Floods in Sahrawi refugee camps in Tindouf
Processes of mobility and immobility

Ludivine Lecat
Map 1. Map of Western Sahara with refugee camps in Algeria

Source: Lewis, 2013
Between 16th and 24th October 2015, exceptionally heavy rain caused major flooding in the Sahrawi refugee camps of Tindouf in southwestern Algeria. While heavy rain is a common occurrence in the area at this time of year, the scale of the flood was uncommon and led to unprecedented damage. Flooding affected both sides of the berm, a sand wall dividing Western Sahara, and devastated five Sahrawi refugee camps in Tindouf —Awserd, Dakhla, Laayoune, Boujdour and Smara. The first heavy rainfall affected four camps (Awserd, Laayoune, Boujdour and Smara). During the same week, Dakhla was affected by the second heavy rainfall. Of all the camps, Awserd and Dakhla were the worst affected by the floods. Although no casualties were reported, the devastation has been considered as widespread and unprecedented with regard to its impact on homes and infrastructure. The disaster also hit a population that had already been displaced forty-one years ago, namely Sahrawi refugees.

The Sahrawi, which in Arabic means literally ‘people from the desert’, are pastoralists who traditionally inhabited coastal areas of northwestern Africa, including Western Sahara, part of southwestern Algeria and northern Mauritania (Volpato, 2014). After Spain’s withdrawal from Western Sahara, the Moroccan army occupied and partially annexed Western Sahara in 1975-76, forcing about 70,000 Sahrawi to flee and settle in camps in neighbouring Algeria. Morocco claims that before Spanish colonization, Western Sahara formed part of its territory. As a consequence, Morocco annexed Western Sahara by staging the ‘Green March’ —a procession of 350,000 Moroccans who walked into Western Sahara and claimed it as their own, as part of Moroccan territory (ICJ, 1975). Between 1975 and 1991, a war ensued between Morocco and the Polisario Front —the Sahrawi’s armed political organization.

Throughout this period, the Sahrawi were excluded from most of Western Saharan territory by means of a wall erected by the Moroccans named the berm. This wall cuts through Western Sahara in a north–south direction and divides the territory between Moroccan-controlled territory

---

1 Following Spain’s withdrawal, Morocco sought the opinion of the International Court of Justice on the matter. In 1975, the ICJ issued an opinion: there were no ties of territorial sovereignty between Western Sahara and Morocco or Mauritania and the referendum prepared by Spain on self-determination should go ahead. However, the same year, Morocco effectively annexed Western Sahara by staging the Green March—a peaceful procession of 350,000 Moroccans who walked into the region and claimed it as their own. As a result, the Polisario Front launched a guerrilla struggle against what it saw as the Moroccan-Mauritanian occupation of its indigenous land.

2 The Polisario Front is a Sahrawi movement founded in 1973 to campaign for the independence of Western Sahara.
and Polisario-controlled territory (see Figure 1). To date, the status and sovereignty of Western Sahara remain unresolved and numerous direct talks have failed to break the political deadlock.¹

Today, between 158,000 and 165,000 Sahrawi live in four refugee camps located on the Hamada desert plateau near Tindouf in Algeria (Figure 2).²

The situation of Sahrawi refugees is one of the most protracted refugee situations in the world, as most of the Sahrawi refugees have been living for some forty years in the harsh Tindouf area (UNHCR, 2010). When they arrived in Algeria, they were recognized by the host State on a prima facie basis. Ever since, they have been living in five refugee camps—Awserd, Dakhla, Laayoune, Boujdour and Smara—and another recent settlement named the “27th February settlement”,³ in the province of Tindouf. Their plight is also one of the most “forgotten crises” as it entails a protracted humanitarian crisis where affected populations are receiving insufficient international aid compared to their needs, and where there is no political commitment to solve the crisis, due in part to a lack of media interest (Horner, 2015).

This paper will present an analysis of the floods’ impact on Sahrawi refugees with a particular focus on the diverse forms of displacement induced, as well as on the nexus between mobility and immobility, in light of this particular context of a disaster affecting an already displaced and vulnerable population. As Black and Collyer point out “the problem is not people being in the wrong place in relation to climate change or other crises. The problem is people being in the wrong place and being unable to do anything about it” (Black & Collyer, 2014). This resonates with the Sahrawi refugee situation and the 2015 flood disaster. Firstly, the paper highlights the specificity of the Sahrawi refugee situation from an environmental and political perspective. Secondly, it addresses how the flooding has affected the camps and its impact on the population in terms of migration. Thirdly, it analyzes policy

¹The conflict lasted until a U.N.-brokered ceasefire was agreed in 1991, but UN diplomatic efforts have achieved nothing despite 10 rounds of informal talks between Morocco and the Polisario Front. Indeed, when the fighting ended the UN brought in a peacekeeping force (MINURSO) to enforce the ceasefire and oversee the scheduled referendum, which never took place. As an alternative the Moroccans have proposed what they refer to as an autonomy plan that would cede limited local control of the region to the Western Saharans. This plan does not satisfy the SADR mostly because the proposal is based on the presumption that Western Sahara is part of Morocco. Huffington Post http://www.huffingtonpost.com/stephen-zunes/obama-ignores-moroccos-il_b_4486688.html

²The issue of data on the Sahrawi population in the camps is further detailed in the first part of the article.

³This date refers to 27 February 1976, the proclamation of the Saharawi Arab Democratic Republic (SADR) by the Polisario Front in the liberated zone of Western Sahara.
Floods in Sahrawi refugee camps in Tindouf: Processes of mobility and immobility

responses that have been implemented to deal with the emergency situation provoked by the flood. Finally, recommendations with regard to existing policy challenges will be suggested as to how local authorities and actors can improve disaster and displacement management, in the particular setting of refugee camps.

The Sahrawi refugee situation: vulnerability and capacity

Approximately 158,800 refugees are currently distributed among the camps according to a first joint assessment made by the UNHCR and the WFP in 2004 (UNHCR/WFP 2004) and confirmed by subsequent assessments and reports (UNHCR, 2010; Rivlesrud, 2010; Fiddian-Qasmiyeh, 2011). The SADR and the Algerian authorities have consistently stated that the camp population is around 165,000 (UNHCR, 2010). On the contrary, international agencies assert that there is no reliable census data on the Sahrawi refugee population. It is indeed important to note that these numbers fail to reflect the fluidity of household structures in the refugee camps, because Sahrawi people continue to be highly mobile; they travel

---

Map 2. Localization of Sahrawi refugee camps

Source: PBS

---

Following an official preliminary registration exercise, the total camp population, including ‘non-voters’ living in the camps, was calculated by WFP and UNHCR in 1999 and 2000 as being 155,430. In 2004, the Joint WFP/UNHCR Assessment Mission to the camps noted that “an estimation carried out during the mid-term evaluation conducted in September 2003 using child vaccination records, primary school attendance levels and MINURSO list of eligible voters [...] comes with a total refugee population of 158,800 persons”.

---
between the different camps, to the liberated territories, or badiya, but also abroad for various reasons—visiting family, to complete schooling, or for employment purposes (Fiddian-Qasmiyeh, 2011). The exact number of refugees is a sensitive issue with both political dimensions and consequences. The issue surrounding the number of people in the camps also has humanitarian consequences. For instance, WFP provided food rations for 158,000 people until 2006 and for 125,000 after 2006 (Hidalgo, 2009). In its 2010 Algeria Fact Sheet, UNHCR stated that it was still negotiating with the Algerian government and Sahrawi refugee leadership to conduct registration in order to determine the exact number of refugees. UNHCR has been using a planning figure of 90,000 vulnerable refugees in the camps (UNHCR, 2010).

A population highly dependent on humanitarian assistance and with low prospects for self-reliance

Life in the camps is extremely difficult. Summertime temperatures regularly exceed 40°C and can easily reach 50°C, while winter temperatures can drop to zero at night. Sandstorms blast through the camps on a weekly basis. Because rainfall is scarce, with an average of 30 to 50 mm per year, the area is known as the “Devil’s Garden” (OCHA, 2012). Additionally, rains are irregular and droughts are recurrent. As a result, the area has poor forage resources, few trees and there is no grass to provide for livestock, inherited from their ancestors’ pastoral lifestyle, forcing pastoralists to use food waste and non-food waste to feed them (Volpato, 2014). Owing to the remoteness of the area and the harsh conditions, Sahrawi refugees remain highly dependent on humanitarian assistance for basic needs such as water, food, and medicine brought by air or by road. They depend on food assistance from the World Food Program and other organizations, but the aid delivery itself is irregular (Murphy, 2015). This means the population face recurrent acute food shortages (ICG, 2007a). As a result of this irregularity and of a  

---

7 According to an evaluation of DG ECHO’s action in the refugee camps: “in 2005, WFP revised the Tindouf “caseload” downward from 158,000 to 90,000 citing “the absence of a census” of camp residents.” In 2008, the WFP stated that it would “provide 125,000 general food rations to the most vulnerable refugees in the camps in the Tindouf area.” It should be highlighted that the 2008 figure did not comprise the total population, but only the “most vulnerable refugees” in the camps. Algeria’s official figure for the number of refugees in the camps is 165,000. Morocco alleges that these numbers are inflated and urges the UN to conduct a new census and UN agencies to limit their assistance to 25,000 to 30,000 people. For the Saharawi authorities, the census should only take place as part of the overall peace settlement process. Recalling that this is MINURSO’s main mandate, they condition the exercise to part of a solution to the conflict. Authorities currently only share beneficiary lists with the most trusted organisations” (Hidalgo, 2009).
lack of product diversity, cases of malnutrition are reported in the camps, with malnutrition affecting nearly 8% of the children. The region’s climate is also the cause of several health problems, including arterial hypertension, lung disease and eye conditions, as well as infections such as bronchitis (ICG, 2007a). The health facilities in the camp are also insufficient and poorly equipped. The water supply remains an issue as access varies and truck deliveries are rationed (Rivelsrud, 2010). Regarding housing conditions, some refugees live in mud-brick houses and others, a minority, in tents (UNHCR, 2015a). On the one hand, employment is limited in the camps and on the other hand the emergence of opportunities for paid jobs with NGOs in the camps has reinforced socio-economic inequalities amongst Sahrawi refugees (Fiddian-Qasmiyeh, 2011). The SADR is becoming less and less able to provide employment for the increasing number of educated Sahrawi returning from studying abroad (Refugee Studies Centre, 2005).

Moreover, there is little prospect of future self-reliance as the harsh desert environment makes income-generating activities scarce (Refugee Studies Centre, 2005), and it has only been a few years since small, informal, markets emerged in some of the camps’ neighbourhoods. Therefore, the vulnerability of the Sahrawi population remains high, and though the occurrence of floods in the region is low their impacts can be devastating for a population that is already in need of assistance.

**Self-governance and proactive management of the camps by the Sahrawi populations**

This dependency is counterbalanced by the role Sahrawi refugees play in the management of their own camps. Aid workers have reported that there is a high level of self-organization and of proactive management of the camps by the Sahrawi community. Sahrawi refugees are described as “future-oriented rather than past-centered” (Huddleston, 2011). This self-governance is embodied by the Sahrawi Arab Democratic Republic (SADR), the name given to the Saharawi state, which is a partially recognized state. The SADR effectively controls a thin strip of area of Western Sahara (see figure 1) and claims sovereignty over the entire territory of Western Sahara. The SADR government calls the territories under its control the Liberated Territories and considers the Moroccan-controlled territory to be occupied territory. The SADR is closely related to Polisario and is currently a one-party state, but intends to implement a multi-party system in an independent Western Sahara (Rossetti, 2008, p. 7). The SADR oversees the administration of the refugee camps and the distribution of humanitarian aid among the refugees.

The camp organization well illustrates the role of the SADR in the camp management: the main camps are headed by a Sahrawi governor or wali, who is appointed by the SADR President and Polisario Secretary General. Each camp is then divided into districts or dawa‘ir, themselves divided into neighbourhoods or ahya’a. Administrative and managerial tasks of these divisions and sub-divisions are undertaken by camp residents employed by the SADR (Fiddian-Qasmiyeh, 2011).

Sahrawi refugee camps are currently the only ones in the world administered by refugees themselves (Mundy, 2007). Indeed, the Algerian authorities ceded the administration of the camp to the Polisario Front and the SADR. Therefore, unlike other refugee camps, usually run and controlled by international organizations such as UNHCR, the camp is administered by the SADR and its representatives are the only authority with which Sahrawi population have regular contact (HRW, 2008), which according to the WFP enables them to “manage their own civil society and social systems without interference” (WFP, 2010).

Academic and non-governmental reports have underlined this self-management policy and described the refugee camps as “models of efficient local government” (Brazier 1997). Highlighting the Sahrawi refugee camps as a “success story” for their management and as the “best run refugee camps in the world”, as Brazier did, became a mainstream idea in the 2000’s (Brazier 1997). However, some academics have questioned these depictions arguing that they risk normalizing the political and humanitarian situation of the refugees (Fiddian-Qasmiyeh, 2011). The humanitarian field has also recognized that this high level of self-organization could be an impediment to properly monitoring aid delivery (ECHO, 2009). Nevertheless, the camps’ self-governance also embodies a very important demand of Sahrawi people for their national future.

The flooding and its impact: material damages and human mobility

Scale and affected areas

Heavy rainfall occurred in the four camps of Laayoune, Boujdour, Awserd and Smara, starting on 17 October and two days later for the more distant camp of Dakhla. Awserd was the worst affected by the initial rainfall and then Dakhla by the second rains (UNHCR, 2015b). This heavy rainfall led to flooding in the area and immediately destroyed refugees’ mud-brick homes. The rain continued for more than a week, leaving the
Smara and Boujdour camps in similar conditions to Dakhla and Awserd. The rain finally stopped on 26 October. While rain is expected at this time of year, the quantity of rainfall and the number of consecutive days of rain were uncommon and had not been seen in over a decade. Recent studies have shown that the scale of the flood corresponded to 10 to 12 years worth of rainfall. According to UNHCR, 11,500 families—more than 57,000 individuals—were affected by the floods (UNHCR, 2015b) and the total number of damaged or destroyed houses was 17,841. In addition, 6,500 children had limited access to schooling (Unicef, 2015). Some 7,000 families were estimated as having been left homeless and 30,000 without access to health care (US Department of State, 2015). Nearly 85,000 people saw their food stocks reduced to nothing. UNHCR representative Hamdi Bukhari said that “the extent of devastation in Tindouf is overwhelming, with pooled water as far as the eye can see. Thousands of families lost their homes overnight and much of their personal belongings” (UNHCR, 2015c). With the floods came the associated risk posed by remnants of explosives. Indeed, the area is known for the presence of mines and other non-exploded devices. With flood waters the mines and explosive remains were likely to be displaced and to pose a risk to civilians and their livelihoods.

Housing and infrastructure

The joint multi-agency assessment implemented by UNHCR was finalized on 6 November in all five camps and concluded that the total number of destroyed/damaged houses was 17,841. These assessments indicate extensive material damages with 70% of houses destroyed or damaged and 60% of public buildings such as schools, clinics and dispensaries destroyed or damaged. The chart below (Table 1) provides a detailed description of the magnitude of the destruction of shelters in the five camps:

One of the main issues regarding housing was the material used to construct them. Most house are made of mud-brick and are therefore easily damaged or destroyed in cases of heavy rainfall or flooding. As well as schools, administrative offices and dispensaries were destroyed as they were built without foundations using traditional techniques. The images below show how these houses were made and how they were not able to resist the flooding. The damage provoked by the floods was exacerbated by the infrastructural characteristics of the camps.

---

8 Interview with Samir Zemouchi, Program Officer at UNICEF, Tindouf—Algeria, 6 April 2016.
9 Interview with Samir Zemouchi, Program Officer at UNICEF, Tindouf—Algeria, 6 April 2016.
Table 1. Levels of destruction of house and infrastructures in the camps

<table>
<thead>
<tr>
<th>Camps</th>
<th>Level 1 (Worst Damaged)</th>
<th>Level 2 (Highly Damaged)</th>
<th>Level 3 (Moderate Damaged)</th>
<th>Level 4 (Lightly Damaged)</th>
<th>Total per camp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dakhia</td>
<td>2,466</td>
<td>1,077</td>
<td>149</td>
<td>59</td>
<td>3,751</td>
</tr>
<tr>
<td>Smara</td>
<td>2,049</td>
<td>1,565</td>
<td>1,020</td>
<td>842</td>
<td>5,476</td>
</tr>
<tr>
<td>Awserd</td>
<td>1,716</td>
<td>889</td>
<td>421</td>
<td>233</td>
<td>3,259</td>
</tr>
<tr>
<td>Boudjour</td>
<td>731</td>
<td>473</td>
<td>388</td>
<td>322</td>
<td>1,914</td>
</tr>
<tr>
<td>Laayoune</td>
<td>1,699</td>
<td>737</td>
<td>411</td>
<td>594</td>
<td>3,441</td>
</tr>
<tr>
<td>Total by level of destruction</td>
<td>8,661</td>
<td>4741</td>
<td>2,389</td>
<td>2,050</td>
<td>17,841</td>
</tr>
</tbody>
</table>

Source: International Federation of Red Cross and Red Crescent Societies, November 2015.

During the flooding, those living in traditional Sahrawi tents were spared the worst of the devastation, however only a minority of families possess such tents (International Federation of the Red Cross, 2015). The traditional tent or *al-khaima* is a must in the Sahrawi community and is resistant to storm and water infiltration thanks to its triangular shape. Even if families have houses, they tend to have traditional tents as sign of their socio-economic status rather than other displays of wealth. Indeed, *al-khaima* has a broader social meaning because it is considered to be the central social unit in Sahrawi communities. It not only refers to a spatial unit reserved as a living space but also to all the relationships linking the members of a given family. However, even if the tents are strong and resistant the population using the tents still lost a majority of their belongings as everything was wet. Several months after the floods, the emergency situation persists as many families have started to rebuild with the same fragile material—mud-brick (Oxfam, 2015).

**Diversity of displacement patterns induced by the 2015 flooding**

**Nomadic tradition and pastoralist recovery**

Before analyzing the different mobility patterns induced by the flooding, it is necessary to detail the regular mobility patterns of Sahrawi refugees.

---

10 Interview with Samir Zemouchi, Program Officer at UNICEF, Tindouf—Algeria, 6 April 2016.
11 Ibid.
The Sahrawi population is a Bedouin population who moves regularly between camps, the Free Zone and Mauritania mainly for trade purposes. Nonetheless, they live at least 8 months per year in the camps. Indeed, before the war the Sahrawi were essentially nomadic, pasturing goats, sheep and camels in the low-lying plains of Western Sahara. For food, they relied on livestock products as well as vegetables, cereals, sugar and dates, which were exchanged for livestock in markets (Volpato, 2014). This nomadic tradition has lived on in and around the camps with the practices of livestock husbandry. However, in the camps, it appears to be a complementary activity whereas full-time or seasonal Sahrawi nomads practice extensive camel husbandry and are therefore highly mobile in the liberated territories across pasture areas and around the camps, which are their main commercial hubs. In the refugee camps, “livestock husbandry is one of the refugees’ few endogenous activities developed and recovered without any consistent attention or funding from donors and development organizations” (Volpato, 2014). This activity was disrupted by the war when herds where bombed and abandoned and nomads had to settle in the refugee camps. The ongoing recovery of this lifestyle was triggered by economic, ecological, political, social and cultural drivers, which include the 1991 ceasefire, the safety and security guaranteed by the Polisario in both the camps and the liberated territories, and the willingness to construct a Sahrawi national and cultural identity. Nomadic refugees travel from the camps to the liberated territories, especially the northern areas, which are richer in forage plants and biodiversity than the area surrounding the camps. Refugees enjoy nomadic life on a seasonal basis. Each autumn or winter, thousands of refugees move to the liberated territories with their livestock, their *khaima* and food stocks so their livestock can graze, but also to get away from the camps (Mundy, 2007).

In addition to this nomadic tradition, another aspect must to be described to fully understand the mobility of Sahrawi refugees: the issue of freedom of movement for refugees. Moroccan authorities often refer to the Sahrawi refugees as the Polisario’s captives, held in the Tindouf camps against their will (Human Rights Watch, 2008). It is true that SADR and Algerian authorities impose regulations on refugees’ travel outside the camps. These regulations can complicate their ability to move freely. However, even though the SADR’s constitution does not contain a specific provision guaranteeing freedom of movement, freedom of movement is actually guaranteed by the African Charter on Human and Peoples’ Rights, to
which the SADR is party. As a matter of fact, Human Rights Watch, in its 2008 report on the issue, concludes that there is no evidence of the SADR or Algerian authorities imposing significant or arbitrary restrictions on Sahrawi refugees’ freedom of movement. The refugees have the possibility to travel between the Tindouf camps, or to Mauritania or Western Sahara, if they want to. Yet, this possibility remains dependent on the individual’s social and financial status (Human Rights Watch, 2008).

This nomadic lifestyle and the recovery of pastoralist practices have to be taken into consideration to fully understand the mobility and immobility dynamic at work during a disaster event, such as the 2015 flood.

**Mobility inside the camps: short-term and inside-camp mobility as a coping strategy**

According to Samir Zemouchi, programme officer at Unicef, during the first weeks after the floods, many families moved from their original sites into the hills, due to fears of further flooding. This was a displacement inside the camps, where people moved from the place they lived to the surrounding hills. It was a short-distance temporary displacement as they stayed on the hills in tents for around a month and a half, until the water had been absorbed by the ground. There is no precise number of people who have moved to the hills. Some news articles mention the number of 25,000 displaced without specifying from where they moved and where they went (The Guardian, 2015). Moving to a higher geographical area was a way to cope with the imminent danger of the flood with the water level rising and houses collapsing, by using the opportunities offered by the hills to overcome adverse conditions. In this case, the households used short-term mobility to survive because there was no possibility of finding shelter with all the houses destroyed and no possibility of installing tents on flooded ground.

**Mobility outside the camps: pastoralism and adaptation strategies.**

Another mobility pattern occurred in the aftermath of the flooding: displacement towards the liberated territories of Western Sahara. This
mobility pattern concerned pastoralist Sahrawi. Indeed, according to Samir Zemouchi, approximately one month after the flooding, some pastoralist Sahrawi refugees moved to the liberated zone in order to move their animals to this area because there was more grass as a result of the floods.\textsuperscript{15} Once again there is no data regarding the number of people who moved to the liberated zone after the flood for this purpose. This mobility is an indirect result of the flood. Pastoralists did not move to the liberated territories to flee the floods but to graze their livestock in an area that benefited from the rainfall and where they usually go to feed their animals. This migration is therefore an indirect consequence of the flooding compared to the previous forms of mobility mentioned above.

This mobility pattern corresponds more to an adaptation strategy than to a coping strategy because this migration pattern is a way to exploit beneficial opportunities induced by the disaster—the increase of grass in grazing areas (IPCC, 2014).\textsuperscript{16} In order to exploit the benefits of the rainfall and to sustain their livelihoods and the livelihoods of their family members, the pastoral Sahrawi refugees engaged in this migration pattern, in a context of the recovery of pastoralist tradition in the refugee camps (Volpato, 2014). Indeed, Sahrawi refugees are increasingly turning to animal husbandry and trade to provide for themselves and their families and maintain basic living standards and nutrition. Animal husbandry and trade provide income, but also milk, meat, fruits and vegetables and household goods. It is worth noting that foods such as meat, fruits and vegetables are not usually included in humanitarian food aid (Human Rights Watch, 2008).

\textbf{Immobility and the case of Dakhla camp: an example of trapped population?}

In the Dakhla camp, which was worst affected with 90\% of infrastructure destroyed or damaged, the Sahrawi population wanted to move to other camps but the local authorities refused. Without forcing them to stay, the Polisario did engage in a campaign to convince the refugees to stay in Dakhla, first for practical and logistical reasons as Dakhla is the farthest camp from Tindouf city (around 180 km away).\textsuperscript{17} There were also more political

\begin{footnotesize}

\textsuperscript{15} Interview with Samir Zemouchi, Program Officer at UNICEF, Tindouf—Algeria, 6 April 2016.

\textsuperscript{16} The Intergovernmental Panel on Climate Change defines adaptation as “The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects”.

\textsuperscript{17} Interview with Samir Zemouchi, Program Officer at UNICEF, Tindouf—Algeria, 6 April 2016.

\end{footnotesize}
reasons at work: the Polisario did not want them to leave for fear that they would not return to Dakhla, which has a particular historical weight in the construction of the Sahrawi identity for the SADR and the Polisario, as it is the first settlement of Sahrawi refugees in Algeria. Moreover, the Algerian government had recently invested in supplying the camp with an electricity network, which cost the Algerian government billions of dinars. Therefore, the SADR and the Polisario saw the willingness of the refugees to move away as a risk posed to this investment and the arrangements made with Algerian authorities on the issue.

In the case of Dakhla, the Sahrawi people needed to move because, as has been mentioned above, the damages in this camp was extensive and almost all houses were destroyed. As a matter of fact, many people were left homeless with some being sheltered by relatives and neighbours (UNHCR, 2015a). Indeed, a primary assessment of the situation in Dakhla made by several NGOs and international organizations on the ground—UNHCR, Unicef, WFP, Echo, Oxfam, Triangle, Algeria Red Crescent, Spanish Red Cross, AFAD, Saharawi Red Crescent—and by the Saharawi authorities indicated that “people were all outside with no place to go and children running across collapsed houses” (Al-Saharawi, 2015). Some people were staying together in one single tent but the report also points to the limited number of tents (Sadr-emb-au.net, 2016). Thus, these people needed to move and wanted to move but could not move, finding themselves trapped—to be ‘trapped’, individuals must not only lack the ability to move but also want and need to move (Black & Collyer, 2014). The already vulnerable situation in which Sahrawi refugees found themselves coupled with the unwillingness of the local authorities to see them leave the camp—bearing in mind that it is hard to say to what extent they were deterred from leaving the camp—can lead to the conclusion that the Sahrawi refugees of Dakhla were experiencing forced immobility. Indeed, the ability to move is correlated with the availability of places to move to, the level of wealth and capital (Black, 2013). In other words, vulnerable people are less likely to move than others who are less vulnerable. For the Sahrawi refugees these resources are scarce and they are already in a situation of vulnerability. Sahrawi refugees in Dakhla are an example of “trapped populations […] vulnerable to stress but without the ability or resources to move” (Black, 2013).

Ibid.

Ibid.

There is no precise number of people left homeless in Dakhla camp. The only precise number available is the one 7,000 people left homeless for all the camps.
However, this idea of a trapped population can also be challenged by the fact that the decision to remain in the camp in general is a decision made seemingly more often for Sahrawi refugees in Algeria than it is for other refugee groups in the world (Huddleston, 2011). Staying in the camp is perceived as a political act, an “act of defiance of the Moroccan occupier and adversary, rather than one of desperation or helplessness” (Huddleston, 2011). It is in line with the historical and cultural weight of Dakhla camp in Sahrawi’s history, mentioned above. Though this type of rationale might not come into play in the decision to stay or to leave the camp in the case of a disaster such as the 2015 flooding, it could be one of the many reasons explaining immobility, especially when considering that the Polisario can mobilize such rationale. Indeed, people may in fact be motivated to stay in vulnerable areas for many reasons—social pressures, cultural attachments, occupational dependence, macro-structural constraints for instance. In the case of Sahrawi refugees, the line between voluntary and forced immobility is even more complex.

Sahrawi displacement patterns: an example of the diversity and complexity of (im)mobility outcomes.

The case study of displacement induced by the 2015 flooding in Sahrawi refugee camps exemplifies the diversity and complexity of the forms migration can take. First, we are facing a case in which a disaster is hitting a population already displaced, in this case by a conflict. Then the impact of this disaster in terms of mobility is multi-faceted, showing that mobility and immobility categories are not fixed, that indirect and direct displacement can be induced by one event, that voluntary and forced immobility as well as voluntary and forced displacement can be present at the same time amongst a population and potentially for one individual in a different timeframe. The flooding in November 2015 showed that extreme environmental events can have different outcomes—mobility and immobility, voluntary and forced (im)mobility, short- and more long-distance displacement. Along with these different outcomes a multiplicity of drivers can be discerned—environmental drivers as a direct result of the flood, economic drivers with the case of pastoralism, or even cultural and social drivers with regard to immobility in Dakhla. This case study stresses “the multi-causal nature of migration influenced by environmental change” and “that whilst an environmental event may trigger migration, it is likely to be just one of a number of deeper causes” (Black, 2012). It also exemplifies the limitations of categorization between refugees, migrants and internally displaced people.
Policy responses and challenges

The humanitarian partners already present in the camps—UNHCR, WFP, Unicef, Handicap International, Oxfam, Triangle, International Federation of the Red Cross and Red Crescent Society, Sahrawi Red Crescent, AECID, Médecins du monde—conducted a rapid assessment of the situation and then quickly responded to the crisis. The first response of agencies and NGOs was to establish an emergency cell by sectors, mainly health and shelter sectors, then a quick evaluation of the damages was launched after the floods. Based on the impact and the assessment, the inter-agency humanitarian response prioritized the health, food security and shelter/non-food-item sectors in the emergency response (Oxfam, 2015; Triangle, 2015; ICRC, 2015; WFP, 2015; Unicef, 2016). The main objectives of the response were to provide emergency shelter and essential relief items, including drinking water; to replace lost food stocks and to secure food security and nutrition, and to provide emergency health care to the affected population. Achieving these objectives was challenging due to ongoing displacements of the refugees (Triangle, 2015). Regarding the implementation of the response, UNHCR is the leading agency in the humanitarian response.

The Sahrawi authorities supported the humanitarian community and recommended priorities according to the survey and evaluation. This cooperation went well as local authorities were significantly involved in the response and very cooperative. One of the explanations for this strong implication of the Sahrawi community in the emergency response lies within another specificity of the Sahrawi refugee camps regarding its role in the construction of the Sahrawi national identity. Indeed, several academics have underlined the fact that the Sahrawi nation and Sahrawi national identity were created in the refugee camps as part of a national project (Rivelsrud, 2010; Shelley, 2007). According to Rivelsrud, “the Tindouf refugee camps are unusual because they are a result of a nationalist project. The refugees refer to the first years in the camps as the Sahrawi Revolution [...] The idea was to combine the broken identities of pre-colonial time and colonial time and to create a new, modern nation state.” The Moroccan annexation and the flight to the refugee camps in Algeria led to the creation of a new community, which the Polisario Front and the SADR have mobilized to forge their nationalist project (Rivelsrud, 2010). The national cause to regain Western Saharan territories is in many ways

---

21 Interview with Samir Zemouchi, Program Officer at UNICEF, Tindouf—Algeria, 6 April 2016.
present in the camps. First, the camps are named after important places of the SADR and more precisely of places inside occupied Western Sahara. Then, many places and institutional buildings are named after memorable dates that have played a role in the Saharawis’ history (Rivelsrud, 2010). This is the case of the last settlement, named 27 February, which refers to 27 February 1976—the date of Spain’s withdrawal from Western Sahara and of the proclamation of the SADR. Therefore, the Sahrawi authorities played an important role during the emergency response “because they are a very organized community”\textsuperscript{22}, they supported the creation of emergency cells and helped with more than 100 volunteers to help the populations in need and also supported the evaluation of damages. The NGO community, Polisario and the SADR were not the only actors in the response. The Algerian authorities also participated by sending civil protection, and the Algerian red crescent sent tents and food coming from the Algerian population.\textsuperscript{23}

Regarding policies affecting mobility or immobility, the action of the local authorities in Dakhla camp can be considered as favouring immobility. It concerns the awareness-raising campaign led by the Sahrawi authorities to remain in Dakhla camp. As mentioned previously, the Sahrawi authorities did not want the refugees to leave Dakhla camp for historical and political reasons and for more financial reasons with the recent electricity network funded by Algerian authorities. The risk was that the authorities would have to find another way to finance the electrical network. Bearing this aim in mind, the authorities engaged themselves in an awareness-raising campaign, explaining the outcome of displacement to deter refugees from leaving the camp.\textsuperscript{24} In addition, no relocation or resettlement solutions were implemented by the authorities. The issue of shelter was actually tackled with emergency tents distributed in the camps and installed in the camps, minimizing any other displacement of Sahrawi refugees. For instance, UNHCR distributed 1,705 tents as of 11 November to the refugees in the camps, and more the following weeks (UNHCR, 2015, 8 November). This immobility can also be understood from the national identity perspective, mentioned above. The importance of the camps for the Sahrawi community in the construction of their national identity can be considered as a driver for immobility and partly explain why some prefer to stay, even in case of disaster (Rivelsrud, 2010; Shelley, 2007). Indeed, the symbolic nature of the

\textsuperscript{22} Ibid.

\textsuperscript{23} Ibid.

\textsuperscript{24} Interview with Samir Zemouchi, Program Officer at UNICEF, Tindouf—Algeria, 6 April 2016.
camps for the community can explain why many Sahrawi while considering opportunities to leave the camp, prefer to stay as a political stand for the national cause. This national cause has been internalized and as a consequence leaving the camp can be perceived as betraying the national cause (Huddleston, 2011). The characteristics of the local community were not the only factor in the response and management of the emergency response and of the displacements.

One major element that has also affected the response and the management of human mobility is the lack of a preparedness plan. On 10-11 February 2006, the camps were struck by torrential rains and there was widespread flooding. Three of the Sahrawi camps were particularly affected: 12,000 families were affected and around 50,000 people were left homeless. Sahrawi people faced similar extensive damages and for the same reasons—infrastructure and housing were constructed with mud-brick materials (OCHA, 2006). Despite this event in 2006, no steps were taken to implement preventive measures and mitigation plans by learning from this event. Indeed, before the 2015 flooding, it appears that there was no mitigation or preparedness plan in the case of flooding. To better understand this aspect, we have to come back to the political and national project of the Sahrawi community, which was explained above. Though the camp was part of the construction of the national project and the identity of the Sahrawi community, the ultimate goal is to return to the land they left, the liberated territories and occupied territories of Western Sahara. For the Sahrawi authorities and community, the hope of returning to this land is significant and despite the fact that they have been refugees living in camps in Algeria for more than 40 years, this situation is perceived as temporary and has to remain that way. In this regard, they live in a state of temporariness, as the type of construction—temporary—illust rates. The same goes for the preparedness process: having such a preparedness plan and long-term construction plan would mean normalizing and anchoring the refugee situation, which they do not want, as it would seem for them like a form of permanent integration in the region of Tindouf.²⁵

Conclusion and policy recommendations

This study has shown the extent to which the 2015 flooding in Sahrawi refugee camps has caused different outcomes in terms of mobility. The patterns of these outcomes are complex because they occurred both during and after the disaster and took different forms, including immobility.

²⁵ Ibid.
Furthermore, the impact of the flooding has affected a population that was already vulnerable and struggling to survive in harsh environmental, economic and political conditions. Based on the impact and on the policy responses implemented, policy recommendations are suggested below to address how to prepare and manage more efficiently similar future disasters and to address the needs of those displaced or trapped, particularly at a time when, as a result of climate change, these types of event are likely to be more frequent and more intense.

**Implement preparedness measures**

Preparedness measures should be implemented for every camp by the local authorities. In cooperation with other actors such as international organizations and NGOs, with the first step is the undertaking of a risk analysis assessing the vulnerability and capabilities of the community and of the actors involved in emergency response and the recovery mechanism. An analysis of the types of hazards that could be faced should also be conducted based on the environment and likelihood of the different types of hazards. Then, the resources at the disposal of the camps and response actors should be evaluated, identifying what—materials, safe areas, communication systems—and who—individuals with skills regarding emergency response and in mobility management—could be mobilized to intervene before, if the disaster is predictable, during and after the disaster. The preparedness phase should also include scenario building with a specific focus on the displacement induced or blocked by the disaster in order to determine the most appropriate policies to deal with this (im)mobility. The implementation of a preparedness and mitigation plan should be viewed not as an element anchoring and normalizing the refugee situation, but as necessary measures to prevent and/or manage the impact of such disasters by the local authorities, and as a further step towards the construction of the Sahrawi state.

**Develop the construction of houses that are more resistant to flooding**

As highlighted by the damage caused by the flooding on mud-brick houses, there is a need for better construction materials that could more efficiently withstand excessive rainfall and flooding. Some steps in this direction have already been taken, as during the reconstruction process, Sahrawi people are using stronger materials with the help of NGOs, as well as employing new construction techniques and material such as iron bars and mixed concrete and mud bricks. These materials are more sustainable and more resistant
to flooding. With these construction techniques, the roofs of the houses are now constructed at an angle of 20 to 30 degrees in order to avoid the water stagnating on roofs and deteriorating the walls. In a similar vein, another example of preventive policies led by an NGO to avoid similar results of potential future flooding is the UNICEF Build Back Better concept. The goal is to rebuild schools and dispensaries in a better and, more importantly, stronger way. UNICEF Build Back Better adopts a community-based approach through a concept encouraging the community to give their point of view and advice on how the rebuilding should be carried out in order to make it more acceptable for children, parents, and authorities. The concept revolves around using better materials and more sustainable techniques to avoid the collapse of housing in the case of further flooding (Unicef, 2015).

While the example of this project is reassuring, the impact of future flooding on homes could still be significant due to the fact that many families are still using mud-brick to rebuild their houses (Oxfam, 2015). Therefore, a reconstruction plan with more resistant materials should be implemented on a large scale to avoid significant damage and homelessness in the event of a future disaster. Another solution could also be to relocate some housing on the hills where the Sahrawi took refuge during the flood. Indeed, during the reconstruction process, Sahrawi people have actually started to rebuild their houses on hills avoiding low-lying sites where houses were previously built and damaged during the flood. This could also be done for public infrastructure such as schools and hospitals.

Implement short-term relocation

By using the experience of the 2015 flooding, one recommendation could be to implement short-term relocation for the refugees affected by the flood, in order to address the issue both of mobility and immobility. Residents of affected camps should be relocated to other camps (if not affected) or in the safer surrounding areas. This policy would guarantee shelter for those affected by the flood and avoid the migration to the hills, used as a coping strategy, as witnessed in October 2015. For trapped populations, short-term relocation would allow them to be settled in safer areas in a time of crisis, with the participation of the local authorities. The population should also be well-informed about the possibility of relocation and included in the decision-making process. Therefore, in the future, relocation should be considered and implemented as quickly as possible in order to avoid putting refugees at risk and exposing the population to inadequate temporary

---

26 Ibid.  
27 Ibid.
solutions. The responses to the flooding in Tindouf have also shed light on the protracted situation of Sahrawi refugees and the chronic deficiency in funding.

*Increase long-term funding for this “forgotten crisis”*

Although international aid was critical in supporting the on-site emergency response, the 2015 flooding in Tindouf has revealed that chronic under-funding can have an impact on the resilience and the vulnerability of the community. Funding levels have greatly decreased in recent years, while the humanitarian needs of the Sahrawi refugees remain as pressing as ever. This decrease in funding can be explained by the protracted situation of Sahrawi refugees and the emergence of other large-scale humanitarian emergencies (UNHCR, 2016b). In the long run, the lack of funding has affected the delivery of life-saving assistance, limiting access to water, the diversity of food and leading to inadequate infrastructure for health and education services. The floods in October 2015 thus exacerbated an already dire situation, also revealing the scarcity of resources due to the lack of funding and to harsh environmental conditions. In addition to the damage caused by the flooding which must be addressed, the 2015 flooding has also highlighted the urgent need for additional funding for essential sectors such as water, food, sanitation, protection, health, education, shelter and non-food items. Moreover, Sahrawi refugees need long-term and sustainable funding to build resilience, reduce vulnerability and improve the living conditions of people who have been living in camps for more than forty years. Finally, in order to be able to extricate themselves from this permanent state of temporariness, they need a definitive resolution to the crisis in accordance with international law.
BIBLIOGRAPHY

ACADEMIC ARTICLES


MURPHY, ANNA. 2015. The Case of the Western Sahara and its Struggle for Independence.


Floods in Sahrawi refugee camps in Tindouf: Processes of mobility and immobility


BOOK


PRESS AND NEWS ARTICLES


BRIEFS AND REPORTS


**Interview**

Interview with **Samar Zemouchi**, Program Officer at UNICEF, Tindouf—Algeria, 6 April 2016.