NORWEGIAN REFUGEE COUNCIL

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Strengthening Environmental Screening Capacity of Humanitarian Organizations

Environmental Screening Report

NEAT+
Nexus Environmental Assessment Tool

Malkohi Community/IDP Camp, Namtari ward

Yola-south

Adamawa State, Nigeria

02-03 May 2023

Contents

INTRODUCTION

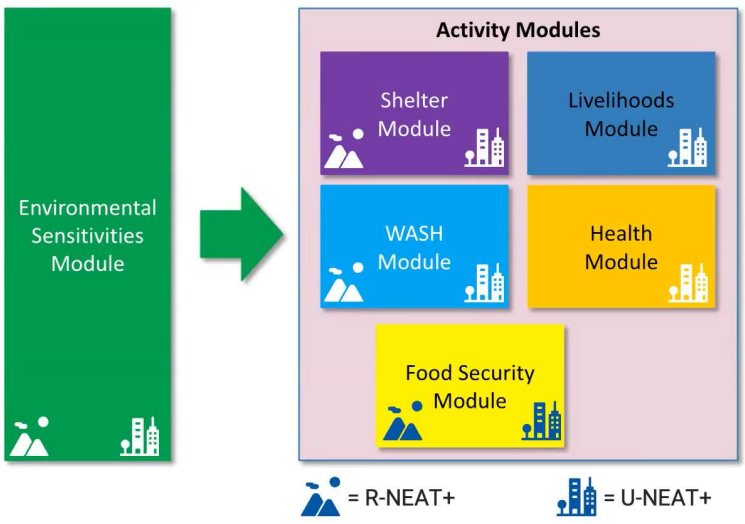
Humanitarian projects, although addressing protection needs and aiming for durable solutions for the crisis and conflict-affected communities, can result in adverse environmental externalities. These environmental externalities must be identified and addressed in the earliest stages of humanitarian response, which helps protect the environment and communities from any project-associated potential adverse impacts. Humanitarian organizations are increasingly working towards addressing environmental considerations in the program cycle; however, this practice is yet to be mainstreamed into project designs and implementations. The most practised exercise for mainstreaming environmental concerns into projects begins with an environmental screening. It evaluates projects' interventions against the sensitivities of the receiving environment to determine positive and negative environmental impacts. Several environmental screening tools can be selected depending on the project's nature, scale, location, and organization's implementation capacity. Environmental screening is usually a requirement by local environmental authorities and donors but can also be an internal organizational compliance requirement.

This environmental screening has been conducted for Shelter and WASH projects Implemented by the Norwegian Refugee Council in Malkohi Community and IDP camp, located in the south of Yola in Adamawa State, Nigeria. This report is part of the **Error! Reference source not found.**ECHO-funded project on "*Strengthening the capacity of humanitarian actors to do environmental screenings*".

NEAT+

The NEAT+ is an open-source, rapid, easy-to-use environmental screening tool[1] mainly designed for humanitarian contexts. A consortium of humanitarian organizations developed and officially launched this tool in 2019. The tool assesses vulnerabilities and impacts of humanitarian response activities and generates summary reports providing a snapshot of baseline environmental conditions, potential environmental impacts, mitigation measures, and development opportunities. There are currently two versions of the NEAT+ available, the Excel-based Rural-NEAT+ and the web-based Urban-NEAT+. As shown in the figure **Error! Reference source not found.**, the NEAT+ consists of an Environment Sensitivity module and Activity Modules covering core humanitarian activities: Shelter and Settlement, WASH, Food Security, Livelihood, and Health.

Figure: **Technical Structure of the NEAT+**



(JEU,2022)

[1] https://resources.eecentre.org/resources/neat/ or https://neatplus.org/

CONTEXT

Nigeria's northeast region is badly hit by conflicts, weak governance, and climate change, forcing some 2.2 million people to flee for safety and shelter in Adamawa, Borno and Yobe States. Adamaawa state hosts many IDP settlement in urban areas of Yola and IDP camps near host communities. Malkohi's community and IDP camp, located in Yola South Local Government Area of Adamawa state, hosts around 15,000 persons. The community has accommodated thousands of IDPs from various parts of the Northeast, especially those ravaged by conflict. The estimated number of IDPs is about 5000 persons, while the number of people in the host community is about 9000.

The temporary shelters in Malkohi IDP camp are in poor condition; some are torn and leaking. The main livelihood activities include agriculture farming, livestock, and small-scale income generation activities in the local market. Malkohi is predominantly desert and barren land with sparse vegetation. Some go as far as 12k-15km for agriculture activities. Agricultural activities are primarily rainfed and seasonal, and many deep borewells are drilled powered by diesel generators and solar panels to meet the growing need for supplementary irrigation but also for small-scale kitchen gardening. The primary source of water for drinking and household use is groundwater, and sanitation facilities are provided through humanitarian projects. Malkohi community and IDP are highly dependent on natural resources, which has led to tension between the IDPs and the host community (NRC-ICLA,2023). These natural resources are vulnerable to climate shocks and stresses, with fewer assets and mean within their reach to adapt and withstand the growing effects of climate change.

PROJECT BACKGROUND:

The Norwegian Refugee Council[2] plans to support shelter rehabilitation and the provision of WASH facilities in the Malkohi IDP camp. The shelter component will support the rehabilitation of 100 temporary shelters for IDPs and around 100 mudbrick houses for the community. Essential household items for both temporary and permanent shelters will also be provided to the beneficiaries. The mud-brick shelters are preferred considering the hot climatic conditions. The shelter materials include timber, zinc roofing sheet and gutter, mud bricks, sand and cement, metal doors and windows, and oil and coal tar. These materials are mostly available within the local markets.

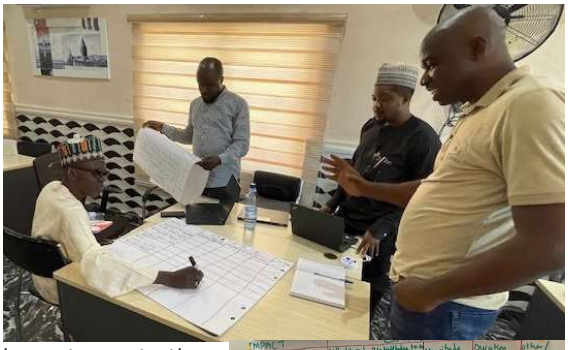
Several other humanitarian organisations are involved in the WASH activities in Malkohi, and several deep borewells are drilled to ensure the provision of water for both IDPs and the host community. NRC plans to provide hygiene kits and support an awareness-raising campaign about good hygiene practices. In addition, NRC is also planning to create awareness about climate change and build community resilience against flooding and other climate hazards.

METHODOLOGY

This NEAT⁺-based environmental screening is part of the two-day capacity-building training from 02-03 May, 2023, for humanitarian organizations in Yola, Adamawa State. As shown in the figure below, a dual-purpose approach is used where participants are exposed to the concepts, environmental regulatory framework, and process of conducting an environmental screening, but also taking participants through the experience of conducting a NEAT⁺-based screening for an actual project. This included the sensitivity module of the NEAT⁺, followed by the activity modules on Shelter, WASH, and Livelihood. Since no livelihood and large-scale WASH

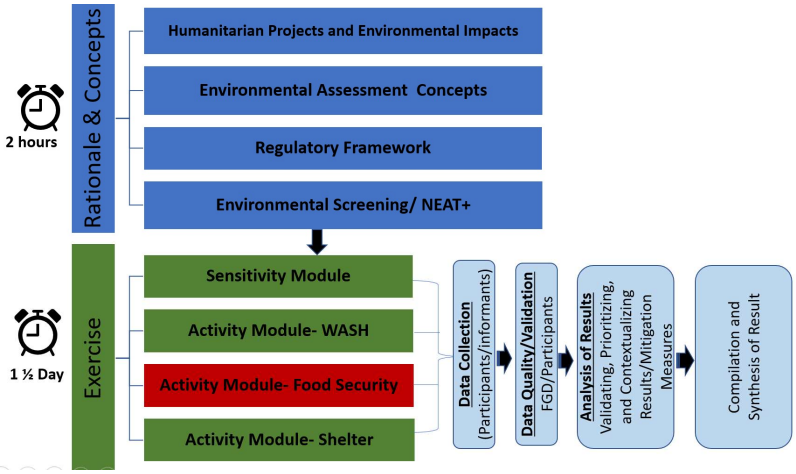
[2] For additional information on the project, reach out to Dimbe Yahra (dimbe.yahra@nrc.no) and Babagana Modu(babagan.modu@nrc.no)

activities were planned in the Malkohi area, participants were given a choice to use to complete WASH and Livelihood modules for other locations where their organizations are implementing projects. Considering the context of Malkohi, the Rural- NEAT+ version is applied. The questionnaires were filled through a group exercise, followed by analyses of the tool-generated results, using criteria to contextualize and prioritize impacts and mitigation measures. The main criteria used for prioritization included the likelihood of the impact to occur, the nature of impacts and their magnitude, and their importance to the crises-affected population. The mitigation measures against each impact are contextualized through group discussion and using the criteria such as financial viability, technical feasibility, social acceptance within the organizational capacity and scope of the project, and alignment with the institutions' policies. A planned field visit to the project site was cancelled since most community representatives were busy in Wednesday's open market in Malkohi.



Finally, participants were taken through drafting the narrative of the analysed results and incorporating them into the project proposal and planning.

Figure1: Overview of the Approach Employed



Sub-activity modules that are within the NRC's project scope are selected accordingly. As part of the exercise, all sub-activity modules were completed to expose participants to all the sub-modules within the NEAT+; the analysis, though, only covers the actual project activities in Malkohi.

ANALYSIS OF THE RESULT SUMMARY

SENSITIVITY ANALYSIS

The Environmental Sensitivity summary helps understand the environmental baseline of the project location. It informs the project team about site-specific potential environmental risks and vulnerabilities resulting from the interactions between communities and their ecosystem and the carrying capacity of natural system against the proposed project activities.

The sensitivity analysis report shown below provides an overview of the baseline environmental conditions of the Malkohi area and categorizes site-specific environmental issues into Low, Medium, and High concerns. As

shown in the result summary below, the issues are structured around five broad categories, namely i) Affected communities, ii) Impacts on biodiversity, iii) Pressure on natural resources, iv) Pollution and environmental degradation, and v) Environmental hazard.

Environmental Sensitivity Analysis Location: Malkohi, Adamawa State Country: Nigeria

Issues of High Concern	Issues of Medium Concern	Issues of Lower Concern
Rates of deforestation may exceed regeneration capabilities. Deforestation may be a risk.	There is a high concentration of people. The potential environmental impact is greater.	The community may have low self-sufficiency. There may be a greater demand (and impact) on the local environment.
This area may be at risk of flooding.	The displaced population may have little understanding of local ecosystems & biodiversity. Loss of biodiversity may be an issue.	The community may not be socially cohesive. This can prevent collective action and lead to social conflict.
Natural resources may be scarce and in high demand. This can lead to social conflict.	The environment has fragile ecosystems.	The community may have a high dependency on the natural environment. It can threaten livelihoods and social cohesion.
There may be an unsustainable rate of extraction of resources from the local environment.	There is a low capacity to manage solid waste. Environmental sanitation and disease transmission may be an issue.	The environment has a low regenerative capacity. The effects of land and soil degradation are more significant. This area may be at risk of soil erosion from wind and water.
Natural resource availability & accessibility may be affected by changing climatic conditions.	Waste management may be an issue. it can pose public health risks	Indoor air pollution may be an issue caused by poor ventilation and cooking/heating.
	The area may have heightened exposure to climate-related risks and extreme weather events.	The water resources may have a low regenerative capacity. Water scarcity may be an issue.
		Water sources may be vulnerable to contamination. Water quality may be an issue.
		There is a low capacity to manage wastewater, sewerage, and faecal sludge. Environmental sanitation and disease transmission may be an issue.

The main environmental issues highlighted in the sensitivity report and validated through the group work exercise by participants with knowledge of the proposed project site are;

- Deforestation is a potential issue since wood and charcoal are the main household energy sources and local shelter constructions in Malkohi. The rates of deforestation may exceed regeneration capabilities.
- The area may have heightened exposure to climate-related risks and extreme weather events, particularly flooding, and the people may have little knowledge or means to adapt and withstand the effects of climate change.
- There is a high concentration of people, which leads to pressure on limited natural resources that are high in demand. This could potentially lead to social tension, particularly among IDPs and the host community, and the environmental impacts are likely substantial and extensive in Malkohi.
- The environment that the community depends on for resources has a low regenerative capacity. The effects of land and soil degradation are more significant.
- Malkohi may be vulnerable to water scarcity due to dry climatic conditions coupled with over-extraction of the groundwater without taking the system's regenerative capacity.
- The water sources may be vulnerable to contamination. Water quality may be an issue.
- There is a low capacity to manage surface water drainage/wastewater. Environmental sanitation and disease transmission may be an issue.

SHELTER- Potential Environmental Impacts and Mitigation Measures

The Shelter summary report outlines environmental risks associated with the planned project activities and combines them with the sensitivities of the project location. The potential environmental risks are prioritised together with the training participants with knowledge of the area. Based on its significance, environmental risks are categorized as low, medium, and high. The most significant potential environmental risks include i) Deforestation, ii) Land degradation and soil erosion, iii) Solid Waste Management, and iv) Climate-related hazards.

- **Deforestation** has been identified as a potential issue associated with shelter activities. In Malkohi, the household energy is primarily wood and coal, leading to deforestation at an unsustainable rate. The host community and IDPs are also highly dependent on humanitarian relief assistance, often insufficient to meet their needs. They often generate additional income through alternative means, including selling wood and charcoal, which puts even more pressure on existing scarce resources.
- **Land degradation and Erosion** have been identified as a potential concern in Malkohi associated with the shelter project activities. Land degradation and erosion are directly and indirectly linked to other socioeconomic issues. Sparse vegetation, loose soil type, and dry climatic conditions expose the land to degradation and soil erosion. Soil erosion also results from vegetation clearance and the use of top fertile soil for mud-bricks production for building shelters. The excavation could also lead to water stagnation, resulting in mosquitos' breeding places.

- **Solid waste management** has been identified as a potential issue of concern in Malkohi and is linked to shelter and settlement-related activities. There are no adequate public services or infrastructure to manage construction or household waste. The area lacks any proper nearby waste dump sites, and household waste is often dumped outside houses and, in most cases, burned in the open air. If waste management measures are not considered, shelter project activities may also contribute to increased waste generation, with adverse health and environmental consequences. Unmanaged waste can also lead to water stagnation, increasing the risk of vector transmission.

- **Climate-related hazards,** particularly flooding has been identified as an issue of concern, which might affect the shelter and settlement-related activities. Malkohi is at the forefront of seasonal flooding and has faced several in the past year due to an inadequate drainage system, damaging people's shelters, properties, and livestock. The community's vulnerability to climate-related hazards is high, and they have little knowledge and resources to cope with the impacts. Farmers engaged in rainfed agricultural activities whose livelihoods directly depend on precipitation are threatened by increasing variations in the annual rainfall, and predicting the time of rain has become more complex.

The table below lists contextualized mitigation measures against the selected[3] anticipated impact extracted from the tool-generated Shelter result summary.

Potential Project Impacts	Mitigation Measures
Deforestation	▪ Plant native tree species and discourage any use of invasive species of trees ▪ Educate communities on sustainable consumption of wood and charcoal for the household energy use ▪ Consider providing fuel-efficient stoves as part of the Non-Food-Items support ▪ Incorporate green areas in your planning. Green spaces also improve inhabitant satisfaction and can provide a natural cooling effect ▪ Minimize the use of wood and timber where alternatives are available ▪ Consider generating alternative livelihood sources for people who make their income from selling wood and charcoal
Erosion & Land Degradation	▪ Refill the excavated land used for making mud bricks within four days to avoid hosting vectors ▪ Limit vegetation clearance to the project site only ▪ Plant indigenous trees as a revegetation measure ▪ Avoid excavating in areas near the surface or shallow sub-surface water flows. ▪ Promote agroforestry practices through other projects
Solid Waste Management	▪ Separate organic and inorganic waste and designate separate waste dump sites at an appropriate distance.

[3] Please refer to Methodology section for more information on criteria used for selection for impacts and mitigation measures

	▪ Minimize the amount of packaging, substitute for paper or cardboard (biodegradable), and promote the principle of reducing, recycling, and reusing. ▪ Provide items according to the assessed household needs. ▪ Select items strategically and consider each household's specific needs, which can reduce resource consumption and waste generation. ▪ Consider multifunctional items and post-crisis use of the items. ▪ Set up waste livelihoods projects and promote best practices ▪ Store chemical waste in approved containers to avoid any spills or leakages ▪ Arrange waste collection and awareness campaigns, and educate the community on potential health risks
Climate Hazards/Flooding	▪ Consult local hazard maps ▪ Establish simple early warning mechanisms that are accessible to the community ▪ Use participatory mapping and depict the main risks and root causes of flood risks ▪ Clear drainage canals and improve the infiltration capacity of the ground with vegetation coverage ▪ Implement flood-resistant shelter in compliance with appropriate shelter codes, and upgrade housing and infrastructure where needed ▪ Improve drainage and surface water penetration by using permeable surfaces

WASH- Potential Environmental Impacts and Mitigation Measures

The WASH summary informs the project team about the potential environmental risks that must be considered during project selection, design, implementation, and operation. In Malkohi, several humanitarian organizations are taking the lead in providing WASH services. NRC aims to complement these by providing hygiene kits and raising awareness of health and hygiene practices. Potential environmental risks associated with the NRC's WASH activities include the low capacity to manage solid waste: climate-related hazards, and deforestation.

- **Solid waste management** has been identified as an issue of medium risk. There is low capacity, supporting infrastructure and awareness to manage solid waste. Unneeded items contribute to the unnecessary consumption of resources. This can also lead to increased waste generation. Packaging waste can be disposed of inappropriately, leading to solid waste management challenges, and many countries have limited recycling capabilities. Environmental sanitation and disease transmission may be an issue. Improper disposal and management of hygiene kit packaging can also become a vector for spreading disease within communities.
- **Climate-related risks** such as **soil erosion, flooding, and drought** are commonly associated with WASH-related activities. Such hazards may directly impact the WASH infrastructure if not appropriately designed (multi-hazards approach) and sited. This is primarily due to the porous nature of the soil, combined with winds, prolonged drought and flash floods. Soil erosion has a direct impact on soil fertility and people's livelihood.
- **Deforestation** has been identified as an issue of indirect concern, interventions that promote the burning of wood for water disinfection by boiling.

Other WASH-related environmental risks in the Malkohi area that are not directly linked to the NRC's project but could be addressed, if resources permit, include.

- There is pressure on the water resources from the over-extraction water of shallow and deep aquifers. **Water scarcity** may be a potential issue considering the low regenerative capacity of the natural water system in Malkohi. Water scarcity can also potentially lead to social conflicts in the community.
- **Water sources are vulnerable to contamination** due to poor drainage systems, the lack of proper sanitation infrastructure and the porous soil texture in Malkohi. Loose soil texture allows the movement of contamination, such as human waste, into water bodies. These water bodies may be used for drinking, cleaning, or bathing. Children and the elderly are particularly affected by contaminated water due to weaker immune systems.
- **Wastewater management** may be a potential issue in Malkohi since proper drainage infrastructure is lacking, and there appears to be a low capacity to manage wastewater and fecal sludge. Wastewater carries contaminants that are harmful to human health. Wastewater ponds can turn into breeding

grounds for mosquitos. Contaminated water can also drain into streams and other surface water used for washing, cleaning, and bathing, increasing the risk of further contamination among women and children.

The table below lists mitigation measures against the most significant environmental impacts of WASH activities.

Potential Project Impacts	Mitigation Measures
Solid Waste Management	▪ Conduct a needs assessment and make a strategic selection of items that are suitable to the needs of crises-affected people. A strategic selection of items for distribution can reduce resource consumption and waste generation. ▪ Consider multi-functional items and items that can be used post-crisis. ▪ Minimize the amount of packaging, substitute for paper or cardboard (biodegradable), and promote the principle of reducing, recycling, and reusing in all operations. ▪ Separate organic and inorganic waste and designate a waste dump site at an appropriate distance. ▪ Promote waste management in communities via Reduce, Re-use and Recycle ▪ Consider setting up waste livelihoods projects
Climate-related Hazards	▪ Consult national/local hazard maps ▪ Explore locally available early warning mechanisms, and make them accessible to the community ▪ Conduct participatory mapping by depicting the main risks and root causes of flood risks, and communicate the findings with the community ▪ Support cleaning of drainage canals and create awareness on promoting vegetation coverage to increase the infiltration capacity of the ground ▪ Coordinate with partners and encourage them to design appropriate and site WASH infrastructure that minimizes exposure to these hazards.
Deforestation	▪ Promote and plant native species tree plantation next to the water points ▪ Promote alternative clean sources of energy for household use ▪ Educate communities on sustainable consumption of wood and charcoal for the household energy use ▪ Consider generating alternative livelihood sources for people who make their income from selling wood and charcoal ▪ Coordinate with other partners and encourage them to consider providing fuel-efficient stoves as part of the Non-Food-Items support
Water Scarcity	▪ Support and create awareness of rainwater harvesting systems and reuse of wastewater for small-scale agriculture activities, such as kitchen gardening ▪ Coordinate with partners to safely dispose of oil residuals, including waste oil, lubricants, and used filters. ▪ Create awareness (behaviour change) on efficient use and minimizing water loses ▪ Build capacity for water conservation practices and alternative water sources ▪ Consider community green spaces to promote cohesion among the community and avoid potential conflicts over scarce resources
Water Contamination	▪ Encourage the community to safeguard drinking water sources from pollution ▪ Create awareness on properly storing oil and chemicals to prevent leakages into soil or water- and educate the community to monitor water quality regularly. ▪ Conduct sensitization campaigns on good sanitation practices and links to health ▪ Coordinate with partners involved in WASH infrastructure activities to maintain appropriate distance and keep the water source at a higher elevation from the contamination source ▪ Create awareness on minimizing stagnation of drainage water
Wastewater management	▪ Educate the community on the safe disposal of fecal sludge and its reuse as manure or biogas. ▪ Create community awareness of wastewater management and its potential reuse for kitchen gardening ▪ Coordinate with partners involved in WASH infrastructure activities to consider latrines and the sub-surface infrastructure fecal storages are designed and adequately maintained to avoid potential inundation and overflow during the rainy season.

RECOMMENDATIONS AND NEXT STEPS

Some key learning from the environmental screening exercise and recommendations are listed below.

- This environmental screening report provides a valuable baseline for organizations operating in Malkohi, Adamawa State of Nigeria. It assesses the baseline environmental conditions of the project site, and lists potential environmental impacts associated with the planned Shelter & Settlement and WASH projects by NRC. The report also provides contextualized mitigation measures to address environmental risks and serves as a base for future environmental screenings in the area.
- The exercise should be followed by a detailed Environmental Management Plan, where the mitigation activities are placed correctly and consistently with the project phases and with clear implementation responsibilities. Developing an environmental management plan should be a collaborative effort and must be monitored by the implementing agency for compliance. For self-reconstruction, adequate monitoring mechanisms should be in place. Contractual terms can be used to enforce contractor and subcontractor compliance.
- Environmental assessment tools, including NEAT+, are more effective when applied during the project planning phase, where there is more room for any potential adjustments in the project design or implementation strategy; however, it can also be used for ongoing projects to avoid and mitigate negative environmental impacts through corrective actions.
- NEAT+ is a participatory tool, and it's more effective when input data and results are discussed among the project team and with wider stakeholders. The environmental data collection and the discussion process are as important as the outcome of the environmental screening process. This helps in the collective understanding of project-related environmental impacts, helps create awareness, and contributes to learning on environmental issues.
- The quality of environmental screening outputs depends on the reliability of the input data and analysis of the result summary. Minimizing data biases and giving considerable time to explore various data sources to validate and triangulate data is important. Merely relying on assumptions and completing the questionnaire without conducting field visits and consultation with important stakeholders should be discouraged. NEAT+ is a flexible tool, and changes in the questionnaire can be made even at a later stage when more reliable information is available.
- Focused group discussion and community engagement are essential aspects of an environmental screening process, it helps in utilizing traditional knowledge of the local communities and understanding the community's challenges and priorities. It also gives them a sense of inclusion in the process and informs them about their responsibility in addressing environmental impacts.
- NEAT+ generates a list project associated impacts and suggests mitigation measures; however, it is important to analyse and contextualize these impacts and mitigation measures. It is also important to look beyond the tool-generated result summary and consider other important impacts and mitigation measures that might be associated with the project activities or noticed by the project-affected communities. This might require some input from environmental experts and other stakeholders. As such, NEAT+ should not be seen as an absolute but as a guidance tool.
- It is important to consider mitigation measures within the project's duration and scope. Mitigation measures will not always mean 'doing new/additional things' but, in most cases ', doing things differently' that are environmentally sustainable. Options need to be explored if some mitigation measures could be implemented through other projects within the organization or in collaboration with other partner organizations active in Malkohi.
- Environmental screening may not be seen as a one-off or stand-alone exercise. Humanitarian organizations must systematically mainstream environmental screening as an embedded process within the program cycle or, where possible, integrate environmental screening into existing procedures and practices, such as Situational Analysis or Rapid Assessments.

REFERENCE MATERIALS

- Access to NEAT+ weblink used in this environmental screening (file provided within the folder)
- ECHO Environmental Guidance: https://civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/climate-change-and-environment_en.
- Environment and Humanitarian Action (EHA) Connect, a comprehensive online repository of tools and guidance spanning the humanitarian-environment nexus: https://ehaconnect.org.
- Environmental Emergency Centre - library of resources and tools for environmental emergency prevention, preparedness, and response Resources: https://resources.eecentre.org/.
- The International Federation of Red Cross and Red Crescent Societies (IFRC)- Green Response: Environmental Quick Guide (2022): https://www.ifrc.org/document/green-response-environmental-quick-guide.
- Nexus Environmental Assessment Tool: https://neatplus.org/.

ANNEXES

ANNEX 1: LIST OF PARTICIPANTS

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