

Strengthening Environmental Screening Capacity of Humanitarian Organizations

Technical Training & Environmental Screening Exercise Report South (Tyre), Beqaa Valley, and North (Tripoli) – Lebanon – 2023

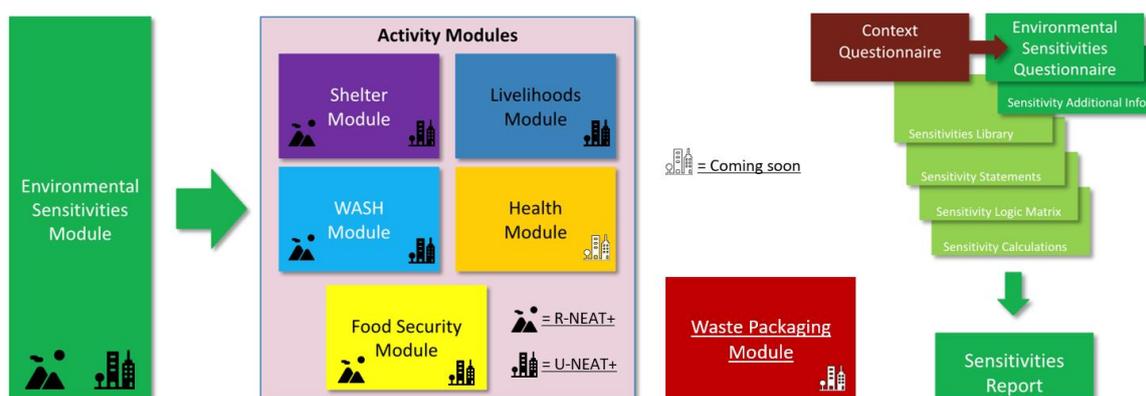
INTRODUCTION

Although responding to increasing needs and aiming for durable solutions for the crisis and conflict-affected communities, humanitarian projects can result in adverse environmental externalities. These must be identified and addressed in the earliest stages, protecting the environment and communities from any project-associated potential negative impacts. Humanitarian organizations are increasingly working towards addressing environmental considerations in the program cycle; however, this practice is yet to be mainstreamed into project design and implementation. Environmental screening, a methodology that evaluates projects' solutions against the context's environmental sensitivities, is crucial for mainstreaming. Several environmental screening tools are available, designed specifically for the humanitarian sector and adapted to multiple scales, scopes, and contexts of operation. Besides supporting increasing projects' sustainability, environmental screening is a common requirement by local environmental authorities and donors and gradually becomes an internal requirement at organizations.

The multi-year project **Strengthening Environmental Screening Capacity of Humanitarian Organizations**, led by the Norwegian Refugee Council ([NRC](#)) and funded by the European Civil Protection and Humanitarian Aid Operations ([ECHO](#)), provides on-site training sessions – including Training of Trainers (ToT) – and technical support for local and international humanitarian organizations and UN Agencies operating in prioritized countries. Based on the **Nexus Environmental Assessment Tool (NEAT+)**, the capacity-building activities equip organizations to autonomously perform environmental screening of their activities, resulting in improved and greener project design, increased funding opportunities, and forming a global Community of Practice (CoP). This report refers to the technical training sessions facilitated in the South (02-03 May), Beqaa Valley (04-05 May), and North (08-09 May) Lebanon in 2023 and includes the application of NEAT+ to a local case study.

THE NEAT+

Launched in 2019, the NEAT+ is an open-source, rapid, easy-to-use environmental screening tool developed by a consortium of humanitarian organizations. The tool generates summary reports as a snapshot of environmental conditions and potential impacts categorized as LOW, MEDIUM, and HIGH, providing recommended mitigation measures and additional resources by crossing sectorial and project-related data. Context-specific, it's available in two versions: the Excel-based Rural-NEAT+ and the web-based Urban-NEAT+. The tool consists of an Environment Sensitivity Module and Activity Modules covering core humanitarian sectors: Shelter and Settlement, Water, Sanitation, and Hygiene (WASH), Food Security, Livelihood, and Health.



UNEP/OCHA Joint Environment Unit (2022)

METHODOLOGY AND TRAINING RESULTS

Adopting a "learning by doing" approach, throughout two full days of activities, the participants learned about the nexus between humanitarian action and the environment, the impacts and opportunities associated with actions, the environmental screening concept, and how it relates to cross-cutting themes such as gender. In the practical exercise, participants grasped NEAT+ as an environmental screening tool, covering the whole process from accessing the templates to analyzing the results. First, participants worked individually with the Sensitivities Module and in groups with the Activity Modules, applying them to the selected case study. Then, referring to the multi-criteria methodology discussed, they presented the results, including prioritization and recommendations of additional mitigation measures based on their experience and understanding of the context and crisis. The training statistics and flowchart of crucial activities are as follows.

South (Tyre): 2-3 May

- 17 participants (09 female)
- 07 organizations (02 local + Gov)

Beqaa Valley: 4-5 May

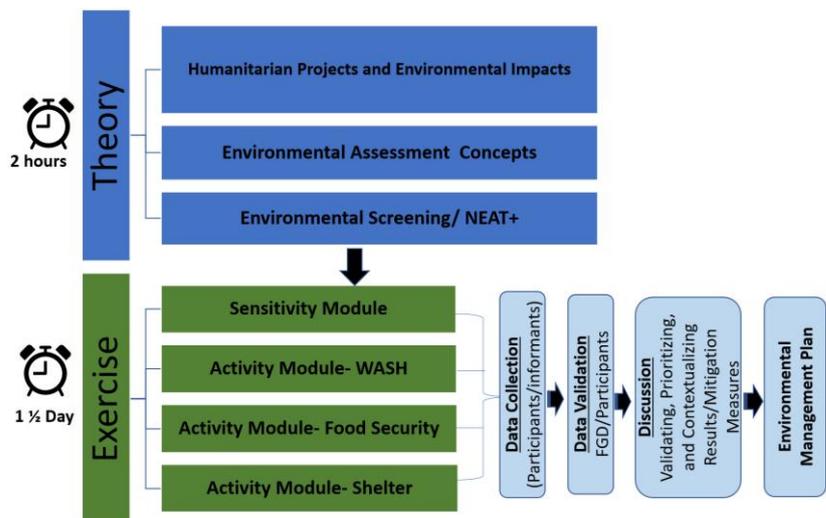
- 21 participants (08 female)
- 11 organizations (02 local)

North (Tripoli): 8-9 May

- 23 participants (10 female)
- 13 organizations (01 local + Gov)

The complete list of participants and organizations is available in Annex 2.

Note: The technical training is the Level II of the ToT. Level I includes three self-paced online training, and Level III, two additional on-site training days. To know more, check [Kaya Connect](#).



As expressed by participants in their feedback, the training sessions were successful, especially due to their great engagement and the fruitful exchange of ideas and experiences. The shared expertise from a diverse group of participants was also critical for the learning process through practical exercises using NEAT+. On the other hand, we also mapped development opportunities. Pre-training activities, potentially involving the case studies and the tool, could be explored to potentialize on-site activities. More space for experiencing data collection through KoBo and transferring to the tool would be useful. Finally, participants pointed out the necessity of better addressing internal advocacy related to mainstreaming the methodology.

Did you find the training useful for you and your organization?	South (Tyre)	Beqaa Valley	North (Tripoli)
Very useful	14	18	14
Little useful	0	0	2
Not useful	0	0	0
To what extent did the training meet your expectations (0-10)?	8.07 (average)	8.11 (average)	8.19 (average)
After completing the training, how confident do you feel to conduct Environmental Screenings (with NEAT+) in your organization (1-5)?	3.71 (average)	4.33 (average)	4.19 (average)

Some valuable participants' feedback and suggestions

"It helps us incorporate environmental screening into projects of other sectors, in a systematic approach."

"Improved my knowledge and learned new skills."

"The NEAT+ tool is very efficient, realistic and simple" "I believe that the NEAT is highly important to be used during the project's assessment until the implementation phase and therefore it is highly useful."



The training sessions were registered in photo and video. To access additional communication materials, please, contact Caroline Zwingelstein, Project Coordinator, at: caroline.zwingelstein@nrc.no

CONTEXT AND CASE STUDY | AKKAR NORTH LEBANON

The humanitarian situation in Akkar, like much of Lebanon, is challenging and complex due to a combination of factors such as economic crisis, political instability, and the impact of the Syrian refugee crisis. The ongoing economic crisis in Lebanon has led to high inflation, widespread unemployment, and a shortage of basic goods and services. This has particularly affected vulnerable communities in Akkar, including refugees, low-income families, and marginalized groups. The COVID-19 pandemic has also had a significant impact on the humanitarian situation in Akkar, with health services and resources stretched thin. The pandemic has exacerbated existing vulnerabilities, particularly for refugees and displaced persons who face additional challenges such as overcrowded living conditions and limited access to healthcare.

*Now in its eleventh year, Lebanon remains at the forefront of one of the worst humanitarian crises of our time and continues to **host the highest number of displaced per capita and per square kilometre in the world**, showing tremendous commitment to displaced Syrians and vulnerable populations within its borders. Lebanon constitutes a unique case as a host country, further facing the devastating impact of the unprecedented economic, financial, social and health crises of the last two years.*

Lebanon Crisis Response Plan 2022-2023¹

Moreover, the presence of Syrian and Palestinian refugees in the district has put a strain on local resources and infrastructure, leading to competition for jobs, housing, and services. The situation has been particularly challenging for Syrian refugees who are not registered with UNHCR and are, therefore, not eligible for assistance. Humanitarian organizations and NGOs are working to address the humanitarian needs of vulnerable communities in Akkar by providing food assistance, healthcare services, shelter, and education support. However, the scale of the crisis and the limited resources available make it a challenging situation.

Tal Al Ziraa School | WASH Project Overview

Wadi Al Jammous is in the Akkar District of the Akkar Governorate in Lebanon, 107 kilometers distant from Beirut. The village covers an area of 347 hectares and stands at an altitude of 170m above sea level. Tal Al Ziraa Mixed Public School consists of one rented building of two floors with 25 classrooms. The double-shift school has 620 registered students in the morning shift and 640 students in the second shift, the school covering from KG3 to grade 9 in each of the learning shifts. The school building includes two separate playground areas, one for KG students and the second for other school grades. Each of the playgrounds includes one toilet block of 8 latrines (4 for girls and 4 for boys) in the main playground and 2 latrines in the KGs playground.

Main Features

- Mixed Public School
- Two floors rented building
- 25 classrooms
- Double-shift: 620 (first) + 640 (second)
- 2 separate playground areas
- 2 toilet blocks: 8 latrines (4/gender)
- 1 toilet block for KGs (2 latrines)

Main Project Activities

- Full toilet upgrade
- Installation of UV filters
- Windows and doors repair
- Roof insulation
- External paints

¹ To access the plan, please check: <https://data.unhcr.org/en/documents/details/90915>



Tal Al Ziraa School location. Source: Google Earth (edited by NRC)

Mhamarra Clinic | Shelter Project Overview

This project aims to improve the medical care available to the population in Mhammara under KFW funded project. In 2016, the municipality of Mhammara decided to establish a new healthcare center to support and enhance the accessibility to health facilities in the village and for all the surrounding villages. For this purpose, the municipality purchased land, and a building of two stories has been partially constructed but not equipped yet with any medical devices or furniture, although a license was acquired. However, due to operational and financial burdens, the construction and equipping of the clinic was not finalized.

Main Features

- Two story-building, partially constructed, not equipped
- 81 km from Beirut, 40 m altitude archaeological richness
- Area rich in fertile soils and water resources
- Original vegetation: small trees and shrubs
- Forests of various types and sizes region considered an animal refuge
- Main access paved (asphalt) with an adequate drainage system

Main Project Activities

- Changing the PHCC ground floor (GF)
- Remove and installation of new walls
- Access improvements and enlargement of doors
- Electric connection and wiring
- Water supply and plumbing works
- Complete the rehabilitation: concrete works and repairs
- Water supply and plumbing works
- Plastering and painting works
- Tiling works
- Waterproofing and insulation
- Carpentry works
- Solid and medical waste disposal process
- Fire alarm and extinguishing system
- Rehabilitation of the PHCC garden & parking area
- Installation of elevator
- Installation of a complete solar system in the centre



Mhamarra Clinic location. Source: Google Earth (edited by NRC)

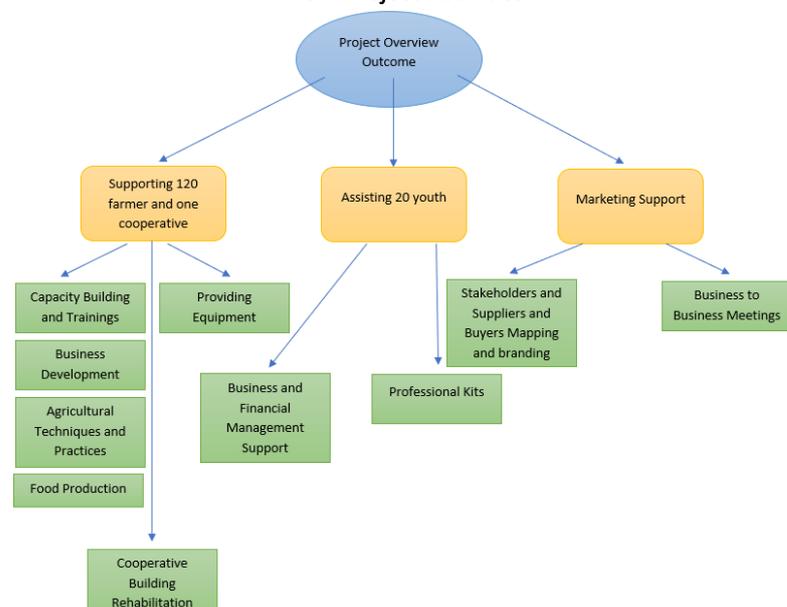
Kabab Bel Karaz | Food Security Project Overview

The project aims at supporting the Arsal community to be actively involved in sustainable practices, building more resilient and localized food and agricultural systems, and improving food security and livelihood opportunities. The governorate of Baalbek-Hermel witnesses some of the highest levels of socioeconomic vulnerability in the country. 61 percent of the population experience moderate food insecurity, and 8 percent severe. 40 percent of the population (89,000 people) experience severe multi-dimensional poverty, along with 38 percent moderate (77,000). Of the Syrian population alone, 94 percent are living below the survival minimum expenditure basket, relying on cash and in-kind assistance to meet their essential household needs. Additionally, 49 percent of the Syrian population is unemployed. As a result of the conflict in Syria, a large population of Syrian people were displaced and sought refuge in Lebanon. Arsal was a first stop for many in the country, with some reports suggesting that there was up to 90,000 Syrians residing in the town at the height of displacement. The latest UNHCR figures report that 37,134 Syrians live in Arsal, predominantly in 152 informal tented settlements.

Main Features

- Grant: Funded by the Norwegian Ministry of Foreign Affairs.
- Modality: In-direct implementation through a partnership with a local partner.
- Partner: Fair Trade Lebanon.
- Location: Arsal, Bekaa-Hermel
- Duration: 5 months.
- Total Number of Beneficiaries and Selection: 140 individuals and 1 cooperative.
- Selection: ideally distributed by gender (50/50 Female/Male) and nationality (50/50 Syr/Leb).

Main Project Activities



***Note:** The Food Security Case Study will be used as an example of a project and activity to allow training participants to grasp the use of the NEAT+ Food Security Activity Module. Therefore, the practical exercise will be a simulation, as if these activities are taking place in the Akkar North Lebanon region, allowing the tool to cross-sect the environmental context and characteristics (Sensitivity Module) with the project's activities and solutions (Activity Module).*

To access the project's details and additional information on the context's climate and environmental conditions, the humanitarian situation, and demographic data, please, refer to [Annex 01: NRC Training Case Study Briefing Lebanon](#).

PRACTICAL EXERCISE ENVIRONMENTAL SCREENING RESULTS

Training participants applied the NEAT+ Sensitivity and Activity Modules to the case study as an environmental screening practical exercise. Since the selected case study is a project including Shelter and WASH activities, participants came up with potential ideas for Food Security that could be developed in the context of the Hoodale Site. While the results related to Shelter and WASH are based in a real context and project and can be used as a starting point for developing in-depth environmental analyses and further reviews of the project, in the case of Food Security, the results are merely a simulation of an Activity Module as part of the capacity building exercise. Therefore, these results should not be considered in the case of Food Security interventions.

Akkar North Lebanon | NEAT+ Environmental Sensitivity Summary

Environmental sensitivity primarily analyses the risks and vulnerabilities of interactions between communities and their natural environment. In the humanitarian program's context, an environmental sensitivity exercise helps understand the environmental baseline of the project location and its carrying capacity against the proposed project activities. NEAT+ screening is based on 59 questions covering eleven thematic areas, generating the sensitivity summary report categorizing environmental issues into Low, Medium, and High concerns. Impacts are structured around five broad categories, as below. [To access the full report and check the mitigation tips generated by the tool, please refer to Annex 02: NEAT+ Sensitivity Summary – Akkar North Lebanon](#). By crossing the results generated by NEAT+ during the practical training exercises with the expert (facilitator) analyses and the participants' knowledge and experience, the most critical environmental issues are as follows.

	Prioritized Risks & Impacts	Localized Mitigation Tips
Affected Communities	The rehabilitation of educational and health facilities by humanitarian actors, combined with the identified poverty level and food insecurity risks among displaced communities, informs on the dependency on aid and relief. This dependency, associated with socioeconomic integration challenges, tends to result in high dependence on the natural environment for income generation and coping mechanisms, which involves high risks of environmental impacts such as deforestation and over-extraction of natural resources. Another critical factor generating environmental risks and negative impacts, is the weak capacity for environmental governance , which encompass adequate management of facilities and humanitarian projects, public services, and the communities' behavior, which might depend on incentives for sustainable practices. Monitoring demographic data per community and neighborhood is essential to detect potential population increases resulting from infrastructure and service provision improvement.	Although providing basic services such as education and health is a priority, where the lack of access directly affects the community's living conditions, investing in livelihood activities that adopt sustainable and climate-resilient practices is crucial, reducing risks of environmental impacts. In parallel, the governance of environmental components should be improved through cooperation among the communities, local governments, humanitarian actors, and the private sector, exploring opportunities for displaced communities such as income generation through maintenance services, for instance. Access to education and health facilities by a significant number of community members can be an excellent opportunity for awareness-raising campaigns and sharing good practices to stimulate healthy and sustainable behaviors. Finally, if new demographic trends are mapped, evaluating the host community and facilities' capacities to absorb increasing demands and exploring opportunities to decentralize service access and livelihood opportunities to reduce environmental risks is essential. These mitigation strategies should incorporate strong gender and diversity approaches to ensure responses to these specific groups' needs and space for their unique capacities.



**Impacts on
Biodiversity**

The environmental screening exercise identified **proximity to fragile ecosystems and vulnerable and/or rare flora and fauna** as a critical environmental sensitivity of the project's context. This environment's fragility and unique characteristics make it more vulnerable to impacts, which is critical due to its low resilience capacity. As a potential result, loss of biodiversity and diminished availability of natural resources, especially water, in an already challenging context. This scenario is exacerbated by the climate crisis, making environmental protection and safeguarding of species a priority in the region where protection or conservation areas were mapped. Another sensitivity priority is the high **land and/or soil degradation risk** due to the region's climate characteristics. Therefore, interventions and practices from construction to farming should consider this environmental sensitivity to avoid long-term consequences such as desertification and water scarcity.

Improved governance and awareness raising is crucial, not only among the affected communities but also with all involved stakeholders. In this sense, establishing dialogues and cooperations with local governments is fundamental to ensuring accountability to environmental regulations, access to updated data on the context's biodiversity conditions, and developing localized solutions for humanitarian interventions. To rehabilitate existing buildings and livelihood interventions to respond to food insecurity, adopt sustainable practices to reduce risks, including but not limited to design to minimize soil movements and excavations, improved construction waste management, and adoption of climate-resilient species to reduce water demands in agriculture. Additionally, promote a regenerative process by introducing climate-resilient vegetation, creating income-generation opportunities for displaced communities to reduce soil erosion and degradation risks. Diagnose and monitor impacts on biodiversity in collaboration with local academic and research institutions. Incorporate biodiversity-related topics into the schools' curriculum.

**Pressure on
Natural Resources**

The environmental screening exercise identified multiple high risks related to pressures on natural resources that, combined, might result in severe impacts. The key ones are related to risks of **scarcity of water resources and vulnerability of water sources to contamination**. Both risks can directly affect my humanitarian activities, including construction services and livelihood practices, especially those involving agriculture and livestock. Also related to livelihood practices, risks of unsustainable rates of deforestation and extraction rates of natural resources might result in environmental impacts. These aspects, in a dry climate, make the context vulnerable to climate impacts.

In cooperation with communities and local authorities, establish a WASH maintenance and contingency plan to prevent and respond to potential water sources contamination, including a monitoring system in collaboration with local stakeholders and the municipality. Prioritize lower water requirements livelihood practices and promote sustainable water use, reuse, and disposal. Consider the rehabilitation of existing buildings as an opportunity to incorporate water-smart solutions that improve water management and work as proof of concepts, having an educational component. When designing livelihood activities, it is crucial to reduce the demand for natural resources and, whenever possible, adopt circular economy strategies developed in cooperation with communities to incorporate their needs, knowledge, and local solutions.

**Pollution and
Environmental Degradation**

Low solid waste management capacity and, eventually, the lack of adequate public services and infrastructure pose high pollution and environmental risks. The same applies to the identified **low capacity to manage sewerage and fecal sludge**. Vector-borne disease transmission is a common consequence of inadequate waste and sewage management and soil contamination, a sensitivity determined by Impacts on Biodiversity. Likewise, although sept tanks are adequate sewage systems, they might impact the environment mid- and long-term without proper maintenance. Schools' and clinics' kitchen facilities, among other humanitarian facilities, with insufficient natural ventilation, pose risks of **indoor air pollution**, directly affecting workers' health, especially among women that commonly perform these professional roles.

If available and operating, connect the facilities to the municipal sewage system and, if possible, contribute to the system improvement by advocating for the contribution from the development sector. If the system is not available or operational, ensure that environmentally-friendly solutions such as sept tanks are incorporated into the design. Independent of the technical solution adopted, a maintenance plan should be prepared and agreed upon with key stakeholders, with a clear definition of roles and responsibilities, to reduce environmental risks during the operation of facilities. Promote design improvements to increase natural ventilation and promote safe and environmentally-friendly cooking solutions, including facilities, equipment, and fuel. Design solutions based on needs assessments and in full collaboration with communities so the solutions are based on cultural practices and traditions, if applicable. Finally, promote awareness-raising campaigns in partnership with health promotion actors (humanitarians and local authorities) related to waste management and cooking practices, including reducing food waste, for both the facilities and communal behavior.

Environmental Hazards

Soil erosion is the most critical environmental hazard risk due to the soil and climatic characteristics, potentialized by frequent and strong winds and the identified **risk of floods** in the region. Design and construction solutions adopted for buildings might exacerbate the risks. For example, drainage systems, soil compaction for accesses, and foundations should be designed considering these risks and soil sensitivity. As mentioned before, this sensitivity must also be considered in the context of the promotion of livelihood activities, especially those related to agriculture and livestock.

Aligned with the mitigation actions to prevent biodiversity loss and regenerate the land, if possible, the introduction of vegetation can also prevent soil erosion and degradation. Consult local experts and authorities to explore the most efficient species and planting solutions to address both environmental issues. It's advisable to consult local authorities about landslides or mudslides in each specific area of intervention since the risks were mapped by the tool due to geographical and climate characteristics. Suppose a high risk is identified in the planned location. In that case, site alternatives should be explored, and early warning and emergency response systems should be in place if there's no alternative location or feasibility of transferring the activities.

Mhamarra Clinic | NEAT+ Shelter & Settlement Summary

The result summary of the Shelter & Settlement Activity Module provides an overview of the key environmental risks associated with project solutions while considering the environmental sensitivities of Akkar North Lebanon. By compiling the groups' results, the exercise applied six sub-modules: *i) Siting, ii) Design, iii) Materials, iv) Construction, v) Energy, and vi) Roads and Access.* Crossing the results generated by NEAT+ training practical exercise with the expert (facilitator) analyses and the participants' prioritization and localization based on their knowledge and experience in the context under screening, the most critical environmental issues per shelter sub-module are as follows.

	Prioritized Risks & Impacts	Localized Mitigation Tips
Siting	Considering that the project under assessment is the rehabilitation of an existing building, there's no flexibility regarding site location. Therefore, the risks associated with siting refer to agreements with the municipality to ensure long-term use, potentializing the benefits versus the environmental impacts of construction services. It's equally important to coordinate site solutions with public services and infrastructure, especially related to construction and operational solid waste and sewage.	Ensure, in coordination with the local government, the provision of public services in the long-term. Develop an environmental management plan with integral participation of key stakeholders, including the communities, to ensure adequate and sustainable maintenance of the site to reduce risks of environmental impacts and the prompt identification of them, including strategies to respond to them if necessary. Due to the environmental sensitivities of the location, the plan should incorporate a strong approach to sustainable water and reuse, reducing demands and ensuring frequent evaluation of water quality.
Design	Risks of indoor air pollution caused by poor natural ventilation, which is a design decision, and non-efficient cooking fuels (wood and charcoal) if adopted, pose high health risks for users and workers. These are compounded by risks of vector-borne diseases associated with inadequate waste management if the design doesn't present adequate solutions to collect, store, and manage solid waste.	The building design must incorporate solutions to improve natural ventilation considering nearby activities and potential air pollution. If necessary, incorporate cooking facilities, equipment, and fuel that are sustainable, reducing carbon emissions, indoor air pollution risks, and over-extraction of natural resources. Alternatives such as biodigester that can process organic waste and generate gas for cooking can be explored. Since it's an existing building and it's impossible to orient it according to solar incidence, the distribution of activities inside of it should consider the activities that can benefit from solar light, especially from a health perspective.
Materials	Construction materials inevitably involve negative environmental impacts throughout their life cycle, from extraction to disposal or reuse/recycling, when feasible. Materials might also result in pollution and contamination of soils, air, and water sources, depending on their characteristics, especially if processed on the construction site, when less industrialized techniques are adopted and disposed of. Although the risk is reduced in building rehabilitation, construction services might involve the extraction of natural resources such as wood.	Prioritize as much as possible locally-produced and procured materials to reduce logistics impacts, including carbon emissions and air pollution, contribute to the local economy and make maintenance easier with reduced environmental impacts associated. If available, adopt reused or recycled materials and prioritize those that allow it, which can generate livelihood opportunities for affected communities.

Construction	Construction services, in general, especially soil excavations and compactions, potentially generate dust and noise and can harm the environment. Soil contamination and air pollution are among the key risks associated.	Plan construction services, including measures to reduce noise and dust to prevent pollution and reduce risks of conflict within host communities. Reduce soil compaction when possible and explore pavement solutions that allow rainwater infiltration to reduce risks of floods. Plan in advance construction waste management, including solid and chemicals, in coordination with local authorities to avoid soil contamination in a sensitive zone and explore reuse/recycling opportunities.
Energy	Energy issues reinforce key environmental risks such as unsustainable natural resource extraction rates, air pollution, and biodiversity loss. This project's risks are low, especially due to the existing local infrastructure and services. However, excessive energy consumption results in environmental impacts, especially carbon emissions, contributing to the climate crisis, varying depending on the energy source.	If a kitchen is incorporated, promote sustainable cooking solutions, including stove and fuel alternatives. Adopt solutions to reduce energy consumption in the building and its surrounding area, such as LED for artificial light associated with decentralized photovoltaic generation. Awareness raising around sustainable behaviors is important to avoid waste of energy.
Roads and Access	In a fragile ecosystem, the main risks associated with road and access are soil erosion and water source contamination during construction and use phases.	If possible, adopt pavement solutions that reduce soil erosion risks and air pollution while increasing durability, reducing maintenance requirements, and allowing water infiltration to reduce flood risks. Adequate drainage systems for roads and accesses are crucial to reducing the risks of floods and soil contamination.

In a nutshell, after group presentations and discussions during the three sessions, the sensitivity of the soil in the project's context, the lack of adequate solid waste management and associated infrastructure, the water sources contamination and water scarcity, and the impacts related to construction materials are the **key environmental risks** mapped by the environmental screening exercise and should be analyzed in depth and prioritized during the shelter project review and improvement of solutions. Finally, as **additional mitigation measures**, the groups proposed what follows as an exercise to generate localized solutions. [To access the full NEAT+ report, please refer to Annex 03: NEAT+ Shelter Summary – Mhamarra Clinic.](#)

- Adopt local and culturally-sensitive materials and design solutions to increase opportunities for the local communities – host and displaced.
- Hire local experts (consultants) to ensure environmental regulation compliance and identify opportunities to increase sustainability.
- Develop a site-specific water management plan involving related authorities.
- Incorporate health promotion actions in the project
- Incorporate training programs for contractors, construction workers, and suppliers on environmental-related topics while selecting them considering environmental aspects (green procurement practices)
- Implement a specific medical and hazardous waste management plan for the project operation in coordination with local authorities and, if feasible, support the local government's improvement of waste management systems and policies
- Development of early-warning and emergency response plans for the clinic in case of floods
- Tree planting in the project site to reduce the risks of floods and improve air quality while creating shaded spaces for community members.

Tal Al Ziraa School | NEAT+ WASH Summary

The result summary of the WASH Activity Module provides an overview of the key environmental risks associated with project solutions while considering the environmental sensitivities of Akkar North Lebanon. By compiling the groups' results, the exercise applied five sub-modules: *i) Water Network (Operation & Maintenance); ii) Latrine Design, iii) Wastewater Management and Drainage Network (Design); iv) Solid Waste Management; v) Distribution of Wash and Hygiene Kits.* Crossing the results generated by NEAT+ with the expert (facilitator) analyses and the participants' prioritization and localization based on their knowledge and experience in the context under screening, the most critical environmental issues per WASH sub-module are as follows.

	Prioritized Risks & Impacts	Localized Mitigation Tips
Water Network (Operation & Maintenance)	Associated with the design of the water network, its operation, and maintenance also involve risks of over-consumption that might contribute to water scarcity in the region, and contamination, which are intensified by the low regenerative capacity of the local environment.	Although the project does not interfere directly with the water network, it's advisable to use it as a point of connection with local authorities and an advocacy opportunity. Protecting water sources, adequate maintenance, and operation of water networks, including regular water quality tests and preventive identification of leakages, are crucial to reducing risks of water contamination and scarcity.
Latrine Design	Although the project under screening is the rehabilitation of an existing building located in a peri-urban zone provided with public infrastructure, the latrine design solutions will directly affect risks of soil and water contamination in a sensitive environment. Besides, inadequate design and operation of latrines might increase vector-borne disease, which is critical for students' health conditions.	Ideally, the latrine design solution should ensure its connection with the municipal sewage system if existing and operational. Alternatively, localized treatment systems such as sept tanks should be incorporated. It's also advisable to use sustainable solutions such as latrines that reduce water consumption. A maintenance and monitoring plan for WASH facilities and equipment must be in place to avoid water waste and contamination.
Wastewater Management and Drainage Network (Design)	Inadequate wastewater management and insufficient drainage network might impact two of the most critical environmental risks identified: soil erosion and water source contamination. This scenario might be exacerbated by the flood risk and limited capacity to manage wastewater and solid waste mapped on the site by the exercise.	Review the drainage system design according to rainwater flow estimations (regular and potential extreme events) so that technical solutions can prevent floods. Regular wastewater tests help prevent contamination of soil and water bodies, whose waters should also be tested frequently to ensure potential contaminations are identified as soon as possible.
Solid Waste Management	Inadequate solid waste during the construction and operation phases might contaminate the soil and water sources and trigger vector-borne diseases. Inadequate solid waste also represents a visible environmental degradation process that might trigger community conflicts.	Solid waste management requires a specific plan involving the community, humanitarian organizations, and local authorities to ensure adequate collection, destination, and treatment, focusing on reducing generation and promoting reuse and recycling. Good solid waste management practices generally include opportunities for affected communities, from capacity building to income generation. Since the WASH project under screening is a school, topics related to waste management can be incorporated into school curricula to stimulate sustainable behaviors at the site and household levels.
Distribution of WASH and/or Hygiene Kits	The distribution of WASH and Hygiene kits commonly generates significant amounts of waste, especially during a crisis, exacerbating environmental risks.	Kits providers should redesign their kits to reduce packaging waste, introduce reusable solutions such as backpacks and bottles, establish the content based on needs assessments, and collaborate with communities to avoid unnecessary consumption.

In a nutshell, after group presentations and discussions during the three sessions, the soil and water sources contamination associated with sewage and wastewater management, solid waste generation, and floods are the **key environmental risks** mapped by the environmental screening exercise and should be analyzed in depth and prioritized during the WASH project review and improvement of solutions. Finally, Finally, as **additional mitigation measures**, the groups proposed what follows as an exercise to generate localized solutions. [To access the full NEAT+ report, please refer to Annex 04: NEAT+ WASH Summary – Tal Al Ziraa School.](#)

- Expand the building rehabilitation WASH intervention to include pipes, pump stations, infrastructure improvement, and retrofit to increase sustainability.
- Connect the project with livelihood activities, incorporate water treatment plants on site, and reuse them for irrigation.
- Install water filters and regular chlorination of water tanks to reduce risks of negative impacts on health.
- Develop awareness-raising campaigns for the key stakeholder groups – students and their families, school faculty, and humanitarian organizations staff, among others – on the sustainable use of water.
- Analyze the possibility of contributing to aquifer recharge, if applicable, in cooperation with the local government.

- Establish a water committee to involve key stakeholders in the collaborative and engaging use of water and maintenance of WASH infrastructure in general.
- If applicable, incorporate decentralized energy generation solutions, such as photovoltaic systems, to WASH-related needs, such as pumping water.
- Provision of regular staff training to ensure adequate operation and maintenance of WASH facilities and equipment.
- Establish partnership agreements with third parties to adequately manage medical and hazardous waste if the school includes a ward.

Kabab Bel Karaz | NEAT+ Food Security Summary

The result summary of the Food Security Activity Module provides an overview of the key environmental risks associated with project solutions while considering the environmental sensitivities of Akkar North Lebanon. Crossing the results generated by NEAT+ with the expert (facilitator) analyses and the participants' prioritization and localization based on their knowledge and experience in the context under screening, the most critical environmental issues per Food Security sub-module are as follows.

	Prioritized Risks & Impacts	Localized Mitigation Tips
Agriculture	The most significant environmental risks identified in the Shelter and WASH modules can be exacerbated by agricultural practices, especially water contamination and scarcity, and soil degradation due to the inevitable demand for natural resources. The climate crisis can also impact the scenario since the region is vulnerable, facing temperature and precipitation variations and increasing extreme events, and the low regenerative capacity of the local environment. Socioeconomic integration of displaced communities tends to pose additional pressure on natural resources demand, especially in contexts with limited income generation activities, resulting in risks of deforestation and over-extraction of natural resources.	Climate-resilient species and smart agricultural practices should be promoted to reduce environmental impacts and risks of disruption of livelihood practices due to extreme events and changes in the temperature and precipitation patterns. Additionally, these strategies should incorporate local traditions and knowledge and be culturally sensitive. In this context, more specifically, water-saving practices and adopting crop cultures requiring less water are crucial to reducing water scarcity risks. The diversification of cultures and their rotation can help preserve the soil where it is sensitive.

In a nutshell, after group presentations and discussions during the three sessions, water source contamination, water scarcity, soil degradation, over-extraction of natural resources, and deforestation are the **key environmental risks** mapped by the environmental screening exercise and should be analyzed in depth and prioritized during the Food Security project review and improvement of solutions. Finally, as **additional mitigation measures**, the groups proposed what follows as an exercise to generate localized solutions. [To access the full report, please refer to Annex 05: NEAT+ Food Security Summary – Kabab Bel Karaz.](#)

- Incorporate rainwater harvesting system as a complementary water source for irrigation and livelihood-related uses.
- Prioritize crop cultures that are locally adapted and climate-resilient.
- Invest in technical training focused on smart agriculture, especially crop diversity, and rotation.
- As part of capacity-building activities, promote awareness-raising and good practices to save and reuse water.
- Map opportunities and support the diversification of livelihood practices prioritizing the green economy and sectors that require fewer natural resources.

LESSONS LEARNED & RECOMMENDATIONS

1. This environmental screening report is the result of a practical training exercise. Although quite valuable for organizations working in Akkar North Lebanon, it should be used as a starting point. The activities and design solutions review and improvement should consider in-depth assessments involving multiple actors and additional site assessments.
2. Environmental screening tools, including the NEAT+, are more effective when applied during the project planning and design phase; however, they can also be used for ongoing projects to avoid and mitigate adverse environmental impacts through corrective actions and to support monitoring activities.

3. NEAT+ is a participatory tool, and it's more effective when input data is discussed among the project team, with key stakeholders, local experts, and community members. The environmental data collection and the discussions are as important as the outcome of the environmental screening process. It also helps in the collective understanding of project-related environmental impacts, helps create awareness, and contributes to learning on environmental issues.
4. The quality of environmental screening outputs depends on the input data's reliability. It is essential to minimize data biases while filling out the questionnaires and give considerable time to explore various data sources, validate, and triangulate data rather than merely relying on assumptions. During this assessment, we discussed among the whole group of participants whenever we found answering the questionnaire challenging. NEAT+ is a flexible tool where input data can be corrected after verification with the stakeholders and informants at a later stage.
5. The primary data source in this assessment were the participants and project team who attended the training. Due to access and safety restrictions, field visits to the project site, transect walks, and focus group discussions (FGD) could not be conducted. FGD and community engagement are essential aspects of an environmental screening process, which helps in utilizing traditional knowledge of the local communities, understanding community challenges and their priorities, giving them a sense of inclusion in the process, and informing them about their share of responsibility in addressing environmental impacts.
6. NEAT+ generates a list of project-associated impacts and suggests mitigation measures; however, analyzing and contextualizing these impacts and mitigation measures through a transparent methodology is essential. It is also important to look beyond this list and consider other relevant impacts and mitigation measures that might not be listed in the NEAT+-generated result summary. This process might require some input or consultations from environmental experts and other stakeholders. As such, NEAT+ should be considered a guidance tool.
7. 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 integrate it into existing project procedures, such as Situational Analysis or Rapid Assessments.
8. The two-day technical training allowed the participants to understand the basic concepts of the humanitarian-environment nexus and grasp the use of NEAT+. However, further support might be necessary to incorporate the tool and methodologies into participant organizations' programming and project design.
9. The diversity of profiles of participants and their organizations and respective activities is highly favorable for the learning process, especially by bringing multiple viewpoints. On the other hand, from a training perspective, it's challenging to adjust the content and methodology to this diversity, requiring flexibility from facilitators and adaptive methodologies and content.

RESOURCES, ANNEXES, AND CONTACTS

Additional Resources	Training Report Annexes
<ul style="list-style-type: none"> • 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: https://resources.eecentre.org/ • The International Federation of Red Cross and Red Crescent Societies (IFRC) - Green Response 	<p>Annex 01: NRC Training Case Study Briefing Lebanon.</p> <p>Annex 02: NEAT+ Sensitivity Summary – Akkar North Lebanon.</p> <p>Annex 03: NEAT+ Shelter Summary – Mhamarra Clinic.</p> <p>Annex 04: NEAT+ WASH Summary – Tal Al Ziraa School.</p> <p>Annex 05: NEAT+ Food Security Summary – Kabab Bel Karaz.</p> <p>Annex 06: List of Participants (South, Beqaa, North).</p> <p>Annex 07: General Training Agenda.</p>
	NRC Contacts

Environmental Quick Guide (2022):

<https://www.ifrc.org/document/green-response-environmental-quick-guide>

- Nexus Environmental Assessment Tool:
<https://neatplus.org/>
- Norwegian Refugee Council - **Environmental Assessment NEAT+ in Kigoma, Tanzania** (2020).

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