

El Niño Problems in Somalia

1. Introduction

El Niño is a natural climate phenomenon associated with unusually warm sea-surface temperatures in the central and eastern tropical Pacific Ocean. It changes global atmospheric circulation and can influence rainfall patterns in the Horn of Africa, including Somalia.

In Somalia, El Niño can contribute to heavy rainfall, river flooding, flash floods, displacement, damage to infrastructure, crop losses, livestock deaths and environmental degradation. However, its effects vary by season and location. El Niño does not always produce the same rainfall conditions, and its impacts depend on local weather patterns, land conditions, river levels and preparedness.

Somalia is particularly vulnerable because many communities depend on rain-fed agriculture, livestock production and natural resources, while drainage systems, flood protection infrastructure and access to essential services remain limited in some areas.





2. Major El Niño-related problems in Somalia

2.1 River flooding and flash floods



Heavy rainfall associated with El Niño can cause the Jubba and Shabelle rivers to overflow, while intense rainfall can trigger flash floods in urban and rural areas.

Major problems include:

- Flooding of settlements and agricultural land.
- Destruction of houses, roads, bridges and drainage systems.
- Loss of human lives and livestock.
- Disruption of schools, health facilities and markets.
- Displacement of vulnerable households.

The October–December 2026 rainy season presents a significant forecast flood risk, particularly in central and southern Somalia and along the Jubba and Shabelle river corridors.

2.2 Displacement and humanitarian emergencies

Floods can force families to abandon their homes, farmland and livestock. Displaced households may live in temporary shelters with limited access to clean water, food, sanitation and healthcare.

The 2023 El Niño-related flooding provides a clear example: WHO reported that more than 2.4 million people were affected and 31 health facilities were destroyed.

2.3 Agricultural losses and food insecurity



Floodwaters can destroy crops, seeds, irrigation canals and farmland. Farmers may lose entire harvests, while damaged roads prevent them from transporting produce to markets.

Consequences include:

- Reduced household food supplies.
- Loss of income for smallholder farmers.
- Increased food prices and dependence on humanitarian assistance.
- Reduced availability of seeds and agricultural inputs for subsequent planting seasons.

These effects can be particularly severe when flooding follows prolonged drought, leaving households with limited savings and few resources for recovery.

2.4 Livestock losses and pastoral livelihood disruption

Livestock are a major source of income, food and security for Somali pastoralist communities. Excessive rainfall and flooding can cause:

- Drowning of animals and destruction of grazing areas.
- Increased livestock diseases and parasite infestations.
- Contamination of watering points.
- Disruption of livestock markets and transportation.
- Loss of milk, meat and household income.

Although rainfall can improve pasture and water availability, excessive rainfall may cause substantial livestock losses and damage pastoral livelihoods.

World Meteorological Organization

2.5 Water contamination and disease outbreaks



Floodwater can mix with sewage, waste, animal manure and contaminated drainage water. This increases the risk of waterborne diseases and other public health emergencies.

Key risks include:

- Cholera and acute watery diarrhoea.
- Malaria in areas where mosquito breeding increases.
- Skin infections and other hygiene-related illnesses.
- Malnutrition among children and vulnerable households.
- Reduced access to health services because roads and facilities are damaged.

UNICEF documented concerns about contaminated water sources and increased malaria and waterborne disease risks following the 2023 floods.

2.6 Environmental degradation

El Niño-related extreme rainfall can damage Somalia's natural environment through:

- Soil erosion and loss of fertile topsoil.
- Riverbank erosion and damage to agricultural land.
- Sedimentation of rivers, canals and reservoirs.
- Destruction of vegetation and wildlife habitats.
- Pollution from plastic waste, sewage and other solid waste carried by floodwaters.
- Damage to coastal and marine environments through increased sediment and pollutant runoff.

These impacts can reduce ecosystem productivity and make environmental restoration more difficult.

2.7 Infrastructure and economic damage

Flooding can damage essential infrastructure, including:

- Roads, bridges and transport networks.
- Irrigation and water-supply systems.
- Schools, health centres and public buildings.
- Electricity and telecommunications infrastructure.
- Small businesses, markets and storage facilities.

Infrastructure damage increases the cost of delivering humanitarian assistance, interrupts trade and slows economic recovery.

2.8 Urban flooding and poor drainage

Cities such as Mogadishu and other rapidly growing urban centres can experience serious flash-flood problems where drainage systems are inadequate or blocked by solid waste.

Unplanned settlements, construction in natural drainage channels and poorly maintained culverts can worsen flooding. El Niño-related heavy rainfall may therefore increase property damage, sanitation problems, traffic disruption and public health risks.

3. Areas of Somalia at risk



Hirshabelle State

Beletweyne, Jowhar and surrounding riverine communities face risks from Shabelle River flooding, crop destruction and displacement.



Jubaland State

Communities near the Jubba River, including areas around Luuq, Doolow and Jilib, may face river flooding, damaged farmland and disrupted transport.



South West State

Bay and Bakool communities may face excessive rainfall, flash flooding, erosion and disruption to agricultural and pastoral activities.



Banadir and other urban areas

Urban flash flooding, blocked drainage, damaged roads, waste accumulation and contamination of water sources are important risks.

These are areas of concern, not a prediction that every listed location will flood. Actual impacts depend on rainfall, upstream river flows, local drainage and the effectiveness of preparedness measures. The current 2026 outlook particularly emphasizes the Jubba and Shabelle river corridors.

4. El Niño risk outlook for October–December 2026

Above-normal rainfall

FAO reported in September 2026 that seasonal forecasts indicated up to a 90% probability of above-normal rainfall in parts of Somalia.

Riverine flood risk

The Jubba and Shabelle river catchments are key areas of concern because rainfall upstream can increase river levels downstream.

Food security pressure

Flooding may destroy crops and livestock and worsen existing food insecurity and malnutrition.

Sources: FAO Somalia and UNDRR's 2026 El Niño Climate Impact Outlook.

5. Recommended solutions and mitigation measures

Priority area	Recommended interventions
Flood prevention	Repair river embankments, reinforce vulnerable riverbanks and improve drainage systems.
Early warning	Strengthen rainfall forecasting, river-level monitoring, community alerts and evacuation plans.
Agriculture	Promote flood-tolerant crops where appropriate, improve irrigation drainage, protect seeds and support rapid replanting.
Livestock	Establish livestock evacuation plans and provide veterinary services, fodder and safe water.
Water and sanitation	Protect wells, rehabilitate water points, improve sanitation and prepare emergency water-treatment supplies.
Health	Pre-position essential medicines, strengthen disease surveillance and prepare mobile health teams.
Environmental protection	Restore vegetation, stabilize eroding riverbanks, manage solid waste and protect wetlands.
Community preparedness	Train local disaster committees, identify evacuation routes and prepare emergency shelters.
Recovery and livelihoods	Provide cash assistance, agricultural inputs and livelihood recovery support to affected households.

6. Proposed El Niño preparedness project for Somalia

A coordinated intervention could be developed by the African Environmental Conservation and Blue Economy Development (AECBED), working with relevant government institutions, local communities, humanitarian organizations and development partners.

Somalia El Niño Preparedness and Flood Resilience Project

Indicative project concept — proposed design, not an approved or funded project.

Overall objective

To reduce the loss of life, environmental damage and livelihood disruption caused by El Niño-related flooding and extreme rainfall in vulnerable communities in Somalia.

Proposed components

1. Flood risk assessment, hazard mapping and community early-warning systems.
2. Rehabilitation of drainage channels, river embankments and selected flood-protection infrastructure.
3. Protection of agricultural land, restoration of degraded ecosystems and improved flood-resilient farming.
4. Emergency water, sanitation, health and livelihood protection for vulnerable households.
5. Community disaster preparedness, evacuation planning and local response capacity.

Potential partners and funding sources

FAO, UNDRR, UNICEF, WFP, IOM, relevant Somali government institutions, the World Bank, the Green Climate Fund and other eligible humanitarian and climate-finance partners.

Indicative duration: 12–24 months, subject to project design and funding.

Geographic focus: Priority flood-prone districts along the Jubba and Shabelle rivers, with additional urban or rural locations selected through risk assessment.

7. Conclusion

El Niño poses a significant climate-related risk to Somalia because heavy rainfall and flooding can interact with poverty, environmental degradation, weak infrastructure and existing food insecurity. The 2026 seasonal outlook reinforces the need for early preparedness, particularly before and during the October–December rainy season.

Investing in early-warning systems, flood protection, sustainable land management, resilient agriculture, clean water and community preparedness can reduce disaster losses and strengthen long-term resilience.

For further planning, the key reference documents include the [FAO Somalia El Niño risk warning](#) and the [UNDRR El Niño Climate Impact Outlook for Somalia](#).