

Guidelines:

- This Request Submission Form should be completed by the organisation requesting technical assistance from the Climate Technology Centre & Network (CTCN) in collaboration with the National Designated Entity (NDE) of the country in question
- The Form must be signed by the NDE. Please see updated contact list of NDEs here: <http://unfccc.int/ttclear/support/national-designated-entity.html>
- The Form can be submitted as a Word file containing a digital signature or as a signed and scanned PDF file in combination with an un-signed Word file
- For requests submitted by multiple countries, all the NDEs of the respective countries shall sign identical Forms before official submission to the CTCN
- NDEs have the opportunity to submit CTCN requests in collaboration with National Designated Authorities (NDAs) for the Green Climate Fund (GCF) if targeting the GCF Readiness Programme.

Requesting country or countries:	Somalia
Request title:	Riverine Flood Early Warning and Agricultural Climate Information System for Smallholder Farmers along the Shabelle and Juba River Basins in Somalia
NDE	Zakarie Ismael Sheikh National Designated Entity- NDE Ministry of Communications and Technology, Somalia zakarie@moct.gov.so
Request Applicant:	Ministry of Agriculture and Irrigation (MoAI) Contact Person: Dirie Abdi Mohamed Director, Agricultural Technology and Innovation Email: mti.dept@moa.gov.so Address: KM4, Mogadishu, Somalia

Climate objective:

- Adaptation to climate change
- Mitigation of climate change
- Combination of adaptation and mitigation of climate change

Geographical scope:

- Community level

Sub-national

National

Multi-country

Federal Member States: Hirshabelle, Jubaland, South West State

12 Target Agricultural Districts:

- Shabelle Basin: Beledweyne, Bulo Burte, Jalalaqsi, Jowhar, Balcad, Afgooye, Janaale and Qoryooley
- Juba Basin: Baardheere, Luuq, Dolow and Kismayo

Geographic coverage: Riverine floodplain agricultural zones of the Shabelle and Juba river basins supporting 1.2 million smallholder farmers.

Problem statement related to climate change (up to one page):

Agricultural Dependence and Climate Vulnerability

The Shabelle and Juba river basins are Somalia's agricultural heartland, supporting over 1.2 million smallholder farmers who cultivate sorghum, maize, sesame, cowpea, and vegetables across the riverine floodplains of Hiraan, Middle Shabelle, Lower Shabelle, and the Jubba Valley. These farming communities depend entirely on the seasonal flow of the Shabelle and Juba rivers for irrigation, livestock watering, and soil fertility replenishment from flood-deposited alluvial sediments. When the rivers flood destructively, farmers lose everything: standing crops, seeds, tools, stored food, livestock, and topsoil.

Climate change is fundamentally disrupting this relationship. El Nino, Indian Ocean Dipole variability, and long-term warming are intensifying both the frequency and severity of extreme rainfall events in the Ethiopian Highlands, which is the origin of both the Shabelle and Juba rivers, generating river surges that overwhelm Somalia's low-lying floodplains with no advance warning reaching farming communities.

Scale of Agricultural Loss from Riverine Flooding

In 2023, Somalia's agricultural sector suffered its most devastating climate year in a generation. During the Gu season (April to June 2023), the Shabelle burst its banks at Beledweyne on 9 May, inundating the entire town and surrounding agricultural lands, displacing 247,000 people (85% of all flood-displaced persons in Somalia) and destroying the entire standing crop of the main gu farming season in Hiraan region. During the Deyr season (October to December 2023), El Nino-amplified flooding affected 2.48 million people, displaced 1.2 million, killed 118, and submerged vast swathes of riverine farmland across 33 of Somalia's 74 districts.

FAO-SWALIM (March 2024) documented 190 open river breakage points and 518 overflow points along the Shabelle alone, and 109 open breakage points along the Juba River, each representing a point where floodwater escapes channels and inundates agricultural land without warning. Post-harvest losses from crop inundation are estimated at USD 200 to 400 million annually in target regions, compounding food insecurity affecting over 7.6 million Somalis.

In 2024, the Shabelle overflowed at Aw Dheegle in April, flooding 19 hectares of crops, destroying 250 farm houses and 129 latrines, and displacing 4,800 farmers at the critical moment of planting preparation.

Trans-Boundary Agricultural Vulnerability

Both the Shabelle and Juba rivers originate in the Ethiopian Highlands. Rainfall events in Ethiopia generate the river surges that destroy Somali crops days later. Somalia has no trans-boundary hydrological data sharing agreement with Ethiopia, making advance agricultural flood warnings practically impossible under current infrastructure conditions.

Core Agricultural Problem: No Advance Warning Reaches Farmers

Somalia's Ministry of Agriculture and Irrigation has no flood early warning capacity, no agricultural climate

information system, and no mechanism to communicate impending flood risk to the 1.2 million smallholder farmers it serves. MoAI currently has: no agricultural flood early warning system delivering advance notice to farming communities; no SMS or digital alert reaching farmers with flood timing, severity, or crop management advisories; no MoAI-trained agricultural engineers with hydrological monitoring or flood forecasting skills; no agro-hydrological assessment of which districts and crop types face greatest flood risk; no district-level agricultural flood risk maps; and no institutional connection between river monitoring data held by FAO-SWALIM and the extension advisory system serving Somalia's riverine farmers.

Past and on-going efforts to address the problem (up to half a page):

Existing Initiative	Contribution and Agricultural Gap
FAO-SWALIM (since 2002)	Operates 8 river gauge stations and the Digniin SMS alert system for designated observers. Critical agricultural gap: alerts reach community observers only, not farmers, extension agents, or MoAI; no crop-specific or farming-action guidance is provided; infrastructure is not owned by government or MoAI.
MoAI Agricultural Extension Services	Network of district extension agents serving riverine farmers with crop advisory. Critical gap: extension agents receive no flood forecast data, have no early warning connection to FAO-SWALIM, and cannot advise farmers on pre-flood crop management decisions.
SoDMA National Flood Preparedness Plan	Provides a framework for disaster response coordination. Critical agricultural gap: entirely focused on post-flood humanitarian response; contains no agricultural pre-flood advisory protocols, no farmer alert mechanisms, and no crop protection guidance.
IGAD-ICPAC Seasonal Forecasts	Regional seasonal outlooks informing FAO-SWALIM's technical bulletins. Critical gap: seasonal forecasts are not translated into district-level agricultural advisories or farmer-facing SMS messages in Somali language.
Somalia NDC 3.0 (2025)	Commits to strengthening early warning systems and climate-smart agriculture. Critical gap: no agricultural-sector early warning implementation plan exists; MoAI has no technical capacity to deliver on this NDC commitment.

Specific technology¹ barriers (up to one page):

Barrier 1: No Agricultural Flood Monitoring Infrastructure under MoAI

- MoAI has zero river monitoring stations, agro-hydrological sensors, or soil moisture monitoring equipment under its ownership or operation.
- No Automatic Water Level Monitoring Stations (AWLMS) with real-time telemetry are operated by MoAI in

¹ *“any equipment, techniques, practical knowledge and skills needed for reducing greenhouse gas emissions and adapting to climate change” (Special Report on Technology Transfer, IPCC, 2000)*

any of the 13 target farming districts.

- No upstream trans-boundary hydrological data from the Ethiopian Highlands reaches MoAI, which is the origin of every major flood event affecting Somali riverine agriculture.
- No National Agricultural Hydrological Data Centre exists for MoAI to access, analyse, or act on river level data for farming advisory purposes.

Barrier 2: No MoAI Agricultural Engineering or Flood Forecasting Capacity

- MoAI's Department of Irrigation and Water Resources Management has no engineers trained in hydrological monitoring, flood frequency analysis, or agricultural flood impact modelling.
- No agricultural flood inundation model exists showing which farmlands, irrigation canals, and crop types face inundation at different river levels.
- No agro-climatic risk assessment maps exist for any of the 13 target districts.
- No trans-boundary data sharing agreement exists between MoAI and Ethiopian agricultural or meteorological agencies.

Barrier 3: No SMS or Digital Alert System Reaching Farmers

- MoAI has no SMS platform, mobile application, USSD system, or community radio protocol to communicate flood warnings to 1.2 million smallholder farmers in riverine districts.
- When FAO-SWALIM issues flood advisories, this information does not reach farmers; it goes to designated observers and response agencies, bypassing MoAI's extension system entirely.
- No standardised Somali-language agricultural flood advisory messages exist at alert, warning, or emergency levels with crop-specific actions.

Barrier 4: No Agricultural Early Warning Institutional Framework

- No national framework defines MoAI's role, responsibilities, and information channels for agricultural flood early warning issuance to farming communities.
- MoAI's extension agents have no standard operating procedures for pre-flood agricultural advisory communication.
- No formal data sharing agreement exists between FAO-SWALIM and MoAI for the regular provision of river level data, flood advisories, and agricultural risk information.

Barrier 5: No Agricultural Climate Knowledge or Human Capital in MoAI

- MoAI has no engineers or technical officers trained in agro-hydrology, climate information services, or agricultural flood risk management.
- Agricultural extension curricula in Somalia contain no flood risk management or agro-climatic advisory content.

Women farmers, who manage a disproportionate share of household food production along the riverine corridors, have no access to agricultural climate advisories through any government system.

Contribution to Programme of Work 2023-2027:

As per 3rd Programme of Work of the CTCN², please indicate the system transformation area, key enablers and cross-sectoral themes related to the request:

System transformation areas (mandatory)

- Water-Energy- Sustainable Energy Systems Buildings and

² <https://www.ctc-n.org/resources/ctcn-third-programme-work-2023-2027>

Food Nexus	Mobility	Infrastructure
<input type="checkbox"/> Business and Industry		
Key enablers (optional)		
<input checked="" type="checkbox"/> National Systems of Innovation		
<input checked="" type="checkbox"/> Digitalization		
Cross-sectoral themes (optional)		
<input checked="" type="checkbox"/> Gender		
<input type="checkbox"/> Youth		
<input type="checkbox"/> Indigenous Peoples		

Sectors:

Please indicate the main sectors related to the request:

<input type="checkbox"/> Coastal zones	<input checked="" type="checkbox"/> Early Warning and Environmental Assessment	<input type="checkbox"/> Human Health	<input type="checkbox"/> Infrastructure and Urban planning
<input type="checkbox"/> Marine and Fisheries	<input checked="" type="checkbox"/> Water	<input checked="" type="checkbox"/> Agriculture	<input type="checkbox"/> Carbon fixation
<input type="checkbox"/> Energy Efficiency	<input type="checkbox"/> Forestry	<input type="checkbox"/> Industry	<input type="checkbox"/> Renewable energy
<input type="checkbox"/> Transport	<input type="checkbox"/> Waste management		

Please add other relevant sectors:

Technical assistance requested (up to one page):

Overall Objective

To establish MoAI as a technically capable, institutionally equipped lead agency for agricultural flood early warning in Somalia by building the monitoring infrastructure, SMS-based farmer alert system, trained agricultural engineering workforce, flood risk maps, and institutional framework needed to deliver 5 to 7 days advance warning to at least 1.2 million smallholder farmers in 13 riverine districts, enabling pre-flood crop harvesting, livestock protection, and input relocation before flood inundation destroys agricultural livelihoods along the Shabelle and Juba river basins.

Activity Group 1: Agro-Hydrological Monitoring Network under MoAI

- Conduct a comprehensive agro-hydrological gap assessment across all 13 target agricultural districts, mapping farm vulnerability by river level, soil type, crop calendar, and irrigation canal exposure.

- Procure and install 30 Automatic Water Level Monitoring Stations (AWLMS) with real-time GSM/satellite telemetry, operated and maintained by MoAI-trained agricultural engineers, at key locations along the Shabelle and Juba rivers covering all 12 target farming districts.
- Establish a National Agricultural Hydrological Data Centre within MoAI's Directorate of Irrigation and Water Resources Management, with real-time data ingestion, quality control, agricultural alert threshold computation, and open data protocols for farmer advisory purposes.

Activity Group 2: Agricultural Flood Risk Mapping and Forecasting

- Conduct bathymetric surveys and DEM analysis of Shabelle and Juba agricultural floodplains to produce calibrated hydrodynamic flood inundation models showing which farmlands, irrigation canals, and agro-pastoral zones are affected at alert, warning, and emergency river levels.
- Produce district-level agricultural flood risk maps for all 12 target districts, classifying farms and irrigation infrastructure by flood risk tier, enabling MoAI extension agents to prioritise advisory outreach to highest-risk farming communities.
- Establish official agricultural flood alert thresholds calibrated to crop calendar milestones, with alerts configured to trigger warning messages at river levels that allow sufficient time for crop harvesting before inundation, integrated with Somalia's main Gu (April to June) and Deyr (October to December) growing seasons.

Activity Group 3: Farmer SMS Alert and Agricultural Advisory Dissemination System

- Design and deploy a MoAI-operated agricultural SMS and USSD flood alert system delivering automated Somali-language flood warning messages to registered farmer mobile numbers in all 13 target districts at alert, warning, and emergency levels with crop-specific action guidance at each level.
- Develop standardised Somali-language agricultural flood advisory messages for each warning level, specifying when to harvest early, when to relocate livestock, how to protect stored seeds and inputs, and which evacuation routes to use, validated with farming communities in target districts.
- Integrate MoAI's agricultural extension radio broadcast network into the EWS dissemination chain, with standardised flood advisory content delivered through 12 community radio stations serving riverine farming communities in Somali language.
- Train and certify 200 MoAI Agricultural Flood Advisory Facilitators (minimum 45% women), one per major farming cluster in each target district, as the last-mile link between the SMS alert system and farming households without mobile phone access.

Activity Group 4: MoAI Institutional Framework for Agricultural Early Warning

- Develop a National Agricultural Flood Early Warning Institutional Framework formally establishing MoAI as the lead government agency for agricultural climate advisory services, defining information flows from river monitoring data through MoAI Agricultural Data Centre to extension agents to SMS alerts to farmers, for formal Cabinet adoption.
- Develop MoAI-specific Standard Operating Procedures for agricultural flood advisory issuance, farmer SMS alert activation, extension agent pre-flood briefing, and post-flood agricultural damage assessment protocols.
- Formalise a data-sharing MOU between FAO-SWALIM and MoAI for the regular provision of river level data, flood advisories, and satellite imagery for agricultural risk monitoring, with phased transition of monitoring infrastructure to MoAI ownership.
- Formalise data-sharing protocols between MoAI and SoDMA integrating agricultural flood advisories into national disaster preparedness communications.

Activity Group 5: MoAI Agricultural Engineering Capacity Building

- Structured training programme for 60 MoAI agricultural engineers and irrigation officers from the Department of Irrigation and Water Resources Management in: agro-hydrology, river level monitoring, flood frequency analysis, agricultural flood impact modelling, GIS-based flood risk mapping, and AWLMS

operation and maintenance (minimum 30% women engineers).

- Specialised training for 150 MoAI district agricultural extension agents in interpreting flood advisories, delivering Somali-language farmer advisory messages, operating SMS alert registration platforms, and conducting pre-flood agricultural protection guidance in target farming communities.
- Develop and accredit an agro-hydrology and agricultural disaster risk management training curriculum for integration into Somali National University programmes, ensuring long-term domestic agricultural engineering capacity generation under MoAI coordination.

Anticipated Deliverables

- D1: 30 AWLMS stations installed, real-time data transmitting, MoAI-owned by Month 12
- D2: Agricultural flood inundation models for Shabelle and Juba, calibrated and crop-calendar-integrated, by Month 10
- D3: Agricultural flood risk maps for all 12 districts with farm-level risk tiers mapped, by Month 11
- D5: Standardised Somali-language agricultural flood advisories at alert, warning, and emergency levels validated with farmers
- D6: Agricultural radio flood broadcast protocol with 12 community stations and SOPs adopted by MoAI
- D7: 60 MoAI engineers (minimum 30% women) trained and certified in agro-hydrology
- D8: 150 MoAI extension agents trained in flood advisory communication
- D9: 200 community Agricultural Flood Advisory Facilitators (minimum 45% women) trained

Expected timeframe:

Activity Group	Phase 1: Months 1 to 6	Phase 2: Months 7 to 12	Phase 3: Months 13 to 18
Agro-Hydrological Monitoring	Gap assessment; procurement; MoAI data centre setup	AWLMS installation; engineer training begins	Full installation; real-time validation
Agricultural Flood Risk Mapping	Bathymetric surveys; DEM data collection	Model calibration; district flood risk maps	Crop-calendar integration; threshold adoption
Farmer SMS Alert	Platform design; farmer registration architecture	SMS system build; extension agent training	100,000 farmer registrations; full operational rollout
MoAI Institutional Framework and SOPs	Stakeholder mapping; legal review	Framework and SOPs drafting; consultation	FAO-SWALIM MOU signed
MoAI Engineering Capacity Building	Training curriculum; twinning MOUs	60 engineers trained; 150 extension agents trained	Twinning attachments; SNU curriculum accreditation

Anticipated gender and other co-benefits from the technical assistance:

Gender Mainstreaming

- Minimum 45% women among 200 MoAI Agricultural Flood Advisory Facilitators, recognising that women manage a disproportionate share of food production and household food security decisions in riverine farming communities.
- Minimum 30% women engineers among the 60 MoAI agricultural engineers trained in agro-hydrology and flood monitoring, building Somalia's pipeline of female agricultural engineers within the ministry.
- Agricultural SMS flood advisory messages designed for women farmers and female-headed households, with clear Somali-language guidance on when to harvest, move livestock, and protect inputs; accessibility

for women with limited literacy via audio IVR calls.

- Farmer SMS registration actively targets women farmers through women's agricultural cooperatives and female extension contacts, with a goal of at least 40% women among 100,000 registered farmer recipients.
- Gender-disaggregated agricultural damage assessment data collected before and after flood events to build the evidence base for gender-responsive agricultural climate adaptation in Somalia.

Agricultural and Economic Co-Benefits

- 5-to-7-day advance SMS warnings enable farmers to harvest standing crops before flood inundation, protecting an estimated USD 200 million in annual agricultural output across the 12 target districts.
- Agricultural flood risk maps enable MoAI to prioritise irrigation canal rehabilitation and flood-proofing investment toward highest-risk farmland.
- Pre-flood livestock relocation guidance protects an estimated 500,000 livestock head in riverine districts from drowning and disease, critical for agro-pastoral households.
- Seasonal flood forecast integration with crop calendars enables farmers to shift planting dates to avoid flood-season crop losses, improving agricultural productivity by an estimated 20 to 30% in worst-affected districts.

Food Security Co-Benefits

- Protecting the agricultural output of 1.2 million riverine farmers directly reduces acute food insecurity for over 6 million household members dependent on Shabelle-Juba basin agriculture.
- Reduced crop losses maintain market food supply in riverine towns, preventing food price spikes that follow flood-driven supply disruptions.
- Pre-flood seed and input protection guidance preserves planting material for the post-flood growing season, accelerating agricultural recovery.

Environmental Co-Benefits

- Agro-hydrological monitoring data builds a long-term understanding of Shabelle-Juba River basin hydrology, supporting sustainable agricultural water resource management.
- Agricultural flood risk maps identify riparian buffer zones warranting nature-based protection, supporting riverbank stabilisation and wetland conservation.

Anticipated follow-up activities after this technical assistance are completed:

GCF Full Project Proposal

MoAI, in partnership with MoECCRE, will develop a GCF full project proposal targeting USD 30 to 50 million for national scaling of the agricultural EWS to all flood-prone regions, integration of drought early warning for pastoral communities, nature-based flood risk reduction including riverbank stabilisation and community-managed riparian buffers, and irrigation canal flood-proofing investments.

World Bank FSRP Integration

Agricultural flood risk maps and agro-hydrological data will be adopted by the World Bank Food Systems Resilience Programme to guide climate-smart irrigation investment, flood-proof canal design, and evidence-based community relocation planning for high-risk farming settlements.

MoAI Operational Embedding

The agricultural EWS, AWLMS network, and MoAI Agricultural Data Centre will be formally embedded in MoAI's operational mandate with dedicated budget allocation in MoAI's Medium-Term Expenditure Framework from Year 2, ensuring sustainability independent of project financing.

IFAD and FAO Programme Integration

MoAI's trained extension agents and agricultural flood risk maps will be integrated into IFAD's Rural Livelihoods Resilience Programme and FAO's emergency and resilience programmes, extending the reach of early warning to additional farming communities beyond the direct project target.

South-South Agricultural Learning

The MoAI agricultural EWS model and farmer SMS platform will be documented and shared through IGAD and AU CAADP agricultural networks for adaptation by Kenya, Ethiopia, Djibouti, and South Sudan, which are countries with comparable riverine agricultural flood exposure.

Somali National University Integration

The accredited agro-hydrology curriculum developed under Activity Group 5 will be fully integrated into SNU's agricultural engineering programme by project end, establishing domestic capacity generation that does not depend on continuing external support.

Key stakeholders:	
Stakeholders	Role to support the implementation of the technical assistance
Ministry of Environment and Climate Change	National Designated Entity; national climate policy oversight; coordination with UNFCCC and CTCN; monitoring and evaluation reporting.
Ministry of Agriculture and Irrigation (MoAI)	Lead implementing agency; host of National Agricultural Hydrological Data Centre; management of AWLMS network; operator of farmer SMS alert system; coordination of field assessments, capacity building, and institutional framework development.
Somalia Disaster Management Agency (SoDMA)	Coordination on national flood preparedness; integration of agricultural flood advisories into national disaster communications; data sharing counterpart.
Hirshabelle, Jubaland, South West State Ministries of Agriculture	Sub-national implementation coordination; identification of target farming communities; facilitation of field access; district extension service coordination.
IGAD-ICPAC	Regional climate and seasonal forecast data provision; technical advisory on climate information services; South-South learning facilitation.
Somali National University (SNU)	Accreditation partner for agro-hydrology training curriculum; integration of agricultural engineering capacity building into degree programmes.
Women Farmer Cooperatives and Community-Based Organisations	Participation in SMS registration and awareness; governance of community-level flood advisory facilitator networks; primary beneficiaries of gender-targeted advisory services.
Community Radio Stations (12 stations)	Dissemination of Somali-language agricultural flood advisories; last-mile reach to farming communities without mobile phone access.

Alignment with national priorities (up to 2000 characters including spaces):

This request is fully consistent with Somalia's national climate and development priorities. Somalia's updated Nationally Determined Contribution (2021) explicitly identifies strengthening early warning systems and climate-smart agriculture as Priority Adaptation Actions 3 and 4 (Section 3.2, p.18), and references agricultural climate information services and farmer advisory systems (Section 4.1). This TA directly implements both commitments through MoAI as the lead agricultural ministry. The National Agricultural Transformation Strategy prioritises agricultural disaster risk reduction systems including early warning and climate advisory services under Priority

Action Area 3. The National Development Plan 9 (2020 to 2024) targets adoption of climate-smart agricultural technologies and national disaster early warning systems under Pillar 3, Sections 3.4 and 3.6. The Technology Needs Assessment (2022) identifies agricultural flood early warning and agro-meteorological monitoring as highest-priority climate technologies, with Technology Action Plan actions for extension system integration with climate data and farmer-facing SMS advisory services directly corresponding to Activity Groups 3 and 5 of this TA. The National Adaptation Plan (in preparation, 2024) pre-identifies riverine flood early warning for farming communities as the highest-priority adaptation intervention for Shabelle and Juba communities. The GCF Country Programme (2023) Priority Area 1 explicitly identifies agricultural resilience and smallholder farmer climate advisory systems as a GCF investment priority; this TA is designed as the preparatory phase for a GCF full project proposal.

Reference document (please include date of document)	Extract (please include chapter, page number, etc.).
Nationally Determined Contribution (NDC 3.0) 2025	Section 3.2 (Adaptation Priorities, p.18): Priority Adaptation Actions 3 and 4 identify strengthening early warning systems and climate-smart agriculture. Section 4.1 references agricultural climate information services and farmer advisory systems. This TA directly implements both commitments through MoAI.
Technology Needs Assessment and Technology Action Plan (2022)	TNA identifies agricultural flood early warning and agro-meteorological monitoring as highest-priority climate technologies. TAP actions for extension system integration with climate data and farmer-facing SMS advisory services directly correspond to Activity Groups 3 and 5.
National Adaptation Plans (2026-2030)	Agriculture and food security pre-identified as primary NAP focus sector. Riverine flood early warning for farming communities identified as highest-priority adaptation intervention for Shabelle and Juba communities. TA outputs constitute foundational NAP agricultural sector implementation infrastructure.
GCF Country Programme (2023)	Priority Area 1 (Climate-Resilient Food Systems): explicitly identifies agricultural resilience and smallholder farmer climate advisory systems as GCF investment priority. This TA is designed as the preparatory phase for a GCF full project proposal for agricultural EWS national scaling.
Long-term Low Emission Development Strategies	No Long-term Low Emission Development Strategy has been formally adopted.
National Agricultural Transformation Strategy	Priority Action Area 3 (Agricultural Resilience and Risk Management): targets development of agricultural disaster risk reduction systems including early warning, crop insurance, and climate advisory services. This TA operationalises Priority Action Area 3 for riverine flood risk.

Development of the request (up to 2000 characters including spaces):

This request was initiated by the Ministry of Agriculture and Irrigation (MoAI) following multi-year documentation of recurrent agricultural loss events along the Shabelle and Juba River basins and the complete absence of government-owned early warning infrastructure reaching farming communities. The identification of agricultural flood early warning as the highest-priority technical assistance need emerged from joint situational analysis workshops conducted in Mogadishu and Beledweyne in 2023 and 2024, involving MoAI's Directorate of Irrigation and Water Resources Management, FAO-SWALIM technical staff, SoDMA disaster management officers, and district-level agricultural extension coordinators from Hirshabelle, Jubaland, and South West State.

The NDE, MoECC, was engaged at the outset of request formulation and has co-developed the scope of activities with MoAI. A national stakeholder consultation was convened in Mogadishu in Q1 2025 involving representatives from the three Federal Member States' ministries of agriculture, women farmer cooperative representatives, IGAD-ICPAC, FAO Somalia, SoDMA, and Somali National University. Participants validated the five technology

barriers, endorsed the five activity groups, and confirmed the 12-district scope and the prioritisation of women's inclusion targets.

The request has been reviewed by MoECC's Climate Change Directorate and approved for submission to the CTCN as a highest-priority technical assistance request, fully aligned with Somalia's NDC implementation roadmap and consistent with the GCF Country Programme's agricultural resilience investment priorities.

Background documents and other information relevant for the request:

- Somalia Nationally Determined Contribution (2025), Federal Government of Somalia, Ministry of Environment and Climate Change
- National Agricultural Transformation Strategy, Ministry of Agriculture and Irrigation, Federal Government of Somalia 2025-2029
- Somalia Technology Needs Assessment and Technology Action Plans (2022), available via UNFCCC TT: CLEAR platform
- Somalia National Adaptation Plan (2026-2030), Ministry of Environment and Climate Change
- GCF Country Programme, Somalia (2023), Ministry of Finance and Green Climate Fund
- FAO-SWALIM: River and Flood Monitoring Reports for Somalia (2022 to 2024), <https://www.faoswalim.org>
- OCHA Somalia: Humanitarian Situation Reports, Gu 2023 and Deyr 2023 Flood Response
- FAO-SWALIM: Open River Breakage and Overflow Analysis for Shabelle and Juba Rivers (March 2024)
- International Crisis Group: Preventing Famine and Political Crisis in Somalia (2025)
- IGAD-ICPAC: Greater Horn of Africa Seasonal Climate Outlooks
- CTCN Third Programme of Work 2023 to 2027, <https://www.ctc-n.org/resources/ctcn-third-programme-work-2023-2027>
- Sendai Framework for Disaster Risk Reduction 2015 to 2030, UNDRR

OPTIONAL: Linkages to Green Climate Fund Readiness and Preparatory Support

The CTCN is collaborating with the GCF in order to facilitate access to environmentally sound technologies that address climate change and its effects, including through the provision of readiness and preparatory support delivered directly to countries through their GCF NDA. These actions are in line with the guidance of the GCF Board (Decision B.14/02) and the UNFCCC, particularly paragraphs 4 and 7 of 14/CP.22 and paragraph 4, 7 and 8 of 14/CP.24 that addresses Linkages between the Technology and the Financial Mechanisms³.

The CTCN is therefore implementing some of its technical assistance using GCF readiness funds accessed via the country's NDA. Any application for GCF support, including the amount of support provided, is subject to the terms and conditions of the GCF and should be developed in conjunction with the NDA.

Please indicate whether this request has been identified as preliminarily eligible by the NDA to be considered for readiness support from the GCF.

Initial engagement: The GCF NDA of the requesting country has been engaged in the design of this request and the NDA will be involved in the further process leading to an official agreement for

³ Please see:

https://unfccc.int/files/meetings/marrakech_nov_2016/application/pdf/auv_cop22_i8b_tm_fm.pdf

accessing GCF readiness support.

Advanced engagement (preferred): The GCF NDA of the requesting country has been directly involved in the design of this request and is a co-signer of this request, the signature indicating provisional agreement to use readiness national funds to support the implementation of the technical assistance.

NDA name:

Date:

Signature:

Monitoring and impact of the assistance:

By signing this request, I affirm that processes are in place in the country to monitor and evaluate the technical assistance provided by the CTCN. I understand that these processes will be explicitly identified in the CTCN Response Plan and that they will be used in the country to monitor the implementation of the technical assistance following standard CTCN procedures. This includes the active engagement as NDE together with the key project proponent / beneficiary in regular project steering meetings.

I understand that, after the completion of the requested assistance, I shall support CTCN efforts to measure the success and effects of the support provided, including its short, medium and long-term impacts in the country. This includes the completion of NDE feedback and post-implementation forms.

Signature:

NDE name: Zakarie Ismael Sheikh

Date: 23/06/2026

Signature:



THE COMPLETED FORM SHALL BE SENT TO THE CTCN@UNEP.ORG

The CTCN is available to answer all questions and provide guidance on the application process.