

Flash Floods Rapid Needs Assessment Report

Sudanese Red Crescent Society (SRCS) – Northern State Branch

Sudan: Northern State: Marawi, delgo, Dongla, Halfa, Alrbugig, Algolid and Aldabah localities.



Executive Summary

In August 2024, heavy rains and flash floods in Northern Sudan affected an estimated 25,696 people and 6,279 families. Among the key statistics 2,468 homes were completely damaged, 3,739 were particularly damaged, and 2,183 latrines collapsed across seven localities. Tragically, at least 16 people lost their lives, 658 were injured, and 676 animals perished. Partners are responding to the flash floods with prepositioned supplies, but stocks are rapidly being depleted and need replenishment to sustain the response. The rainy season is anticipated to continue until October, with predicted above-average rainfall, leading to a high likelihood of further flash and river floods.

As a part of the flood and flash floods Rapid Needs Assessment, carried out by the Sudanese Red Crescent Society-Northern State Branch (SRCS-NS), it was discovered that the impact of natural disasters extended beyond the environment and livelihood activities. Many schools and health facilities in the flood-affected communities were either damaged or completely collapsed, leaving thousands of people, particularly children, vulnerable to various risks and hazards. To address these challenges, SRCs-NS agreed to assess the infrastructure damage and other immediate lifesaving needs across various sectors.

Due to timeline and capacity constraints, the assessment focused on the most affected areas in seven localities in the northern state. Approximately 20 to 30 per cent of the people in these localities were affected, with many thousand temporarily displaced and in need of recovery assistance. The impact on crops and infrastructure was also significant, with 30 hectares of dates, 50 hectares of fruits, and 66 hectares of vegetables damaged and affecting many school health centres.

BACKGROUND:

1.1. State context:

The Northern state of Sudan faces a spectrum of natural and human-induced hazards, particularly environmental challenges such as land degradation, soil erosion, deforestation, water scarcity, and pollution. These challenges have significant impacts, including heightened mortality and morbidity, decreased agricultural productivity, and substantial socio-economic costs, all exacerbated by hydro-meteorological hazards and climate change. Consequently, these environmental threats have far-reaching effects on poverty, food security, long-term economic growth, and the peace process in the region. Furthermore, concerns about deforestation, changes in ecosystems, and habitat transformations are prevalent. The impact of climate change further compounds these existing challenges, disproportionately affecting both rural and urban communities throughout the northern states. Chronic drought, reduced rainfall, and increased rainfall variability, especially in the northern regions, pose substantial risks. Paradoxically, devastating floods and flash floods also occur during exceptionally wet periods, with repercussions including loss of life, decreased crop production, spread of water- or vector-borne diseases, reduced hydropower production, and infrastructure damage. Moreover, drought, desertification, and dunes lead to decreased soil fertility, impacting agriculture economics and production, ultimately resulting in internal migration.

1.2. Descriptions of the current disaster

In August, close to 25,696 individuals were impacted by heavy rains and flash flooding in the Northern state, with approximately 2468 houses completely damaged, 3739 particularly damaged, and 2183 latrines completely collapsed across seven localities. As of now, joint needs assessments have been carried out at these seven localities to evaluate the extent of the damage and provide immediate assistance to those affected by the flooding. The affected population is in urgent need of food items, non-food items, healthcare (medicine), and WASH services. According to SRCS, aid is being extended to

individuals impacted by flash floods in some of the affected regions. Humanitarian actors require access to those affected by the floods. Tragically, at least 16 people have lost their lives, 658 have been injured, and 676 animals have perished across the Northern state. Partners are currently responding to the floods with prepositioned supplies; however, stocks are depleting rapidly and need to be replenished to sustain the response. The rainy season is projected to persist until October with above-average rains in the forecast, heightening the probability of additional flash floods and river floods.

Due to the absence of effective early warning systems, floods, heavy rains, and torrents have led to the instability of many families, resulting in the decrease and destruction of numerous homes and farms. The diminishing agricultural land and resources have contributed to environmental degradation and pest infestations. Consequently, homes and farms near the Nile River are at significant risk due to the weakness of the terraces and the fragility of building materials. The impact of these risks and hazards has resulted in a high level of poverty and migration, affecting the livelihoods of the people and leading to the destruction of farms, schools, and homes, leaving individuals in peril. The fragility factors that have emerged this year are as follows:

1. Existence of shelter centres within the state's localities.
2. Forced habitation of large numbers of displaced persons in unsuitable old houses within the villages.
3. Insufficient capacity of the Northern State Government and the Emergency Room to address the challenges due to the country's conditions.
4. Absence of a strategic stockpile in the branch as a result of interventions for displaced persons inside shelter centers throughout the year.
5. Inadequate response from organizations and United Nations agencies that came to the state due to the ongoing war.

1.3 Risks analyses

Heavy rains accompanied by flash floods in Seven localities of the state from 5 August led to the collapse of many houses and damage to public institutions (schools - and health centers), leading to the cessation of work. In addition to the damage of many roofs of houses, latrines and public utilities, death of animals, and destruction of farms and crops, heavy rains and flash floods led to the accumulation of water in low-lying areas and areas, which poses a health and environmental hazard to the residents of the affected areas in the long term. The health situation about housing near animal waste and destroyed toilets or latrines. Since the occurrence of the disaster, the Higher Committee has toured the affected areas, initially; there is a need for shelter and food, there is three deaths were reported. The humanitarian community in the northern state expressed willingness to support the affected population by every possible means.

1.3.1 The Rapid Assessment Results:

NO	Locality	Affected houses		Latrines	Public facilities	Affected families	Remarks
		Totally	Partially				
1	Marawi	1415	740	709	21	2449	11 deaths, 322 injuries, and 440 animal deaths
2	Dongle	141	1563	382	11	1722	2 deaths, 55 injuries, and 177 animal deaths
3	Al-gold	14	157	124	6	171	6 injuries
4	Halfa	879	1011	942	3	1784	3 deaths, 210 injuries, 59 animals dead
5	alburgig	2	166	2	0	168	
6	dalgo	14	91	21	0	105	11 injuries
7	Al -dabah	3	11	3		15	12 injuries
Total		2,468	3,739	2,183	41	6,414	

Note:

- 16 deaths and 658 injuries 676 animal deaths
- Due to the cracking and fragility of buildings and the accumulation of water there is the possibility of increasing the number of houses and institutions collapsed.
- Public facilities (schools -health centers -etc.).
- In addition, some areas suffered heavy 676 losses in animals and crops, cows' areas, and fruit trees and farm

It is worth mentioning that the majority of houses are now uninhabitable due to the crashes and their walls full of water.



1.4 *adapting and Response mechanism:*

Affected people have relied on housing with their neighbors or inside schools, farms, and mosques. Some affected areas have also been assisted by neighboring areas to provide ready meals (TAKIA) and stand with them in rescue operations.

1.4.1 Shelter

More than 30 per cent of vulnerable individuals in affected areas currently lack shelter and are residing in open spaces due to the effects of heavy rain and floods. These displaced persons are in urgent need of shelter, food items, and non-food items (NFI). Among those affected, approximately 20% are women, 40% are children, and 6% are elderly or disabled. In most cases, affected families were able to salvage important documents and valuables. The vulnerability of old mud houses contributed to the high number of affected individuals. Both poor and middle-class families were impacted; however, middle-class families expressed confidence in managing, making it a priority to focus support on identified poor families, particularly in terms of shelter assistance. The poor and vulnerable people are appealing for support in rebuilding their shelters and replacing lost valuable materials. It is crucial to coordinate with the housing department to provide shelter-related assistance, especially for families without land whose shelters have been severely damaged. Further assessment is needed to collect data on households without land ownership and to understand the government's stance on shelter compensation. This calls for coordination with local agencies and the government to facilitate relief and early recovery efforts.

1.4.2 Water, Sanitation, and Hygiene (WASH) and Health:

The water network in the entire area has been severely affected by power cuts resulting from storms and the collapse of electricity lines, leading to a critical shortage of drinking water and widespread issues in the affected areas. Furthermore, numerous health centers have collapsed, and there has been a significant increase in the rate of electrical injuries. The sanitation and environmental health situation have also deteriorated, with the majority of latrines collapsing and sewage mixing with drinking water. Additionally, the emergence of numerous ponds and stagnant water-gathering areas poses a significant risk, leading to concerns about mosquito breeding and the spread of flies, which could further impact the environment.

Key Water, Sanitation, and Hygiene (WASH) needs emerging from the field assessment indicate urgent requirements in both hygiene and sanitation. Hygiene practices, such as handwashing, are only carried out with water, and the community lacks awareness of water treatment agents. There is a crucial need for health promotion services to raise awareness among the community and reduce the spread of diseases. Moreover, the affected area has reported a lack of assistance from local government, humanitarian organizations, or UN agencies.

In terms of sanitation, the destruction of toilets and latrines due to landslides has resulted in significant damage, with approximately 2183 latrines in households being destroyed. Only around 30% of affected people have access to a toilet within the neighborhood, and there is currently no aid agency providing support in the area of sanitation in the northern state.

1.5 Educational institutions and infrastructure

There are schools and infrastructure collapsed, which led to the instability of the study and the deterioration of the educational environment in all the region there is a problem with drinking water in most schools and the collapse of latrines, and pupils were at risk of collapse of buildings over them because of water surrounding it, the roofs of all schools collapsed due to hurricanes. So, need for school infrastructure to be built with permanent materials.

1.6 Property, farms and crops

Many of those affected have lost their property, crops, and livelihoods, making them poorer and more vulnerable, more than 300 farms were destroyed in all areas.

1.7 Food Insecurity and Livelihoods

The key food security and livelihood needs emerging from the field assessment include an urgent requirement for food aid and logistical support to distribute food and relief items in the flooded areas. It is vital to prevent a decline in the nutritional status of the most vulnerable populations, necessitating the continuous provision of relief assistance. Additionally, restoring livelihoods through short-term emergency

agricultural activities such as distributing seeds, agricultural inputs, and tools is essential to combat the severe impact of the floods on agricultural activities.

The assessment highlights that the primary livelihood in Northern state communities involves farming dates, wheat, beans, and other crops. Other livelihood sources include buying and selling agricultural products, livestock, and tailoring in the city market. However, these sources of livelihood are not sustainable, which necessitates assistance with farming seedlings, capital for business, and more tailoring machines.

Furthermore, returnees in several localities expressed that enhancing their livelihood, making it sustainable, requires assistance in skills such as soap making, disinfectant production, cream production, and room freshener production. This will enable them to market their skills and products in the local market. Currently, only an average of 50% of people in all communities are engaged in farming-related activities, primarily those with farmland close to the community.

In all affected communities, returnees require water pumps, seedlings, and tools for irrigation farming, which was their main source of livelihood before the emergency. Additionally, they need fertilizers and seeds for dates, wheat, corn, and beans to restart farming activities.

a. Humanitarian Community Response Mechanism:

Main Coordination Committee: state governor, Sudanese Red Crescent, Ministry of Urban Planning, Civil Defense, Ministry of Health, Ministry of Education

Since the disaster occurred, the Higher Committee has toured the affected areas. Initially, the pressing needs are for shelter and food.

The humanitarian community in the Northern state has expressed willingness to support the affected population in every possible way.

The following action points were agreed upon:

Rapid Assessment teams will continuously update information at the field level. However, the available Non-Food Items (NFIs) with partners in the northern state are insufficient to cover all the gaps. As a result, SRCS-NS is required to submit an immediate NFI request to SRCS-HQ, SRC for 4000 households (as the total number is expected to exceed 6,414 families), and additional steps will be taken to expedite the process.

Furthermore, people living along the main creek will need to be relocated to safer areas.

The Water and Sanitation technical teams will address the issue of damaged latrines while developing a hygiene plan. Additionally, it's vital to provide mosquito nets for the affected people and to support the clinics with an adequate supply of emergency drugs and supplies.

SRCs-NS intervention:

Following a national alert for flooding, the national society, in coordination with others, activated their contingency plan. In agreement with other stakeholders, SRCS-NS identified its response strategy. Assessments were conducted by the staff and volunteers in the affected areas, and the initial response was activated as follows:

- Over 1088 SRCS volunteers were mobilized for response rescues and evacuations.
- SRCS provided training in rescue evacuation and relief distributions.
- SRCS-NS provided non-food items to 1000 families and distributed non-food item
- SRCS-NS volunteers mobilized in the affected areas for search and rescue activities, as well as offering first aid to vulnerable people. Alongside their response, volunteers conducted assessments and registered damages and affected communities in the area for further response.
- They participated in evacuations and worked with civil defence personnel in water pumping activities.
- Psychological support was provided to several families during and after the disaster, and training in evacuation and rescue was also provided.
- The SRCS-NS also coordinated their activities with respective government and non-governmental actors at the state level and locality level through the established coordination mechanism.





Number	Locality	Volunteers' numbers	First aid	Psychological first aid	Evacuation and rescue
١	Dongola	61	82	35	79
٢	Marawi	47	44	80	66
٣	Borgaig	29	23	5	48
4	Daba	48	33	95	58
5	Goalid	25	18	32	37
6	Dalگو	34	16	67	44
		244	231	274	339

Volunteer's Roles and Responsibilities

Volunteers intervene with:

- awareness lectures to help affected families, building terraces, and evacuation of property.
- Conducting field surveys needs assessment and providing first aid and evacuation services.
- Submit daily and weekly reports to the state branch emergency room.

- Emergency room during floods time.
- Providing relief and assistance services to those affected.

Urgent needs

- Provide shelter materials for 5000 affected families and Emergency medicines and hygiene kits and providing environmental sanitation equipment and spraying and towing pumps.
- Budget for the management and subsistence and deportation of volunteers.
- 100,000 chlorine tablets.
- Ambulatory materials (2000 first aid boxes).
- Food and fast food for 5000 families for 10 days.
- Providing safety tools for volunteers for rapid intervention (emergency team).
- Drilling materials (200 Izm-200 Quaric-200 digging tools),5000 small sacks for doing terraces.
- Providing 5000 mosquito nets. And Provide 5000 portable toilets.
- Contribute to the repatriation of some of the affected and build new villages typically.
- Providing 2000 wheelchairs for the disabled.
- Providing 5000 hygiene kits and 5000 packages of Sanitary Kits.
- Providing 5000 kitchen kits.
- Providing 1,000 Victor control pump
- 500 Environmental campaigns.
- 5000 Blankets, 5000 Jerry cans, 5000 Sleeping Mats 5000 Plastic Sheets, and Soap.
- Solar-powered lamps for 5000 families
- School and educational supplies for children in the affected areas
- -Cash or voucher assistance for 5000 families to meet their immediate needs and support the local economy
- Livelihood support for affected individuals to help them rebuild their sources of income
- 14 Mobile clinics to provide medical support to remote or hard-to-reach areas
- Communication equipment such as satellite phones or two-way radios for better coordination and response
- Residual chloride measuring devices - comparison
- - Training volunteers to guide citizens on how to use chlorine
- - Providing a budget for preparedness in islands expected to be damaged.

RECOMMENDATIONS FOR ACTION

The assessment team recommends the following actions as the main recommendations for actions based on the needs assessed in the community

- Provide NFI
- Food and livelihood (Agricultural support by (seeds, seedlings, tools, and water pump) - Income generator projects- Livestock support – water harvesting– vaccination to combat animal disease. Community gardening and home nursery)
- Shelter (Provide tents for affected people who lost their houses -Common latrines -Potable drink water or water sources construction of temporary houses and rehabilitating houses that are badly damaged).
- Hygiene Kits
- Hygiene Promotion (Sanitation: There were three scenarios identified for latrines in affected areas; Total collapse of latrines or damage beyond repair, in this case, there’s a need to rebuild the latrines from scratch; Partial damage of latrines will need some rehabilitation work; Functional latrines -
- Advocacy (To coordinate with local agencies and government for relief or early recovery efforts. -Advocacy with state government especially the housing department for providing complete shelter)
- Systematically upgrade the northern state response with initial steps to include supporting and strengthening the SRCS -northern Emergency Operations.
- Urgent and detailed review of these assessment findings by the Health, WASH, and Food Security Clusters, with timely and appropriate follow-up actions.
- Prioritize northern state infrastructure rehabilitation to assure access to inaccessible communities, with particular attention to Health and education.
- Scale up teacher training, focusing on areas with large numbers of students, and include essential emergency components such as risk reduction and hygiene promotion.
- IEHK

RECOVERY AND RECONSTRUCTION

Recovery and Reconstruction Needs Housing

The recovery needs for the housing and shelter sector are:

- Ensure inequalities based on housing will not be exacerbated as a result of reconstruction following the 2024 flooding, and that efforts are directed accordingly. At the same time, continue the so far successful implementation of the plan to increase per capita average dwelling size.
- Ensure households moved to safer locations will have access to basic services and will not be disadvantaged as a result of the relocation.

Transportation Infrastructure (Roads and Bridges)

The following recommendations pertain to transportation infrastructure needs in the seven localities, where restoring connectivity is essential for people to resume their day-to-day activities:

- Restore rural accessibility by repairing impassable roads and bridges.
- Construct additional cross-drainage structures, including bridges replacing causeways.
- Upgrade key routes to withstand potential hazards.
- Use more stable material at road embankments and side slopes, together with slope protection as required.
- Stabilize hill slopes, including improved drainage and protective works as required.
- Improve and strengthen surface drainage arrangements alongside the roads.
- Engage local communities in the reconstruction of the transportation infrastructure, encouraging female workers to participate and using local materials where possible.
- Develop and implement resilient design and construction standards, maintenance routines, and budgets.

Flood Control and Irrigation Infrastructure

Restoring the infrastructure for flood control and irrigation is a high priority to ensure communities are protected against future floods. The following recommendations reflect the recovery and reconstruction needs:

- For the rehabilitation of the flood control and irrigation structures, it is important to choose appropriate materials and implement design standards fully, including standards for maintenance during the lifespan of the infrastructure.
- The design of rural infrastructure should be based on a detailed analysis of the local conditions. The lack of detailed design in the past may have contributed to the failure of some of the structures.
- Consider improving design principles with greater concern for flexibility and drainage. Detailed hydrological studies will be important to avoid the overtopping of the embankments in the event of floods of similar magnitude.
- The operation manuals for the reservoirs (large and small) are in urgent need of review, as these could bear on the safety of the infrastructure that will be reconstructed downstream in the long term. Improved reservoir operations can reduce the flood peaks in the rivers and, consequently, lower the chances of the overtopping of dikes and unintended flooding.

Agriculture, Livestock, and Livelihoods

Restoring agriculture, livestock, and livelihoods is key to the swift recovery of the communities, especially in the rural areas, from the effects of the floods. The following recommendations pertain to the agriculture, livestock, and livelihoods sectors:

- Crops and fruits (Distribute seeds and other inputs for off-season replanting in affected areas and rebuild affected farmers' stocks of saved seeds and planting material.
- Livestock (Restock animal herds and build capacity, including animal management health care, and pasture management- Provide animal feed, vaccinations, and veterinary services.

Education

Long-term recommendations: 3-6 months, and beyond While continuing to support interventions that provide immediate relief to struggling schools, it is also recommended that the education sector invest in the following development activities that will help foster resilience over the long term:

- Working closely with the Government, advocating for school feeding programs or alternatives such as food vouchers, cash, or take-home rations, focusing on newly accessible areas Procuring basic learning materials for students, and replacing consumable items as necessary.
- Strengthen the relationship between the education and protection clusters around issues related to child-friendly spaces, youth engagement, and reporting and monitoring of violations, and include DRR training components in teacher training.
- Construct additional permanent classrooms and latrines in overcrowded schools.
- Build the capacity of local NGOs and institutions, dedicating an increasing share of Common Humanitarian Fund (CHF) and Central Emergency Response Fund (CERF) allocations to indigenous organizations, and Advocate for education to be prioritized in CHF allocations and CERF funding.

Health, WASH, and Food Security Clusters, with timely and appropriate follow-up actions.

- Prioritize northern state infrastructure rehabilitation to assure access to inaccessible communities, with particular attention to Health and education.
- Scale up teacher training, focusing on areas with large numbers of students, and include essential emergency components such as risk reduction and hygiene promotion.
- Sanitation: There were three scenarios identified for latrines; Total collapse of latrines or damage beyond repair, in this case, there's a need to rebuild the latrines from scratch; Partial damage of latrines will need some rehabilitation work; Functional latrines.