



**NORWEGIAN
REFUGEE COUNCIL**



IRAN FLOODS :

RAPID NEEDS ASSESSMENT APRIL 2019

in GOLESTAN, KERMANSHAH, LORESTAN AND KHUZESTAN PROVINCE

Cover Photograph : Flooded house in Modarresi (Afghan Abad, Golestan Province). Photo : Hamidreza Fakhar/NRC

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Flooding in Lorestan School – April 2019 Photo: Anne Trehondart/NRC

Executive Summary

Starting in mid March, Iran experienced 3 major waves of rain and floods within a two week period in what has since been described as a 1 in 100 year event.

According to Government officials, 140 rivers burst their banks, leading to flash floods which affected 25 of the 31 provinces. By mid April 2019, an estimated 12 million people had been affected, 2 000 000 of whom are in need of immediate assistance. The scale of the damage on a personal level is extensive. 65 000 houses totally destroyed, and 114 000 damaged. Entire villages evacuated and approximately 366 000 people displaced.

Record rainfalls, with some areas receiving 70% of their annual rainfall in a single day have devastated agricultural lands. For a country who, according to the Food and Agriculture Organisation, as of 2015 is among the world's top 5 producers for a number of fruits and nuts, the destruction of thousands of hectares of agricultural land will have dire long term consequences for the economy. Similarly, the grand scale loss of livestock will affect both food security and the livelihood conditions for many households.

In the immediate, there are entire villages who have no shelters, who cannot access clean drinking water, who do not have the means to take care of their personal hygiene needs, who have lost their livelihoods, and whose children are unable to attend school. Due to the destruction of public infrastructure, these communities have no access to healthcare facilities which have been totally or partially destroyed. Where undamaged by the floods, access to a healthcare facility may not be possible due to an approximate 36% of the country's road network being washed away (12 000 km), or because the bridge linking the village to the facility is one of thousands which have simply disappeared in the wake of the floods.

Needs between the 4 provinces visited and assessed by NRC teams vary to the degree required, but are similar in nature. NRC have been fortunate in being granted approval to visit these sites, and is encouraged by the positive attitude of the local authorities when expressing readiness to support the immediate aftermath of the floods. Donor response has been equally encouraging, guided by the fact that at the time of writing, an estimated 3 billion USD is required to return to pre-flood status.

Sanitation facilities are urgently required. There are not enough facilities to accommodate the 270 000 who have been provided with temporary shelters in public spaces such as undamaged schools, mosques or public centres. Clean drinking water is a necessity, as is basic hygiene supplies, especially for women and children. Temporary education spaces, equipment and stationery are required in the short term to provide safe spaces for the estimated 170 000 students who were originally educated in the almost 6 000 destroyed or damaged classrooms in only 3 provinces. Alternative livelihood opportunities or restored access to income for the 1.8 million affected individuals needs to be provided.

Following positive feedback from the Government, NRC will provide assistance in the coming days, which includes hygiene kits containing essential personal items for each household, non-food items, kitchen sets and cash assistance to help families meet their basic needs. NRC will also provide additional sludge pumps to evacuate mud and water in flooded areas and respond to critical needs in water, hygiene and sanitation (WASH). Support to education facilities will be provided so that children have what they need to finish the school year successfully.

1. Background and Context

Since the middle of March 2019, intense rainfalls, storms and blizzards caused flooding in the Islamic Republic of Iran, causing significant human and material losses in 25 of the 31 provinces of the country.

As early as 13 March, Iranian officials were reporting on extensive damage caused by floodsⁱ. According to an OCHA Situation Overview of the floods on 18 April 2019, an estimated 12 million people have been affected by the floods, 2 million are in need of immediate assistance, and some 366 000 individuals have been displaced nationwide. With the further flow of information, the World Health Organisation estimated that by 22 April, the number of internally displaced individuals had risen to 371 000, an estimated 3 192 deaths and injuries had occurred, and that 397 000 children have been affected in most vulnerable areas.

In response to the floods, between April 5th and 18th, NRC dispatched three teams to Golestan (5-9th), Kermanshah (10-14th), Lorestan and Khuzestan (14-18th) provinces to conduct rapid needs and emergency market assessments.

2. Objectives and Methodology

It is common knowledge that, in the Iranian context, access to respondents in the field can at times be challenging. Needs assessments are therefore a combination of direct observations, interviews and discussions, and information gathering from external stakeholders.

Despite the fact that NRC teams spent time in the field interviewing community members, and held informal talks with groups, the statistics contained in this report stem predominantly from representatives of government authorities, UN agencies and external stakeholders who are located in the NRC assessment areas. Statistical variances can be found between the direct provincial assessments contained in Annexes 1, 2 and 3 respectively, and those contained in paragraph 3 below. Annex 1, for example, relating to the field assessment visit to Lorestan and Khuzestan provinces mentions 88 households (314 individuals) temporarily housed in a shelter visited by the NRC team, while the collated provincial information received reflects in excess of 21 000 houses being partially or totally destroyed, therefore uninhabitable. Furthermore, areas such as Dashte Azadegan county were not at all accessible, unless by boat.

The NRC team conducting the assessments were accompanied by representatives of BAFIA and PDA and SRS NGOs. Prior to, and during the assessment phase, meetings were held with provincial and local authorities, representatives of BAFIA, and IRCS field workers to receive regular updates on the overall situation in the provinces.

The rapid needs assessments were conducted in accordance with NRC guidelines, adapted to the context of Iran, and included two sections, namely :

1. Rapid needs assessments conducted in form of structured key informant interviews with local authorities, community leaders or representatives, and
2. Emergency market assessments conducted to assess market capacity in assessment locations during the emergency

In instances where access was limited or time constraints applied, in the absence of structured interviews, unstructured interviews were held following the same protocol of questions.

Details of the specific locations and settings can be found in the graph below.

Province	County / District	City / Village	Setting / Specific area
Golestan	Gonbad settlement		1 urban area
	Gonbad settlement		1 emergency shelter
		Aqh Ghala	3 villages Urban area
		Gomishan	Urban area 1 village 1 - emergency shelter in a school
Kermanshah	Sarepol County	Sar-e Pol-e Zahab city	Anzal - Ghal'eh Shahin Reza Lak - Beshiveh & Paataagh
	Kermanshah county	Posht Tang Zahab	
	Eslambad –e Gharb county		Naveh Fereh - Houmeh Kaani Aziz – Houmeh
Lorestan	Pol Dokhtar county Central District	Poldokhtar city Malavi village Murani village Babazeid village Chammehr village	
	Pol Dokhtar County Mamulan district	Mamulan city Afrineh village Chamshahran village	
Khuzestan	Ahvaz county	Ahvaz city	2 camps
	Esmailieh district	Om al Tamar village Malehan village	
	Shush County Shavur district	Ahu Dasht village	1 camp
	Shush Country Bam dezeh district	Seyed nabi village	
	Hamidieh county		1 camp
	Dashte Azadegan county Dehlavieh district	Seyed naser village Seyed Khalaf village	

3. Key Findings based on NRC and external stakeholder triangulated information

3.1 Golestan Province

300 000	Individuals affected by the adverse weather
7 306	Houses totally destroyed
10 531	Houses partially destroyed
10 083	Individuals who had water removed from their homes
8 015	Individuals who were provided with temporary shelters
56	Villages affected
17	Villages evacuated
270 000	Hectares of agricultural land flooded
100 000	Hectares of agricultural crops destroyed

Flash floods began on 19 March in Golestan province, north east of the country, resulting in the evacuation and displacement of thousands of individuals. Agricultural lands and livelihood assets were destroyed, in addition to damage to public infrastructures (power supply, roads, schools and health centers) Electricity supply was affected, and to a lesser degree, in some locations water has become unsuitable for use. Agh Ghala and Gomisham areas, downstream from Gonban settlement have been severely affected. As at 10th April, several villages and a significant section of Gomishan City are still under water.

30 000 Afghan refugees live in Golestan province of whom 3 000 are undocumented. Many of those Afghans were affected and displaced but received first-line emergency assistance. The refugee zone (Afghan-abad) in Gonbad city was affected by the floods. 35 houses destroyed and 150 were damaged.

3.2 Lorestan Province

14 650	houses in need of complete reconstruction
300km	Main roads damaged
150	Fish farms partially or totally destroyed
57	Bridges destroyed
11 000	Industrial and service sector jobs significantly affected or lost
7 500	Agricultural jobs significantly affected or lost
964	Villages affected by floods and landslides
11	Cities affected by floods and landslides
30 000	Hectares of agricultural land flooded
15 000	Livestock deaths

In Lorestan province, the majority of cities and districts of the province were affected by the rainfalls, *inter alia* Mamulan, Dorud, Khoramabad, Poldokhtar and Wisiyan. The flow rate of the Khoram Abad river increased from 400 cubic metres per second to 700, while the Tireh river in Dorud experienced a flow rate which increased from 380 to 550 cubic meter per second. Although the number of casualties was mitigated through warnings and evacuation of rural and urban areas, the aftermath included 15 fatalities and 256 injuries. Nonetheless, the scale of financial loss is vast and significant as many people had to leave their houses and all their belongings behind.

712 schools have been affected, of which 60 (150 classrooms) are damaged beyond repair and need to be demolished. The flood affected 256 public health facilities: 29 of which have been completely destroyed. Poldokhtar and Mamulan are the most severely impacted counties. Disaster risk reduction strategies will include complete relocation of some villages to prevent similar damage and loss in the future.

3.3 Khuzestan Province

800	Urban houses totally destroyed
6 138	Rural Houses totally destroyed
117	Villages flooded and inhabitants displaced
20 000	Head of cattle lost
4 500	Hectares of agricultural land flooded and crops destroyed
766 million Euro	Estimated financial loss

The rainfall in the province, which increased threefold from last year, yielded a flow of 8.2 billion cubic metres into provincial dams in less than two weeks. Karkhe, Dez and Karoon, the 3 main rivers breached their banks at various points, resulting in peripheral cities and villages becoming submerged in varying degrees. Public infrastructure in the form of power supply roads, schools and health centres have been significantly impacted and 6 fatalities have been reported.

In certain areas, floods occurred just prior to harvest times and in locations where the communities are still in the recovery phase of 2016 floods and the drought in 2017. Certain mitigation measures implemented in anticipation of the damage included facilitating run off of the Karkhe river at 13 points, evacuation of villages and accommodation in temporary emergency shelters, and rehabilitation of water channels.

3.4 Kermanshah Province

The effect of the floods on infrastructure in the province was less significant: no substantial damage to the electricity or gas network was caused by the flood, and the assessment team observed only minor damage to roads in the assessed locations. Communities in the assessed villages reported agricultural damage of up to 10%.

The notable impact of the floods was felt in areas affected by the November 2017 earthquake. These areas comprise temporary arrangements in response to the earthquake, such as prefabricated housing. People living in camps in urban areas following the earthquake have been most impacted.

3.5 Estimated number of individuals and/or households affected

In Golestan province, 300 000 individuals comprising 200 000 urban, and 100 000 rural.

In Lorestan province, an estimated 300 000 individuals.

In Khuzestan province, 400 000 individuals.

In Kermanshah, a total of 1 281 households have been affected.

The total number of people severely impacted by the floods in the three NRC assessed provinces is estimated to be in excess of **1 million individuals**.

3.6 Market Assessments

Market assessments were conducted in all areas visited. The assessment teams conducted interviews using an adapted questionnaire for emergency market assessment.

Findings are as follows

Province	Food	Hygiene products	Household NFIs	ATMs, POS terminals	Comments
Golestan	Partially available, little price increase	Available, No price increase	Partially available, no price increase	Available	The shops are open, and the availability of goods is full or partial although slight price increases were detected. ATMs and POS terminals are functioning. The residents of the flooded villages have difficulty accessing shops but the situation should revert to normal shortly. Agh Ghala for example has operational markets in the 70% dry sectors of the city.
Lorestan	Partially available, increased prices	Partially available, increased prices	Partially available, increased prices	Partially available,	In the cities the markets are functional. Shops are equipped with working POS terminals, and the ATMs are functional, although significant price increases were reported. In affected rural areas the markets are not functional and communities cannot access markets in the cities due to poor road conditions and increase in prices. In-kind assistance should be considered.
Khuzestan	Partially available, increased prices	Partially available, increased prices	Partially available, increased prices	Partially available,	Conditions in Khuzestan mirror those of Lorestan where city markets are functional and shops equipped with working POS terminals. ATMs are functional. Significant price increases have been reported. Similarly, the rural markets are not functional and communities struggle to access city markets due to poor road conditions and significant increases in prices. In-kind assistance should be considered.
Kermanshah	Available, No price increase	Available, No price increase	Available, No price increase	Available	No disruption of the markets detected.

Overall situation of the markets:

In Kermanshah, markets have returned to normal, while in Golestan, Lorestan and Khuzestan markets are mostly functional in the dry areas of the cities, with access to all types of basic goods. Cash transfer systems are functional. In Lorestan and Khuzestan, prices increases have been identified.

In flooded rural areas of Lorestan, Khuzestan and Golestan, access to markets is difficult or impossible for the waterlogged households. Food and water are delivered to these villages by boat and/or helicopters by IRCS. Consideration should be given to distribution of non-food items.

3.7 Sectoral Summary of Needs

The table below provides a summary of the sectoral needs observed in the provinces visited.

It is anticipated that similar humanitarian needs will be identified across the entire expanse of the provinces, with specific needs depending on factors such as scale of destruction, previous socio-economic situation, duration of the flooding, and the like.

NRC and ancillary needs assessment trips highlighted the prioritized needs of individuals, as communicated by those affected, as hygiene equipment for women and children predominantly, clean drinking water and water for household use, latrines, non food items, sludge pumps, mini loaders for removal of mud and garbage, milk, nutritional supplements and clothing for children, and basic kitchenware. Most people interviewed raised livelihoods as their primary concern.

1	WASH support to temporary shelters	Temporary shelters (in schools, sports-centers, religious institutions) require additional temporary water supply and sanitation facilities (latrines and shower units) <i>In Lorestan province alone, an estimated 12 500 showers and latrines are required for 80 000 individuals.</i>	Golestan, Lorestan, Khuzestan, Kermanshah (shelters of 2017 earthquake victims)	Households living in temporary shelters.
2	WASH hygiene items for households in affected villages	For people who stayed on their properties in flooded villages (in their homes, in tents next to their damaged houses, or on the roof). Require water filters or tablets to purify water as well as suitable water containers and basic training to properly use tablets. They are also in need of in-kind hygiene items such as soap, shampoo, and sanitary pads	Golestan, Lorestan, Khuzestan	Residents of the flooded rural areas
3	WASH hygiene items for households in temporary shelters	Hygiene non-food items, which are essential for recovering and enhancing the hygiene conditions in the temporary shelters: soap, shampoo, sanitary protection, jerry cans.	Golestan, Lorestan, Khuzestan Kermanshah (shelters of 2017 earthquake victims)	People affected by the flood who were evacuated to temporary shelters
4	WASH support to affected villages	Water supply providing drinkable water, latrines and showers have been damaged in many villages and are no longer functional. Sewage systems (septic tanks) are damaged or destroyed, and grey water is released in the environment and on the streets. Assistance with garbage collection and waste management. <i>It is estimated that 2 000 000 individuals require WASH assistance due to the flood impact on 47 cities and 2 509 in 4 provinces alone.</i>	Golestan, Lorestan, Khuzestan	Flooded rural areas
5	Infrastructure support: pumping water from flooded areas	Several areas that are still under water require water/sludge pumps to remove the water and mud.	Golestan, Lorestan, Kermanshah	Residents of the flooded rural areas with the support of local authorities
6	Permanent shelter repairs	Support to households who need to repair/rehabilitate their damaged shelters possibly through cash assistance, training/capacity building and technical support. <i>An estimated 263 561 people have suffered total destruction or significant damage to their homes in Lorestan and Khuzestan provinces.</i>	Golestan, Lorestan, Khuzestan Kermanshah (residents of temporary shelters after the earthquake)	Residents of rural and urban areas affected by the flood

7	Essential household NFI	Affected households lost most of their essential household NFIs when evacuating at short notice. NFIs should include plastic mats, kitchen sets, mosquito nets with repellents, etc. This could be addressed through provision of multipurpose cash assistance or in-kind supplies depending on the access to the market.	Golestan, Lorestan, Khuzestan, Kermanshah	Residents of rural and urban areas affected by the flood
8	Infrastructure support: repair of damaged community facilities	Large infrastructure components (including roads and bridges) are damaged or destroyed. Access is only possible by boat to many areas.	Golestan, Lorestan, Khuzestan, Kermanshah	Rural and urban areas affected by the flood
9	Education	Many schools and classrooms are damaged or destroyed (especially in rural areas). Temporary educational space and equipment is required and stationery for children are urgent needs. <i>Current national numbers indicate that 170 000 students are in need of emergency education. In the 3 provinces listed, 164 schools (620 classrooms) have been totally destroyed, while 1 087 schools (5 000 classrooms) have been partially damaged.</i>	Golestan, Lorestan, Khuzestan	Rural and urban areas affected by the flood
10	Food security support to affected households	Vulnerable households in affected rural areas require support with food safety net. This may also be addressed through a provision of multipurpose cash. So far, food has been provided by charity or state organizations but it is unclear how long this assistance will be provided.	Golestan, Lorestan, Khuzestan	Mainly residents of the flooded rural areas
11	Livelihoods	The floods have caused significant damage to agricultural lands and livestock in the affected villages, which has a very significant impact on livelihood activities. <i>An estimated 1 800 000 people will need restoration of their income sources, or access to alternative livelihoods.</i>	Golestan, Lorestan, Khuzestan, Kermanshah	Mainly residents of the affected rural areas
12	Psycho-social support	People have been strongly affected by the natural disaster as many of them evacuated their homes in emergency. They have now lost everything and many of them have some loans to reimburse to the bank. Children are also deprived from their normal life (access to schools, safe environment for playing, etc.)	Golestan, Lorestan, Khuzestan, Kermanshah	Residents of rural and urban areas affected by the flood
13	Health	Health facilities (centres, hospital) have been damaged or flooded and are only partially functional to date. In addition, communicable diseases are reported in temporary shelters. (e.g. chickenpox, lice, etc.) and water borne diseases could occur in rural areas due to lack of WASH facilities. Some medicines are also reported as missing.	Golestan, Lorestan, Khuzestan, Kermanshah	Residents of rural and urban areas affected by the flood, residents of temporary shelters
14	Protection of women and children	Women are unable to leave their premises due to cultural restrictions on travelling by boat or wearing plastic fishing pants and boots. They are therefore unable to purchase sanitary items. Currently women are washing the sanitary products in polluted water. Children are unable to attend school and play unsupervised in polluted water. Focus should be paid to creating and equipping child friendly and women's safe spaces to provide respite from possible negative coping mechanisms within the family, such as abuse. <i>In Lorestan province there are a reported 8 800 female headed households, and 7 500 households headed by the elderly.</i>	Golestan, Lorestan, Khuzestan	Mainly residents of the flooded rural areas

4. Recommendations

Recommendations are provided below for each province, and are similar in nature between Golestan, Lorestan and Khuzestan provinces due to the similarities in identified needs.

Golestan province

Main recommendations

1. Provide WASH solutions (latrines and showers) to temporary shelters where the WASH facilities lack sufficient capacity.
2. Provide sludge pumps to help removing water and sludge from flooded areas.
3. Provide in-kind hygiene kits to areas that are flooded, with a particular focus on hygiene needs of women and girls.
4. Provide in-kind non-food items or multipurpose cash assistance to satisfy basic needs of the households. In many areas, markets are fully or partially functioning. The cash assistance should cover food, hygiene items, essential household items, and other basic expenses of the households. Where there is no access to a market, in-kind supplies will be provided
5. Attempt to access villages that were inaccessible earlier, conduct needs assessments and market assessment in these areas.

Lorestan province

Main recommendations

1. Provide basic non-food items such as hygiene kits (including mosquito nets), housing items (including kitchen items, stove), blanket, etc. Priority is rural areas (flood-affected villages). In-kind supply is to be considered when access to the market has not been restored.
2. Repair and/or provide WASH facilities such as water supply, pumps, latrines, showers for temporary shelters and rural areas.
3. Provide solutions for assisting people to resume their livelihood, such as multipurpose cash and cash for work.
4. Provide access to education to children whose schools were damaged/destroyed through provision of equipment and stationeries in temporary educational spaces.
5. Provide support for reconstruction and rehabilitation of shelters.

Khuzestan province

Main recommendations

1. Provide basic non-food items such as hygiene kits (including mosquito nets), housing items (including kitchen items, stove), blanket, etc. In-kind supply is to be considered when access to the market has not been restored.
2. Repair and/or provide Wash facilities such as water supplies, pumps, latrines, showers for temporary shelters and rural areas.
3. Provide sludge pumps to help removing water and sludge from flooded areas.
4. Provide solutions for assisting people to resume their livelihood, such as multipurpose cash and cash for work.
5. Provide access to education to children whose schools were damaged/destroyed through provision of equipment and stationeries in temporary educational spaces.
6. Provide support for reconstruction and rehabilitation of shelters.

Kermanshah province

Main recommendations

1. Provide WASH solutions (rehabilitation and new construction of latrines and showers) to select temporary shelters in urban areas, which are hosting people affected by the 2017 earthquake.
2. Provide communal WASH solutions (rehabilitation and new construction of latrines and shower units) to replace the ones that were installed following the earthquake and were destroyed by the flood.

3. Provide in-kind hygiene kits in some temporary shelters that are hosting people affected by the 2017 earthquake.
4. Provide multipurpose cash assistance to vulnerable households who are living in temporary shelters since the earthquake, to replace household items lost in the flood.
5. Assist with the relocation of the earthquake temporary shelters that are situated close to the river and were affected by the flood, to safer location.
6. Assist the restoration of a bridge in Javan Miri village, to provide critical connectivity to 60 households



Receding floodwaters in Golestan – April 2019. Photo: Hamidreza Fakhar/NRC

5. Assessment Team

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External :

Pars Development Activists (PDA)
Society for Recovery Support (SRS)

ⁱ <https://en.trend.az/iran/society/3032506.html> - Flood on March 9-10, caused damage to Sistan and Baluchistan in the amount of 3.36 trillion Iranian rials (roughly \$80 million), said Abdurrahman Shahnavazi, DG of the provincial emergency situations department.