



*Implications of refugee settlements on the natural environment and on refugee and host community resilience*

August 2017

**CASE STUDIES: LEBANON AND CAMEROON**

**AUTHORS**

Samantha Brangeon Groupe URD

Made possible by the generous support of the Global Disaster Preparedness Center and Response 2 Resilience.



*Summary*

THE CONTEXT..... 2

FINDINGS IN CAMEROON:..... 2

FINDINGS IN LEBANON:..... 4

GENERAL FINDINGS & CONCLUSIONS..... 6



---

## The context

---

In refugee contexts, resource management tends to be dominated by a short-term outlook to the detriment of long-term environmental impacts. The priority given to addressing the life-saving needs of refugee populations often means that additional strain is put on ecosystems and natural resources. Nevertheless, a deteriorated environment can have a significant impact on the capacity of both host and refugee communities to resist, adapt and recover from prolonged stresses and shocks.

For more than 10 years, Groupe URD has been working on documenting the links between environmental degradation and refugee camp management<sup>1</sup>. Given the complexity of crises, refugee settlements often have a long life-span (17 years on average according to UNHCR) which can lead to irreversible damage to the environment through, for example, the unsustainable use of forestry or water resources or the physical effects of long-term settlements on the quality of the soil.

For this research, Groupe URD analysed two refugee settings (Northern Cameroon and Lebanon) with the aim of contributing to existing evidence-based documentation and increasing awareness in the sector about the need for environmental mainstreaming. The two countries included in the research have been hosting refugees for about 4 – 6 years. This meant that the research team was able to assess environmental impacts that are already evident and make realistic recommendations for ways to reverse these trends before the damage becomes irreversible.

---

## Findings in Cameroon

---

Northern Cameroon hosts 80,000 Nigerian refugees who have fled the violence caused by Boko Haram. 64,000 of them live in Minawao camp which was established in an isolated and arid area in 2013.

1) The most significant environmental impact of Minawao camp is the rapid deforestation that is happening in the vicinity of the camp, as is very common in refugee camps in Africa and Asia. It has been estimated that 43 tons of wood are being used (and therefore cut locally) per day (based on an average consumption of 0,67kg of firewood per person, per day<sup>2</sup>). Whereas at the beginning of the crisis, refugees and the host population had to walk 2–3 km to get firewood, now they have to walk a distance of up to 18km around the camp as there is no more wood available.

Wood is used mostly for cooking the food distributed by WFP. The majority of households use three-stone stoves which use a lot of energy and produce a lot of smoke which can be harmful for the users.



*Traditional cook stove used in Minawao camp*

---

<sup>1</sup> For more information on Groupe URD's work on the links between environment/humanitarian action: <http://www.urd.org/Environment-theme?lang=en>

<sup>2</sup> Estimate used by UNHCR in Eastern Chad. Eastern Chad has strong similarities with Northern Cameroon in terms of climate and refugee habits.

Wood selling has become an important income-generating activity in the camp and consequently the price of wood in the area has been multiplied by 5 since last year.

*Firewood being sold at the market in Minawao camp*



UNHCR is particularly aware of the problem and has launched yearly reforestation programs inside and outside the camp. While these are very important, they are not necessarily accompanied by large scale programs to help refugees replace traditional cook stoves. Until cook stoves using alternative energy are provided to refugees, deforestation will continue. Today only 2.8% of the refugee population has access to alternative energy cook stoves<sup>3</sup>.

2) Another significant impact, although still very difficult to quantify, is the amount of water being drawn every day from ground water tables (in total, approx. 660,000 litres is needed in the camp each day). UNHCR have installed 2 piezometers inside and outside the camp in order to monitor the level of ground water tables. Bacteriological and chemical tests of ground water tables are also carried out. While this is to be encouraged, there is no monitoring of surface water despite the fact that this is more likely to be polluted than ground water given the nature of the soil and the lack of waste water management systems in place.

3) Waste does not appear to be a serious issue in Minawao camp. This is because refugees have little access to consumer goods given their low purchasing power and because WFP monthly food distributions do not use packaging but reusable containers.

### *Key lessons learnt from the Cameroon case study:*

The Cameroon Response Plan recognises the importance of placing environmental issues at the centre of the response. The sustainable management of the environment has also been defined as a priority by UNHCR who established an environmental impact assessment tool in 2005. And yet, when projects are implemented by humanitarian organisations to reduce the environmental impact of the crisis or of their programmes, these are based more on a “curative” approach than on “preventive” one. The focus on reforestation aims to reduce the damage done by intensive wood cutting, but without any real alternative solutions for the refugees, deforestation will continue.

It is urgent for the humanitarian community to explore the possibility of introducing alternative cook-stoves such as the SAVE 80 , which consume up to 80% less wood than traditional cook stoves, or solar cookers (See technical fact sheet on ecological cookers<sup>5</sup>).

<sup>3</sup> Regional Refugee Response Plan, 2017 <https://data2.unhcr.org/fr/documents/download/56255>

<sup>4</sup> [http://www.bioenergylists.org/files/Save80\\_0.pdf](http://www.bioenergylists.org/files/Save80_0.pdf)

<sup>5</sup> <http://www.urd.org/IMG/pdf/FactsheetREHJunefinal.pdf>



*Banco cook stove produced in Eastern Cameroon camps*

The study also revealed the total absence of discussions about environmental issues in sectoral tables and within the Humanitarian Country Team (HCT). What is more, there is still very little exchange and collective action between humanitarian organisations and the development organisations that have been present in Cameroon for a long time. Increased consultation between these two different types of organisation generally allows environmental issues to be taken into account more effectively by the humanitarian organisations and a better transition to recovery.

In Cameroon, there are also technical advisors who provide humanitarian organisations with support in designing and implementing their activities. These advisors work on issues of Protection and Gender, and more recently on Cash. Despite the importance of environmental issues, there has not yet been any discussion about bringing in an “Environment” advisor.

---

## Findings in Lebanon

---

1) The arrival of 1.2 million Syrian refugees in a very short period of time (over a 5-year period), has undoubtedly made existing environmental challenges worse, but it has mostly made them more visible. The existing environmental situation (challenges of a structural nature), particularly with regards to solid waste management and sanitation, was already critical prior to the crisis, both in urban and rural contexts.

2) Around 80% of Syrian refugees are “urban refugees” who are mixed in with the Lebanese population. As such, it is difficult to quantify their impact on the environment as their houses are connected (or should be connected) to urban networks. This situation makes it difficult to identify refugees, and programs that have aimed to provide access to basic services have specifically targeted sub-standard buildings. The presence of refugees has an impact on the environment due to the additional population density that they bring to a limited area, in a context where basic services were already seriously deficient before the crisis.

3) Due to the Lebanese government’s refusal to recognise the Syrians’ “refugee status” and to allow refugee camps to be set up, the remaining 20% of refugees live in “informal settlements” for which they have to pay rent to private landlords. As a result, humanitarian actors have little room for manoeuvre and are forced to implement a short-term and repetitive response creating more negative environmental impacts than would a more long-term, and sustainable one. For example, in these settlements:

a. Instead of linking refugees to the existing water network, most NGOs are only permitted to implement water trucking activities. The companies that provide the water are privately owned and do not report to the Ministry for Water and Energy. As a result, there is no monitoring of water tables and no information as to where the water comes from (it is estimated that 2.4 million litres of water are provided to Syrian refugees every day<sup>6</sup>). Water trucking is extremely costly (one NGO mentioned that it paid 300,000 USD alone per month for the 5 settlements it worked on), and the CO<sub>2</sub> emissions involved are not negligible.

b. Expensive solutions have been implemented for the collection and disposal of wastewater (regular desludging) because aid organizations were not allowed to develop treatment networks or facilities locally. In January 2017, several innovative proposals by international NGOs were being considered or were in the course of being submitted to the Ministry for Water and Energy.

---

<sup>6</sup> 360,000 refugees living in ITS (20% of the total refugee population)\*10 liters per day per person which is the limit the government has given to humanitarian actors providing water trucking activities.

c. Refugees living in informal settlements have to pay a fee to the municipal authority for waste collection (approx.: 3.5 USD per month per tent). Given refugees' economic vulnerability, waste is often dumped in an uncontrolled manner (see pictures below).



*Dumping area in Ghazze (Jan 2017)*

d. Lebanon's refugee settlements are regularly evacuated (either by the police, or by landlords) or refugees sometimes decide to leave a site if rent increases. This means that no camp closure procedures are being followed (as it is usually the case in a UNHCR managed camp), leaving behind high levels of waste and pollution. Over and above the pollution that is left behind on a site, the most important environmental issue is whether or not the site will be able to be restored for agricultural use. It is common that rents are increased to encourage the occupants to leave in order to recuperate the land.

*Evacuated refugee settlement near Zahle, Lebanon (Jan 2017)*



4) Though it was already very bad, the main environmental impact of the refugee crisis has been to further deteriorate the situation in terms of water table depletion and soil and water pollution due to poor waste water management. In refugee settlements, given that there is no waste water management system in place, waste water (toilets, used water from cleaning) is directly discharged into rivers or the soil, creating high levels of pollution. This is particularly worrying in a country like Lebanon, where water is scarce in many areas.



*Waste water disposal in a refugee settlement near Zahle, Lebanon (Jan 2017)*

5) There appears to be only a limited impact on forestry resources in the Lebanon refugee crisis. There are a number of reasons for this. One is that early on in the response UNHRC distributed fuel stoves for cooking and heating. Many Syrians of urban origin were familiar with these and this will have reduced the need for firewood (although this solution generates other environmental problems such as air pollution, and CO2 emissions). Another reason is activities such as the ones implemented by the Qatari Red Cross, who distributed insulation materials for refugees to keep warm during the winter, which also reduces the need for firewood.

And lastly, the gradual shift to cash transfer programmes since the beginning of the response helped to reduce the need for wood for shelter programs in the humanitarian response. Direct payment of rent to landlords or payment by NGOs of building repairs also reduced the need for wood used in the construction of shelters in informal settlements.

## Key lessons learnt from the Lebanese case study

Generally speaking humanitarian actors and the donor community in Lebanon are aware of the environmental challenges that exist in the country. The environment is mentioned a few times in the 4-year Lebanon crisis response plan (LCRP<sup>7</sup>) as a cross-cutting issue, and is being addressed in some forums such as the WASH Working Group. Nevertheless, there is a general sense of hopelessness within the humanitarian community given the structural problems that existed prior to the crisis and the general lack of interest in addressing environmental issues at all levels of the political system.

The fact that the majority of refugees (80%) are living in urban contexts means that urban solutions have to be identified, rather than simply a "humanitarian quick fix".

When mitigation solutions are being introduced these are the result of individual organizations' priorities and are implemented at the local level. They are generally not the result of a global strategy by the humanitarian sector to address environmental issues and reduce the response's footprint.

---

## General findings and conclusions

---

➔ The environmental stress caused by a refugee crisis depends to a great extent on where the refugees settle, how long they stay and where they come from. The impact of the refugees in Lebanon (semi-urban/urban context) is very different to that of the refugees in Cameroon (rural context).

➔ When one single organisation (in this case UNHCR) is in charge of one refugee site, it makes it easier to understand the environmental impacts within the site, and consequently makes it easier theoretically to control them. For example, in Lebanon, the fact that the refugee sites were not recognized as "refugee camps" means that the refugees are staying on private land and therefore pay rent to the owner. Responsibility for environmental issues (grey water management or waste management, for example) are consequently the responsibility of the owner and the humanitarian organisations operating on these sites therefore have very little control over these issues. In Cameroon, on the other hand, the Minawao camp is managed by UNHCR, which is subsequently responsible for managing and minimizing the environmental impacts related to the presence of the refugees and the humanitarian response<sup>8</sup>.

➔ Despite raised awareness among humanitarian actors of the environmental challenges that exist in the countries where they operate, this does not necessarily mean that they are taken into account at the operational level in a coherent, long-term and coordinated manner. There is still a major gap between policies and strategies on the one hand, and operational programmes on the other. Environmental issues are not sufficiently taken into consideration in humanitarian programmes for the following reasons:

a. There is a perception that technical expertise and significant investment are needed to take the environment into account (whereas it is often a question of common sense);

b. There is little in the way of funding or pressure on the part of donors to encourage environmentally-friendly practices;

c. There is a tendency to think that crises will not last and to implement emergency relief programmes without thinking about the long term;

d. The environment is a cross-cutting issue and therefore is the responsibility of all stakeholders (rather than one particular agency), which makes progress in this area very difficult.

---

<sup>7</sup> Lebanon crisis response plan 2017–2020 <http://reliefweb.int/report/lebanon/lebanon-crisis-response-plan-2017-2020-enar>

<sup>8</sup> UNHCR' sustainable environmental management policy <http://www.unhcr.org/sustainable-environmental-management.html>

➡ Though “cash” programmes are being implemented in more and more refugee contexts, which is to be encouraged, this raises the question of waste management. For example, in Lebanon, where cash programmes are widely used, waste is a particularly serious problem (due also to the weakness of the waste management systems that exist). The refugees buy food and non-food items from HCR approved shops and inevitably generate waste. In contrast, in the Minawao refugee camp, where humanitarian organisations distribute food, not a lot of waste is produced. This is because the WFP is in charge of the distribution process and has managed to do away with packaging by distributing reusable containers.

The links between cash programmes and environmental degradation need to be further explored.

➡ The environmental impacts of a refugee crisis are also very much linked to local governance. The nature of the Ministry of the Environment in the host country and their ability to enforce environmental laws during the crisis will influence how serious the environmental impact will be. The stronger the authorities, the more humanitarian organisations will make an effort to minimize the impact of the crisis and their programmes

Despite the fact that environmental governance is often weak, it is essential that humanitarian actors who want to implement environmental protection programmes coordinate with the relevant state bodies. In Cameroon, for example, the HCR approached the Ministry for Forests in connection with its reforestation programme in order to select varieties of plants that are adapted to the arid conditions in the area.

➡ Humanitarian donors are not doing much to encourage the organisations they fund to reduce their environmental footprint and implement more environmentally-friendly programmes. Nevertheless, they can be flexible if these issues are raised by NGOs. In Lebanon, for example, *Solidarités International* managed to implement an ecological waste water purification project following a request made from *Solidarités* to UNICEF. The UNHCR in Cameroon, which funds programmes in Minawao camp, is open to funding “ecologically responsible” projects.

➡ Any project which aims at mitigating environmental risks in refugee contexts should target both the refugee and the host communities. As confirmed by both case studies, access to natural resources can create and/or exacerbate tensions between these 2 communities, and host communities often feel left out from humanitarian efforts. Reforestation or waste recycling programmes should therefore include both communities in order to reduce these tensions.

Though there is widespread recognition that climate change and environmental protection should be a priority, there is not yet a genuine environmental strategy to tackle issues of climate change adaptation and mitigation and which defines operational activities. The responsibility of humanitarian organisations in relation to environmental issues remains weak. This raises questions about their responsibility to “DO NO HARM”. Despite the gradual introduction of the term “environment” as a cross-cutting issue in policies and strategies, environmental issues are generally perceived as being separate to the humanitarian sector, and addressed mostly by development actors. However, as shown in these case studies, humanitarian crises can have a significant impact on the natural environment, particularly when these are prolonged crises. What this research has also shown is that humanitarian actors can help reduce these stresses if there is a shift from a short-term perspective, which traditionally characterizes humanitarian action, to a more long-term vision. This will help ensure the sustainability of humanitarian action and help reinforce host and refugee communities’ resilience to environmental stresses.

The full Cameroon report can be found on our website:

[http://www.urd.org/Study-of-the-environmental-impact,2806?var\\_mode=calcul](http://www.urd.org/Study-of-the-environmental-impact,2806?var_mode=calcul)

*Report on Lebanon will be available soon.*

Additional information on Groupe URD's activities related to the environment on:

<http://www.urd.org/Environment-theme>

The study is part of the “Learning and innovating to improve crisis response” project, funded by:





[urd@urd.org](mailto:urd@urd.org)  
[www.urd.org](http://www.urd.org)

**Siège du Groupe URD**

La Fontaine des Marins  
26170 Plaisians – FRANCE  
Tel : +33 (0)4 75 28 29 35  
Fax : +33 (0)4 75 28 65 44