

Land Degradation Problems in Somalia

Environmental assessment and project-development overview

1. Introduction

Land degradation is one of the major environmental and socioeconomic challenges facing Somalia. It involves the deterioration of land quality, soil fertility, vegetation cover, water-retention capacity and the ability of ecosystems to support agriculture, livestock production and biodiversity.

Somalia's predominantly arid and semi-arid climate, recurrent droughts, irregular rainfall, floods, and pressures on natural resources contribute to land degradation. These challenges affect pastoralists, agro-pastoralists, farming communities and rural households whose livelihoods depend heavily on healthy land and functioning ecosystems.

Land degradation is not only an environmental problem. It also affects food security, household income, livestock productivity, water availability, resilience to climate shocks and sustainable economic development.

2. Major land degradation problems in Somalia



1. Soil erosion and loss of fertile topsoil

Wind and water erosion remove fertile soil, particularly where vegetation has been cleared or the land is heavily grazed. Intense rainfall can wash away topsoil, damage farmland and deposit sediment in drainage channels.

Consequences: declining crop yields, reduced soil fertility and increased sedimentation.



2. Overgrazing and rangeland degradation

Concentrated livestock grazing around settlements, wells and water points can reduce grass cover and prevent vegetation regeneration. In some areas, prolonged grazing pressure and drought expose soil to erosion.

Consequences: declining pasture quality, livestock losses, reduced carrying capacity and competition over grazing resources.



3. Deforestation and unsustainable charcoal production

Cutting trees and shrubs for charcoal, fuelwood, construction materials and land clearance reduces vegetation cover. Where harvesting exceeds natural regeneration, landscapes become increasingly vulnerable to erosion and desertification.

Consequences: habitat loss, reduced soil protection, declining biodiversity and lower carbon storage.



4. Recurrent drought and desertification

Repeated droughts reduce soil moisture, vegetation growth and the recovery of degraded rangelands. Desertification is the degradation of land in drylands caused by climatic variations and human activities; it does not simply mean that a desert is physically expanding.

Consequences: loss of productive land, food insecurity, livestock mortality and displacement.



5. Flooding and riverbank erosion

Flooding along the Juba and Shabelle river systems can erode riverbanks, destroy crops, damage irrigation infrastructure and deposit sediment. The severity of damage depends on flood intensity, drainage, land management and local exposure.

Consequences: loss of farmland, damaged infrastructure, reduced production and increased soil erosion.



6. Unsustainable agricultural practices

Continuous cultivation, inadequate soil conservation, poor irrigation management and limited replenishment of soil nutrients can reduce agricultural productivity. In irrigated areas, inadequate drainage and unsuitable water management may also cause salinity or waterlogging.

Consequences: declining yields, reduced farm income and increased vulnerability to food shortages.

3. Key underlying causes

Land degradation in Somalia results from the interaction of environmental pressures, unsustainable resource use and institutional challenges. Somalia's National Environmental Policy and FAO's land assessment identify several of these drivers.

- Climate change and climate variability: irregular rainfall, rising temperatures and recurrent drought.

- Poverty and dependence on natural resources: households may rely on charcoal production, fuelwood collection and intensive grazing when alternative livelihoods are limited.
- Weak land-use planning: insufficient enforcement of environmental regulations and limited restoration investment.
- Conflict and displacement: disruption of resource management, damage to infrastructure and increased pressure around settlements and water points.
- Limited access to technology and finance: inadequate soil testing, irrigation management, agricultural extension and conservation equipment.
- Unclear land tenure and resource rights: disputes over access to grazing areas, farmland, forests and water resources.

4. Areas affected and typical degradation patterns



Southern riverine and agricultural areas

Lower Shabelle, Middle Shabelle, Lower Juba and Middle Juba

Soil erosion, flooding, declining soil fertility, irrigation problems and salinity in some irrigated areas.



Agro-pastoral and farming areas

Bay, Bakool, Gedo and parts of Hiiraan

Drought-related vegetation loss, soil erosion, declining crop productivity and pressure on agricultural land.



Northern and central drylands

Puntland, Somaliland, Galmudug and surrounding dryland areas

Degraded pasture, loss of trees and shrubs, wind erosion, drought stress and localized desertification.

These are broad regional patterns, not a substitute for site-level assessment. The severity and type of degradation vary considerably within each region.

5. Scale of the problem

The United Nations Convention to Combat Desertification (UNCCD) country dashboard reports the following estimates for Somalia for 2019.

23.29 million ha

Reported degraded land

36.86%

Of total land area reported as degraded

Important: These are historical, model- and reporting-dependent estimates, not a verified measurement of conditions in October 2026. Different assessments use different methods and reference periods, so their percentages should not be directly compared without checking the methodology.

6. Impacts on communities and the economy

Sector	Main effects
Agriculture	Lower yields, loss of fertile soil and crop failures
Livestock	Reduced pasture, water shortages, animal deaths and lower productivity
Food security	Reduced food availability, rising household vulnerability and increased dependence on assistance
Water resources	Reduced infiltration, sedimentation, depletion of some water sources and irrigation challenges
Biodiversity	Habitat destruction and loss of native plants and wildlife
Livelihoods	Lower incomes, unemployment and increased poverty
Social stability	Greater competition over land and water, resource disputes and displacement

Climate resilience	Reduced capacity of landscapes and communities to withstand droughts and floods
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The impacts reinforce each other: drought reduces vegetation, exposed soil erodes more easily, land productivity declines, and households may face greater pressure to use remaining natural resources. FAO has also documented how the 2025–2026 drought has intensified crop and livestock pressures.

7. Recommended solutions and interventions

1. Afforestation and assisted natural regeneration

Protect existing trees, regenerate native species, establish community-managed woodlots and restore degraded landscapes. Prioritize suitable native species and survival rates rather than simply counting seedlings planted.

2. Sustainable rangeland management

Develop community grazing plans, rotational grazing where appropriate, seasonal pasture reserves and agreed rules for shared water points.

3. Soil and water conservation

Construct contour bunds, check dams, stone lines and gully-control structures where technically appropriate. Introduce rainwater harvesting, mulching and soil-moisture conservation.

4. Climate-smart agriculture

Promote crop rotation, drought-tolerant crops, improved soil organic matter, conservation agriculture and efficient irrigation. Monitor salinity and drainage in irrigated riverine areas.

5. Alternative energy and livelihoods

Expand access to solar energy and cleaner cooking options, sustainable fodder production, beekeeping and other locally viable income sources to reduce pressure on trees and rangelands.

6. Community governance and monitoring

Strengthen community land-management committees, clarify resource-access arrangements, support women's and young people's participation, and monitor vegetation, soil condition and restoration survival.

These approaches are consistent with Somalia's national environmental policy and documented land-restoration priorities.

8. Potential land degradation project for Somalia

For organizations developing an environmental conservation proposal, the following is a possible project framework.

Somalia Land Degradation Rehabilitation and Sustainable Land Management Project

Illustrative concept — proposed parameters, not an approved project

Overall goal

Restore degraded land, improve ecosystem health and strengthen climate-resilient livelihoods for vulnerable communities in Somalia.

Proposed objectives

1. Rehabilitate degraded rangelands, agricultural land and selected watersheds.
2. Restore native vegetation and reduce unsustainable tree cutting.
3. Improve soil fertility, water conservation and climate-smart agricultural practices.
4. Strengthen community-based natural resource management and environmental governance.
5. Increase livelihood opportunities for pastoralists, farmers, women and youth.

Illustrative 12-month targets

All figures below are provisional planning targets and must be validated through baseline assessments, land suitability analysis, community consultation and budget review.

Indicator	Provisional target
Land under restoration or improved management	1,000 hectares
Native trees and shrubs planted or regenerated	100,000 plants or regeneration units
Households receiving direct project support	1,000 households
Community land-management plans developed or updated	10 plans
Community members trained in sustainable land management	500 people
Restoration sites with survival and vegetation monitoring	100% of project sites
Potential funding and technical partners	

Food and Agriculture Organization of the United Nations (FAO), Global Environment Facility (GEF), Green Climate Fund (GCF), United Nations Development Programme (UNDP), the World Bank and relevant government institutions. Eligibility, funding windows and partnership requirements would need to be verified for the selected project and implementing entity.

9. Useful reference sources

- FAO Somalia Water and Land Information Management — [Land degradation in Somalia](#).
- United Nations Convention to Combat Desertification — [Somalia country data dashboard](#).
- World Bank — [Water, agriculture, livestock and environmental services in Somalia](#).
- Ministry of Environment and Climate Change of Somalia — [National environmental initiatives and projects](#).