental issues. These initiatives could not be included in the existing Shelter and NFI technical working group, as not all working group members carried out those initiatives.

An informal working group to consider environmental issues was initiated six months after the 2017 refugee influx. It was formalized as the EETWG in January 2018, co-led by FAO, IOM, UNHCR and WFP. Initially, the EETWG worked predominantly with the Food Security Sector, the Shelter and Non-Food Items Sector, and the Site Management and Site Development Sector. Since mid-2021, it worked closely with the WASH Sector as well.

The EETWG worked closely with around 40 partner agencies within those sectors, including national and international NGOs and government entities. The latter included the Forest Department, Department of Environment, Department of Agriculture Extension, RRRC.

The EETWG also engaged with many research and educational institutions for technical input on assessments, training, and workshops to build capacity in partner agencies.

5.2. The technical working group restructured as an inter-sectoral network

In 2023, the inter-sector coordination structure was rationalized, resulting in changes to the name and function of the EETWG. It became the Energy and Environment Network (EEN). It is situated within the ISCG, and EEN representatives attend the weekly ISCG coordination meetings.

EEN took over the responsibility for implementing the EETWG Climate Action Strategy (2023-2025). The three strategic objectives set out in that strategy relate to renewable energy, environmental restoration, and climate resilience. More details are in ***Annex 1***.

EEN also conducts ad hoc coordination meetings to discuss specific environmental issues.

The most common interactions with the sectors relate to the issues listed in Table 1.

Sector	Topics
Shelter and Non-Food Items*	• Use of alternative cooking fuel • Research on energy-efficient stoves • Repair of household-level solar lights • Roof gardening
Site Management and Site Development* * In early 2023, the Shelter and Non-Food Items Sector and the Site Management and Site Development Sector were merged to become the Shelter and CCCM sector	• Solar street lighting • Sustainable site development • Development of innovative solar projects • Managing elephant-human contact through bio-fencing and maintenance of watch towers
Food Security	• Conduct plantation aligned with site development works • Support climate-smart agriculture practices in host communities
Water, Sanitation and Hygiene (WASH)	• Piloting sustainable e-waste management solutions • Watershed management • Sanitation and safe disposal of excreta and solid waste • Access to safe drinking water and water for domestic use • Managing agricultural water use, including irrigation systems
Livelihoods and Skills Development	• Community engagement and training on the maintenance of solar infrastructures

Table 1: *Examples of topics receiving EEN support*

The ISCG coordinates inter-sectoral initiatives, including those proposed by EEN. It also supports EEN through advocacy to the broader humanitarian community and the government of Bangladesh. For example, in 2018, there was some resistance to providing LPG stoves to the Rohingyas because most of the host community could not afford the same benefit. The EETWG used data from an LPG pilot program in one of the camps to develop an impact analysis. That analysis showed that when LPG stoves replaced wood-fueled stoves, there was a demonstrably positive impact on forest cover. The analysis also confirmed that the change posed minimal fire risk if users received training. The ISCG, with representatives from IOM, UNHCR, and suboffices from Cox's Bazar, presented the analysis to the Bangladesh government, which then approved the distribution and use of LPG stoves throughout the camps.

6 THE ORIGINAL TECHNICAL WORKING GROUP HAD CONSIDERABLE SUCCESS

Since its formation, the EETWG has worked with approximately 40 partners from four sectors. It has made some notable achievements in collaboration with partner agencies, government counterparts, and the communities.

6.1 Functional success

General support for partners

- Provided publicly available resources on the website.[10]
- Developed guidelines on LPG distribution, solar lighting, homestead gardening, land stabilization and greening the camp, and watershed management.
- Created awareness-raising messaging for reforestation.
- Helped sectors and partners complete assessments, such as for environmental impact, soil quality, plantation and forestry, and wildlife management.
- Conducted joint visits to camps with sectors and partners for replanting, disaster risk reduction, energy, watershed management, etc.
- Initiated more formal knowledge management, including compiling an ongoing list of environmental assessments, guidelines, and reports produced since 2018.

Training and workshops

- Developed and delivered training and workshops on:
- Bamboo propagation techniques
- Human-centered design workshops
- GIS training
- Nature-based solutions workshop
- Climate-smart agriculture workshop
- Camp plantation lessons-learned workshop.

Advocacy

- Supported the introduction of environmental and energy initiatives in the camps.
- For example, in 2022, one Camp-in-Charge Officer (CiC) resisted bamboo plantation in their camp even though the RRRC and the Forest Department had already approved it. EETWG engaged directly with the CiC and attained their agreement to proceed.

Constructive engagement with the Bangladesh government

- Supported the RRRC to find an alternative to using wood as a cooking fuel, resulting in the provision of LPG across all camps.
- Facilitated the Ministry of Forestry's active involvement in reforesting and land restoration to reduce landslides and siltation of surface water.
- Played a critical role in bringing ministries together with the humanitarian community and making them partners in the field.

Community awareness in the Rohingya Camps

- Coordinated with sectors and the AAP Working Group (previously the Communicating with Communities Working Group) on training and communication to raise awareness of energy and environment-related issues in the camps. They found that the most effective way to raise community awareness has been through face-to-face messaging and loudspeakers. There are ongoing discussions in the AAP Working Group on how to make consultations more meaningful and inclusive. Communication tends to be more effective when trained Rohingya community representatives deliver the messages and seek input, unlike when Bangla staff do it.
- BBC Media Action holds community awareness sessions with Imams and female community leaders in coordination with UNHCR. Imams share knowledge in the mosque, and women visit the female religious teachers regularly, making them valuable communicators in awareness-raising campaigns.
- The focus is shifting from messaging in the community toward behavior change communication. This includes understanding the community's risk perception and possible triggers for behavioral change. For example, having experienced landslides, the Rohingya's perception and understanding of risk have changed, such that they have a better understanding of the risks of deforestation. If evidence of risks and potential consequences can be clearly demonstrated, people are likelier to change their behavior to reduce that risk.

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The only cement allowed in Rohingya shelters is plastering the wall behind the cooking stove to protect the shelter against fire hazards. In the photo, you can see the inside of a mid-term shelter built during the fire response in Camp 9. 2021.

- Triggers for behavior change include clear opportunities to increase income, ownership, and hope for the next generation.
- A BBC Media Action program, "Our Heroes," identifies and highlights positive community initiatives, creating relatable content based on the Rohingya culture.
- A life skills development framework is being developed through the Livelihood Sector. The community is gaining skills and potential sources of income. A stable income can increase the sense of responsibility and awareness of and willingness to engage in efforts to mitigate energy and environmental issues.
- Assessments have shown that the community is aware of environmental issues, although a lack of means often prevents people from putting that knowledge into practice. The capacity-related advocacy needs to be at the donor level. The AAP Working Group and EETWG should carry out field assessments to understand the issues communities face so they can develop evidence-based donor-level advocacy.

6.2 Technical achievements

Solar-powered lighting

- Oversaw the installation of more than 12,000 solar street lamps throughout the camps.
- Oversaw the distribution of more than 37,000 solar lamps to households across all 33 camps.
- Enabled 32% of health facilities to use solar energy as their primary energy source.
- Enabled 70% of health facilities in the camps to be powered partially by solar energy sources.

Flood hazard maps of all camps

- Worked with the Site Management and Site Development Sector, the Shelter and Non-Food Items Sector, the Natural Hazards Working Group, and IOM and UNHCR site planners to develop maps of flood-prone areas in the camps. An inter-sectoral team distributed the maps to relevant stakeholders to highlight at-risk construction. The team conducted individual visits and meetings with the CiCs of each of the 32 camps.

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A shelter in the camps during monsoon. Households have added an extra layer of tarpaulin on the external face to protect the shelters from rain. In addition to shelter materials, shelter positioning and levels of pathways, etc., also influence the shelter's vulnerability to heavy monsoons.

Stream rehabilitation

SuLMER coordinated the Sustainable Land Management and Environmental Rehabilitation project, a multi-sectoral and multi-agency project that involved:

- stream excavation
- bank protection
- slope stabilization
- revegetation
- plant-based wastewater treatment
- drainage improvement
- construction of silt traps, water reservoirs, and firebreaks.
- UNHCR and its partners, including BRAC, the International Union for the Conservation of Nature, and the Center for Natural Resource Studies, rehabilitated streams in camps 1W and 2W with the support of EETWG.

Reforestation

After the LPG program was rolled out in 2018, many agencies recognized the need to replant deforested areas and began to do that on their own initiative. The EETWG provided technical advice on species selection and sapling maintenance, but efforts remained ad hoc and uncoordinated.

In December 2021, 14 EETWG partners, in collaboration with RRRC and the Forest Department, reforested almost 150 hectares of land with over 900,000 seedlings.

In 2022, 15 partners replanted an additional 100 hectares of land around the camps with more than 250,000 seedlings. That replanting was the result of extensive planning and cooperation between multiple stakeholders. The process was overseen by EETWG, which:

- Compiled data from previous plantations conducted by individual agencies.
- Consulted with various sectors to identify available land for plantation.
- Consulted with site planners to identify additional potential roadside, riparian, and hill slope plantation locations.
- Generated a land availability map for the plantation and shared it with partners and site planners.
- Developed plantation maps, then verified the availability and suitability of proposed areas with partners, AoRs, IOM, UNHCR, and the SMSD Sector.
- Allocated locations to partners and received final verification from AoR site planners. Partners were requested to only plant species approved by the Forest Department.
- Worked with ISCG and AoRs to secure joint approval from the Bangladesh government through RRRC.
- Supported (with AoR representatives) partners in getting the CiC's approval where needed.

[10] https://rohingyaresponse.org/

7 LEARNING AND ADAPTING ENVIRONMENTAL MANAGEMENT AS THE RESPONSE CHANGES

7.1. The focus is shifting to more sustainable construction

The protracted nature of the crisis, combined with declining funding, requires the humanitarian strategy to shift toward more durable solutions. This is critical from both humanitarian and environmental perspectives. As the continuation of EETWG, EEN will play a significant role in coordinating and developing the technical designs and advocacy reports with the relevant sectors.

The response is already planning streamlined and durable interventions. For example, an integrated health and nutrition facility will replace facilities destroyed in a fire in Camp 11. The new facility will use more durable and fire-resistant construction materials, such as brick, rather than the bamboo and tarpaulin used in the camps. EEN will support sectors and partners to implement sustainable solutions as the humanitarian strategy shifts.

7.2. Advocacy and communication challenges still need to be addressed

Since 2022, sectors and technical working groups, including the EETWG, can no longer discuss issues directly with RRRC. Changes intended to streamline communications with the government mean that ISCG must negotiate approval for technical designs and guidance with the government on behalf of those working groups and sectors. This change was a response to misinformation and the increasingly political nature of the response. RRRC now directs all its communication to ISCG, which only responds after consulting with the relevant working groups. Consequently, the limitations on direct and open communication have reduced the speed and efficiency of government approvals.

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7.3. EEN operates as a technical advisory body

ISCG now directly supervises all technical working groups. The EEN will not have its own work plan but will be integrated into sectoral initiatives. EEN will support sectors in an advisory capacity, streamlining initiatives and combining similar activities. This is intended to avoid duplication, increase impact, and optimize funding.

One of EEN's primary roles will be coordinating activities related to specific environmental management initiatives, effectively operating a series of task forces. For example, it may coordinate solar energy generation and use activities, solid waste management, sustainable cooking fuels, or plantation management.

EEN will focus on the funding scope instead of activities, providing a response-wide overview of funding requirements for environmental management priorities.

The overall and ongoing decline in response funding will require different ways of funding existing activities. Integrating environmental management initiatives into existing programs may gain access to new funding.

8 LESSONS FROM EETWG AND CONSIDERATIONS FOR FUTURE RESPONSES

8.1. Seek broad multisector, multi-stakeholder representation

A multisectoral representation from the inception is essential and must be open to local partners, research institutions, government, the private sector, and humanitarian organizations. ***Indigenous knowledge*** of environmental management is invaluable to engaging the community and the future sustainability of initiatives. Managing or coordinating a large and diverse group of members can be challenging, but ***inclusive decision-making, knowledge sharing, and shared accountability*** contributed to EETWG's achievements.

Environmental management needs to be inter-sectoral and balanced when it comes to issues and engagement. Its primary focus should be coordination while allowing individual sectors to manage their respective technical issues and programmatic activities. Each sector, through a technical working group, should consider managing and resolving their contribution and impacts. They should consider proactively participating in ***assessments and sharing data*** with the environmental management group, which can consolidate and identify potential gaps and effects on other sectors and resolve overlaps.

The multisector environmental management group should encourage strategic consideration of expected ***long-term response outcomes***, focus on the ***sustainability of initiatives***, and work closely with institutional and development actors.

8.2. Start early and establish a clear mandate

Setting up a multisector environmental management group as early as possible helps ***identify, prioritize, and manage*** environmental issues more efficiently. In Cox's Bazar, technical working groups and an inter-sectoral network have successfully managed environmental issues.

By knowing that such support is available, program designers can integrate environmental considerations into their planning, even if implementation is delayed while more urgent humanitarian issues are addressed. Most practitioners

emphasized the need to ***incorporate environmental issues at the onset***, ensure funding is available, and design initiatives collaboratively.

The host country's national environmental policies should inform any strategy and objectives for environmental outcomes of the response, and their support is crucial. Ideally, the group's main role can include ***technical advice, data collection, strategic advice, and ensuring coherence*** in efforts. Many humanitarian organizations acknowledge the lack of technical expertise, which the group can fill by reviewing specific activities and providing technical advice and recommendations to the implementing partners.

While urgent humanitarian priorities and short funding cycles can be challenging, ***collective awareness and early advocacy are essential for program design, funding, and timeframe***. While ***donor environmental guidelines*** are available, they are not harmonized, leading to inconsistent, isolated, and competing initiatives.

8.3. Increase awareness and develop technical skills

During a series of consultations InterAction conducted, humanitarian organizations have identified significant gaps in technical expertise as one of the aspects that has been challenging. Further, in regional consultations, similar sentiments were expressed by local and national organizations. Specific areas identified include conducting assessments, interpreting environmental data, prioritizing interventions, and program design beyond operational mitigation. The multisector environmental management group could provide such awareness and training centered around collective impact.

As most environmental initiatives are not separately funded and are required to be mainstreamed, organizations ***lack resources to staff or maintain*** such positions. The multisector environmental management group could act as a resource center where ***technical expertise and resources*** can be shared with those who need them.

Experience at Cox's Bazar suggests that such a multisector environmental management group could work with CiCs, government, and other liaisons to improve their understanding of the shared ***operational value and long-term benefits*** to the settlement and surrounding areas. The group could increase CiCs' willingness to support environmental management initiatives by providing technical evidence for planned and ongoing interventions.

8.4. Strengthen quality data and knowledge management

The environmental management group's operations must be rooted in ***flexibility in leadership, multi-sectoral and multi-stakeholder collaboration, active and meaningful community engagement*** and feedback mechanisms, and the inclusion of the community's ***adaptive capacity in program design***.

As environmental concerns evolve, rely on continuous monitoring and impact data to strengthen ***knowledge management*** and ensure and plan for continuity past the emergency phase. Practitioners preferred that such data should be maintained at the sector level in a format that can be consolidated to provide a ***response-wide perspective***.

Access to consolidated data can also help the group demonstrate the long-term benefits of short-term interventions, even if the benefits are not immediately noticeable. Additionally, share impact data with key stakeholders such as government counterparts and donors to sustain support.

Pre and Post Picture of Segment 3

ANNEX 1: STRATEGY, OBJECTIVES, AND GENERAL OPERATION OF THE EETWG

The EETWG worked with the community, government, the private sector, research institutions, sectors, and development banks to develop the EETWG Strategy for Climate Action in Cox's Bazar, Bangladesh (2023–2025). The strategy was published in November 2022.

The overall objective of the EETWG, as specified in the strategy paper, is "To ensure better coordination and the technical assurance of interventions related to energy and environment and mainstream nature-positive climate action in the refugee camps and host communities of Cox's Bazar District."

The strategic objectives of the EETWG (Table 1.1) align with ISCG's Joint Response Plan and support the strategic direction of the sectors involved.

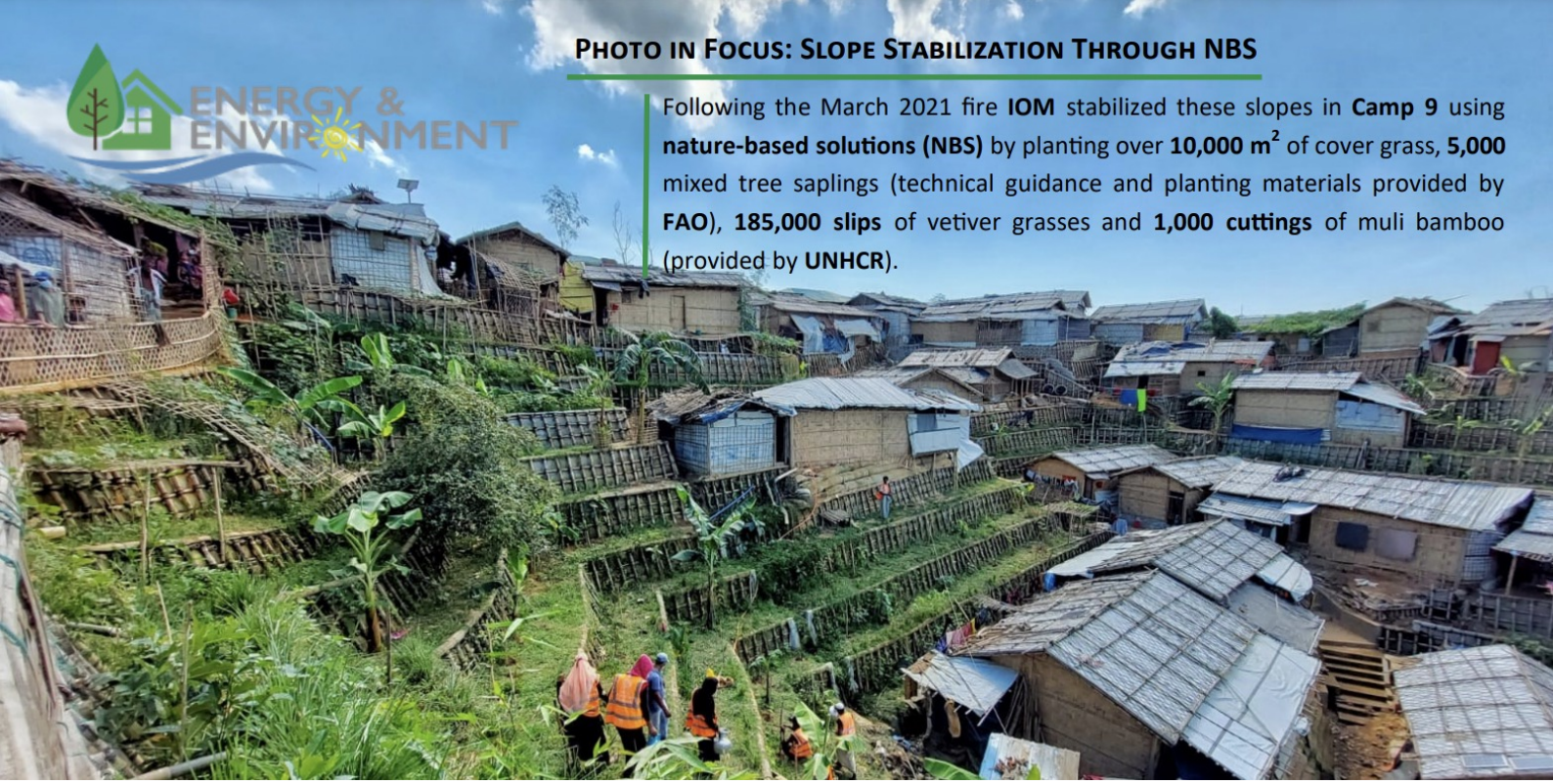
None of the EETWG's strategic objectives can be linked to individual sectors, as many require inter-sectoral collaboration. It also mentions the supporting sector, thus outlining the inter-sectoral linkages for each strategic objective and its activities. EETWG played an important role in facilitating the collaboration, continuity, and agreed split of responsibility between the sectors at Cox's Bazar level and field level.

EETWG used various mechanisms to engage with sectors and partners, including:

- EETWG coordination meetings attended by sectors and partners active in energy and environmental management activities.
- A survey on issues such as partner activities, required technical support, and potential joint field visits.
- A newsletter, produced every 2-3 months, highlighting successes, updates, and links to resources.
- Support to partners to plan events, activities, and awareness-raising initiatives such as World Environment Day.

PHOTO IN FOCUS: SLOPE STABILIZATION THROUGH NBS

Following the March 2021 fire **IOM** stabilized these slopes in **Camp 9** using **nature-based solutions (NBS)** by planting over **10,000 m²** of cover grass, **5,000** mixed tree saplings (technical guidance and planting materials provided by **FAO**), **185,000 slips** of vetiver grasses and **1,000 cuttings** of muli bamboo (provided by **UNHCR**).



© *EETWG Dec 2021 Newsletter: Nature-based solutions*

Strategic Objective 1 Ensure sustainable energy solutions for cooking and lighting and solid waste management.	**Objective 1.1** Refugee households have safe and sufficient access to clean cooking energy to meet their basic needs, and longer-term, efficient cooking energy solutions are identified for host communities.
	Objective 1.2 Sustainable, affordable, and innovative energy technologies are promoted and maintained for lighting to mitigate protection risks in the camps.
	Objective 1.3 Solid waste management efforts are improved in the camps and host communities.
Strategic Objective 2 Restore and rehabilitate the natural environment and conserve ecosystems.	**Objective 2.1** The natural land and water resource base within the camps are maintained post-restoration, and new site development and shelter work adopt nature-based and sustainable solutions.
	Objective 2.2 Host community capacity to sustainably manage natural land and water resources and disaster risks and mitigate conflicts over access is strengthened.
Strategic Objective 3 Strengthen community resilience against climate-related and other environmental risks.	**Objective 3.1** Home gardening and aquaculture activities in the camps are climate-sensitive.
	Objective 3.2 Climate-smart agriculture practices are adopted in host communities.
	Objective 3.3 Preparedness, anticipatory action, and response activities are strengthened.

Table 2: Summary of objectives in the EETWG Strategy for Climate Action in Cox's Bazar, Bangladesh (2023–2025)