

Artificial Intelligence, Anticipatory Action & Climate Risk Financing: Protecting Food Security from Climate Risks in Eastern Africa 2025-2026

Key results:

Empower national and local institutions in Ethiopia, Rwanda, and Uganda to take proactive, scalable, and sustainable actions in both anticipating and responding to extreme climate and weather-related events. Demonstrating proof of concept, showcasing how to build sustainable early warning and financial protection systems that can effectively minimize the predictable losses and damages caused by increasingly severe and frequent floods and droughts, in particular through the use of AI. By providing evidence of the effectiveness and scalability of these integrated approaches, the project aims at protecting lives, food security, and livelihoods while contributing to enhancing resilience across Eastern Africa. The project will achieve this through the following two interlinked components: i) Leveraging Artificial Intelligence (AI) to enhance National Early Warning Systems, enabling better prediction, wider coverage and activation of pre-arranged financing and actions to reduce adverse impacts of extreme climate events; ii) Supporting comprehensive national climate risk financing strategies that combine AA and forecast index insurance to provide robust protection along the crisis timeline.

Justification for support:

The project directly delivers on overall priority in The World We Share on building resilience in climate vulnerable countries. Specifically, it is relevant for the Danish intention of preventing humanitarian crises and being a strong partner before, under and after humanitarian crises, including through enhancing longer-term sustainable nexus approaches, by addressing climate change as an underlying factor of vulnerability.

Further, the engagement delivers on the Danish government's priority of enhancing nexus approaches, through enhancing climate resilience for food security with national and local ownership in Ethiopia, Rwanda and Uganda, thus responding to climate change and lowering local vulnerability to climate and weather-related shocks, including in displacement contexts.

Major risks and challenges:

- WFP organisational changes in 2024 and strained overall budget, leads to pressure to focus on direct humanitarian relief efforts, consequently leading to down-prioritization of resilience building programmes and projects.

| | | | | | |
|---|---|---|---|---|---|
| File No. | 24/50845 | | | | |
| Country | Regional | | | | |
| Responsible Unit | HUMCIV | | | | |
| Sector | 31120 | | | | |
| Partner | UN World Food Programme | | | | |
| DKK million | 2024 | 2025 | 2026 | Total | |
| Commitment | 40.0 | 0.0 | 0.0 | 40.0 | |
| Projected disbursement | 20.0 | 20.0 | 0.0 | 40.0 | |
| Duration | December 2024 - December 2026 | | | | |
| Previous grants | None | | | | |
| Finance Act code | 06.39.03.13 | | | | |
| Head of unit | Birgitte Nygaard Markussen | | | | |
| Desk officer | Nette Kyndesen | | | | |
| Reviewed by CFO | YES: Tobias Grønlund Nissen | | | | |
| Relevant SDGs | | | | | |
|  |  |  |  |  |  |
| No Poverty | No Hunger | Good Health, Wellbeing | Quality Education | Gender Equality | Clean Water, Sanitation |
|  |  |  |  |  |  |
| Affordable Clean Energy | Decent Jobs, Econ. Growth | Industry, Innovation, Infrastructure | Reduced Inequalities | Sustainable Cities, Communities | Responsible Consumption & Production |
|  |  |  |  |  | |
| Climate Action | Life below Water | Life on Land | Peace & Justice, strong Inst. | Partnerships for Goals | |

Objectives

The project aims at proofing the concept of how to reach even more local communities, including the most vulnerable people in the three countries, with improved and low-cost solutions, in particular the use of AI and the importance attached to building adequate local capacities and country level systems for tailored forecasting that better informs delivery of AA strategies, including actions by communities themselves.

Environment and climate targeting - Principal objective (100%); Significant objective (50%)

| | Climate adaptation | Climate mitigation | Biodiversity | Other green/environment |
|--------------------------|--------------------|--------------------|--------------|-------------------------|
| Indicate 0, 50% or 100% | 100 | 0 | 0 | 0 |
| Total green budget (DKK) | DKK 40 mill. | 0 | 0 | 0 |

Justification for choice of partner:

WFP is a long-term trusted strategic partner to Denmark, providing both humanitarian and development efforts in fragile and climate vulnerable contexts. Under the current Multilateral Strategic Development Agreement between DK MFA and WFP, building climate adaptation in WFP's food assistance to strengthen resilience, sustainable food systems and climate smart agriculture is one of the key strategic objectives.

Summary:

In Ethiopia, Rwanda and Uganda, WFP will leverage AI to enhance National Early Warning Systems, enabling better prediction, wider coverage and activation of pre-arranged financing and actions to reduce adverse impacts of extreme climate events, and support comprehensive national climate risk financing strategies that combine AA and forecast index insurance to provide robust protection along the crisis timeline.

Budget (engagement as defined in FMI):

| | |
|----------------------------------|-------------------------|
| Outcome 1 | DKK 7,068,000 |
| Outcome 2 | DKK 29,823,986 |
| Outcome 3 | DKK 666,700 |
| Indirect support cost (6.5 pct.) | DKK 2,441,314 |
| Total | DKK 40.0 million |

*Artificial Intelligence (AI), Anticipatory Action & Climate Risk
Financing: Project Proposal for Protecting Food Security from Climate
Risks in Eastern Africa 2025-2026*

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1. Introduction

The project document outlines the background, rationale and justification, objectives and management arrangements for development cooperation concerning **Artificial Intelligence (AI), Anticipatory Action & Climate Risk Financing: Project Proposal for Protecting Food Security from Climate Risks in Eastern Africa 2025-2026** as agreed between the parties: The **World Food Programme (WFP)** and **Department for Humanitarian Action, Civil Society and Engagement in the Ministry of Foreign Affairs of Denmark (MFA)**. The project document is an annex to the legal bilateral agreement with the implementing partner and constitutes an integral part hereof together with the documentation specified below.

The objective of this project is to empower national and local institutions in **Ethiopia, Rwanda, and Uganda** to take proactive, scalable, and sustainable actions in both anticipating and responding to extreme climate and weather-related events. Central to this project is the demonstration of a proof of concept, which will showcase how building sustainable early warning and financial protection systems can effectively minimize the predictable losses and damages caused by increasingly severe and frequent floods and droughts, in particular through the use of artificial intelligence (AI). By providing evidence of the effectiveness and scalability of these integrated approaches, the project aims at protecting lives, food security, and livelihoods while contributing to enhancing resilience across Eastern Africa.

Existing Danish support for anticipatory action (AA) has been instrumental in establishing effective AA systems for food security across the region, catalysing additional funding from key partners such as Germany, Ireland, Republic of Korea, Switzerland, the African Risk Capacity (ARC), and private insurance companies. The proposed project will effectively expand the scope of the climate interventions through the use of AI in order to enhance the governments and communities' capacities to build food security and protect lives and livelihoods from the impacts of predictable climate hazards.

The project will achieve this objective through the following two interlinked components:

- **Component 1:** Leveraging AI to enhance National Early Warning Systems, enabling better prediction, wider coverage and activation of pre-arranged financing and actions to reduce adverse impacts of extreme climate events.
- **Component 2:** Supporting comprehensive national climate risk financing strategies that combine AA and forecast index insurance to provide robust protection along the crisis timeline.

Both components will bring tangible benefits to communities to prepare, adapt, sustain themselves and gradually build resilience in local food systems. WFP will lead the project implementation by leveraging its extensive experience and established partnerships with technical experts, national governments, and local stakeholders in AA and Climate Risk Finance (CRF). This collaborative approach ensures that the project benefits from a network of trusted partners, strengthening its impact and sustainability while aligning with national priorities and enhancing resilience to climate shocks.

The proof of concept will provide valuable insights and lessons that can inform the scaling and long-term sustainability. By leveraging AI, and testing and refining AA and CRF solutions, the project will generate evidence on their effectiveness, challenges, and best practices. This learning, intentionally to be captured, will be essential for adapting and improving systems, ensuring they are better integrated into national

frameworks. Over time, the data and lessons learned will help secure long-term funding, including through informing domestic budget allocation for disaster management, foster policy development, and build local ownership, ultimately ensuring the continued success and expansion of AA and CRF in the target countries but also other relevant regional and global contexts.

A well-crafted communication plan will ensure the project's successes and learnings are effectively shared with key stakeholders, amplifying Denmark's leadership in leading innovative solutions to address climate impacts on food security. The plan will help attract global attention to critical issues, positioning Denmark as a leader in supporting the humanitarian, climate and development nexuses to prevent and mitigate losses and damages. The visibility will not only enhance the project's impact but also help secure additional funding and support from international donors, partners, and the private sector.

2. Context and rationale for formulating the project

2.1 Context

The climate crisis is a key driver of hunger and food insecurity in Eastern Africa. From 2020 to 2023, the region has experienced an unprecedented sequence of five consecutive seasons of below-average rainfall, followed by heavy rainfall and devastating floods in 2023 and 2024. These extreme weather events have severely impacted food security, affecting about 35.8 million people in the region. By end of 2024, the region is again expecting below average rainfall due to La Niña. The crises are further compounded by widespread macroeconomic shocks linked to structural fragilities and protracted conflicts. As a result, food systems in East Africa have been disrupted, livelihoods lost, and millions of livestock have perished, while water scarcity and reduced crop yields persist. Recovery in Eastern Africa is slow and challenging, as the region frequently experiences rapid shifts from drought to floods, often with minimal warning. This lack of capacity to predict weather events at regional, national and local levels, coupled with limited resources for forward-looking risk management approaches, exacerbate the crises.

The countries targeted in this project — **Ethiopia, Rwanda, and Uganda** — are characterized by high levels of climate vulnerability and annual exposure to natural extreme events, which can be predicted and forecasted (Table 1). These challenges underscore the urgent need to transition from reactive to proactive risk management approaches that effectively integrate the humanitarian, development, and climate sectors. Response to predictable emergencies is evolving, paving the way for innovation to better protect vulnerable populations from the escalating impacts of climate crisis in a more cost-effective manner. Consequently, strengthened efforts in AA has the potential to enhance resilience of livelihoods and food systems of food insecure populations and communities in these countries, including in the areas which are hardest to reach.

Table 1. INFORM Index Performance for Project Target Countries

| Country | Risk (0-10) | Risk Level | Change in risk in 2050 | Change in risk in 2080 |
|----------|-------------|------------|------------------------|------------------------|
| Ethiopia | 7.1 | Very High | Low | Low |
| Rwanda | 3.5 | Medium | High | High |
| Uganda | 6.5 | High | Medium | Medium |

Several WFP Country Offices in the region were consulted to assess existing initiatives, identify synergies, and avoid overlap, ensuring the proposed activities fill action gaps and support an integrated approach. WFP's partnership with Intergovernmental Authority on Development (IGAD) ensures alignment with regional needs and national development plans in Ethiopia, Rwanda, and Uganda.

WFP plays a key role in regional AA coordination and has selected target countries based on existing activities. Over the past decade, WFP's climate risk financing initiatives in Ethiopia, focusing on crop farmers and pastoralists, have informed the testing of forecast index insurance (FII). In Uganda, a 2022 feasibility study recommended layering AA with Insurance to enhance coverage. In Rwanda, ongoing discussion with the National Disaster Risk Management highlighted the need for capacity strengthening to integrate AI in micro and sovereign risk insurance systems.

Ethiopia Context

Ethiopia is highly vulnerable to climate-induced shocks, particularly in pastoral regions, where recurrent extreme droughts lead to livestock production failures, water shortages, and food insecurity. Over the past decade, approximately 20 million people have been affected by severe droughts and flooding, exacerbating humanitarian needs. In regions like Somalia and Oromia, prolonged droughts have devastated livelihoods, reducing household incomes by up to 35% for pastoralists and 25% for crop farmers. The 2021/22 drought alone left 4.1 million people acutely food insecure, highlighting the need for early actions to save lives, protect livelihoods, and reduce costs.

Recent forecast predict below-average rainfall due to La Niña which is vital for pastoral and agro-pastoral communities across southern and South-eastern The Ethiopian Meteorological Institute has warned that severe regions are at high risk of drought conditions.

Based on the Integrated Context Analysis (ICA) conducted by WFP and the government, long-term interventions are necessary to address crises and frequent natural shocks, which hinders recovery efforts. This project aims to improve food security, reduce risks and build resilience against natural shocks, with AA, as a key component in mitigating the impact of extreme weather and reducing the need for humanitarian assistance.

Rwanda Context

The climate crisis is a significant threat to Rwanda's development. In May 2023, Rwanda experienced its heaviest recorded rainfall event, with a third of the country affected by floods and landslides, requiring more than USD 700 million in response and recovery costs. With 45% of the country at high risk of erosion, natural disasters cost the country an average of USD 300 million annually, and the frequency and intensity of such events are expected to increase. By 2050, Rwanda could face a loss of 5-7 percent of its GDP due to weather-related disasters.

These shocks hinder Rwanda's ability to reach the Sustainable Development Goals and erode development gains across sectors. As the country recovers from the 2023 floods, disaster risk management has become a national priority. The government is strengthening its Disaster Risk Reduction and Management (DRRM) system and has prioritized AA within the DRRM framework,

reflecting the National Disaster Risk Reduction and Management Policy (2023) and the DRRM Strategy 2024–2029, developed to operationalize the policy.

Uganda Context

Uganda is a landlocked, low-income country in East-Central Africa, ranked 159 of 193 countries in the 2022 Human Development Index, 138 of 166 in the Gender Inequality Index and 105th of 127 in the 2024 Global Hunger Index - indicating a level of hunger defined as 'serious' by WHO. With a fast-growing set to reach 100 million by 2050, over 76% of the communities report shifts in rainfall patterns significantly affecting climate sensitive sectors like agriculture. Extreme weather events are intensifying, with the country suffering USD 152.2 million in economic losses in 2020 alone. These climate risks are expected to cause severe economic damages, slow growth and increase poverty.

The agricultural sector, which relies heavily on rainfed systems, faces inconsistent yields thus increasing food and nutrition insecurity in the country. Northeastern Uganda experiences the highest percentages of acute malnutrition and food insecure households, while the entire country suffers from increased vulnerability due to limited resilience, poor disaster management capacity and limited financial means to respond to extreme weather events. In 2023, severe weather events, including rainstorms, floods, and landslides, displaced over 49,326 individuals and disrupted livelihoods, education, market accessibility, health services, and deepening the food crisis. The escalating climate impacts are straining Uganda's ability to cope, highlighting the urgent need for improved disaster preparedness and response.

2.2 Results and lessons learned from existing interventions

AA and Climate Risk Finance (CRF) have gained significant momentum in Eastern Africa as innovative approaches to reduce vulnerability and humanitarian needs. WFP's work with AA in the region has a focus on 1) strengthening national and local capacities and systems for Early Warning Systems (EWS) and anticipatory actions, and 2) activation and implementation of AAs. For CRF, WFP has focused on piloting and establishing FII schemes, in Ethiopia and Uganda, while in Rwanda, WFP will support the Government and World Bank to layer AA and FII in the national Disaster Risk Management Strategy.

Denmark has supported WFP's AA programme from the beginning, particularly in the Horn of Africa. This support was particularly critical in scaling-up the AA approach in East Africa and catalysing contributions from additional donors such as Ireland, Switzerland, and the Republic of Korea. Through the Danish support, WFP initiated the approach in three countries in the region (Djibouti, Kenya and Uganda), and later the approach was scaled up to nine countries in the region: Burundi, Djibouti, Ethiopia, Kenya, Rwanda, Somalia, South Sudan, Sudan¹ and Uganda.

Key achievements from the previous Danish support to WFP's AA programme in the region

- Activation:** In 2022, WFP assisted 300,000 people in Ethiopia and Somalia ahead of forecasted drought, and in 2023 to support over 200,000 people in Somalia days ahead of the deadliest flood in decades. Monitoring in Ethiopia showed that AA prevented severe food insecurity, reduced excessive livestock mortality, and increased vegetation cover so that communities would continue to have access to pasture from this intervention for a number of months to come¹.

¹ [Anticipatory Action 2022 activation in Somali Region, Ethiopia.](#)

- **Enhanced National Capacities:** National capacities to forecast droughts were strengthened in Djibouti, Ethiopia, Kenya and Uganda through training of National Meteorological Services and technical support from partners like International Research Institute for Climate and Society (IRI) for Djibouti and Ethiopia, and the IGAD Climate Prediction and Applications Centre (ICPAC) for Kenya and Uganda.
- **Tailored Forecasts:** Forecasts have been tailored into specific drought triggers for the targeted sub-national locations, and visualization platforms were created to support decision-making and early actions.
- **Improved AA Understanding at Sub-National Level:** Government agencies and cooperating partners in Djibouti, Ethiopia, Kenya, Somalia, and Uganda have enhanced their understanding of the AA approach through stakeholder workshops and trainings held. This has led to strong government buy-in, good collaboration among actors, and joint development of multi-agency anticipatory action plans for drought in Ethiopia, Uganda, and Kenya and as well as for floods in Ethiopia, Uganda, and Somalia.
- **Drought Anticipatory Action Plans (AAPs):** Drought AAPs have been developed in Djibouti, Ethiopia, Kenya, and Uganda. It is expected that the Ethiopia and Kenya AAPs will be activated in 2024 for implementation and generation of evidence and learning.
- **Community Early Warning Committees:** At local level, community early warning committees have been trained in Ethiopia to understand, translate, and communicate early warning information effectively, ensuring timely local responses to climate risks.
- **AA Technical Working Groups:** National and sub-national AA Technical Working groups were established in Uganda, Kenya, Somalia, Ethiopia and Djibouti to hence coordination and engagement.
- **Regional Coordination:** WFP has supported development of the Eastern Africa regional AA roadmap², aimed at providing a coordination framework for AA in the region and guiding regional and national efforts for scale up through government systems.
- **Regional Technical Working Group on AA:** Under IGAD, WFP co-chairs a regional Technical Working Group (TWG) on AA. The aim of the regional TWG³ is to promote the scaling of coordinated anticipatory action approaches, in line with the regional AA roadmap, through convening actors for collective efforts.

Key lessons learned

To deliver AA effectively, accurate and high-resolution forecasting early warning information are essential. However, forecasting capacity in Eastern Africa Region, including the three targeted countries is not yet sufficient for tailored, localized hazard-specific forecasts. Current forecasting methods, relying on global data, often miss local climate events and National Meteorological and Hydrological Services (NMHS) lack the resources for high resolution forecasts due to limited budget. AI integration could

² [The IGAD Regional Roadmap for Anticipatory Action](#)

³ [Terms of reference for the regional TWG](#)

enhance forecasting accuracy and support AA activation by providing more precise predictions for extreme climate events. In Eastern Africa, drought and flood events often occur simultaneously, requiring AA systems that can address multiple climate hazards. While financial instruments like insurance are gaining traction for managing climate risks, insurance companies in the region lack the capacity to develop innovative insurance solutions. Most existing insurance products rely on proxy indicators such as satellite data to determine payouts at the end of the season, which delays support provided to affected communities. The integration of AI in the design of FII products could be earlier payouts based on predictive models, addressing climate shocks in real time. For example, WFP's a crop insurance in Ethiopia and livestock insurance in Somalia currently rely on post-season assessment, but an FII model could trigger payouts during the season, offering timely relief to farmers and pastoralists.

Despite progress in scaling up early warning and disaster risk financing, significant gaps remain, not least in the areas which are hardest to reach, such as the Horn of Africa. While pre-arranged funding, including for AA and CRF, has increased, it remains insufficient to provide adequate protection to vulnerable communities in a changing climate given the growing size of population being impacted. As of 2024, WFP's efforts on climate protection have scaled up to cover 46 countries and 9.2 million people (40 countries and 4.1 million people for AA and 35 countries and 5.1 million people for climate risk insurance). The majority of this scale-up has concentrated in sub-Saharan Africa. Though over USD 45 million has been secured to cover AA programmes until 2028, primarily in southern and western Africa, critical funding gaps remain in eastern Africa. The Eastern Africa Dialogue Platform on AA stressed the need to attract all sources of financing to address these funding gaps⁴. Additionally, challenges such as fragmented risk data, limited impact-based forecast (IbF) models, and insufficient AA system capacities hinder scaling efforts. To address these, WFP with support from Google.org is piloting *Strengthening Early Warning System for Anticipatory Action (SEWAA)* Project, a multi-stakeholder initiative with ICPAC, Oxford University, European Centre for Medium-Range Weather Forecasts (ECMWF), Kenya Meteorological Department, and the Ethiopian Meteorological Institute, leveraging AI and weather prediction expertise to improve early warning systems and activate AA in the Horn of Africa.

2.3 Programme design rationale & alignment to Danish priorities

Building on the existing results and lessons learned, this project aims to demonstrate a proof of concept of using AI generated forecasts to activate AA and forecast index insurance (FII), to provide integrated climate protection for vulnerable communities in Eastern Africa. It will support the region in improving effectiveness in tackling the impacts of climate change on food security. It aligns with Denmark's commitment to bridging the humanitarian, development, and climate nexus through innovative solutions for vulnerable communities and hard-to-reach areas.

The Danish experience with leveraging partnerships across governments, NGOs, and private sector actors further enhances its ability to catalyse funding that bridges gaps between humanitarian response and long-term climate resilience. This underlines the Danish priority of driving forward-thinking, innovative solutions and proofing concepts for scalable and integrated solutions to manage climate risks.

⁴ [Declaration from the First Eastern Africa Dialogue Platform on Anticipatory Action](#)

Alignment with the DAC criteria:

- **Relevance:** It addresses the *critical needs* of climate-vulnerable populations by focusing on AA, early warning systems and climate and disaster risk financing (CDRFI). These mechanisms are essential to reducing the vulnerability of affected communities.
- **Impact:** By leveraging advanced AI technologies to strengthen early warning systems, the project has the potential to serve as a proof of concept for deploying cost-effective, scalable and localized forecasts which will enhance the ability by communities and other stakeholders to proactively act to reduce climate risks while establishing scalable systems for climate risk management.
- **Effectiveness:** The design of the project enhances *effectiveness* by integrating the use of early warning information with financial tools, ensuring timely and actionable responses. This coordinated approach increases the effectiveness of climate resilience strategies by addressing risks before they escalate.
- **Efficiency:** It is *efficient* in its use of AI to optimize resources needed for development of high resolution and timely forecasts. This reduces operational costs and enhances the efficiency of response mechanisms, ensuring that resources are used in the most impactful way.
- **Coherence:** The program shows strong *coherence* with national, regional, and international frameworks. By working closely with governments, WFP ensures that program interventions complement existing disaster management and climate adaptation strategies.
- **Sustainability:** Lastly, it emphasizes *sustainability* through capacity building, national ownership, and securing additional funding sources, ensuring the long-term resilience of communities in Eastern Africa. It fosters sustainable systems by empowering local and national institutions to independently manage and respond to climate risks over time.

Alignment with relevant Danish engagements:

Denmark is engaged with a range of initiatives in the space of early warning/early action, anticipatory action and climate related finance in the region. The project at hand complements the following engagements:

- **Systematic Observations Financing Facility (SOFF):** in recognition that weather and climate data are a critical part of developing relevant forecasts, this project will collaborate with the ongoing SOFF interventions in the 3 countries to turn the expanded data coverage planned by SOFF into actionable information. The project will contribute to informing the investment plans developed under the SOFF and capitalise on the technical assistance provided under the SOFF to support holistic capacity strengthening that enables early warning to be used for decision making and action.
- **Risk-informed Early Action Partnership (REAP):** WFP has committed to achieve REAP's ambition of making one billion people safer from disasters by 2025. This project will support the realization of the ambition by expanding early action financing in the selected countries, improving early warning systems, and building local capacity to act on pre-identified forecasts. By integrating AI technology, AA and climate risk financing, the project aligns with REAP's objectives of bridging the gap between early warnings and early actions.

- **Early Warnings 4 All (EW4All) Initiative:** This global initiative seeks to ensure that every person on the planet is protected by early warning systems within the next five years. The project will contribute to all the 4 pillars of the EW4All through contributing to risk assessments (pillar 1) that inform targeting of pre-agreed actions to a range of vulnerable populations, using AI to develop localized forecasts of hazards (pillar 2), enhancing capacities to act on early warning (pillar 3) and dissemination of early warning information (pillar 4) which is a commonly agreed AA.
- **InsuResilience Global Partnership:** Denmark is also engaged in the InsuResilience initiative, which aims to enable faster and more reliable disaster response through climate risk insurance. This project's focus on developing FII contributes to the InsuResilience research agenda, as well as to their overall vision about extending risk insurance coverage to 500 million vulnerable people.
- **Global Shield Against Climate Risks:** Denmark is an active supporter of the Global Shield, an initiative launched under the G7 in partnership with the V20 Group to provide fast and predictable financial assistance to countries facing climate disasters. This project's focus on developing Forecast Index Insurance (FII) and expanding early action financing aligns well with the Global Shield's objectives of ensuring rapid response mechanisms are in place for vulnerable communities.

Important to notice the project will also build on the key principles outlined in the **Joint FAO and WFP AA Strategy** endorsed in 2023 to deliver a comprehensive set of AA measures to protect people's food security from shocks, expand the geographic coverage and anticipation for different types of shocks and advocate for the mainstreaming of AA within key policies, processes and institutions.

Alignment with Danish Cross-Cutting Priorities:

In each country, WFP has existing, strong relationships with local and national governments. This engagement is multi-sectoral in nature, involving all relevant sectors, including hydrometeorology, disaster management, social protection, agriculture, environment, finance, gender and health. In addition, WFP Cooperating Partners remain an essential part of the implementation and achievement of WFP's Country Strategic Plans (CSP). The range of partners have been mapped out in Annex 2, considering ongoing engagements, and this will be expanded during the project implementation. WFP also continues to advance the **localization** agenda, through collaboration with National Non-Governmental Organizations (NGO) and national and local authorities to increase its footprint in hard-to-reach areas, strengthen capacities, and leverage local knowledge, skills, and solutions while fostering stronger coordination amongst various stakeholders for sustainability. In 2023, 33 percent of WFP Cooperating Partners' expenditure went to national partners and WFP aims to increase this amount. These partnerships have been instrumental in promoting sustainability and self-reliance within the communities. Further, with the coming WFP Localisation policy, which is expected to be approved in early 2025, WFP will be able to further strengthen its localisation approach during the project implementation phase.

- **Human Rights-Based Approach (HRBA):** The project prioritizes vulnerable populations, addressing structural inequalities and ensuring marginalized groups benefit from climate resilience strategies. By working closely with local and national governments, WFP ensures that its interventions respect human rights principles while promoting local ownership, which is critical for sustainable, equitable outcomes.

- **Leaving No One Behind (LNOB):** The project employs inclusive approaches, ensuring that all population groups—particularly the most vulnerable—are actively considered in the design and implementation of interventions. By engaging NGOs and local communities, the project leverages local knowledge and skills to ensure that assistance reaches those in hard-to-reach areas, fostering self-reliance and working to ensure that no one is left behind.
- **Gender and Youth:** The program includes gender-responsive approaches and actively involves youth in climate resilience efforts, acknowledging their role in sustaining future climate action.

3 Project outcomes and key components

The project aims to achieve three outcomes:

- **Outcome 1:** National systems for medium and seasonal forecasting in project countries are strengthened to produce high-resolution, probabilistic forecast information.
- **Outcome 2:** National and local institutions enhance their capacity to manage climate risks through integrated anticipatory action and climate risk financing.
- **Outcome 3:** Knowledge is effectively shared across the wider community, enabling learning from practices and used to inform future scaling of the project

The three critical outcomes are achieved through two key project components detailed in the following.

Component 1. Leveraging AI to strengthen National Early Warning Systems in Uganda and Rwanda to reduce climate risks on food security

AA and CRF programs require reliable early-warning systems to forecast extreme weather events with lead time of weeks or months, enabling timely response before disaster occurs. As part of this project, WFP will complement the initial set up developed under the SEWAA project to support the national meteorological services of Rwanda, Ethiopia and Uganda and their local government counterparts and partners to develop a cloud-based AI post-processing system for developing improved high-impact weather forecasts. The AI generated forecasts will cover the entire country, with tailored forecasts for areas prone to extreme events.

This Danish support will focus on a proof of concept to rapidly set up a nationally owned cloud-based AI post-processing system for improved high-impact weather and sub-seasonal forecasts at high-resolution. This project will take the results from the Google.org project forward to test the provision of high-quality forecasts that will be used to trigger AA, sector-specific early warnings, and the development of forecast-based index insurance programmes. Reliable early warnings are an important component of any disaster risk management system and are most useful when they offer all relevant actors the right information at the right time. These reliable forecasts would be used by local authorities to make informed decisions regarding preparedness actions, AAs, and emergency response actions at the right place before, during, and after the impact of a severe weather event.

The project will use global weather models and AI techniques to improve weather forecasts in areas with limited local by integrating satellite and other data for more accurate, accessible, and timely community level forecasts. AI forecasts can be run on laptops, reducing costs and enabling frequent, high quality predictions for various sectors. When integrated with climate-risk management instruments such as AA,

and forecast-based insurance, these forecasts can trigger pre-arranged financial mechanisms, ensuring resources are available before disasters occur. This approach maximizes the efficiency of interventions, reducing human and economic losses and building resilience to future climate shocks. The Danish support will accelerate the deployment of AI technology in Kenya and Ethiopia, improving CRF tools with robust and accurate information.

WFP and partners will provide technical support to National Meteorological and Hydrological Services (NMHS) and key national actors to:

- Proof the concept on how AI forecasts can reach underserved areas and inform AAs.
- Develop datasets for extreme weather event forecasting as well as for improving the knowledge on extreme events.
- Enhance capacity to generate high-resolution, calibrated, and probabilistic forecasts days to months in advance.
- Explore AI for forecasting potential impacts, in addition to hazard forecasts.
- Communicate tailored AI forecasts for timely anticipatory actions at all levels.

Component 2. Strengthening national climate risk financing approaches in Ethiopia, Rwanda, Uganda to improve food security

WFP will use AI to enhance EWs under Component 1 and pilot its use to systematically and more consistently improve the activation of AA and CRF. The project aims to integrate digital technology with financing tools for AA and FII, supporting layered disaster risk financing and institutional system building. While AA and climate risk insurance initiatives are ongoing in Ethiopia, Rwanda and Uganda, they are implemented separately. This project will aim to work with key actors to layer the two risk financing solutions, with emphasis on designing pre-arranged financing based on AI generated forecast.

AA takes pre-emptive steps before disasters, reducing loss and damage, while CRF, and particularly insurance, offers compensation when risks materialize. When coordinated, these tools minimize immediate climate shock impacts and encourage investment in climate adaptation and risk management strategies. Due to funding limitations and the challenges in ensuring full coordination, WFP has so far only been able to deploy the two instruments simultaneously in Zimbabwe but results point towards the need to expand and improve how we sequence and layer different climate and disaster risk financing instruments in order to use resources in the most efficient and impactful way.

FII, which triggers payouts based on weather forecasts, offers a proactive approach by enabling early funding for AA before disasters strike. As all insurance products, FII will imply the payment of a premium by WFP to a licensed insurance company, based on which the company will provide coverage of a certain risk. In case the event covered by the insurance policy materializes, the insurance company will distribute a payout either directly to the affected households or to WFP to implement responses. Through this payout, FII aims to provide additional 'fuel' for major events, as part of a risk layered approach where a combination of risk financing tools will ensure prevention or mitigation of the impact of extreme events.

In contrast to traditional insurance that compensates after events, FII supports risk preparedness and mitigation. It unlocks funds before extreme events, promoting prevention rather than post-event

compensation. With robust financial structures and multiple funding sources, FII can amplify response capacity and improve climate risk management and is critical in countries where humanitarian needs exceed traditional response capabilities.

Considering the novelty of such products, technical and financial support are needed for product design and implementation. The insurance industry will be supported to leverage the existing AA models, ensuring that threshold and forecasts are sufficient, appropriate and robust enough to support the development of FII by:

- Identifying the optimal AA, timing and implementation strategy for anticipatory financial instruments (including who will implement them).
- Aligning methodologies and datasets for thresholds and forecasts with insurance industry practices.
- Complementing existing insurance coverage either to capture the same shocks (and optimize coverage) or trigger for shocks that would not be captured by index insurance.
- Developing standard operating protocols for FII to complement the overall AA plan.

Danish support is crucial for enabling communities to respond swiftly to early warnings while ensuring financial security through insurance, bridging the gap between immediate disaster response and long-term resilience. Continued Danish investment in capacity building will help test tools, build the enabling environment to increase the number of people protected from climate-related hazards and ensure local capacities are maintained for sustainability. As stakeholders at all levels take ownership of the AA approach and identify synergies with complimentary risk financing and climate adaptation approaches, the project will provide technical support to key stakeholders to:

2.1 Develop new disaster risk financing tools and improve existing ones: Develop a solid risk layering and financing approach for climate shocks, covering all financing mechanisms available (e.g., insurance, contingency funds), including covered risks, financial volumes, targeted areas and populations and actions. In Ethiopia and Uganda, pilot a FII scheme for forecast-based payouts, enabling communities to implement AAs before disaster hits the ground. In Rwanda, strengthen government capacity to complement AA systems with CRF instruments such as household-level and sovereign insurance schemes.

2.2 Scale up the coverage: Expand AA and CRF coverage and diversify climate protection instruments for new risks.

2.3 Link tools to national systems: Link risk financing mechanisms to national shock-responsive safety-nets for immediate response to predict (AA) or detected shocks (early response, via climate risk insurance).

2.4 Evidence generation and learning: Assess AI's role in triggering AA and FII products to validate the proof of concept and develop best practices for scaling AA and risk financing solutions across different national contexts.

The planned interventions in the three countries are summarized in Table 2.

Table 2. Country Specific Objectives and Component Interventions

| | Ethiopia | Rwanda | Uganda |
|------------------------------------|--|---|--|
| Country Specific Objectives | <ul style="list-style-type: none"> • Improve AI-driven early warning information for decision making and action. • Strengthen AA systems and integrate them into regional disaster risk management (DRM) frameworks. • Develop and implement a multi-tiered FII system to protect vulnerable livestock herders. | <ul style="list-style-type: none"> • Improve AI-driven early warning systems for extreme rainfall, floods, and landslides. • Strengthen national AA capacity and develop a comprehensive national AA framework. • Build government capacity and provide proof of concept for future CRF mechanisms. | <ul style="list-style-type: none"> • Improve AI-driven early warning systems for timely disaster preparedness. • Introduce FII to complement existing agricultural insurance programs, enabling pre-arranged payouts. • Strengthen national disaster risk management systems by linking AA and climate risk insurance with existing social protection and disaster risk frameworks. |
| Component 1 Interventions | Component 1 interventions are not applicable to Ethiopia. | <ul style="list-style-type: none"> • Develop high-resolution forecasts: WFP will support Meteo Rwanda to generate AI-generated forecasts for extreme weather, enhancing calibration with tailored observational datasets. • Tailor AI forecasts for triggers: WFP will guide the integration of AI-generated forecasts into locally relevant triggers for activating AA, focused on floods. • Capacity building and proof of concept: WFP will collaborate with the Rwandan Ministry in charge of Emergency Management (MINEMA) and the Ministry of ICT (MINICT) to second an expert to MINEMA to link AI-driven forecasts generated by Meteo Rwanda to Rwanda's national disaster risk management systems to inform key decision making. | <ul style="list-style-type: none"> • Development of AI-driven forecasts: WFP will support Uganda Meteorological Agency in generating high-resolution forecasts to predict extreme weather events like droughts and floods, providing critical information for timely AA responses. • Tailoring AI forecasts for triggers: WFP will guide the integration of AI forecasts into locally relevant AA triggers for disaster risk management. • Proof of concept and capacity building: WFP will collaborate with the Department of Meteorology and the Office of the Prime Minister to |

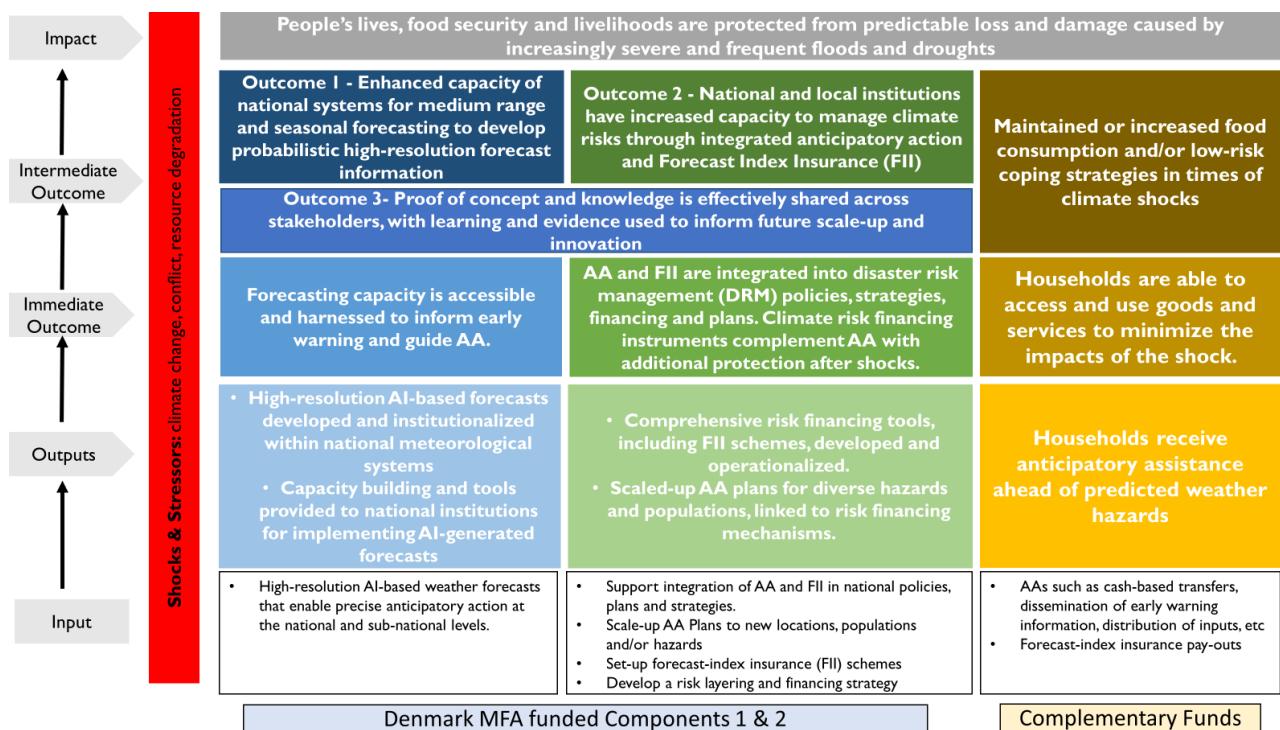
| | | | |
|----------------------------------|--|--|--|
| | | | <p>showcase a proof of concept demonstrating the effectiveness of these tools in enabling at-risk communities to better mitigate climate risks.</p> |
| Component 2 Interventions | <ul style="list-style-type: none"> • Research impact-based forecasts using AI-generated data from the Google.org funded SEWAA project. • Develop a flood AA in the Somali region using historical models to help communities anticipate and take proactive actions before both floods and droughts occur. • Enhance the 8028 Farmer Hotline - an innovative digital platform – to provide real-time AI-driven early warning alerts and impact information in local languages to inform actions by smallholder farmers and pastoralists. • Institutionalize AA systems in Oromia and Southern regions by supporting the development of AA Plans (AAPs), creating a decision-making tool with the Ethiopian Meteorological Institute (EMI) for drought AA and integrating AA into regional DRM frameworks. • Pilot FII to support livestock herders through payouts based on forecasts of extreme weather events. • Conduct awareness campaigns and training to promote AA and climate risk insurance at the district and community level, improving preparedness. | <ul style="list-style-type: none"> • Strengthen AA systems: WFP will operationalize AA systems for droughts, floods and landslides, integrating them into the shock responsive Social Protection System • Technical assistance: WFP has supported the Ministry of Finance and the World Bank to develop a Disaster Risk Financing diagnostic study. Following findings from this study, WFP will help integrate AA and FII into Rwanda's Disaster Risk Financing Strategy that is currently under development. | <ul style="list-style-type: none"> • Strengthen AA systems: WFP will work with the Government of Uganda and partners to put in place AA systems for floods in Karamoja and scaled up flood AA in Southwestern region. • Capacity building: WFP will second an expert to the Uganda National Meteorological Agency (UNMA) to tailor climate information for AA and FII, ensuring long-term sustainability and integration into national systems. • Introduce FII: FII will provide pre-arranged financial support based on weather forecasts, enabling smallholder farmers to adopt anticipatory actions. • Integrate climate risk financing into national systems: WFP will link AA and FII to Uganda's agricultural insurance program and national disaster risk frameworks, including the Uganda Agricultural Insurance Scheme (UAIS) and the Northern Uganda Social Action Fund (NUSAIF), enhancing cost-efficiency and long-term sustainability. |

2 Theory of change, key assumptions and summary of result framework

2.1 Theory of change and key assumptions

The project's theory of change (ToC) is presented in figure 1 below. Component 1 and 2 will be funded through this project, while the additional dimension that focuses on the delivery of AA and FII payouts is funded by collective investments from multiple donors from other sources.

Figure 1: Intervention logic for the WFP AI and CRF project



Problem Statement: The increasing frequency and severity of climate-related disasters, such as floods, droughts in Eastern Africa threaten lives, food security, and livelihoods, exacerbating vulnerability and poverty. Current disaster preparedness systems are inadequate to anticipate and mitigate the effects of extreme weather events, not least for the hardest to reach areas. Moreover, fragmented data and limited access to anticipatory finance make it challenging for national and local institutions to act decisively.

Goal: To empower national and local institutions in Ethiopia, Rwanda and Uganda to take proactive, scalable actions to reduce climate risks, demonstrating how integrated and innovative approaches can protect lives, food security, and livelihoods from predictable climate impacts.

Intervention Logic:

Component 1: Leveraging AI to strengthen National Early Warning Systems

Assumption: If national institutions are equipped with a cloud-based AI-driven weather forecast systems and the necessary technical skills, they will be able to generate more frequent, accurate, and actionable early warning information.

Causal Pathway: AI-driven post-processing improves weather prediction accuracy, particularly at local level. This is essential for managing climate risks as it improves the reliability of forecasts which are essential for timely decisions on anticipatory action and disaster response. Cloud-based systems provide real-time access to high-resolution forecasts without costly infrastructure, making advanced technology accessible to resource-constrained countries.

Implementation Strategy: To ensure that the project outcome is achieved, WFP will work with technical service providers (e.g.) to: 1) train national meteorological and hydrological services (NMHSs) to operate such systems; 2) utilise such systems to process data to generate probabilistic and high resolution forecasts.

Component 2: Support comprehensive approaches to anticipatory actions and climate risk financing

Assumption: If AA policies, plans and CRF tools are developed and operationalized, institutions and communities will be better equipped to act ahead of intensified weather events, mitigating losses.

Causal Pathway: AA and CRF systems unlock funds based on pre-set triggers and plans, allowing governments and communities to access resources before or immediately after an event. This prevents high-risk coping strategies, such as asset sales or borrowing, enhancing longer term resilience.

Implementation Strategy: WFP will collaborate with national meteorological services, disaster management agencies and other line ministries (e.g. agriculture, social protection, etc) to:

- support the identification of people-centred actions that can be taken ahead of, and in response to, specific climate hazards;
- identify the most vulnerable populations to be prioritised for AA and early response through climate risk financing for each country and hazard;
- identify appropriate, accessible delivery mechanisms for different population groups in each country (e.g. women, men, youth, elderly, people with disabilities, indigenous peoples etc.)

Additional dimension of work, not supported within this project: In case of shocks, deliver anticipatory and rapid assistance to at-risk populations when pre-defined forecast triggers are reached

Assumption: If households receive timely assistance (FII and parametric insurance pay-outs) ahead of, or immediately after, predicted weather hazards, then they will maintain or improve food consumption, reduce reliance on high-risk coping strategies and reduce losses and damages in times of climate shocks.

Causal Pathway: AA and parametric insurance provide financial support before or right after a predicted climate hazard, such as drought or floods. This enables households to maintain food consumption, avoid

asset deletion, and make informed and long-term decisions. Studies show that timely assistance helps prevent malnutrition, supports resilience, and encourages sustainable practices. Access to insurance encourages households to adopt risk-reducing behaviours.

Implementation strategy: WFP will ensure this outcome is achieved by pre-arranging complementary funds (e.g. from Germany, Ireland, insurance payouts, etc.) for the implementation of AA and/or early response plans developed under Outcome 2 through Danish support. To manage risks, WFP will:

- improve data quality through activities under Component 1.
- co-develop layered, multi-stage triggers using local knowledge.
- conduct validation exercises with stakeholders and communities.

Finally, as target populations may experience hazards beyond the ones covered by the project (e.g. conflict, landslides, economic shocks etc.), the interventions will be implemented in areas benefiting from longer-term development programmes that address the structural causes of disaster vulnerability (e.g. poverty, inequality, degraded ecosystems, inadequate infrastructure, chronic malnutrition, etc.).

When implemented at scale, these interventions will protect food security, lives and livelihoods of vulnerable populations in Ethiopia, Rwanda and Uganda from climate-related loss and damage.

2.2 Results framework

Progress will be measured through WFP's monitoring framework focusing on a limited number of key outcomes and corresponding outputs and their associated indicators.

Baseline indicators will refer to 2023 values as 2024 official values will only be available in early 2025 as per WFP's corporate reporting timelines. WFP will update the baseline values once the 2024 reporting exercise is complete.

| | | | |
|-------------------|---|--|--|
| Project | AI, Anticipatory Action & Climate Risk Financing Instruments: Project Proposal for Protecting Food Security from Climate Risks in Eastern Africa 2025-2026 | | |
| Project Objective | Protect people's lives, food security and livelihoods from predictable loss and damage caused by increasingly severe and frequent floods and droughts, in selected countries. | | |
| Impact Indicator | Number of people with financial protection from climate hazards | | |
| Baseline | 2.34 million | | |
| Target | 3.1 million | | |

| | | | |
|-------------------|---|------|----------------|
| Outcome 1 | National systems for medium range and seasonal forecasting in Rwanda and Uganda are enhanced to develop probabilistic high-resolution forecast information. | | |
| Outcome indicator | Number of tools or products developed or revised to enhance national systems contributing to Zero Hunger and other SDGS as part of WFP capacity strengthening | | |
| Baseline | Year | 2023 | 0 ⁵ |
| Target | Year | 2027 | 6 |

| | | | |
|------------|---|--|--|
| Output 1.1 | A cloud-based AI/ML system for weather and seasonal forecast established and institutionalized in Rwanda and Uganda | | |
|------------|---|--|--|

⁵ The baseline target is zero because no tools or products have yet been developed or revised in these countries to enhance national systems as part of WFP's ML/AI capacity-strengthening efforts.

| | | | |
|-----------------------|--------|---|----------------|
| Output indicator 1.1a | | Number of tools or products developed or revised to enhance national systems contributing to Zero Hunger and other SDGS as part of WFP capacity strengthening (CRF C.6) | |
| Baseline | Year | 2023 | 0 ⁶ |
| Target | Year 1 | 2025 | 4 |
| Target | Year 2 | 2026 | 6 |

| | | | |
|-----------------------|--------|---|----------------|
| Output 1.2 | | National meteorological services in Rwanda and Uganda are equipped with the skills to independently operate, manage, and maintain cloud-based AI/ML system for forecasting and early warning systems. | |
| Output indicator 1.2a | | Number of people engaged in capacity strengthening initiatives facilitated by WFP to enhance national stakeholder capacities contributing to Zero Hunger (CRF C.4). | |
| Baseline | Year | 2023 | 0 ⁷ |
| Target | Year 1 | 2025 | 20 |
| Target | Year 2 | 2026 | 50 |

| | | | |
|-------------------|------|---|-------------------------------|
| Outcome 2 | | National and local institutions have increased capacity to manage climate risks through integrated anticipatory action and Forecast Index Insurance (FII) | |
| Outcome indicator | | Number of tools developed or reviewed to strengthen public and private sector systems for forecast-based action ⁸ | |
| Baseline | Year | 2023 | 9 (3 CRI ⁹ , 6 AA) |
| Target | Year | 2027 | 21 (6 CRI, 15 AA) |

| | | | |
|------------------|--------|--|-----------------|
| Output 2.1 | | Anticipatory Action Plans are scaled-up to new locations, hazards and people | |
| Output indicator | | Number of people covered by Anticipatory Action Plans, disaggregated by sex and hazard (drought/floods) (CRF G.9) | |
| Baseline | Year | 2023 | 871,943 |
| Target | Year 1 | 2025 | 950,000 |
| Target | Year 2 | 2026 | 1,100,000 |
| Output 2.2 | | Forecast index insurance (FII) products are made available to vulnerable people in Ethiopia and Uganda, complementing existing inclusive climate risk financing schemes (covering 620,000 people in Ethiopia in 2023). | |
| Output indicator | | Number of people covered by FII | |
| Baseline | Year | 2023 | 0 ¹⁰ |

⁶ The baseline target is zero because no tools or products have yet been developed or revised in these countries to enhance national systems as part of WFP's ML/AI capacity-strengthening efforts.

⁷ The baseline target is zero because no individuals have yet participated in WFP-facilitated AI/ML capacity-strengthening initiatives in these countries at the start of the project.

⁸ This indicator reflects WFP's contribution to the development/ adjustment of key tools reflecting the status of national capacities for anticipating climate risks and mitigating their impact on food systems by using forecasting technologies and early warning systems. The indicator focuses on six main tools developed and/or revised with WFP support with the aim to strengthen national disaster risk management capacity to implement forecast-based anticipatory actions: 1) feasibility and risk assessments; 2) forecasts & triggers; 3) implementation tools (e.g. targeting and delivery mechanisms); 4) AA Plans; 5) financing mechanisms and; 6) M&E resources. As of 2024, only Ethiopia has finalised all the tools, Uganda has 5 out of the 6 and Rwanda only 2. By the end of the project WFP aims to have all tools fully operational for all countries covered.

⁹ Currently WFP is collaborating with public and private sector partners on climate risk insurance initiatives at different levels including micro (Uganda) meso (Ethiopia) and macro (Rwanda). By the end of this project, at least 1 FII tool shall be developed in the 3 countries achieving the target of 6 FII tools developed to compliment existing CRI instruments.

¹⁰ FII is not yet implemented in the 2 countries therefore baseline number of people covered is zero.

| | | | |
|--------|--------|------|-----------------------------------|
| Target | Year 1 | 2025 | 30000 (10k Uganda, 20k Ethiopia) |
| Target | Year 2 | 2026 | 60,000 (20k Uganda, 40k Ethiopia) |

| | | | |
|-------------------|------|---|---|
| Outcome 3 | | Increased learning and evidence generated on the effectiveness of early warning systems and integrated Forecast Index Insurance as a proof of concept for scaling. | |
| Outcome indicator | | Number of learning reports, case studies, or knowledge-sharing events documenting the effectiveness, challenges, and best practices from the project to inform future scale-up. ¹¹ | |
| Baseline | Year | 2023 | 0 |
| Target | Year | 2026 | 2 |

3 Budget

Table 3 presents the overall budget of the project at outcome level aligned with the Result Framework. Annex 5 includes a detailed budget for each Trust Fund aligned to WFP's standard cost categories, including budget allocation at country level for each year. The contribution will be channelled to the following WFP corporate Trust Funds: a) The Hunger-related Climate Change (THCC) Trust Fund (for Component 1 and part of Component 2) and b) Trust Fund Rural Resilience - TFRR (for the climate risk insurance-related costs of Component 2). Annual (certified) financial reporting will follow the standard WFP Trust Fund financial report format for each Trust Fund, as per the agreement to be signed with Denmark.

| Project | | AI, Anticipatory Action & Climate Risk Financing Instruments: Project Proposal for Protecting Food Security from Climate Risks in Eastern Africa 2025-2026 | | |
|-------------------|--|---|--------------|------------|
| Project Objective | | Protect people's lives, food security and livelihoods from predictable loss and damage caused by increasingly severe and frequent floods and droughts, in selected countries. | | |
| | | Year 1 (DKK) | Year 2 (DKK) | |
| Outcome 1 | | National systems for medium range and seasonal forecasting in Rwanda and Uganda are enhanced to develop probabilistic high-resolution forecast information. | 3,534,000 | 3,534,000 |
| Output 1.1 | | A cloud-based AI/ML system for weather and seasonal forecast established and institutionalized in Rwanda and Uganda | 2,120,400 | 2,120,400 |
| Output 1.2 | | National meteorological services in Rwanda and Uganda are equipped with the skills to independently operate, manage, and maintain cloud-based AI/ML system for forecasting and early warning systems. | 1,413,600 | 1,413,600 |
| Outcome 2 | | National and local institutions have increased capacity to manage climate risks through integrated anticipatory action and climate risk financing | 14,911,993 | 14,911,993 |
| Output 2.1 | | Anticipatory Action Plans are scaled-up to new locations, hazards and people | 7,711,633 | 8,111,653 |

¹¹ WFP aims to have: 1) synthesis of findings, lessons learned and best practices on how AI can be used to inform AA triggers and FII products and 2) an event to present the synthesis document by the end of the project timeframe.

| | | | |
|-------------------------------------|--|-------------------|-------------------|
| Output 2.2 | Forecast index insurance (FII) products are made available to vulnerable people in Ethiopia and Uganda, complementing existing inclusive climate risk financing schemes (covering 620,000 people in Ethiopia in 2023). | 7,200,360 | 6,800,340 |
| Outcome 3 | Increased learning and evidence generated on the effectiveness of early warning systems and integrated climate risk financing as a proof of concept for scaling. | 333,350 | 333,350 |
| Direct Costs | | 18,779,343 | 18,779,343 |
| Indirect Support Cost (6.5%) | | 1,220,657 | 1,220,657 |
| Total (DKK) | | 20,000,000 | 20,000,000 |

4 Institutional and Management arrangement

The contribution will be managed in line with the terms and conditions set out in the agreement related specifically to this project, which will cover the project period 2025-2026.

Further to the management arrangement set out in the agreement between Denmark and WFP, the MFA will follow the implementation of the project through an annual meeting with the objective to receive project updates and focus on reviewing project implementation and of the appropriateness of objectives and commitments. WFP will inform the MFA of significant changes to the activities envisaged in this project document.

The draft communications plan can be found in Annex 5 and serves as a baseline for joint communication regarding the project. The plan can be elaborated during implementation.

4.1 Key Partners

WFP as implementing partner

WFP is uniquely positioned to lead this initiative, leveraging its extensive field presence, technical expertise, and partnerships to address the challenges posed by climate shocks. As the world's largest humanitarian agency, WFP combines global advocacy, operational capacity, and proven leadership in AA and CRF. Since 2015, WFP has supported governments and communities in over 40 countries, reaching 9.2 million people through AA and insurance mechanisms by 2024. WFP is supporting this scale-up through its leadership in initiatives such as the Early Warning for All, the Anticipation Hub, Grand Bargain Caucus on Scaling up AA, the Risk-Informed Early Action Partnership (REAP), the Global Shield against Climate Risk, the IGAD regional AA roadmap and other initiatives and funding mechanisms that bring together diverse partners and elevate our advocacy for investments.

WFP's operational leadership is underpinned by strong partnerships with governments, technical service providers, and private-sector actors – many have already existed, and some are in the process of establishing. The detailed partner assessment, roles, and responsibilities of WFP are further elaborated in **Annex 2**.

International Partners

Global networks: Expansion of AA programming supported by WFP over the last years has been realized in great part through an increase of advocacy and global attention. To further support this expansion, WFP has established systematic linkages with the REAP, the Anticipatory Action Task Force (AA TF), the Monitoring Evaluation and Learning practitioners' group (MEAL), and the Interagency Standing Committee's (IASC) early warning and early action readiness group.

International organizations: Partnerships with organizations like the World Bank, African Risk Capacity, IGAD's Climate Prediction and Applications Centre, Red Cross societies, International NGOs and networks, and United Nations have supported expertise, funding, and resources to enhance the project's reach and impact. Through its collaboration with the UN Office for the Coordination of Humanitarian Affairs (OCHA) and other UN agencies on the Central Emergency Response Fund (CERF) AA Frameworks, WFP has an opportunity to engage in AA at scale, mainstream the approach, and effectively lead the UN-wide transformation of humanitarian response from repetitive 'response loops' to more forward-looking risk management.

National and Local Partners

Annex 2 elaborates the key national and local partners who are already working with WFP or that WFP intends to work with to deliver the project activities. Further mapping of partners will be done once the project commences, in coordination with existing technical working groups. The broad categories of partners are described below.

Key government agencies: The project will target regional, national and subnational government agencies responsible for disaster management, agriculture, social protection, and climate services as crucial stakeholders. A significant number of these public sector agencies have already been collaborating with WFP in different contexts. Strengthening their capacity – including their ability to deliver locally relevant and gender-responsive services—and integrating AA into their systems will enhance resilience at all levels.

Local communities: Stakeholders in local communities possess valuable indigenous knowledge about climate patterns. Engaging them in the EWS and forecasting process will lead to more localised predictions and enhance the resilience of vulnerable populations. Local communities also have knowledge on actions that would work well in their contexts, and this will be supported and integrated into the design of AA that will be delivered by WFP and partners.

Women, girls and youth: Ensuring their meaningful participation in the design and implementation of AA and risk finance solutions will enable more inclusive and equitable systems. This is done through better targeting and more concerted engagement with women and youth groups at national and local levels.

Private sector and academic: As part of this initiative, WFP will further strengthen its partnership with Oxford University, a leading academic institution for AI techniques, Google.org, African Risk Capacity (ARC), the European Centre for Medium Range Weather Forecasting (ECMWF), Technical Service Providers to design index insurance products, and regional and local insurers and reinsurers.

WFP shall engage with the host governments as well as other UN agencies including FAO, IFAD, UNDRR as well as the World Bank to especially on policy and advocacy for the project's sustainability. Project implementation at community level shall be supported by WFP's Cooperating Partners (CPs) who shall be responsible for community awareness creation, product distribution, training of village champions and engagement with local farmer/pastoral groups. WFP as the project implementer shall be responsible for project coordination and partnership management. Targeting criteria for project beneficiaries and quality assurance shall also be led by WFP.

In the case of FII WFP shall contract Technical Service Provider (TSPs) to analyse/quantify climate risks affecting agricultural production and explore mechanisms of integrating AI to design FII products. The TSP works hand in hand with WFP technical teams at HQ, RBx and COs to develop suitable agricultural insurance products that are responsive to the needs of our target beneficiaries, are affordable and verifiable (transparent). To contract a TSP; based on needs, the CO can either choose to:

- Use one of the existing Long-Term Agreements (LTAs) with prequalified service providers.
- Piggyback on other UN Agencies' LTAs
- Launch a new tender.

The roles of TSPs include;

- **Risk assessment:** identify and quantify specific risks, such as drought, floods, pests and diseases using historical data from satellite imagery or historical yield record to predict potential losses.
- **Coverage options:** Based on the risk assessment, coverage options are determined. For example, if coverage is for crops, what risk is specifically covered e.g. weather events, pests and diseases or floods.
- **Insurance Policy design:** Set affordable premiums for farmers while ensuring sustainability. Define coverage limits, terms, and conditions.
- **Designing AI based FII solutions:** Private insurance companies shall be engaged as underwriters responsible for providing insurance services and delivering payouts to FII policyholders once triggered. The key roles of insurance companies include;
- **Underwriting:** providing insurance coverage for the identified climate risks.
- **Claims processing:** Establishing efficient procedures for assessing damage and processing compensation promptly to minimize financial stress to affected farmers. Robust loss verification mechanisms, such as field visits (yield estimation), remote sensing and farmer reports, will be implemented to ensure accuracy.

4.2 Project management structure

From the MFA, the project will be anchored in the Department for Humanitarian Action, Civil Society and Engagement, who will be responsible for grant management and project monitoring. In the project implementation the MFA Department will include and inform the Danish embassies in Kampala, Addis and Kigali, as well as the Permanent Danish UN Mission in Rome.

In WFP, project implementation in the three countries will be directly supervised by the WFP Country Office (CO) project teams to ensure timely and effective delivery of outputs, while the WFP Regional Bureau Nairobi (RBN) will provide project technical support, integration with regional strategies and knowledge sharing and linkages across both WFP AA projects and with WFP partners such as the Red Cross and FAO at regional and country levels. Overall oversight, linkages with other AA projects globally, and targeted strategic support will be provided by the HQ team in Rome. Jointly with RBN, HQ will support the designing of project monitoring and evaluation plans, providing capacity building for WFP field staff and disseminating and communicating evidence to inform best practices across the region and beyond.

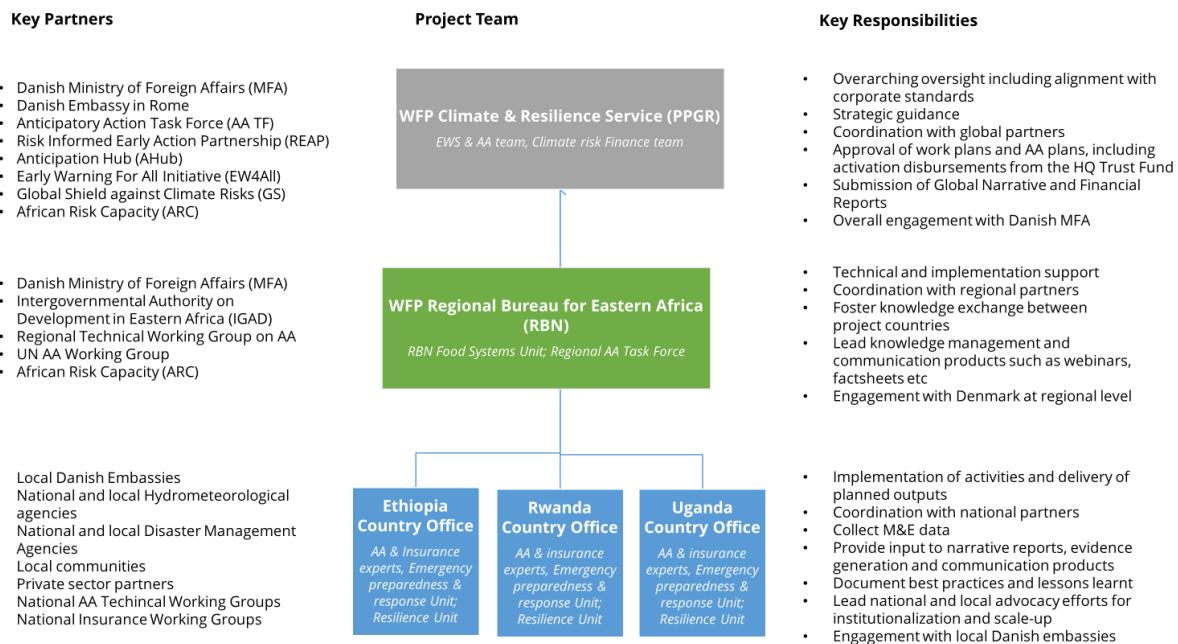
Throughout the implementation period of this project, WFP will inform the Danish MFA on the state of play of the foreseen activities, through regular email exchanges and/or calls (when relevant and required). In addition, annual technical meetings will aim to exchange views on activities, review implementation, review the appropriateness of partnership objectives and commitments and determine whether changes should be made to these objectives and commitments.

Multiple layers of both internal and external coordination structures and formats will be implemented from global- to regional- and national-level, as further outlined below.

Global- to regional-level coordination - Enabled through close WFP-internal coordination between HQ and RBN, evidence and operational learnings will be disseminated to relevant global platforms, such as the Risk-Informed Early Action Partnership (REAP), the Global Shield against Climate Risks and the Anticipation Hub, as well as to relevant regional bodies, such as the Intergovernmental Authority for Development in Eastern Africa (IGAD), African Union Commission (AUC), and the Regional Working Group for AA. The existent partnership with the African Risk Capacity (ARC) Group as specialized agency of the AU will be further strengthened at regional level in support to enhanced harmonization of climate and disaster risk financing instruments (CDRFI), such as insurance and anticipatory finance, at national level.

Regional- to national-level coordination – RBN will lead on the coordination between implementing country offices (CO) in the region, including joint knowledge management and learning (KML) formats, such as joint thematic webinars. Regular (bi-weekly to monthly) bilateral coordination meetings will be held between CO and RBN teams to ensure continued technical support to the project implementation. On a biennial basis, RBN will host a regional workshop, which will bring together all AA-implementing COs and offer a WFP-internal platform for knowledge sharing and exchange of operational learnings. RBN will provide continued support to the successful implementation of the IGAD Anticipatory Action Roadmap which is aligned to the key AA country priorities as developed in the 2024 Eastern Africa Dialogue Platform by key partner and by extent also to the achievement of commitments made under the UN Executive Action Plan for the Early Warnings for All initiative. Visibility of project results will be ensured through the consolidation of country case studies and dissemination of operational learnings on multi-stakeholder events, such as the Africa or Global Dialogue Platforms on AA. The AA and Insurance teams in Eastern Africa will establish and coordinate WFP's strategic engagements in the region as well as provide guidance and support integration and links of AA with other programs and initiatives: climate services, disaster risk financing (macro and micro insurance), AA for essential needs, resilience, CBT, Shock Responsive Social Protection (SRSP).

National-level coordination – The COs in the selected countries aim at sustaining support provided to the relevant government entities in leading national coordination platforms for AA, such as National and sub-national AA Technical Working Groups (TWG) or Communities of Practice (COP) established with WFP support. These coordination platforms act as key vehicle towards enhanced government ownership and necessary alignment of relevant line ministries and the wider humanitarian and development community of practice for scaled-up AA efforts at national-level. As per government requests, WFP plans to allow for country partnerships and government peer learning visits based on common themes in AA system building (e.g. pairing of governments focusing on integration of SRSP and AA or countries focusing on common hazards or more experienced countries providing peer learning for less experienced countries).



With respect to measuring the performance of WFP and its programmes, Denmark will rely on WFP's reporting, monitoring and evaluation systems. WFP will keep Denmark informed on relevant preparation, review and evaluation missions or other activities in relation to the implementation of this project. WFP will facilitate, at the expense of Denmark, the participation of officials or designated representatives of Denmark in any such mission in accordance with WFP Regulations and Rules.

5 Financial Management, planning and reporting

5.1 Fund Disbursement Plan

Danish support for this project will be disbursed in two tranches in accordance with the following schedule:

| Instalment | Amount | Date |
|------------------|----------------|---------------|
| 1st disbursement | DKK 20,000,000 | December 2024 |

| | | |
|------------------|-----------------------|--------------|
| 2nd disbursement | DKK 20,000,000 | October 2025 |
|------------------|-----------------------|--------------|

5.2 Financial Management, Accounting and Auditing

Financial management, accounting and auditing will align with WFP's rules and procedures, while respecting sound international principles for financial management and reporting. WFP's financial framework is defined in the [WFP Financial Regulations and Rules](#)¹². In line with its Financial Regulations and Rules, WFP is subject to regular external audits, reports of which are presented to the Board and published online on the WFP EB [website](#). WFP, like all other UN organizations, is subject to the Single Audit Principle. The Single Audit Principle is enshrined in Financial Regulation 14.9, which provides 'External audits will be conducted exclusively by the External Auditor appointed by the WFP Executive Board'. In accordance with the Single Audit Principle, WFP does not consent to undergo external reviews (including audit of projects) commissioned by its donors when these do not reflect the governance and oversight arrangements at the UN level.

The funds will be managed in line with the Denmark MFA – WFP agreement concerning this project.

5.3 Work Planning

Each WFP country team and the regional bureau will do their individual work planning. An overall plan for the project implementation will be developed at project start by WFP and shared with the MFA. Based on overall plan and developments within the project, annual work plan and budgets will be developed. Work plans will be flexible and allow for adaptive management in dialogue with partners, in accordance with the MFA Aid Management Guidelines¹³ and the Financial Management Guidelines¹⁴.

5.4 Monitoring, Evaluation and Learning (MEL)

Project monitoring and evaluation will be carried out in accordance with WFP procedures. An indicative Logframe is attached to the project document, which is aligned to the Theory of Change (see Annex 3). The Logframe includes quantitative indicators, in line with [WFP's Corporate Results Framework 2022-2025](#). Overall, monitoring and the associated data collection processes will assess and report on the achievements of project implementation at both outcome and output levels. WFP COs will be in charge of designing and running the internal monitoring and evaluation system of the project. HQ and RBN will provide technical and quality assurance support as needed, such as the development of baselines, endlines, and Post-Distribution Monitoring guidance, templates and support.

Learning activities and processes will be implemented from the start of the project to foster a deep learning culture. Activities will include: evidence and knowledge exchanges, learning and stock-taking meetings and events, development of user-friendly knowledge products, as well as targeted external engagements to share knowledge beyond the project.

¹² <https://docs.wfp.org/api/documents/WFP-0000141150/download/>

¹³ [Guidelines for programmes, projects, country strategic frameworks & HARD EARMARKED MULTILATERAL SUPPORT \(um.dk\)](#)

¹⁴ [General Guidelines for Financial management \(um.dk\)](#)

5.5 Reporting

Annual results will feature in WFP's standard corporate reporting requirements (i.e. Annual Country Reports - ACRs). In addition, WFP will summarise the key results for each CO in the Global AA and Climate Risk Insurance reports together with certified financial reports of the two Trust Funds on an annual basis, as per the agreement to be signed with Denmark.

6 Risk Management

The main risks to the project are linked to contextual, programmatic and institutional risks. Denmark will monitor and assess risks and risks management based on WFP's approach to risk management, as well as through dialogue with and reporting from WFP on project progress. The identified risks will be further developed as part of the detailed development of the project and in line with WFP's risk management systems. The matrix below highlights the main identifies risks and its management, while Annex 4 presents WFP's approach to risk management.

Contextual Risks:

| Risk | Probability | Impact | Overall risk | Risk-reducing measures |
|---|-------------|--------|--------------|---|
| Humanitarian emergency A medium/large scale humanitarian emergency occurs in one of the three countries, necessitating a diversion of focus for key implementing partners and stakeholders. | Medium | Medium | Medium | Contingency plans in place, activation of anticipatory fund if crisis is related to extreme weather events in order to mitigate impact on beneficiaries. |
| Change in national political priorities on climate resilience building | Low | High | Medium | As part of project implementation, working to build national and local authorities' ownership, and ongoing focus on responding to national priorities within climate resilience and adaptation. Further, in bilateral engagements, Denmark will work to make links between the project at hand and other relevant bilateral engagements, based on bilateral dialogue on priorities. |
| Unpredictable political environment High turnover of government focal points. Change in government leadership might lead to change in priority and policies over the projects time period. | High | High | High | Denmark and WFP will seek to reduce effects on project implementation by establishing strong operational partnerships with various national organizations and the development of standard operating procedures to promote ownership amongst national stakeholders. Ensure that all MoUs are strictly followed. Organize meetings with key government officials. Organize regular TWG meetings. |
| Conflict Some regions in the three countries are affected by persistent attacks from nonstate armed groups. This might have impact on accessibility to certain areas. | Medium | High | Medium | Take conflict, access and volatility into account during geographical targeting. Engage constantly with the government and local community to ensure ownership and buy in at all levels. Organize meetings with different government official to highlight the importance of AA. Staff undertake mandatory security trainings. |

Programmatic Risks:

| Risk | Probability | Impact | Overall risk | Risk-reducing measures |
|---|-------------|--------|--------------|--|
| Thresholds and triggers do not capture climate shock impact or scale , or are set incorrectly (either in terms of frequency, severity or in opposition to other risk management mechanisms). | Medium | High | Medium | Forecast and trigger system will be co-developed together and based on needs and limitations of local authorities and systems. Ongoing monitoring (satellite and ground-based) of rainfall amounts in target districts; Triggers and thresholds to be refined with observational feedback on an ongoing basis. Apply experience from previous/ongoing projects including, Ethiopia Google, AA and insurance programmes, to fine-tune the trigger methodology and minimize errors. Partner with specialised Technical Service Providers, such as IRI, ICPAC and others to |

| | | | | | |
|--|--------|------|--------|--|--|
| | | | | | provide capacity building support on improved forecast information and index design for FII. |
| Lack of weather and climate data in the targeted districts | Medium | High | Medium | | Make use of AI, historical archives, conduct data rescue exercises and make use of blended products including earth observational data; Capacity strengthening for National Hydrometeorological Services to generate higher-skill weather and climate data. |
| Low uptake of climate risk financing instruments by the targeted segment of participants. | Low | High | Medium | | <p>The choice of the right cooperating partners and the gradual introduction of instruments/services, accompanied by appropriate financial literacy training will be essential to build trust in the program.</p> <p>Preference to insurance schemes to be offered at the meso-level and macro-level so instrumental aggregators, including government, integrate climate risk financing instruments as part of the support provided. At that level there are higher probabilities of Willingness to Pay and Ability to Pay for climate risk financing instruments that are market based, ensuring an appropriate exit strategy.</p> <p>Appropriate selection of climate risk financing instruments and model depending on socio-economic profile of targeted segment of participants.</p> |
| Lack of readiness of insurance ecosystem to develop innovative climate risk insurance schemes such as FII | Medium | High | Medium | | Provide ongoing capacity support to insurers and reinsurers and involve specialised Technical Service Providers in the design and set up of the schemes. |

Institutional Risks:

| Risk | Probability | Impact | Overall risk | Risk-reducing measures |
|---|-------------|--------|--------------|--|
| Worsening of WFP's financial situation causes the organisation to down prioritise its longer-term and innovative operations for acute response. | Medium | High | Medium | <p>In addition to earmarked support, Denmark provides core support based on a multi-annual strategic partnership agreement to contribute to WFP's core business.</p> <p>WFP's adjustment to the financial situation has overall focused on protecting field engagements.</p> |

| | | | | |
|---|--------|-----|--------|--|
| High number of cooperating partners and government institutions involved may cause coordination problems. | medium | low | low | <p>Ensure adequate staffing capacity for project implementation at country and regional level for solid project coordination and oversight; Establishment/strengthening of inclusive and participatory AA/CRF TWGs.</p> <p>Clearly define roles and responsibilities of each partner, find synergies and avoid duplication of activities.</p> |
| Operational readiness WFP and partners are not operationally ready to implement timely AA or to offer CRF instruments in the appropriate way. | medium | low | medium | AA has a clear timeframe for readiness actions and implementation actions. The project will be set up from the beginning in a way that seasonal timing of activities is accounted for. For CRF, the choice of cooperating partners and adequate financial service providers will be crucial to ensure the success of the program. |
| Financial means to implement AA at scale Lack of funds to carry out AA | medium | low | low | <p>In addition to Danish financial support, Denmark will, together with WFP, make efforts to emphasize the relevance of AA in relevant fora.</p> <p>WFP works with multiple donors (e.g. CERF) and internal financial mechanisms (e.g. IRA) in order to ensure funds are pre-allocated and available to implement AA following a trigger activation.</p> |

7 Closure

The project prioritizes strengthening national systems and government ownership to ensure sustainability beyond the implementation timeline. WFP will guide governments in integrating AA and CRF into national disaster risk management laws, policies, and budgets with support from local institutes such as IGAD. The M&E component will build an evidence base to demonstrate the value of investing in AA and CRF, supporting the future scale-up and mainstreaming of the project results.

While the project duration is insufficient for full tool handover (e.g. registration and distribution systems, response capacities, full development of AI-based forecasting capacities etc) and/or allocation of significant amounts of domestic funds to AA and/or climate risk insurance, WFP will share achievements and lessons learned to inform future investments. The proof of concept will be designed as a learning component by incorporating continuous monitoring, evaluation, and feedback loops that allow for real-time adjustments and improvements. The iterative learning process will enable the government and stakeholders to refine strategies, enhance capacity, and build institutional knowledge, ensuring the long-term sustainability and scalability of the project's outcomes.

Ongoing support and multi-year finance are critical for resilience building, integrating and layering activities throughout the disaster management cycle. WFP and its contracting partners will continue to advocate for local ownership and future support to ensure the sustainability of these interventions.

The results of the official closure of the project in 2026 will be available in the Global Annual AA and Climate Risk Insurance Reports by 30 April 2027.

8 Annexes:

Annex 1: Context Analysis

Annex 2: Partner Assessment

Annex 3: Risk Management

Annex 4: Budget Details

Annex 5: Plan for Communication of Results

Annex 6: Process Action Plan for Implementation

Annex 7: Quality Assurance Checklist or signed table of appraisal recommendations and follow-up actions taken, depending on whether the appraisal has been conducted by a development specialist

Annex 1: Context Analysis

Ethiopia

Ethiopia remains one of the poorest countries on the African continent, with an annual average per capita income of just USD 850. While rates have fallen, close to 84 percent of the population still experiences multidimensional poverty. In 2021, Ethiopia ranked 90th of 116 countries assessed by the Global Hunger Index. An estimated 16 percent of Ethiopia's population is chronically food insecure, and up to 74 percent of households are routinely unable to afford a nutritious diet. Acute hunger is highly seasonal and driven upwards by recurrent shocks. Most people live in rural contexts and are dependent on two main livelihood systems that intersect and are mutually dependent i.e. agriculture and pastoralism. Some 70 percent of Ethiopia's population is employed by the agriculture sector which contributes an estimated 37 percent of GDP. But, while the cultivated area has steadily increased over the years, structural impediments render productivity insufficient to meet the food and nutrition needs of a growing population. While rates of wasting, stunting and underweight have fallen in recent years, they remain concerningly high. Some 37 percent of children under 5 are stunted, generating economic losses estimated at USD 1.8 billion annually, equivalent to approximately 16 percent of Ethiopia's GDP. Widespread micronutrient deficiencies and poor dietary quality are additional concerns.

Evidence has shown that Ethiopia's food system is routinely unable to meet the needs of the population despite public investments that have been undertaken to increase food production and yields. To address the long-term food security challenges in Ethiopia, a different approach that looks at food security from a food systems lens is required. Looking at Ethiopia's smallholder farmer challenges using a food systems lens shows significant gaps along smallholder value chains from production; aggregation; markets and consumption. These gaps cannot be addressed through short term emergency food assistance that have dominated the humanitarian response for many years in Ethiopia. To drive change, WFP will provide context specific integrated value chain support and catalytic investments aimed at strengthening smallholder productivity and incomes, that are critical to addressing long term food security challenges. Proposed activities prioritize vulnerable areas and ensure distinctions in intensity of investments across low and high food producing regions. These interventions will be implemented through expanding traditional models of partnerships, adopting new models with private sector, government, and communities for sustainability. Necessary coalitions for implementation are established at national, sub-national and community levels with alignments of ongoing WFP activities.

Ethiopia faces significant vulnerability to recurrent climate-induced shocks that disrupt the livelihoods of millions, particularly in pastoral regions. Extreme droughts lead to livestock production failures, water shortages, and prolonged food insecurity. Consequently, local coping strategies often falter, ultimately deteriorating the resilience of households. It is increasingly evident that acting before a disaster occurs can save lives, build resilience, and be more cost effective¹⁵.

Over the past decade, around 20 million people have been affected by severe droughts and flooding, leading to significant humanitarian crises. In Somali region, recurrent droughts have devastated

¹⁵ <https://reliefweb.int/report/madagascar/scaling-anticipatory-action-zimbabwe-madagascar-and-malawi>.

livelihoods in the region in the past four years, with historically high acute food insecurity. Many pastoralists' herds died due to the lack of water and pasture. At the same time, agricultural production also declined, thus leading to reductions in households' income by up to 35 percent for pastoralists and 25 percent for crop farmers. Moreover, women, girls, elderly people and people with disabilities face disproportionate impacts from droughts and floods because of existing social structures that limit their individual agency, mobility, access to services, resources, and information, that they would need to effectively prepare for and respond to a disaster.

Based on the Integrated Context Analysis (ICA) conducted in August 2021, long-term interventions are necessary to address crises and frequent natural shocks that impede recovery, aiming to improve food security, reduce risk and build resilience to natural shocks and other stressors. Because anticipatory action is a component of the border disaster management system, it is crucial for mitigate/prevent losses and damages caused by extreme weather hazards and reduce the need for humanitarian assistance in their aftermath.

A recently concluded gender and protection analysis for AA in Ethiopia reports that women and girls faced increased work burden in the face of droughts since they have to travel for longer distances to fetch water firewood and fodder for household use. This exposes them further to risks of gender-based violence. The analysis also demonstrates the impact of disaster on men's economical and psychological stress due to lack of resources to provide for their families, that is rooted in their role as providers as dictated by gender roles and responsibilities. People with disabilities face mobility challenges to evacuate during disasters and accessing resources post-disaster which heightens their vulnerabilities.

Rwanda

Rwanda is the most densely populated country on the African mainland, with a population of 13.7 million people on an area of 26 thousand square kilometres. The population has a high proportion of young people 78 percent below 35 years of age. Agriculture is the chief economic activity for Rwandans, employing half of the working age population in Rwanda. Despite the various interventions and strategies to meet the country's aspirations, youth unemployment remains a serious challenge in Rwanda. According to the Rwanda Labour force survey annual report, 2020, the labour force participation rate is 56.4 percent and the youth unemployment rate stands at 22.4 percent. However, this can be reversed by strategically engaging youth in solving challenges within the food system.

Anthropogenic climate change is contributing to rising temperatures and the increasing frequency of extreme weather events such as floods and droughts. According to a report from the Rwanda Water Board, 45 percent of the total area of the country is at high or very high risk of erosion, creating a substantial loss to agricultural production, economic activity (GDP loss), and soil health.

As highlighted by FAO, CSA is an agricultural approach that strives to transform agricultural systems in order to protect food security and development from climate change. The three objectives of climate-smart agriculture are "sustainably increasing agricultural productivity and incomes, adapting and building resilience to climate change, and reducing and/or removing greenhouse gas emissions."

Development Problems to be Addressed

The climate crisis presents serious challenges for Rwanda's sustainable development. After strong gains in the 2000s, food insecurity, malnutrition and poverty rates have stagnated in recent years. The stagnation is due in part to the dual pressures of erratic weather combined with extensive soil erosion and biodiversity loss that undermine the nature-based livelihoods of the poorest people and aggravates underlying gender inequalities between women and men.

In May 2023, the country faced the highest single rainfall even in recorded history, with a third of the country affected by floods and landslides resulting in more than 700 million dollars in response and recovery costs. As much as 45 percent of the land faces high erosion risk and disasters cost the nation an average of 300 million dollars on an annual basis. In the past decade, two landslide events have featured in the top 15 globally.

By 2050, Rwanda risks losing 5-7 percent of GDP due to climate disasters. As much as 45 percent of land faces high erosion risk: 27 million tons of topsoil are lost annually, undermining agricultural output and GDP, and forcing the poorest farmers to buy more costly fertilizer. At the same time, 15 percent of the population lives in hilly areas susceptible to floods and landslides, and 6.3 percent are exposed to drought. This is particularly worse for women due to the gender norms around who carries out the majority of physical labor in agriculture. Women in Rwanda make up 86 percent of the agricultural sector and are the majority of small holder farmers. When small-scale agriculture becomes untenable, women face the heightened burden to generate income and enough food to feed the family. Additionally, women's unpaid care work burden increases as responsibilities such as fetching water and firewood take longer and sometimes further exposes them to risks of gender-based violence.

The Notre Dame Global Adaptation Initiative ranks Rwanda 124th in terms of its vulnerability to climate change in combination with its readiness to improve resilience. Rising temperatures (1.4°C since 1970) and increasingly irregular precipitation are expected to increase the frequency and severity of climate shocks, primarily localized floods, landslides and droughts. Moreover, agriculture accounted for 55 percent of all GHG emissions in 2015. It is estimated that half of Rwanda's farmland suffers moderate to severe erosion while 65 percent of freshwater is used by agriculture.

In Rwanda, a strong enabling environment for climate action and food systems transformation is already in place. The Environment and Climate Change Policy, Green Growth and Climate Resilience Strategy (GGCRS), updated Nationally Determined Contribution (NDC) and the new Strategic Plan for Agriculture Transformation (PSTA5) comprise a clear and structured framework for all partners to engage with. WFP has significantly contributed to these strategic documents, now is the time to further pilot and support the scale-up of gender-responsive climate smart agriculture initiatives that have proved the potential to create a productive and sustainable agri-food system. WFP will focus on promoting and scaling up conservation agriculture CA complemented with other good agronomic practices.

This investment to strengthen the integration of Rwanda's national disaster risk reduction management system across sectors comes at a critical moment when the climate crisis is challenging the traditionally strong Government-led Climate agenda and Disaster Risk Reduction and Management (DRRM) system in the country. The effects are evident; Rwanda has already experienced a temperature increase of 1.4 degrees Celsius, with the impact seen in more frequent and intense heavy rains, and longer dry spells.

This notwithstanding, Rwanda aspires to accelerate its efforts to meet its ambitious climate agenda by 2035, setting a cost-efficient example amidst growing humanitarian needs in the region.

The Government of Rwanda has made Anticipatory Action a strong priority under the broader scope of Disaster Risk Reduction and Management (DRRM). This can clearly be seen in the recent development of policies and strategies, such as The National Disaster Risk Reduction and Management Policy (2023) and the DRRM Strategy 2024 – 2029, developed to operationalize the policy.

WFP initiated Anticipatory Action programming in Rwanda in 2023, conducting a feasibility assessment (to be validated by the Government) and developed strategic partnerships for AA with government entities and partner agencies. WFP has been present in Rwanda since the 1970s, with 3 field offices and a country office in Kigali. WFP plays a dual role of direct provision of assistance to food insecure households, including refugees, combined with engagement with the Government of Rwanda for the strengthening of national systems and capacities in key technical areas for food security transformation, particularly disaster risk management, social protection and food systems.

There is a need to pivot and integrate global innovations into the national climate and DRRM system. WFP can support the Government to build bridges between presently fragmented DRRM, climate adaptation, social protection, and agriculture sectors' agendas into an integrated forward-disaster risk reduction framework. This will demonstrate the power of working through Government structures and existing nationally-led programmes to manage the complex multi-hazard crises in the country in a cost-efficient manner as humanitarian funding decreases. WFP can also play a huge role in advocating for more investments in financing of programmes that equitably benefit women and meaningful participation in national and sub-national planning and decision making process around disaster risk management.

Uganda

Uganda has a population of 45.9 million people and the majority (over 70 percent) are young people below the age of 30 years. The country is classified as being in the transition phase of reaping the gains from the potential demographic dividend. In line with this, the Uganda Vision 2040 recognizes that unlocking Uganda's development prospects would require strategic investment into its young population that can harness the perceived demographic dividend. Consequently, all three national development plans (NDP I (2010-2015), NDP II (2015-2020) and NDP III (2020-2025)) developed till now have emphasized the role of Human Capital Development through investment in health, education, and job creation for the young population. Therefore, building a healthy, educated and skilled workforce that can drive the country's socio-economic transformation and achieve long-term development goals remains a key priority for the Government of Uganda (GoU). While significant strides have been made this far, important gaps still remain in selected population indicators, posing threats to achieving desired targets and hindering the country's demographic dividend potential.

Uganda ranks 131st on the Gender Inequality Index (value: 0.530) and achieved "medium equality in HDI achievements between women and men" in the Gender Development Index (Value: 0.927, Group: 3). In terms of gender parity, there is a broadening gap in key areas for women's rate of development, with the World Economic Forum Global Gender Gap Index 2023 showing Uganda ranking overall at 78th – down

from 43rd in 2018 and 47th in 2006. There has been low progress in economic participation and opportunity in particular for Uganda, where it ranks 102nd globally – with large gender gaps persisting in labour force participation, income and percentage of female professionals. Comparably under the economic indicators, Kenya ranks 16th, Tanzania 53rd and Rwanda 67th. These are in addition to concerns in women's enrollment in tertiary education and advanced skilling (ranking at 123rd). Contributing to these disparities are the persistent and unacceptably high levels of violence against women in Uganda – with the highest rates of intimate partner violence in the region.

Adolescents and youth face challenges in actively participating in economic activities. Around 700,000 young people reach working age every year in the country – by 2030, there will be 13.5 million young people in the job market. However, the most recent Labour Force Survey indicates that about 41 percent of youth (4.2 million aged 18-30 years) are not engaged in any productive activity – neither education, employment, nor receiving training. Three out of four are young women. According to the same study, only 37 percent of youth were in employment in 2021 – almost all of which (9 in 10) were in informal employment excluding agriculture.

Vulnerability to Shocks: includes conflict, climate, and environment

The Third National Communication and NDC for Uganda indicate a trend in decreasing rainfall, with observed rainfall decreasing at the rate of 10.3 mm per decade from 1951 to 2020. Temperatures have been rising at a rate of 0.23°C per decade since 1950. Uganda National Meteorological Authority (UNMA) showed in their 2021 State of Climate Uganda report that, since 1950, 2021 was the third hottest year on record following 2019 and 2009 respectively. Rainfall patterns are inconsistent across regions, varying between normal, above normal, and below normal levels. Whereas some regions are experiencing heavy rainfall (namely eastern, north-eastern and some parts of south-western), other regions are receiving decreasing rainfall (UNMA, 2021).

Temperature and precipitation are projected to continue to increase in Uganda over the years (NDC, 2022). Moreover, the country is experiencing an increased occurrence of extreme events such as droughts, floods, and landslides (NDC, 2022; TNC, 2022; Department of Disaster Preparedness and Management, 2011). The Climate Impact Explorer and Climate Change Knowledge Portal indicate that mean temperatures will increase by 0.5–3.5°C by the 2050s and by 1–5°C by the 2090s, depending on the emissions scenarios. The same projections show that the number of hot days and hot nights will increase in the country. Rainfall projections are more balanced. Annual precipitation is expected to increase in some areas of the country, and decrease in others – notably the northern and north-eastern areas (Uganda Climate Risk Profile, 2020). The intensity and frequency of extreme rainfall events are set to increase in the future. Damages from river floods will increase annually by 12.9 percent in 2040 to 26.8 percent in 2100 (Climate Analytics, 2023). The area of land exposed to heatwaves is projected to increase annually by 2.9 percent in 2040 to 5.5 percent in 2100. Likewise, the proportion of the population exposed to heatwaves is projected to increase annually by 3.6 percent in 2040 to 5.6 percent in 2100 (Climate Analytics, 2023).

Karamoja Region: The region is one of the most vulnerable areas in the country, experiencing multiple, overlapping, and mutually reinforcing shocks and stressors including cycles of insecurity and violence, high rates of poverty, high food insecurity and malnutrition, high food prices, and gender inequalities, as

well as climate-related shocks (floods, droughts, landslides), pest/vectors and disease. Frequent outbreaks of epidemics (cholera, malaria) continue to pose additional emergency challenges in the region. Climate variability and change in Karamoja is projected to continue to manifest in form of extreme weather conditions, such as erratic rainfall, flooding and droughts, which will continue to affect livestock, pasture and crop productivity and epidemics of pest and disease for humans, livestock and crops.

The region has historically been affected by armed conflict, cattle rustling, and inter-ethnic violence. To cope with cyclical water scarcity in the region, during dry seasons Karamojong pastoralist migrate with their livestock across wide territories both within and across the porous borders with Kenya and South Sudan and vice-versa. Coupled with the proliferation of illicit small arms and light weapons, among other factors, this has led to armed conflicts, livestock thefts, and revenge raids. Traditional definitions of masculinity and manhood, including as warriors and providers, combined with contemporary challenges that have altered men's abilities to provide for their families, are also among the root causes of violence and insecurity in the region.

The 2023/24 crop production season yields were below average due to a series of prolonged dry spells which reduced availability of pastures for livestock and induced migration to the neighbouring districts. The IPC analysis for the period (March – July 2024) classified all the nine districts of Karamoja region IPC Phase 3 (Crisis), with 45 percent of the population analysed (600,000 people) facing high levels of acute food insecurity (IPC Phase 3 or above). An estimated 84,000 people (6 percent of the population analysed) were classified in IPC Phase 4 (Emergency) while 516,000 people (39 percent of the population analysed) are classified in IPC Phase 3 (Crisis). Compared to historical trends, the region's food insecurity situation continues to increase with the population in IPC Phase 3 or above increasing from 27 percent in June 2020 to 30 percent in April 2021, 41 percent in April 2022, 45 percent in May 2023 and 45 percent in 2024.

Trend analysis from 2020-2024 of the Food Consumption Score (FCS) points to a declining food security situation in Karamoja with the proportion of households under the 'acceptable' category of the FCS declining during the period from 59 percent in 2020 to 35 percent in 2023 but then increasing to 41 percent in 2024. The majority of the households, 59-66 percent, have borderline to poor food consumption scores. One third of households (36 percent) experience some difficulty or shock, mainly related to insecurity and high food prices. The most common coping mechanisms to these shocks have been unconditional local government help and involuntary change in the dietary patterns respectively. For consumption, households are resorting to less preferred and/or less expensive food, with 28 percent using high and medium consumption-based coping strategies. Additionally, 29 percent of households are employing crisis or emergency livelihood coping strategies, such as borrowing money, purchasing food on credit, selling productive assets, and begging. The Karamoja Food Security and Nutrition Assessment (FSNA 2023) highlighted a worsening food security situation. Compared to 2022, households with acceptable food consumption have decreased by 26 percentage points to 35 percent, meaning 65 percent of households now have insufficient food consumption. This indicates that households are not resilient and often resort to negative coping strategies to withstand shocks and stressors. For consumption, households are resorting to less preferred and/or less expensive food, with 28 percent using high and medium consumption-based coping strategies. Additionally, 29 percent of households are employing crisis or emergency livelihood coping strategies, such as borrowing money, purchasing food on credit, selling productive assets, and begging.

Female-headed households face higher food insecurity than male-headed households, with 16.2 percent categorized as poor and a lower mean food score of 32.23. In contrast, male-headed households have a mean food score of 36.23 percent, with 44.8 percent fund in the acceptable category. A significant majority of urban households (63.3 percent) fall into the 'acceptable' food security category, with a relatively low percentage (4.4 percent) categorized as poor. The mean food score for urban households is relatively high at 42, indicating better food security. In contrast, rural households face greater food insecurity, with 13.3 percent classified as poor and only 38.4 percent as acceptable. The mean food score for rural households is notably lower at 34.13.

Food security improves significantly with wealth. The highest wealth quintile shows the lowest percentage of poor households (2.9 percent) and the highest mean food score (44.77), with 67 percent in the acceptable category. In contrast, the lowest wealth quintile has 25.7 percent poor households and a mean food score of 27.71, indicating severe food insecurity. Households headed by individuals with no formal education exhibit higher food insecurity, with 14 percent categorized as poor and a mean food score of 33.84. Conversely, those headed by individuals with higher tertiary education show remarkable food security, with only 1.9 percent poor and a mean food score of 47.82. Notably, 80.5 percent of these households fall into the acceptable category.

Households with access to agricultural land have better food security, with 39.9 percent in the acceptable category and a mean food score of 34.83, compared to those without land (mean food score of 35.46). Ownership of livestock correlates with improved food security, with a higher mean food score (40.61) and 54.8 percent in the acceptable category, compared to those without livestock (mean food score of 32.16). The impact of climate-related shocks, including average to below-average food and livestock production over the last three years, endemic pests, and diseases, has driven widespread food insecurity. According to the Integrated Food Security Phase Classification (IPC) analysis (April – August 2023), all nine districts of Karamoja are classified in IPC Phase 3 (Crisis), with 45 percent of the population (582,000 people) facing high levels of acute food insecurity (IPC Phase 3 or above). Of these, 102,000 people (8 percent of the population) are in IPC Phase 4 (Emergency), while 480,000 people (37 percent of the population) are in IPC Phase 3 (Crisis). As climate change is expected to increase the frequency and intensity of climate shocks and stressors, there is an urgent need to invest in strengthening the resilience of the Karamojong to better anticipate, prepare for, withstand, and adapt to this intensifying risk landscape.

Rwenzori and Elgon Regions: The Rwenzori Mountains in western Uganda and the Mount Elgon area in the east are both highly vulnerable to environmental and climate-related shocks. These regions are prone to natural disasters such as landslides, floods, and soil erosion, often triggered by heavy rainfall and deforestation. The Rwenzori region has also experienced conflict and tension related to ethnic divisions and land disputes. The combination of steep terrain, high rainfall, and human activities such as agriculture on the slopes increases the risk of landslides, which have caused significant loss of life and property in recent years.

Informal Settlements and Slum Communities: Slum communities in Kampala are also vulnerable to various economic, environmental, and social shocks, due to their precarious living conditions and limited access to resources. Most slum residents are in the informal sector, which are particularly susceptible to

economic shocks, as demonstrated by the COVID-19 pandemic. Moreover, most slums in Kampala are located in low-lying areas and lack adequate drainage infrastructure, making them particularly susceptible to flooding – leading to property damage and outbreaks of waterborne disease. Overcrowding, poor sanitation, and limited clean water also contribute to the spread of infectious diseases.

Informal Sector and Working Poor: People working in the informal sector – which are predominantly women and youth – are at greater risk of being left behind due to the precarious nature of their work, lack of social protection, and limited access to opportunities for economic advancement. Informal sector jobs are often characterized by low wages, unstable employment conditions, lacking job security and benefits, making them more vulnerable to sudden job losses and highly susceptible to economic shocks like price fluctuations, inflation, and public health crisis (e.g., COVID-19). Limited access to financial services and credit, limited legal protections, and barriers to formalization make them more vulnerable to exploitation or exploitative practices.

Other Vulnerable Groups: Conflict, climate, environmental and other shocks further reinforce existing inequalities and disparities, disproportionately impacting otherwise vulnerable and marginalized groups. For example, women shoulder a disproportionate share of caregiving responsibilities, limiting their access to paid employment, financial resources, and social protection. This burden limits their ability to recover from crises, as their time and energy are tied to caregiving roles that are often undervalued and unsupported. During economic downturns or other shocks, women face compounded vulnerabilities due to the double burden of unpaid care work and limited access to safety nets. Refugees face challenges accessing basic social services, discrimination in work and employment, and high levels of poverty, which make them particularly vulnerable to the impacts of shocks. This is likewise true for persons with disabilities in Uganda.

Children in Uganda are also highly vulnerable to a range of shocks, which affect their well-being, development, and future prospects. High poverty levels, exacerbated by shocks, push many into child labour to supplement family income, disrupting their education and exposing them to exploitation, or early/child marriage – 42 percent of girls in Uganda are married before their 18th birthday. Malnutrition is widespread, with 29 percent of children under five affected by stunting, and many face preventable diseases due to poor healthcare access. Environmental shocks like climate change-driven droughts and floods further exacerbate food insecurity, while conflict and displacement, particularly in refugee-hosting areas, disrupt education and social stability.

Development problems to be addressed

Climate variability has adversely affected agricultural productivity, leading to low yields, food shortages at the household level, and food insecurity at the community level. The impacts of climate change are unevenly distributed, with the most affected households and communities being those already facing significant challenges, such as exposure to climate vulnerability and limited ability to cope with floods, droughts, dry spells, and landslides. These communities such as those in Karamoja struggle to adapt to climate change due to the unpredictability of weather patterns and inadequate support.

Karamoja, is one of Uganda's poorest regions, with income poverty rising from 61 percent in 2017 to 66 percent, and food poverty increasing from 70 percent to 75 percent over the same period (UBOS: UNHS 2019/20). Agriculture, primarily rain-fed and subsistence-based, is crucial in Karamoja, focusing on livestock and, to a lesser extent, crops like sorghum, maize, groundnuts, beans, and market-oriented vegetables. Despite its potential for agro-pastoral activities, agricultural productivity in Karamoja is very low. The region has the highest levels of food insecurity, malnutrition, and poverty in Uganda. Climate change and natural shocks, such as droughts and floods, significantly hamper socio-economic development, livelihoods, and overall well-being. These factors lead to soil and rangeland degradation, poor crop and livestock yields, and other issues such as water scarcity and pest and disease outbreaks, including locusts and tick-borne diseases. Additionally, resource-based conflicts and cattle rustling exacerbate the vulnerability of local communities in Karamoja. The region also lacks capacity to deal with climatic shocks and maintenance of shock responsive infrastructures and facilities.

The Rwenzori region has been experiencing a lot of riverine flooding and mudslides. This is mostly due to extreme rainfalls in the mountains. Due to the terrain and accessibility challenges, monitoring of the weather elements in these mountains is challenging and this has resulted in a gap in early warning information. Novell methods for monitoring and forecasting will also enable more accurate predictions of the hazards and enable communities to be better informed and well prepared.

Annex 2: Partner Assessment

WFP as implementing partner

WFP is the UN agency charged with providing and coordinating food assistance. Its dual humanitarian and development mandate dates back to its origins in 1961. The dual mandate implies that WFP works both in emergency settings and in protracted crises. The dual mandate gives the organisation a potential edge when it comes to operating effectively in the humanitarian-development nexus in protracted crises.

WFP's vision focuses on eradicating hunger and malnutrition (SDG 2) and strengthening partnerships (SDG 17). Food and food-related assistance lie at the heart of the struggle to break the cycle of hunger, fragility and poverty.

WFP's mission is to ensure that people are better able to meet their urgent food and nutrition needs, have better nutrition, health and education outcomes and enjoy improved and sustainable livelihoods. In addition, WFP will strengthen national programmes and systems and ensure that humanitarian and development actors are more efficient and effective, working across the humanitarian-development-peace nexus to address food insecurity.

The organisation's work is guided by the Strategic Plan 2022-2025, aimed at the achievement of Agenda 2030, specifically SDGs 2 and 17.

WFP's dual mandate and humanitarian response expertise is critical in addressing the protracted humanitarian crises and enables WFP to integrate a focus on resilience and medium-term and longer-term development objectives into its responses. WFP is also increasingly ensuring that all its humanitarian and development interventions are delivered using risk-informed approaches, which in practice means that they are designed to withstand – or be resilient in the face of – shocks and stresses. WFP works to ensure that all of its programmes are conflict-sensitive, and when appropriate, make an explicit contribution to peacebuilding and strengthening of social cohesion. WFP was awarded the Nobel Peace Prize in 2020 for its efforts to combat hunger, for its contribution to bettering conditions for peace in conflict-affected areas and for acting as a driving force in efforts to prevent the use of hunger as a weapon of war and conflict.

WFP has a workforce of over 20,000 staff across more than 120 countries and territories, and delivers life-saving food assistance to those displaced by conflict and devastated by disasters, while also aiding people and communities in overcoming the multifaceted challenges they encounter in striving for better futures.

In conflict-affected areas, WFP delivers essential relief to weary populations and employs food assistance as a tool to pave pathways to peace and stability. This commitment was internationally recognized when WFP was honoured with the Nobel Peace Prize in 2020 for its significant contributions to combating hunger, enhancing conditions for peace in conflict-ridden regions, and its proactive stance against the use of hunger as a weapon of war and conflict.

Aligned with the 2030 Agenda for Sustainable Development, WFP plays a pivotal role in the United Nations system's efforts to assist countries in addressing the immediate needs of the most vulnerable and achieving the Sustainable Development Goals (SDGs), with a focus on people, the planet, prosperity, peace, and partnerships. The cornerstone of achieving zero hunger lies in improving immediate access to adequate, safe, and nutritious food, while simultaneously ensuring the fulfilment of essential needs over time. Strengthening resilience against an increasing number of shocks is paramount, aiming to reduce both the human and financial costs of crises and responses. WFP's vision of zero hunger encompasses the following key outcomes:

- People are better able to meet their urgent food and nutrition needs;
- People have better nutrition, health and education outcomes;
- People have improved and sustainable livelihoods;
- National programmes and systems are strengthened;
- Humanitarian and development actors are more efficient and effective.

WFP collaborates with a wide range of partners, including governments, NGO, the private sector, UN agencies, regional and international institutions, clusters, multistakeholder partnerships, academia, and think tanks, along with goodwill ambassadors, advocates, and high-level supporters.

In 2023, WFP extended direct assistance to about 152 million people, including those facing emergency or catastrophe levels of food insecurity, refugees, migrants, and internally displaced persons, through diverse means such as in-kind food delivery, cash-based transfers, commodity vouchers, and individual capacity strengthening. Women and girls comprised 53 percent of the beneficiaries, with children accounting for 56 percent of the total assisted population. Additionally, WFP offered capacity strengthening and supply chain services to governments, local partners, communities, and the private sector in 120 countries and territories.

Central to WFP's mandate are the goals of eradicating hunger and malnutrition (SDG 2) and fostering strong partnerships (SDG 17). This is pursued through a focus on immediate food and nutrition needs, improved health and education outcomes, and sustainable livelihoods, while enhancing the efficiency and effectiveness of humanitarian and development efforts. WFP's approach emphasizes people-centered action, adherence to humanitarian principles, context-sensitive programming, integrated partnerships across the humanitarian-development-peace nexus, risk-based decision-making, and evidence-driven impact.

CSPs and the corporate results framework (CRF) are instrumental in contextualizing WFP's global strategy at the country level, ensuring a coherent approach to achieving outcomes and contributing to global goals. Through strategic planning, partnership development, and technological innovation, WFP is uniquely positioned to address the complex challenges of hunger and malnutrition, and climate change driving progress toward a world of zero hunger.

WFP's climate and resilience efforts in the region aim to ensure that climatic shocks and stressors do not leave longlasting adverse impacts on communities. WFP works with Governments and partners to strengthen household resilience and enhance livelihoods through a combination of climate actions and food systems actions which reduce the reliance on humanitarian assistance and are also cost-effective. WFP implements integrated programmes across several sectors including increasing access to adequate, nutritious, and affordable food through functioning food systems; early and anticipatory protection from climate shocks; food and nutrition support during crises; basic social services to build human capital; livelihood support; and community infrastructure and ecosystems restoration.

WFP's resilience programmes are aimed at reducing humanitarian needs, protecting people against the impact of droughts and floods, enabling people to sustain their livelihoods, helping to empower women, promoting water resource management, and regreening landscapes and regenerated soils for improved food security and nutrition.

For this project, the Climate and Resilience Service in the HQ (PPGR) and the Regional Bureau of Eastern Africa (RBN) will be responsible for management of the partnership and relationships with the funding partner. PPGR and RBN will also support WFP country offices with programme coordination, specific technical expertise linked to the thematic pillars of the programme.

In accordance with "The World We Share", Denmark will contribute to break down silos between urgent humanitarian assistance and long-term development programmes and support cohesion across humanitarian assistance, development and peacebuilding. Denmark will therefore actively support WFP in applying an integrated humanitarian-development-peace (HDP) nexus approach and work for greater food security in fragile countries and regions. WFP has endorsed the Development Assistance Committee (OECD-DAC) Recommendation on the HDP nexus which Denmark is supportive of.

Two thirds of WFP's work takes place in conflict-affected settings, often in protracted crises. It therefore makes sense that WFP rolls out the humanitarian-development-peace nexus approach in its work and applies a conflict-sensitive approach. In practice, this means that WFP addresses both short term urgent food needs in emergencies and works towards long-term and sustainable solutions building food security. Both preparedness and building of resilience are part of this approach. This aligns well with WFP's overall approach to deliver on its dual mandate, including through its focus on integrated programming and collaborative partnerships as reflected in its Strategic Plan. And it aligns with broader efforts of the UN to Deliver as One and strengthen the coherence and complementarity of humanitarian, development and peace efforts. WFP operationalizes the HDP-nexus approach in all its country strategic plans within conflict-affected countries.

Denmark is an important donor to the entire UN system, as well as the International Financial Institutions, and is therefore keen to see a systems approach to food insecurity. At the same time, Denmark expects WFP to work, based on its mandate, closer with partners in order to better realise the humanitarian-development-peace nexus. This is crucial, especially in the fragile and vulnerable countries hit worst by conflict, climate change and COVID-19.

Denmark will in its advocacy support WFP's efforts to focus political attention on the complex linkages between hunger and conflict, and will use relevant platforms to highlight the relevance of UN Security

Council resolution 2417 which condemns the starvation of civilians as a method of warfare and those that wilfully block humanitarian access, and call for a shift towards implementation of the resolution. Furthermore, Denmark expects WFP to design programmes that are conflict sensitive.

With outset in WFP's dual mandate, Denmark expects WFP to lead the operationalisation of the HDP-nexus while retaining its focus on food security and nutrition and to document good practices and approaches for other actors to learn from. Thus, Denmark expects WFP to pursue the nexus-approach as co-lead for the global Food Security cluster, and as co-lead for country-level food security clusters with operational partners. Moreover, Denmark supports WFP's efforts, as member of the multi-stakeholder Global Network against Food Crises, to apply a nexus approach when monitoring food crises and the impact of WFP programmes.

Finally, this project aligns with the Danish priority 2 for the strategic partnership with WFP on advancing climate adaptation and anticipatory action in WFP's food assistance, where Denmark is focused on promoting a more climate-oriented development cooperation focused on the implications of climate change and sustainable development.

Climate change puts food production under pressure and is one of the key drivers of rising food insecurity. Climate-induced extreme weather, droughts, storms and floods damage the systems that produce and process food. And climate shocks disturb livelihoods and increase displacement, thereby intensifying hunger. For WFP, climate change therefore represents a growing challenge and underlines the need for a new business model, with more weight on strengthening capacities for preparedness, adaptation and resilience.

Within the field of climate action, Denmark sees WFP core competences and added value in its work on anticipatory and early action before climate-induced disasters strike. WFP's work on anticipatory action and emergency preparedness for droughts has especially been showing good progress in the Eastern Africa and Sahel regions. In its collaboration with WFP, Denmark will advocate for further integration of climate risks and climate resilience into WFP programmes. Moreover, Denmark supports WFP's efforts towards more resilient and sustainable food systems, including innovative and green solutions. Denmark expects WFP to further integrate anticipatory action towards climate shocks in its country strategic plans and design programmes integrating climate resilience.

WFP's Partnerships

This project will be implemented with a wide variety of partners at regional, national and sub-national levels. WFP increasingly takes on a convening role based on its thought leadership, technical expertise, research capacity and advocacy efforts. Partnerships are built through an ecosystem-based approach that clusters the value and roles of different stakeholders.

Local and National Governments

The country teams have existing, strong relationships with local and national governments in each country. WFP's strong relationships with national governments enable access, offer pertinent data and

insights, coordination and collaboration with key actors and ensure that project initiatives align with each country's strategic priorities.

Partner Selection for Implementation

WFP partners with civil society and communities to implement its programmes. WFP Cooperating Partners are an essential part of the implementation and achievement of WFP's Country Strategic Plans. In 2023, WFP partnered with 356 partners across East Africa, out of which 199 were national organizations across the nine countries in the region. WFP works to advance the localization agenda, through collaboration with national and local NGOs and Governments to increase its footprint in hard-to-reach areas, strengthen capacities, and leverage local knowledge, skills, and solutions while fostering stronger coordination amongst various stakeholders for sustainability. Where and if needed, WFP will conduct a stakeholder mapping to identify new partners required for this project.

Implementation partners are selected through WFP's rigorous cooperating partner selection process, which includes a competitive due diligence evaluation of technical, financial, and ethical/humanitarian capacities. Additionally, the process ensures that organisations are properly registered in the United Nations Partner Portal, affirming their credibility and legitimacy to participate in United Nations-led initiatives.

All stakeholders, including direct implementing partners and other relevant entities, will be engaged through field-level agreements (FLAs) following WFP's stringent selection criteria. This ensures that all participating organisations not only align with the project's strategic objectives but also adhere to the highest standards of legal and operational integrity. WFP will verify the legal status of all stakeholders to ensure they are authorized to operate within the project's target regions. This verification process includes confirming their legal registration and operational status in accordance with local laws and regulations. The legal status of these organisations may be disclosed to donors and other interested parties following the selection and engagement process, ensuring transparency and accountability in all project-related activities.

By adhering to these procedures, WFP guarantees that all participating organizations in the project are not only strategically aligned with the project's goals but also legally compliant and operationally capable of contributing to its success. This approach fosters a collaborative and legally sound environment for implementing the project, ensuring effective and efficient achievement of its objectives.

Responsibilities of Partner Organizations

NGOs/ Civil Society Organisations (CSOs) are instrumental at the community level, providing essential on-ground support, facilitating capacity building, and ensuring that interventions are culturally and contextually aligned. They will play a pivotal role in engaging beneficiaries, gathering feedback, and driving social mobilisation. Tasks will be executed as per the implementation plan, within set timelines and to professional standards. This includes supplying skilled personnel and necessary resources for project activities, adhering to WFP's Gender Policy, ensuring free and secure assistance to beneficiaries, meeting targeted criteria, and maintaining the highest ethical standards.

This coordinated approach leverages each participant's strengths, aiming to ensure the project's success and maximise the impact on the communities it serves. WFP is open to collaborating with a diverse range of partners, including the private sector, academia, regional and international partners and more, to amplify the project's impact (see the table 2.1 below).

Table 2.1 Regional and International Partners

| Name of Partner | New/existing | Core business | Importance | Influence | Contribution | Capacity | Exit strategy |
|--|--------------|---|--|---|--|---|--|
| | | What is the main business, interest, and goal of the partner? | How important is the project/programme for the partner's activity-level (Low, medium high)? | How much influence does the partner have over the project programme (low, medium, high)? | What will be the partner's main contribution? | What are the main issues emerging from the assessment of the partner's capacity? | What is the strategy for exiting the partnership? |
| IGAD Climate Prediction and Application Centre | Existing | WMO designated Regional Climate Centre serving 11 member states in Eastern Africa. Its primary role is to provide climate services, including weather and climate forecasts, early warnings, and climate data analysis to support decision-making in climate-sensitive sectors such as agriculture, water resources, disaster risk management, and public health. | High | High | Capacity strengthening for National Meteorological and Hydrological Services to develop AI-generated forecasts, hydrological models for flood forecasting and tailored triggers at relevant lead times for AA and forecast index insurance | | As the Regional Climate Centre supporting member states, ICPAC would continue to provide required technical support. |
| Food and Agriculture Organization | Existing | Achieve food security for all and make sure that people have regular access to enough high-quality food to lead active, healthy lives. | Medium | Low | FAO will be engaged to provide agricultural technical support | | No special requirements after the end of the contract. |
| University of Oxford | Existing | Focusses on developing machine learning | High | High | Development of the model and transfer of | | The knowledge and capacity/skills |

| Name of Partner | New/existing | Core business | Importance | Influence | Contribution | Capacity | Exit strategy |
|--|--------------|--|--|---|--|---|---|
| | | What is the main business, interest, and goal of the partner? | How important is the project/programme for the partner's activity-level (Low, medium high)? | How much influence does the partner have over the project programme (low, medium, high)? | What will be the partner's main contribution? | What are the main issues emerging from the assessment of the partner's capacity? | What is the strategy for exiting the partnership? |
| | | algorithms tailored to the National and Regional Meteorology needs towards enhancing the precision of early warning predictions | | | skills and knowledge to the National and Regional Meteorology centres for them to be able to implement the model beyond the project period | | transferred to ICPAC will allow for the continuous roll out of the ML model to the countries within the project but also across the entire IGAD region |
| European Centre for Medium range Weather Forecasts (ECMWF) | Existing | Provides high-resolution global weather forecasts and climate data, essential for generating reliable early warnings. | High | High | Share the forecast and data to support train and run the ML models in the different countries of operation | | The model is systematically being trained using observational data to enhance the accuracy of the model and seamlessly reduce the reliance on the ECMWF forecast and data |
| Google Deepmind | New | Provide optional ML models and approaches such as diffusion that can be benchmarked for the evaluation an improvement of the project | Medium | Low | Capacity building on the diffusion model and support the performance evaluation of the Projects Model | | Once the team has been trained on the approach, they will be able to tailor the model using it |

WFP Ethiopia:

WFP Ethiopia has been working in partnership with various national, regional and international stakeholders on early warning and AA. The major potential partners on AA include Ethiopian Meteorology Institute, Ethiopian Disaster Risk Management Commission, Ethiopian Agricultural Transformation Institute, Ministry of Irrigation and Lowlands, Ministry of Water and Energy, Ministry of Agriculture, and the Ethiopia Artificial Intelligence Institute.

In addition, WFP partners with FAO to deliver complementary services in the same geographical areas (27 priority 1 woredas of Somali and Oromia regions, with WFP focusing on disseminating early warning messages, advising on rangeland management, and providing multi-purpose cash (MPC), and FAO offering animal treatment and livestock destocking services to fill service gaps in prioritised woredas. Table X below present an overview of WFP partners and their respective role.

Table 2.2: Partnerships to the Ethiopia Component of the Project

| Name of Partner | New/existing | Core business | Importance | Influence | Contribution | Capacity | Exit strategy |
|---|--------------|--|------------|-----------|---|---|--|
| Ethiopian Meteorological Institute (EMI) | Existing | Deliver world-class weather and climate services to Ethiopia. Provide early warning on adverse effects of weather and climate. | High | High | Develop AI-generated forecasts. Develop tailored triggers for anticipatory action and Forecast Index Insurance. Dissemination of early warning information through relevant channels. | EMI has regional counterparts and branches at the district level in the selected regions. However, the partner has capacity limitation in terms of resources, technology, and know-how. | Upon completion of the project, the key project activities can be handed over to the partner to ensure sustainability of the services. |
| Ethiopian Agricultural Transformation Institute (ATI) | New | Identify systemic constraints and bottlenecks of agricultural development through | High | High | | | No special requirements after end of contract. |

| Name of Partner | New/existing | Core business | Importance | Influence | Contribution | Capacity | Exit strategy |
|--|--------------|---|---|---|---|---|--|
| | | studies and piloting innovative solutions. | | | | | |
| Ethiopian Disaster Risk Management Commission (EDRMC); and its regional counterparts | Existing | Provide capacity building support and coordinate Regional States and works with non-governmental organizations in to enhance the effectiveness of Disaster Management and Food Security related activities. | High It coordinates the establishment of the national disaster prevention and preparedness fund and the strategic food reserve for emergency purposes. | High EDRMC has the mandate to create, strengthen, and administer stand-by capacities for timely and effective response against fast onset and other disasters. | Coordinate the Anticipatory Action approach through leading the TWGs established. Integrate AA into DRM policies. | EDRMC has regional counterparts and branches at the district level in the selected regions. | Support them to continue leading the TWGs after the project ends |
| Ministry of Irrigation and Lowlands (MILLS) | Existing | Coordinates activities that enable pastoralists and semi pastoralists to become beneficiaries of social and economic development. | Medium | Low | | | No special requirements after the end of the contract. |
| Ministry of Agriculture | Existing | Create a modern and a highly productive agricultural system that uses a more advanced technology which enables the society to get rid of poverty | High | Medium | Integrate early warning systems and AA within the MoA's strategies and policies. Support to develop agricultural related AAs, and agro-climate advisories and ensure timely dissemination of critical information about climate risks and agricultural threats to farmers. | | No special requirements after the end of the contract. |

| Name of Partner | New/existing | Core business | Importance | Influence | Contribution | Capacity | Exit strategy |
|--|--------------|---|------------|-----------|---|--|---|
| Ministry of Water and Energy (MoWE) | Existing | Ensuring integrated water resource management | High | Medium | MoWE will work with Ethiopian Meteorological Institute to develop a hydrological model for flood forecasting, using the AI-generated rainfall forecasts | A hydrological model is not yet operational over the regional targeted by the project. | No special requirements after end of contract. |
| Ethiopia Artificial Intelligence Institute | New | Fostering data-driven AI systems to solve problems and increase efficiency and productivity | High | Medium | Contribute to the development of AI-driven tools for accurate climate forecasting and risk assessment. | | No special requirements after end of contract. |
| Cooperating Partners e.g. Mercy Corps, VSF, OWDA, Ethiopia Red Cross, Shebelle Bank etc. | Existing | Development and humanitarian assistance | High | High | Support with design and timely delivery of Anticipatory Actions to targeted communities | Enhanced internal systems and capacities to deliver timely Anticipatory Actions. | Support the government to continue to deliver AA at scale |
| Private Sector | New | | High | High | Private companies can be engaged to develop and provide advanced technologies, such as AI-driven analytics, mobile applications, communication, and data management systems | | No special requirements after end of contract. |

| Name of Partner | New/existing | Core business | Importance | Influence | Contribution | Capacity | Exit strategy |
|---|--------------|---|------------|-----------|--|----------|--|
| Private sector (financial service providers): International Research Institute (IRI), Ethiopia insurance pool, Re-insurers/brokers and Banks/MFIs/RuSSACOs | Existing | Design the forecast Index Insurance, underwrite the risk and payout disbursement. | High | High | Product Design Underwrite the risk Re-insure the risk Payment and payout disbursement | | No special requirements after end of contract. |

WFP Uganda

Table 2.3: Partnerships to the Uganda Component of the Project

| Name of Partner | New/Existing | Core business | Importance | Influence | Contribution | Capacity | Exit strategy |
|---|--------------|---|------------|-----------|---|--|--|
| Uganda National Meteorological Agency under the Ministry of Water and Environment | Existing | Provide seasonal, monthly and 10 day forecasts; and provide climate services. Promote and monitor weather and climate as well as provide weather predictions and advisories to Government and other stakeholders. Responsible for establishing and maintaining weather and climate observing stations network, collection, analysis and | High | High | Develop AI-generated forecasts. Develop tailored triggers for anticipatory action and Forecast Index Insurance. Dissemination of early warning information through relevant channels. | Inadequate skills in fully operating climate forecasting models (including dynamical and statistical models) for extreme events. • Inadequate capacity to tailor climate information to addresses stakeholders' needs including impact-based forecasting and developing triggers and thresholds for anticipatory action • Inadequate number of experts in operational weather and climate forecasting and modeling • Lack of capacity to perform data assimilation to | Upon completion of the project, the key project activities can be handed over to the partner to ensure sustainability of the services. |

| Name of Partner | New/Existing | Core business | Importance | Influence | Contribution | Capacity | Exit strategy |
|---|--------------|--|---|---|---|---|---|
| | | production of weather and climate information, including warnings/advisories. | | | | integrate the station data in weather forecasting models • Inadequate skills in fully operating and using climate data analysis tools/software/programming languages • Lack of established modeling lab that allows sharing of knowledge on climate models and software. The operation is rather centered on an individual office base. | |
| Office of the Prime Minister Department of Relief Disaster Preparedness and Management. (DRDPM) | Existing | Provide capacity building support and coordinate Disaster Management and Food Security Programme related activities. | High Coordinates the disaster responses across the country and capacity enhancement of District local governments as well as local actors to deal with shocks. | High DRDPM has the mandate to create, strengthen, and administer stand-by capacities for timely and effective response against fast onset and other disasters. DRDPM has the National Emergency Coordination and Operations Centre (NECOC) is a 24 hour, 7-days a week central facility for early warning and the coordination of emergency and crisis response and recovery action. | Staff and technical expertise Infrastructure (sever capacity and well-equipped centre) Coordination of actors | DRDPM-has District Disaster Management Committees as the point of coordination at district level, there is also proposal for district and regional emergency coordination centers (DECOC and RECO) under the disaster risk management plan. | Support to continue coordination of the AA approach |

| Name of Partner | New/Existing | Core business | Importance | Influence | Contribution | Capacity | Exit strategy |
|---|--------------|---|------------|--|--|--|--|
| | | | | The NECOC also produces a monthly bulletin Uganda National Integrated Multi Hazard Early Warning System (U-NIEWS). | | | |
| Agro-Insurance consortium (AIC) | New | The AIC is charged with developing the agriculture insurance products and planning how they will be offered, handled and distributed. AIC also regularly interacts with various UAIS stakeholders including government ministries, the Insurance Regulatory Authority (IRA) and the insurance companies that are part of the AIC. | High | The AIC manages the Uganda Agriculture Insurance Scheme which is a Public Private Partnership (PPP) arrangement in which the Government subsidizes agriculture insurance premiums for farmers. | Provision of technical backstopping to farmers and farmer organization on Agricultural insurance Training of farmers on Agricultural insurance products Recruitment of farmers and registering premium payments Make payouts when forecast trigger is met | Untimely provision of insurance payouts due to delays in government disbursements Lack of adequate number of certified insurance agents to support farmers access agricultural insurance Limited awareness of the insurance products Subsidy running out when donor assistance expires. | |
| Ministry of Agriculture Animal Industry and Fisheries | Existing | MAAIF monitors crop, livestock and fisheries production and performance. The Ministry has an Early Warning Unit . Information and data is | Medium | Medium | Provides policy direction for agricultural insurance. Integrate early warning systems and AA within | Limited capacity to disseminate EW information timely. The early warning unit does not collect data or generate information directly but has access to data and information collected by other departments | No special requirements after the end of the contract. |

| Name of Partner | New/Existing | Core business | Importance | Influence | Contribution | Capacity | Exit strategy |
|--|--------------|--|------------|-----------|--|---|---|
| | | collected on crop and livestock production indicators like yield, level/extent of pest and disease damage, and food and livestock prices. The unit has a rapid | | | the MoA's strategies and policies. Support to develop agricultural related AAs, and agro-climate advisories and ensure timely dissemination of critical information about climate risks and agricultural threats to farmers. | and units within the Ministry and other partner organizations. Limited workforce/human resource | |
| Cooperating Partners e.g. Uganda Red Cross, Save the Children etc. | Existing | Development and humanitarian assistance | High | High | Support with design and timely delivery of Anticipatory Actions to targeted communities | Enhanced internal systems and capacities to deliver timely Anticipatory Actions. | Support the government to continue to deliver AA at scale |

WFP Rwanda

In Rwanda, WFP is the Government's partner of choice for disaster risk reduction and management (DRRM), under leadership of the Ministry in charge of Emergency Management (MINEMA). In 2023, WFP and MINEMA convened relevant stakeholders in Rwanda's first national conference on DRRM, and built on this experience in 2024 by joining hands with the IFRC and FAO they established Anticipatory Action Technical Working Group of which WFP is a secretariate. In addition, WFP also works with the Ministry of ICT & Innovation (MINICT), the Ministry of Local Government (MINALOC), Meteo Rwanda, Rwanda Space Agency, and Rwanda Water Resources Board to explore on how artificial intelligence and machine learning can boost early warning systems to protect the vulnerable communities.

Additionally, the WFP, in collaboration with FAO and IFRC, is actively addressing the escalating need for conflict-sensitive, protection-centered anticipatory action (AA) through the ECHO project in the region. This initiative is pivotal in establishing an innovative hub aimed at bridging critical institutional gaps and enhancing local capacity. At its core, the project emphasizes the development of multi-sectoral frameworks that effectively tackle climate hazards. Integral to this effort is the establishment and strengthening of community-based last-mile Early Warning Systems. The project also incorporates indigenous knowledge approach to ensures that responses to climate challenges are well informed, culturally relevant, and maximize community engagement. as a way to not only improve weather information uptake, but also foster trust within the communities they serve. Through these collaborative efforts, we aim to empower communities to proactively adapt to looming threats, thereby enhancing their resilience and safeguarding their futures amidst a backdrop of conflict and environmental change.

Table 2.4 Partnerships to the Rwanda Component of the Project

| Name of Partner | New/Existing | Core business | Importance | Influence | Contribution | Capacity | Exit strategy |
|-----------------|--------------|---|------------|-----------|---|---|--|
| Meteo Rwanda | Existing | Provide accurate weather and climate information on time for the socioeconomic development and well-being of the population. Guide and assist public, private entities and individuals to integrate weather and climate information into their short and long-term investments for their productivity and sustainability. Ensure implementation of international agreements that are ratified by Rwanda relating to meteorology, climate services and advise the Government on all weather and climate related matters. | High | High | Develop AI-generated forecasts. Develop tailored multi hazard triggers for anticipatory action and Forecast Index Insurance. Dissemination of forecast information through relevant channels. | <ul style="list-style-type: none"> The weather forecasting and early warning process is mostly manual and lacks new modern software and tools for automation and dissemination. Impact-based forecasting is not yet fully developed to support AA. The Numerical Weather Prediction system should be further developed and made available. New partnerships should be established to allow efficient use of information provided by Meteo Rwanda at the grassroots level. | Upon completion of the project, the key project activities can be handed over to the partner to ensure sustainability of the services. |

| Name of Partner | New/Existing | Core business | Importance | Influence | Contribution | Capacity | Exit strategy |
|---|--------------|--|------------|-----------|---|---|---|
| Ministry in charge of Emergency Management (MINEMA) | Existing | Lead in formulation, coordination, control, direction of disasters management, refugee affairs policies, political guidance, supervision of the humanitarian assistance in emergency situations and mobilization of appropriate resources accordingly in order to promote disaster awareness culture | High | High | <p>Coordinate the AA approach through the established National TWG.</p> <p>Integrate AA into DRM policy.</p> <p>Dissemination of EW messages to the citizen</p> <p>Support delivery of AA through the well-defined National and District Disaster Management Committees.</p> <p>Integrate use of AA in Emergency clusters since is the main coordinator of all clusters</p> | <p>Improve operational capacities of the District Disaster Management Committees.</p> <p>Build systems for Multi hazard Early warning,</p> <p>Develop different tools for dissemination of EW messages,</p> <p>Capacity communities in dissemination of EW messages,</p> <p>Set of infrastructures for dissemination of EW messages</p> | <p>Support to continue coordination of the AA approach</p> <p>Developed SoPs for all hazards,</p> <p>Established digital system for landslide and storms,</p> <p>Early warning is reflected in NST2 as a key achievement (National strategy for Transformation),</p> <p>Existing initiatives and investment from multi donor funding to established MHEWS from different ministries</p> |
| Rwanda Water Resources Board (RWB) | Existing | Ensure the availability of enough and well managed water resources for sustainable development | High | High | <p>RWB will work with Meteo Rwanda to develop a hydrological model for flood forecasting, using the AI-generated rainfall forecasts,</p> <p>Ensure availability of real time data leveraging on the AI/ML,</p> <p>Issue flood warning message to competent institutions for further dissemination to the end users</p> | <p>A hydrological model for flood forecasting does not exist in the country</p> | <p>Partner with Meteo Rwanda to ensure flood early warning information is available</p> |
| Rwanda Space Agency | Existing | Developing Rwanda's space sector towards social-economic development. | Medium | Medium | Develop enhance development of flood risk analysis and trigger development | | <p><u>Currently RSA and MINEMA have an MoU for collaboration in</u></p> |

| Name of Partner | New/Existing | Core business | Importance | Influence | Contribution | Capacity | Exit strategy |
|---|--------------|--|------------|-----------|--|--|--|
| | | Designing and implementing capacity building programs in space sciences and technologies, their applications and to build highly skilled professionals. | | | monitoring natural disasters to lessen impacts of hazardous events that occur due to climate variability, and hydro-meteorological disasters | | <u>DRM and space governance.</u> <u>Key partner in establishment of EWS for geological and hydrogeological hazards.</u> |
| Ministry of Local Government (MINALOC) | Existing | Provide social protection to a number of categories of the population that are vulnerable to poverty including older people, those living with disabilities, young children, female-headed households, genocide survivors and the historically marginalized. | Medium | Medium | Integrate AA into Social Protection programming | | No special requirements after the end of the contract. |
| Cooperating Partners e.g. Rwanda Red Cross. | Existing | Development and humanitarian assistance | High | High | Support with design and timely delivery of Anticipatory Actions to targeted communities | Enhanced internal systems and capacities to deliver timely Anticipatory Actions. | Support the government to continue to deliver AA at scale |

Annex 3: Risk Management

Overview of Risk management in WFP

Denmark will mainly base the risk management related to the project on WFP's risk assessment, and its approach to risk management. In 2018, the WFP Executive Board approved the most recent Enterprise Risk Management Policy with the Risk Appetite Statements as an annex. Under this policy, Country Offices, Regional Bureaux and HQ Divisions are required to conduct a risk assessment at least once a year or when a major change occurs in the risk environment and track assessment results in their respective operational Risk Register (RR). WFP also updates the Corporate Risk Register twice a year, taking into consideration the risks that occur globally and with strong engagement of all Leadership Group corporate risk owners.

The WFP Risk Management Division (RMD) presents a review of the corporate risks and emerging issues to the Oversight and Policy Committee (OPC) along with field risk insights collected through field risk register data analysis. The OPC, which supports the Executive Director's managerial functions, is mandated with oversight of risks across WFP. The Oversight and Policy Committee discusses twice a year any changes or updates to specific risks of a corporate nature as well as forecasts of potential events that may impede the achievement of WFP's Strategic Objectives.

RMD prepares a consolidated update on oversight recommendations to support executive management discussions with the Independent Oversight Advisory Committee on WFP's global risk landscape. The oversight update includes recommendations from internal audit, external audit, and the Joint Inspection Unit of the United Nations System. As part of the WFP Annual Executive Director Assurance Exercise (the Exercise), RMD synthesized significant risk and control issues into the Executive Director's Statement on Internal Control, which is incorporated in the Audited Annual Accounts and detailed in a separate management review document for consideration during the Annual Session of the WFP Executive Board. The Exercise includes questions prepared in collaboration with the Ethics Office on PSEA including addressing any gaps and areas for improvement.

Risk management at Country Office Level

WFP manages a comprehensive risk management and compliance portfolio with the following objectives:

- Improve transparency on high-risk areas and promote shared understanding of risk
- management principles across functions and offices
- Support operational and managerial decision making through risk informed decision making.
- Promote integrated planning (performance, risk, and budgeting) across offices
- Promote integrity and ethics among staff, partners and contracted third parties; and
- Strengthen assurances through periodic risk and control reviews

Country Offices maintain and regularly update risk register covering the portfolio of activities conducted within each respective country operation. Some cross cutting risks in the region include strategic risks primarily related to access constraints, funding and beneficiary targeting and identity management. Operational include those related to connectivity, partner and vendor capacities, beneficiary protection,

supply chain, and limited access which impact WFP and third-party monitoring coverage. Fiduciary risks, specifically those related to suspected fraud and corruption (incorporating incidents of theft and looting), include improper conduct of contracted third parties, the role of gatekeepers and community structure who may improperly influence operations or misappropriate beneficiary entitlements, and security of WFP personnel. These risks are managed through function or office-specific control strengthening actions, including investing in preventive and detective controls, specifically system controls in WFP's beneficiary, and transfer management platforms. WFP also maintains robust security structure complaint with prevailing UNDSS provisions for safety and security of WFP personnel, premises and assets.

Issue management and escalation

Consistent with WFP's revised Anti-Fraud and Anti-Corruption Policy (AFAC) (updated in 2021), CO reviews all allegations of fraud and corruption. Reasonably suspected cases of prohibited practices (as outlined in the AFAC policy) are referred to the Office of Investigations (OIGI) for further review and investigation. WFP maintains a country and regional level taskforces which are convened to review cases of misappropriation, including the sale of WFP commodities in markets domestically and cross border to ensure appropriate compensatory controls and mitigation actions are introduced. Where possible, local authorities are requested to assist in the recovery of humanitarian commodities. cases where transports or cooperating partners are involved, WFP may recover the value of commodities and/or terminate agreements as necessary.

Complaints received by WFP involving partner misconduct, allegations of ties to sanctioned entities, or other allegations of misappropriation of resources are reviewed by OIGI. Where appropriate, information from complaints is cross-checked among agencies present on the ground to ensure details of the complaint are as complete as possible to take an informed decision. Where required, WFP may move to terminate the partnership agreement, and further escalate the issue to WFP's Office of Investigations for further action.

Conflict sensitivity

Conflict sensitivity risks are identified for each operational area to enable context specific analysis, with accompanying mitigation measures. This enables WFP to make more specific programmatic and operational decisions based on the assessed dynamics of a particular location. Additionally, power dynamics, possible conflicts of interest and other stakeholder assessments included in the conflict sensitivity reviews enable WFP field managers to better direct assistance activities.

WFP oversight

On a broader scale, WFP's vision for oversight is for it to drive continuous improvement, reinforce the highest standards of integrity, ethics and professionalism, and safeguard stakeholder confidence for the benefit of the people it serves. The stakeholders of assurance include WFP governing bodies, donors, host countries, cooperating partners, civil society organisations, beneficiaries, and personnel. Stakeholder confidence in WFP's ability to achieve its objectives for the people it serves, and to continuously improve by addressing identified gaps and weaknesses, is the ultimate deliverable of assurance activities.

Annex 4: Budget Details¹⁶

Contribution to The Hunger-related Climate Change Trust Fund (Outputs 1.1, 1.2 and 2.1)

| Cost Category | 2025 (DKK) | 2026 (DKK) | Total (DKK) |
|---|-------------------|-------------------|-------------------|
| Ethiopia (capacity strengthening, implementation, direct support costs) | 2,186,149 | 2,162,089 | 4,348,238 |
| Rwanda (capacity strengthening, implementation, direct support costs) | 1,554,960 | 1,554,960 | 3,109,920 |
| Uganda (capacity strengthening, implementation, direct support costs) | 2,332,440 | 2,332,440 | 4,664,880 |
| HQ (capacity strengthening) | 706,800 | 706,800 | 1,413,600 |
| RBN (capacity strengthening) | 4,631,959 | 5,056,039 | 9,687,998 |
| Direct Costs | 11,412,308 | 11,812,328 | 23,224,636 |
| Indirect Support Cost (6.5%) | 741,800 | 767,801 | 1,509,601 |
| Total (DKK) | 12,154,108 | 12,580,129 | 24,734,237 |

Contribution to The Trust Fund for Rural Resilience (costs of Output 2.2)

| Cost Category | 2025 (DKK) | 2026 (DKK) | Total (DKK) |
|---|------------------|------------------|-------------------|
| Ethiopia (capacity strengthening, cash-based transfers, implementation, direct support costs) | 918,840 | 1,413,600 | 2,332,440 |
| Rwanda (capacity strengthening, cash-based transfers, implementation, direct support costs) | 565,440 | 777,480 | 1,342,920 |
| Uganda (capacity strengthening, cash-based transfers, implementation, direct support costs) | 909,840 | 1,413,600 | 2,323,440 |
| RBN (capacity strengthening) | 4,619,515 | 2,357,755 | 6,977,270 |
| HQ (capacity strengthening) | 353,400 | 1,004,580 | 1,357,980 |
| Direct Costs | 7,367,035 | 6,967,015 | 14,334,050 |
| ISC (6.5%) | 478,857 | 452,856 | 931,713 |
| Total (DKK) | 7,845,892 | 7,419,871 | 15,265,763 |

¹⁶ UN ex.rate as of Dec 2024: 7.068

Annex 5: Plan for Communications of Results

Purpose of the communications plan:

This communications plan aims to strategically showcase Denmark's long-term, catalytic role in supporting anticipatory action and climate risk financing in Eastern Africa. This plan underscores Denmark's leadership in establishing scalable and innovative solutions that address extreme climate events and minimize food security risks for vulnerable communities. The objective of the communications plan is twofold:

1. **Demonstrate impact:** Highlight Denmark's leadership in scaling innovative approaches to anticipate and respond to climate-related food security risks, showcasing tangible results from the project's implementation. Demonstrate how this project will serve as a proof of concept, illustrating the effectiveness of AI-enhanced early warning systems and innovative climate risk financing mechanisms in reducing predictable losses and damages caused by floods, droughts and other extreme weather events.
2. **Inspire collaboration:** Inspire further engagement and investment from international stakeholders, particularly within the donor community, to replicate and scale this model of anticipatory action and climate risk financing. By showcasing the project's outcomes and aligning with Denmark's broader commitment to bridging the humanitarian-development-climate nexus, this plan aims to position Denmark as a forward-thinking donor driving innovative, scalable interventions that effectively manage climate risks in vulnerable settings such as Ethiopia, Rwanda, and Uganda.

Through targeted messaging, engaging digital content and public engagements, this plan will emphasize Denmark's role as a central actor, aiming to inspire additional funding commitments and partnerships within AA.

Target audience:

The communications plan will target the following key audiences:

- **Danish stakeholders:** MFA leadership, Danish embassies in East Africa, private sector companies, think tanks, academic institutions and the Danish public. The goal is to increase recognition of Denmark's innovative contributions and leadership role in anticipatory action and climate risk financing.
- **International donors and multilateral partners:** Engage international donors, multilateral agencies and private sector partners. The goal is to provide inspiration from Denmark's commitments and catalyze additional support for AA.
- **Governments and civil society in Ethiopia, Rwanda, and Uganda:** Communicate the project's local impact on strengthening national systems to mitigate climate risks, protecting vulnerable communities and enhancing resilience.
- **General Public:** Raise awareness of the innovative solutions being deployed to address climate change and Denmark's role in advancing these solutions, to inspire support for global climate action.

Communications strategy:

The strategic approach for communicating the project's outcomes and Denmark's role will be centered on three key pillars:

1) Digital outreach: leveraging social media and web content

- **Press release on WFP's website:** Following project approval, a comprehensive news release will be published on the WFP website. The release will emphasize the catalytic nature of the project and will include expected impact of the project and background on Denmark's continuous support for AA. A quote from MFA leadership could be included to highlight Denmark's vision and commitment to innovative solutions.
 - The press release will be shared by WFP with Danish media outlets for potential cover.
- **Social media campaign:**
 - **WFP's Danish and local social media accounts:** WFP will use its Danish X account as well as the accounts of its country offices (Uganda, Ethiopia, Rwanda) to ensure comprehensive digital coverage. Posts will highlight key milestones of the project.
 - **Partner amplification:** Content can be amplified through Danish MFA channels, Danish embassies to reach a broader audience.

2) Launch events: dual rollout in East Africa and Copenhagen

One idea could be to organize dual launch events in East Africa and Copenhagen. The format and structure of these events will be discussed with the MFA closer to the project roll-out.

- **Regional launch in Uganda:** The project's regional launch in Uganda could take place in early 2025 and involve key stakeholders, including WFP, Danish embassy officials, regional and local government representatives.
- **Copenhagen Launch:** A simultaneous launch in Copenhagen could be organized to engage key stakeholders from the Danish government, private sector and civil society. The event could be aligned with an expected WFP-hosted event at UN City Copenhagen in Q1 of 2025 on humanitarian. The presence of MFA leadership, alongside other international partners could serve as compelling platform to further highlight Denmark's leadership in AA.

3) Learning and knowledge sharing: scaling innovation through global platforms

- **Global climate conferences:** Following the roll-out of the project, WFP and Denmark will work jointly to disseminate the lessons learned from the project at major global events such as COP and other climate conferences.
- **Joint learning conference:** As part of the project's learning component, WFP and Denmark may decide to organize a dedicated learning event towards the end of the project in 2026. This conference could bring together key stakeholders—governments, donors, private sector actors, and international organizations—to present project results and lessons learned.
- **Knowledge reports:** As part of WFP's broader efforts to document and disseminate lessons learned from anticipatory action, this project will be prominently featured in upcoming annual reports on AA and climate risk insurance. As part of Outcome 3, a lesson learned and best

practices report on how to leverage AI for developing AA triggers and FII products will also be produced.

Timeline of Communications Activities:

- **Q1 2025:** Following project approval, launch of press release on WFP's website; social media campaign begins.
- **Q1 2025:** Potential regional and Copenhagen launch events.
- **Q2-Q4 2025 + 2026:** Ongoing digital outreach, social media updates from WFP country offices and potential engagement at major conferences such as COP.
- **Q4 2026:** Potential learning event on the project's success and lessons for scaling anticipatory action globally.

Template for Process Action Plan (PAP) for WFP Anticipatory Action Project

DKK 40 million

| Action/product | Deadlines | Responsible/involved units | Comment/status |
|--|--------------------|----------------------------|---|
| Formulation, quality assurance and approval | | | |
| Kick-off meeting | 13.09.2024 | | |
| 2-pager and follow-up mgt. | 20.09.2024 | WFP | |
| Formulation of Project Document | September-November | WFP and MFA | |
| Proposed list of countries | End September 2024 | | |
| First draft | 11 October 2024 | WFP | |
| Mgt. on first draft | Week of 15 October | MFA and WFP | |
| MFA to send written feedback on first draft project document | Week of 15 October | MFA | |
| Identify and agree on terms for an appraisal consultant | October 2024 | MFA | Draft TOR for appraisal, revised draft PAP and Draft Project Document and associated partner documentation |
| Updated draft project document for MFA hearing | 30.10.2024 | WFP | |
| MFA internal hearing | 06.11.2024 | MFA | Hearing to relevant embassies. MFA to provide feedback to WFP by this date. |
| Quality assurance: Appraisal | 25.-29.11.2024 | Appraisal consultant | An independent view must be safeguarded during appraisal. Appraisal report with recommendations on final updates. Alongside draft PD, the appraisal will look at internal MFA feedback. |
| Final appraisal report integrating comments from the responsible unit and partner(s) | 29.11.2024 | Appraisal consultant | |
| MFA will go through appraisal recommendations | 2.-3.12.2024 | MFA | |
| MFA-WFP meeting on appraisal recommendations and final adjustments | 4.12.2024 | MFA and WFP | |
| WFP integrates final adjustments to PD, integrating appraisal recommendations | 5.-11.12.2024 | WFP | |
| Final project document | 12.12.2024 | WFP | |
| Quality Assurance Checklist (Annex 9): documentation of the appraisal process | 9.12.2024 | MFA | Signed by the responsible desk officer and the Head of |

| | | | |
|--|-------------------------------|-----------------|---|
| | | | unit and attached to the project documents |
| Checklist for approval by the Under-secretary for development policy: QA of required documentation | 9.12.2024 | MFA | The filled-in checklist to be attached to the project/programme document, appropriation cover note and Annex 9 |
| All documentation is sent in P360 for the Under-secretary's endorsement via the Head of unit and LEARNING (Modtagelse i Bevillingssekretariatet) | 13.12.2024 | MFA | Required documentation: Appropriation cover note Final Project Document, including annexes Quality Assurance Checklist (Annex 9) Checklist for approval by the Under-secretary for development policy |
| LEARNING presents the grant for final approval by the Minister | 17.12.2024 | LEARNING | |
| The minister approves the project | December 2024 | | |
| Initial actions following the Minister's approval | | | |
| LEARNING facilitates that grant proposals are published on Danida Transparency after the Minister's approval | After Minister's approval | LEARNING | |
| Signing of agreement and/or other legally binding agreements (commitments) with partner(s) | After Minister's approval | MFA / WFP | |
| Register commitment(s) in MFA's financial systems within the planned quarter | After agreement(s) are signed | MFA | |
| Implementation | | | |
| Announcement of project | Tbd. | MFA/WFP | |
| Launch of project | Tbd. | MFA/WFP/Embassy | |