



CENTRE FOR DRYLAND DEVELOPMENT & RESILIENCE SYSTEM

Building Resilient & Sustainable Communities

Ongoing Research Portfolio – 2026-2027

Somalia

1. Introduction

CDDRS conducts applied, policy-relevant research on critical development challenges affecting communities in Somalia. Our research generates evidence to support resilient food systems, sustainable livelihoods, climate adaptation, improved natural resource management, and informed development interventions.

The ongoing portfolio addresses recurrent drought, climate change, food insecurity, conflict, displacement, agricultural production constraints, crop pests, market instability, and pressure on natural resources. Studies use combinations of household and farmer surveys, quantitative and qualitative methods, agricultural and climate data, market analysis, literature reviews, and other evidence-based approaches.

2. Main Research Themes

Climate Change, Drought and Resilience: Drought drivers, prolonged climate change, household food availability, climate-related market stress, and resilience.

Agriculture and Food Security: Cassava and household food security, banana production, greenhouse farming, beekeeping, post-harvest losses, crop productivity, and agricultural production trends.

Conflict and Livelihoods: Effects of domestic and external conflicts on farming, food security, production, markets, and rural livelihoods.

Natural Resources and Environmental Governance: Natural resources, environmental pressures, governance, climate challenges, and food insecurity.

Displacement and Community Resilience: Environmental, socioeconomic, livelihood, food-security, and conflict-related factors associated with displacement.

Crop Protection and Agricultural Innovation: Crop pests, greenhouse technologies, crop diversification, value chains, and approaches that can strengthen agricultural resilience.

3. Current Research Portfolio

3.1 Impacts of Sand Encroachment

This study examines how sand dune encroachment affects household food security and livelihoods in arid regions of Somalia, particularly its impacts on agricultural production, farmland and grazing resources, household income, food access, and livelihood coping strategies.

3.2 Conflict and Household Food Security

This study examines how conflict affects household food security among smallholder farming communities in Somalia, including disruptions to agricultural production, food access, markets, household income, and livelihood strategies.

3.3 Conflict and Farmer Livelihoods

This research examines how conflict influences agricultural production, income, access to farmland and inputs, markets, productive assets, and the ability of smallholder farmers to sustain their livelihoods.

3.4 Constraints to Agricultural Production

This study investigates major constraints to agricultural production, including climate variability, irrigation and water access, inputs, labour, technology, extension services, markets, infrastructure, and insecurity.

3.5 Greenhouse Farming and Urban Food Security

This study explores emerging greenhouse farming in Mogadishu and its potential contribution to urban food production and food security, while examining investment costs, technical knowledge, water, inputs, technology, markets, and management capacity.

3.6 Natural Resources and Food Insecurity

This research examines how natural resources, climate pressures, environmental degradation, institutional arrangements, and governance challenges interact with agricultural and livelihood systems and persistent food insecurity.

3.7 Root Causes of Drought

This study examines climatic, environmental, socioeconomic, and natural-resource-management factors associated with recurrent drought and seeks to inform resilience building, preparedness, and sustainable resource management.

3.8 Drought and Urban Food Markets

This study investigates relationships between meteorological drought, crop price dynamics, and market stress in Somali urban markets, contributing evidence for food-market resilience, early warning, and food-security monitoring.

3.9 Climate Change and Household Food Availability

This research examines how prolonged climate-related changes affect agricultural production, water resources, livelihoods, and household food availability in southern Somalia.

3.10 Drivers of Internal Displacement

This research investigates interconnected drivers of internal displacement, including conflict, drought, livelihood disruption, food insecurity, environmental pressures, and loss of productive assets.

3.11 Middle East Conflicts, Agriculture and Livelihoods

This study explores how conflicts in the wider Middle East may create indirect pressures on Somali smallholder agriculture through trade and supply chains, agricultural inputs, market conditions, production costs, and livelihood activities.

3.12 Crop Pests, Productivity and Food Security

This research investigates aphid infestation, crop damage, production losses, pest-management practices, and associated household food-security implications among farmers in Somalia's river-basin agricultural areas.

3.13 Beekeeping and Household Food Security

This study examines the potential contribution of beekeeping to household food security, income generation, and livelihood diversification by considering conditions among beekeeping and non-beekeeping households.

This study assesses losses associated with harvesting, handling, transportation, storage, packaging, and marketing, and identifies opportunities to reduce losses and strengthen farmer income and local food availability.

3.14 Historical Agricultural Production

This research reviews long-term agricultural production patterns, changes in farming systems, major disruptions, and climatic, socioeconomic, institutional, and conflict-related influences on Somalia's agricultural development.

3.16 Banana Production and Food Security

This study examines the potential contribution of banana to household food security, income generation, and livelihood diversification.

3.17 Cassava Production and Household Food Security

This study examines how cassava production contributes to household food availability, consumption, income generation, and livelihood diversification. It also considers planting materials, agronomic practices, water, inputs, pests and diseases, extension services, and market access, including cassava's potential role in climate-resilient farming systems.

4. Research Partnerships and Collaboration

CDDRS welcomes collaboration with Somali and international universities, research institutions, government agencies, development organizations, technical institutions, donors, and other partners. Potential areas include joint research, field studies, data collection and analysis, researcher exchange, capacity development, joint publications, technology testing, research dissemination, and collaborative research proposals.

5. From Research to Impact

CDDRS views research as an integral component of resilient development. By generating locally relevant evidence, CDDRS seeks to strengthen understanding of Somalia's interconnected challenges and support better-informed decisions related to agriculture, food security, climate resilience, natural resource management, livelihoods, displacement, and sustainable development.