WFP
World Food Programme

SAVING LIVES
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Updated Return on Investment for Preparedness to Respond study - ANNEX

March 2026

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Annex 1

Detailed Results and Supporting Information

This annex presents three supporting tables. **Table A1.1** outlines the impact dimensions analysed for each activity included in the study. **Table A1.2** provides the weights used for the global aggregation of results, based on the IRA preparedness investments. **Table A1.3** and **Table A1.4** summarizes the results by investment category across the different impact dimensions, respectively.

Table A1.1: Overview of dimensions analysed by activity

Investment Category	Activity	Location	Cost Savings	Time Savings	Qualitative
Infrastructure	Set up Humanitarian Staging Area (HSA)	Malawi	X	X	X
	Set up Humanitarian Staging Area (HSA)	Nepal	X	X	-
	Improve Local Infrastructure	South Sudan	X	X	X
Pre-positioning	Pre-position Food at Local Level	Malawi	X	X	X
	Pre-position Food and NFIs at Local Level	Cuba	X	X	X
	Pre-position Food at Regional/ Global Level using Global Commodity Management Facility (GCMF)	Global	-	X	-
	Pre-positioning specialized nutritious foods at Regional and Global	Global	-	-	X
Staffing and learning	Conduct Emergency Simulations	Malawi	-	X	X
	Establish Rapid Start Emergency Training	Global	X	-	-
	Maintain a Rapid Response Team – Nutrition in Emergencies Roster	Global	-	X	X
	Maintain Short-term Staff Availabilities for Emergency Response	Malawi	-	X	X
Data and Systems	Establish a Self-Registration Application (SRA)	Global	X	X	X
	Set up an Early Warning System	Malawi	X	X	X
	Use Nutrition Data for Operations	Global	-	-	X
	Maintain a Famine Early Warning System	Afghanistan	X	-	X
Technical assistance to government	Support the Development of a Mechanised Packing System (MPS)	Philippines	X	X	X
	Support the Implementation of a Commodity Tracking System (CTS)	Malawi	X	X	X
Anticipatory Action Interventions	Deliver Cash in Anticipation	Bangladesh	X	X	X
	Pilot an AA Plan in Social Protection	Peru	X	X	X

Table A1.2: Aggregation weights by Investment Category

Investment Category	Weights – excl. Staff and Learning	Weights - all
Infrastructure	25%	20%
Prepositioning	16%	13%
Staff and Learning		22%
Data and Systems	35%	27%
Technical Assistance to Government	17%	13%
Anticipatory Action Interventions	7%	6%

Table A1.3: Impact indicators for country-level preparedness by investment category

	Cost Saving	Time Saving	Human well-being	Economic	Social
	(ROI ratio)	(days)	(score)	(score)	(score)
Infrastructure	2.0	14	2.3	2.3	2.1
Prepositioning	1.3	65	2.3	1.8	2.0
Staff and Learning		14	2.0	2.0	
Data and Systems	3.7	14	2.7	2.3	1.5
Technical assistance to government	2.3	5	2.0	2.5	2.3
Anticipatory Action Interventions	3.5	59	2.6	2.3	2.0

Table A1.4: Impact indicators for global-level preparedness by investment category

	Cost Saving	Time Saving	Human well-being	Economic	Social
	(ROI ratio)	*(days)*	*(score)*	*(score)*	*(score)*
Pre-positioning		100	3.0	2.0	2.0
Staffing and learning	10	99	2.0		
Data and Systems	19	19	3.0	2.0	2.5

Annex 2

Case Studies

Infrastructure

Set up Humanitarian Staging Area (HSA) - MALAWI

Overview and Investment

The Humanitarian Staging Area (HSA) in Bangula, Nsanje district, was established to enhance emergency preparedness and response in Malawi's Lower Shire region. The facility consists of a concrete-built warehouse, prefabricated units, and Mobile Storage Units (MSUs), designed to provide a durable logistics hub for pre-positioning relief items and supporting rapid deployment. With regular maintenance, the infrastructure is expected to remain operational for approximately fifteen years before major reinvestment is required. In addition to its core function as a staging area, the HSA serves as a venue for simulation exercises and trainings, reducing reliance on external facilities and associated costs.

Emergency and Counterfactual

During Cyclone Freddy in 2023, the HSA played a critical role in sustaining access to isolated communities after roads and bridges were severely damaged. Its strategic location enabled WFP to dispatch food and relief items within one to two days to Nsanje and southern Chikwawa, even when the Chikwawa bridge was cut and access from Blantyre was blocked. For the return-on-investment analysis, the counterfactual assumed that, without the HSA, equivalent operational needs would have been met through air operations.

Results

The analysis demonstrates a financial return on investment of 2.5 and a time saving of 4 to 9 days compared to the counterfactual scenario. Beyond cost and time efficiency, the HSA ensured last-mile access to hard-to-reach areas using WFP's own fleet, avoiding costly helicopter operations. In addition to its role as a logistics hub, the Humanitarian Staging Area (HSA) has served as a venue for simulation-based and other trainings. By hosting these activities on-site, WFP avoided the cost of renting external conference facilities and accommodation, highlighting the HSA's added value as a cost-saving training location beyond its operational function (Economic: 2.0).

Set up a Humanitarian Staging Area (HSA) - NEPAL

Overview and Investment

The Network of Humanitarian Staging Areas in Nepal is a strategic logistics preparedness investment designed to enhance WFP's emergency response capacity. Between 2014 and 2024, WFP established 12 Humanitarian Staging Areas (HSAs) across all seven provinces of Nepal. Established in 2014 at Tribhuvan International Airport in Kathmandu, the first HSA serves as a fully equipped logistics hub with secure infrastructure and essential equipment for emergency operations. The site includes space for truck movements and prepositioned assets such as Mobile Storage Units, generators, and forklifts, enabling rapid deployment during crises. This infrastructure enables rapid deployment of relief supplies during emergencies. Of these, 10 HSAs have been handed over to the Government of Nepal for continued management and operation.

Emergency and Counterfactual

HSAs were activated during the 2024 earthquake[1] serving as hubs for the storage and dispatch of humanitarian supplies. In the counterfactual

1 Since the number of people affected by the actual emergency was below the severe disaster threshold, we used this number of affected people as the reference threshold for this case study.

scenario, WFP would have operated without the HSA, relying on ad hoc logistics arrangements and external storage facilities. This would have resulted in longer mobilization times, higher procurement and transport costs, and reduced operational efficiency during large-scale emergencies.

Results

The investment generated substantial financial and operational benefits. Using WFP's preparedness ROI methodology, the discounted benefits amounted to USD 9.4 million, compared to total discounted costs of USD 8.2 million, resulting in a Net Present Value of USD 1.2 million and a ROI of 1.2. In terms of time savings, the HSA eliminated an average delay of 7 to 14 days per activation, enabling faster customs clearance, storage, and distribution of relief supplies.

Improve Local Road Infrastructure - SOUTH SUDAN

Overview and Investment

In 2024, WFP undertook a strategic infrastructure investment in Ayod County, South Sudan, aimed at improving humanitarian access and reducing the high costs associated with air transport during emergencies. The intervention focused on rehabilitating and maintaining a reliable road corridor to enable consistent delivery of assistance, particularly during the rainy season when much of the region becomes inaccessible. Prior to the investment, WFP relied heavily on air operations, which were not only costly but also logistically constrained. The road rehabilitation project was designed to support recurring severe events and facilitate faster, more cost-effective movement of goods and personnel. Beyond logistics, the investment was intended to strengthen local systems, improve access to essential services, and contribute to broader development and stability objectives in a region affected by conflict and seasonal isolation.

Emergency and Counterfactual

The infrastructure was activated during the 2025 flood response, allowing WFP to shift deliveries from air to road transport. In the counterfactual scenario, WFP would have continued relying more on air operations, which are significantly more expensive and slower. Without the road investment, delivery costs and response times would have remained high, limiting the reach and timeliness of humanitarian assistance.

Results

The investment yielded a Return on Investment (ROI) of 2.3, with total discounted benefits of USD 23.9 million compared to discounted costs of USD 10.4 million. Delivery times were reduced from 2.5 months to 1.5 months, saving 30 days per emergency and improving WFP's ability to respond promptly to flood-affected populations.

The infrastructure investment had a notable impact on human well-being (Qualitative score: 2.5). Improved road access enabled faster delivery of humanitarian supplies and increased access to health facilities, contributing to reduced maternal and child mortality in Ayod and Bor areas. Economically (2.7), the restored road supported local commerce by improving trader access and creating temporary employment during rehabilitation, which boosted household incomes and stimulated market activity. Socially (2.7), enhanced connectivity fostered interaction and trust between communities, including commercial exchanges between Nuer and Dinka groups. Safer mobility improved access to services for women, children, and persons with disabilities, while reduced seasonal displacement and improved visibility of humanitarian actors helped strengthen community trust and cohesion.

Pre-positioning

Pre-positioning Food at Local Level – MALAWI

Overview and Investment

The preparedness investment consisted of pre-positioning food commodities in strategic locations across southern Malawi ahead of the cyclone and rainy seasons. This approach was guided by seasonal forecasts provided by the Vulnerability Analysis and Mapping (VAM) team. Storage capacity included four permanent warehouses in the southern region—three in Blantyre and one in Machinga. Additionally, the Humanitarian Staging Area (HSA) in Bangula has served as a critical hub for pre-positioning stock for flood-prone districts such as Nsanje and Chikwawa since 2023. For this case study, the focus is on food pre-positioned in WFP's warehouses in the Southern Region. The operation of the main storage facility in Blantyre is taken as a representation of the investment, considering only the space required for pre-positioning.

Emergency and Counterfactual

The food was deployed before Cyclone Freddy, which severely impacted southern Malawi in 2023. The counterfactual scenario assumed that, without local pre-positioning, food assistance would have relied on long-haul trucking or airlifting from Lilongwe or Blantyre once access to southern districts was cut. In particular, without stock at the HSA in Bangula, hard-to-reach areas in the Lower Shire would have required costly helicopter operations or faced significant delays in receiving assistance.

Results

The pre-positioning strategy delivered measurable benefits. Emergency transport costs avoided amounted to an ROI of 1.4, demonstrating a positive return on investment. Operationally, the intervention achieved between 10 and 15 days of time savings, enabling faster food distribution to affected populations. Qualitatively (Human well-being: 2.0), the impact was substantial. Timely pre-positioning stabilized food security in eleven southern districts classified as IPC Phase 3 (Crisis) during June 2023, preventing deterioration to Phase 4 (Emergency). This early response likely mitigated acute malnutrition risks among vulnerable groups, including children and pregnant women. Socially (2.0), reduced waiting times and avoidance of perceived neglect strengthened trust between communities, WFP, and local authorities.

Pre-position Food and NFIs at Local Level - CUBA

Overview and Investment

The preparedness investment establishes local-level pre-positioning of food commodities and a diversified set of non-food items (including MSUs, lighting towers, warehouse pallets, tents, collapsible tanks, and cooking sets) to enable rapid, effective emergency response. The approach is designed and implemented jointly with government counterparts to ensure protection, integrity, and rotation of stocks when required by shelf-life constraints. The need to pre-position has increased with the rising frequency and intensity of tropical cyclones and the current socio-economic context, which is characterized by limited market access, constraints on shipping companies calling at Cuban ports, and fuel shortages that affect mobility and power generation. A regional distribution model (West–Center–East) was developed to facilitate agile mobilization from pre-positioned sites, overcoming logistical bottlenecks and minimizing lead times for critical items.

Emergency and Counterfactual

The investment was deployed during Hurricane Melissa, which struck eastern Cuba in 2025 and

led to widespread damage to housing and basic services, severe disruptions to communications and livelihoods, and heightened threats to food security. Subsequent flooding in the Cauto River basin necessitated urgent evacuations across affected provinces.

In the counterfactual scenario used for ROI calculation, response would have depended on international procurement and transport under restricted market and shipping access, requiring immediate resource mobilization and incurring increased freight and supply costs.

Results

The investment delivered a financial ROI of 1.2. Pre-positioning generated a time saving of 120 days. In the absence of pre-positioning, deliveries to Cuba would have experienced multi-month delays, driven by constrained market access and limited shipping services to Cuban ports. The human well-being score is 2.5, reflecting earlier activation of assistance that reduced the risk of prolonged food insecurity and mitigated deterioration of health among vulnerable households. Social impacts have a score of 2.0, as the availability of NFIs and strengthened early warning systems improved perceived fairness and interpersonal trust by ensuring timely, equitable access across key regions. Safe spaces provided through family tents reduced stress for displaced households and prevented overcrowding in public facilities.

Pre-positioning Food at Regional and Global Level Using the Global Commodity Management Facility (GCMF) - GLOBAL

Overview and Investment

The Global Commodity Management Facility (GCMF) is a strategic financing mechanism established by the World Food Programme (WFP) to enhance the speed and efficiency of food delivery during emergencies. Through GCMF, WFP is able to purchase and pre-position food commodities in advance of confirmed donor contributions, based on projected needs across multiple countries. This anticipatory procurement model allows WFP to respond more rapidly to crises, while also leveraging favorable market conditions, achieving economies of scale, and supporting local and regional procurement. The facility is designed as an ongoing operational investment, enabling continuous readiness and supply chain optimization for emergency response.

Emergency and Counterfactual

The effectiveness of GCMF has been demonstrated across numerous emergencies. For the purpose of return-on-investment analysis, the counterfactual scenario assumes a traditional procurement model, where WFP initiates food purchases only after donor funding is secured. This conventional approach involves sequential steps including sourcing, contracting, and transportation, which can extend delivery timelines by several weeks or months. Under such conditions, food often arrives after the onset of an emergency, delaying assistance and increasing operational costs.

Results

The GCMF model has yielded substantial operational benefits. Across 43 emergencies, WFP recorded a time saving of 100 days, enabling food to be available at or near delivery points when crises occurred. This reduction in lead time significantly improved the timeliness of humanitarian assistance, contributing to faster response and reduced logistical bottlenecks. The strategic use of GCMF has proven to be a critical enabler of cost-effective and life-saving food assistance in complex emergency settings

Pre-positioning specialized nutritious foods at Regional and Global - GLOBAL

Overview and Investment

The preparedness investment involved the prepositioning of Specialized Nutritious Foods (SNFs) in strategic locations across multiple countries. These products are specifically formulated to meet the nutrient needs of children and pregnant and breastfeeding women and girls. The primary objective was to reduce lead times for emergency nutrition responses by ensuring supplies are available closer to operational areas. The investment is designed for sustained readiness, supporting multiple emergency cycles and ensuring continuity of nutrition programming.

Emergency and Counterfactual

Prepositioned SNFs were utilized during rapid-onset emergencies, including climate shocks, economic disruptions, conflict, and displacement, where immediate nutrition support was critical. The counterfactual scenario assumed that, without prepositioning, food assistance would have relied on sequential processes—sourcing, contracting, and transportation—resulting in significantly extended delivery timelines.

Results

Prepositioning allowed timely nutrition responses, preventing healthy children from becoming moderately malnourished and halting the progression of moderate malnutrition to severe acute malnutrition (Human well-being: 3.0). Reliable access to supplies at health centers ensured continuity of care, encouraged health-seeking behaviors, and maintained program quality standards. In terms of economic impacts (2.0), prepositioning before seasonal road closures avoided reliance on expensive airlifts, generating significant cost savings in contexts such as South Sudan. By enabling treatment closer to home, prepositioning reduced the likelihood of population displacement (Social: 2.0).

WFP/Denise Colletta

Staff and Learning

Maintaining Short-Term Staff Availabilities for Emergency Response - MALAWI

Overview and Investment

To strengthen emergency response capacity, Malawi CO has invested in maintaining pre-vetted rosters of short-term personnel available for rapid deployment. These rosters include professionals with expertise in key operational areas such warehousing, logistics and overland transport. By streamlining recruitment procedures, Country Offices can bypass standard hiring processes and accelerate onboarding during crises. This preparedness measure is designed as a continuous operational capability, enabling the CO to respond more efficiently to emergencies by ensuring timely access to qualified staff.

Emergency and Counterfactual

This investment was utilized during two major emergencies in Malawi: Cyclone Freddy (2023) and the 2024/2025 Lean Season, which was significantly worsened by El Niño conditions. Cyclone Freddy caused widespread flooding and required a large-scale humanitarian response, while the lean season saw food insecurity escalate to IPC Phase 4 (Emergency). The counterfactual scenario assumes reliance on standard recruitment procedures. In contrast, the use of pre-selected rosters allowed for faster staffing, avoiding delays that could have hindered the delivery of critical assistance.

Results

The investment yielded substantial time savings. Across the reference period from 2021 to mid-2025, five new roles were filled using the roster mechanism, resulting in recruitment delays shortened by 26 days per emergency. Qualitatively, the economic impact was notable (2). The use of rosters reduced dependence on costly temporary duty (TDY) deployments, which can cost approximately USD 64,000 for two staff over three months. This approach not only improved cost-efficiency but also enhanced operational readiness, allowing WFP to mobilize staff more quickly and deliver timely support to affected populations.

Conduct Emergency Simulation Exercises - MALAWI

Overview and Investment

WFP invested in conducting multi-agency Simulation Exercises (SIMEX) to strengthen disaster preparedness and response capabilities in Malawi. These exercises were designed to replicate realistic emergency conditions, focusing on flood and disease outbreak scenarios in the disaster-prone Lower Shire region. The SIMEX held in Bangula, Nsanje, involved WFP, the Ministry of Health (MoH), and the Department of Disaster Management Affairs (DoDMA), among other partners. The exercise tested planning, pre-positioning, forecasting, logistics coordination, information management, and decision-making under pressure, aiming to improve operational readiness for large-scale emergencies. This investment was short-term and training-oriented, with benefits expected to extend across multiple emergency responses through enhanced institutional capacity.

Emergency and Counterfactual

For ROI analysis, the reference emergency was Cyclone Freddy (early 2023), one of the most severe cyclones to hit Malawi, causing widespread flooding and requiring rapid humanitarian intervention. The counterfactual scenario assumed that, without prior simulation exercises, agencies would face unclear roles, fragmented coordination, and duplication of efforts, resulting in slower mobilization and delayed delivery of essential supplies. In such a scenario, reaching affected regions could take 5–7 days by road,

compared to the improved timelines observed after SIMEX training.

Results

The investment delivered measurable operational benefits. Evaluations confirmed that agencies reached affected regions within 72 hours, which is equivalent to a time saving of 2 – 4 days**,** compared to the counterfactual. Qualitatively, SIMEX improved clarity of roles and strengthened coordination among stakeholders, reducing duplication and delays. This enabled faster and more systematic support to vulnerable populations during Cyclone Freddy. Enhanced preparedness also contributed to more efficient resource allocation and better alignment of health and food assistance, mitigating the risk of service gaps in disaster-affected areas (Human well-being: 2.0).

Establish Rapid Start Emergency Training - GLOBAL

Overview and Investment

Rapid Start is a foundational emergency training designed for newcomers and emerging humanitarian professionals, as well as staff seeking a refresher on emergency concepts and operations. Delivery includes interactive online classroom sessions, scenario-based participatory exercises, and engagement with experienced responders.

The investment strengthens WFP's workforce preparedness by enabling staff to recognize the attributes required to work effectively in emergencies, articulate WFP's unique capabilities to internal and external stakeholders, understand humanitarian architecture and WFP's leadership role within clusters, identify critical data and design inclusive targeting strategies, navigate the emergency timeline (preparedness, response, recovery/transition), and build teamwork and continuous learning cultures.

The course was developed in 2022 and rolled out from 2023 to 2025 with updated content, delivery, and design to maintain relevance as a standing onboarding and refresher offering. It has been delivered online over 16 hours across four days, with up to 25 participants per cohort. In total, more than 400 staff from around 50 COs have been trained.

Emergency and Counterfactual

The programme's application spans multiple country offices, supporting preparedness prior to crises and enhancing surge readiness. No specific emergency instances were analysed.

The return-on-investment calculation is based on a "no training" counterfactual scenario. The benefits are estimated by attributing a 17 percent reduction in crisis-response expenditures to the training effect on Country Office staff, based on general evidence of the performance impact of trained personnel.[2] Additionally, we assume that during an emergency, non-trained staff are able to acquire 70 percent of the knowledge provided through the training.[3]

Results

The measured financial ROI is 10, indicating that every dollar invested in developing the global emergency course Rapid Start generated 10 USD in cost savings during emergencies. The high ROI stems from low development costs and the fact that many country offices benefit from the training, improving numerous emergency operations.

2 There are no studies that directly assess the impact of emergency training for humanitarian staff on performance during an emergency. Existing evidence on the effects of staff training on performance comes from general workforce studies, which report elasticities indicating that a 1 percent increase in training is associated with a 0.17–0.32 percent (O'Boyle and Aguinis, 2012) and up to 0.6 percent (Dearden et al., 2006) improvement in performance. For this analysis, we apply the lowest of these estimates as a conservative assumption.

3 The assumption that staff can acquire 70 percent of knowledge through experience is based on the 70–20–10 learning model; see Lombardo and Eichinger (1996) and McCall et al. (1988).

Maintain a Nutrition in Emergencies Rapid Response Team and Roster - GLOBAL

Overview and Investment

WFP maintains a Nutrition in Emergencies (NiE) Rapid Response Team and a dedicated NiE roster to ensure timely deployment of qualified personnel during humanitarian crises. The roster is a pre-assessed database of professionals with expertise in nutrition in emergency settings, enabling Country Offices to recruit directly without undergoing the full recruitment cycle. This mechanism significantly reduces administrative delays and ensures that experienced staff can be mobilized within 72 hours of visa clearance. The investment is designed as an ongoing operational capacity, supporting rapid scale-up during corporate emergencies and strengthening WFP's ability to deliver life-saving nutrition interventions.

Emergency and Counterfactual

The roster was utilized in multiple emergencies, including responses in Palestine (Gaza), Chad, South Sudan, Libya, Sudan, Haiti, and East Africa. For ROI analysis, the counterfactual scenario assumed reliance on standard recruitment processes, which involve vacancy advertisement, longlisting, shortlisting, technical assessments, and interviews. Under this scenario, the time from Country Office request to contract offer would be substantially longer, delaying deployment and potentially compromising the timeliness and effectiveness of nutrition interventions.

Results

The investment delivered significant operational gains. Across 11 deployments analyzed, the roster mechanism achieved an average time savings of 99 days per emergency compared to the counterfactual recruitment process. Qualitatively (Human well-being: 2.0), the impact on human well-being was notable. Rapid deployment of experienced personnel enabled WFP to engage effectively with nutrition cluster coordination mechanisms, ensuring coherent response planning and reducing duplication of efforts. Improved coordination facilitated timely communication of WFP's planned interventions, geographic coverage, and supply needs, which strengthened referral pathways and highlighted service gaps. This clarity supported advocacy and fundraising initiatives, contributing to a more systematic and efficient response for affected populations.

WFP/Dennis Matendechere

Data and Systems

Maintain a Famine Early Warning System - AFGHANISTAN

Overview and Investment

Afghanistan remains one of the world's most food-insecure countries, where years of drought, economic crisis, and restricted access have pushed millions toward hunger. To enable timely and preventive action, WFP Afghanistan established a Famine Early Warning System (EWS), a near real-time, data-driven platform integrating climatic, market, livelihood, and nutrition indicators. The system continuously monitors rainfall, vegetation, prices, and food security trends to detect early signs of deterioration and trigger rapid, localized assistance in hotspot areas. By acting before conditions escalate, the EWS allows WFP to deliver targeted, preventive interventions rather than delayed, large-scale emergency responses, ensuring resources are directed where they achieve the greatest humanitarian impact. This investment enables earlier response and helps reduce operational inefficiencies as well as mitigate the human and economic consequences of late response.

Emergency and Counterfactual

The ROI analysis compared two scenarios during recent food security stress periods: the current EWS model, which enables early hotspot targeting and three months of 50% rations to at-risk households, and a counterfactual scenario without EWS, where assistance would only begin after widespread deterioration, requiring six months of full rations for recovery. Without the EWS, WFP would have faced delayed activation, higher costs, and deeper humanitarian needs, as households would have crossed emergency thresholds before receiving support.

Results

The financial analysis shows that every dollar invested through early hotspot response saved USD 1.3 in future emergency assistance costs, confirming the cost-effectiveness of early action. Acting early also reduced the cost per household significantly, as preventive support required far fewer resources than late-stage recovery.

Qualitative impacts were substantial. In terms of human well-being (2.3), early assistance helped households avoid severe hunger and reduced the need for distress coping strategies, preserving resilience and preventing malnutrition. From an economic perspective (2.5), the system stabilized household purchasing power and local markets by avoiding asset sales and livelihood erosion, protecting minimal economic activity during shocks.

Set up an Early Warning System - MALAWI

Overview and Investment

Malawi's Anticipatory Action (AA) system was launched in 2023 with policy integration into the national Disaster Risk Management (DRM) framework, the creation of a National AA Technical Working Group and Trigger Working Group, and the development of disaster triggers. By 2024, the system became operational following capacity mapping for the Department of Climate Change and Meteorological Services (DCCMS), targeted capacity strengthening for DCCMS and the Department of Disaster Management Affairs (DoDMA), hazard monitoring for riverine flooding, development of a drought AA plan, and training of district-level actors across five districts. The system combines institutional structures, hazard-specific plans, trained personnel, and technical forecasting tools to enable early action ahead of disasters.

WFP contributed to all the investments referenced. In this case study, the early warning component—using data to forecast and trigger alerts that enabled the prepositioning of critical supplies, namely maize and fuel—was essential in generating efficiency gains for WFP. As such, this activity is classified as an early warning system. However, since WFP implemented the broader set of investments to achieve these benefits, all referenced investments are treated as costs in our analysis.

Emergency and Counterfactual

The ROI analysis compares the preparedness scenario, which uses data for the 2023 El Nino drought, with a counterfactual where no preparedness measures exist, and maize is not pre-positioned ahead of the lean season. In the absence of the system, response would be delayed until after impact, requiring larger-scale interventions at higher cost.

Results

The projected cost savings over 2025–2029 amount to an ROI of 6.0. Each dollar invested is projected to return approximately USD 6 in discounted benefits. Time savings are significant: actions are initiated 14 – 28 days earlier than under a reactive baseline, reducing household waiting times and preventing negative coping strategies during the critical pre-impact window.

Qualitative impacts reinforce these gains. In terms of human well-being (3.0), early action ensures households receive food, non-food items, shelter, or cash before impacts peak, reducing exposure to hunger and disease. From an economic perspective (2.0), distributions occur before price spikes inflate procurement and transport costs, while hotspot targeting based on food price monitoring optimizes resource allocation. On the social dimension (2.0), embedding the AA system in the DRM policy and creating technical working groups has strengthened government ownership and confidence in forecasts and triggers, consolidating early action as a core component of national disaster preparedness.

Establish a Self-Registration Application (SRA) - GLOBAL

Overview and Investment

The SRA is a core digital transformation initiative by WFP designed to modernize and accelerate beneficiary registration processes. Over the past three years, SRA has been deployed in 11 countries across four Regional Offices, including Ukraine, Palestine, Egypt, Syria, Jordan, Lebanon, Libya, Moldova, Sudan, the Dominican Republic, and Bangladesh. Nine of these countries have already used SRA in emergency settings, demonstrating its scalability and adaptability to diverse operational contexts. By replacing traditional face-to-face registration with a secure, self-service digital process, SRA enables beneficiaries to register themselves through mobile or web platforms, significantly improving speed, accuracy, and data integrity. The system also supports interoperability with government systems and partner agencies such as OCHA, UNRWA, UNICEF, and UNFPA, strengthening coordination and accountability across the humanitarian ecosystem. This investment represents a long-term shift toward digital preparedness, reducing operational risks and enabling WFP to deliver dignified, cost-efficient assistance at scale.

Emergency and Counterfactual

SRA was deployed in multiple emergencies, including conflict settings in Sudan and Gaza, where physical access was severely restricted. In the counterfactual scenario, WFP would have relied on traditional in-person registration, which typically requires extensive field infrastructure, staff deployments, and weeks of administrative processing. This approach would have delayed assistance delivery and exposed both staff and beneficiaries to heightened security risks in volatile environments.

Results

The financial impact of SRA is significant. The cost per household registration dropped from USD 12 under the traditional system to USD 0.50 with SRA. The ROI analysis shows that for every dollar invested, WFP generates USD 19 in cost savings, making SRA the most financially efficient preparedness investments. Time savings are equally substantial. Lead time has been reduced by between 19 and 26 days and enabling faster initiation of assistance.

Beyond financial and time efficiencies, SRA delivered critical qualitative benefits. In terms of human well-being (3.0), remote registration and digital cash transfers allowed WFP to assist millions of people in hard-to-reach areas, reducing mortality risks and ensuring timely support while minimizing exposure to conflict zones. From an economic perspective (2.0), the system reduced the need for costly field infrastructure and staff deployments, while promoting market-based responses that stimulated local economies. On the social dimension (3.0), SRA fostered inclusion and trust by enabling transparent, user-driven registration processes. Beneficiaries reported high satisfaction levels, and the approach strengthened dignity and participation, particularly among displaced and mobile populations.

Use Nutrition Data for Operations

Overview and Investment

WFP has invested in the systematic collection and analysis of nutrition data to strengthen emergency response planning and implementation. This includes the integration of nutrition indicators into mobile Vulnerability Analysis and Mapping (mVAM) systems, allowing for real-time monitoring of nutritional conditions in crisis-affected areas. The investment supports proactive decision-making by enabling WFP to predict nutritional deterioration and plan timely interventions. As an operational tool, this data system is maintained continuously and used across multiple emergencies to inform targeting, prepositioning, and coordination.

Emergency and Counterfactual

This investment was applied in conflict-affected contexts including Myanmar, South Sudan, Palestine (Gaza), and Yemen during 2024–2025. In the absence of integrated nutrition data, WFP would rely on standalone surveys such as SMART, which are costly and time-consuming to implement. Without timely data, decisions on where and when to intervene would be delayed.

Results

The use of nutrition data enabled WFP to make timely decisions on prepositioning supplies and scaling up interventions, particularly in South Sudan, where early action helped prevent deterioration of nutritional status among children. Children were prevented from progressing from moderate to severe acute malnutrition (Human well-being: 3.0). In Gaza and Myanmar, the inclusion of nutrition indicators in mVAM supported the Integrated Phase Classification (IPC) process and informed advocacy for increased humanitarian access. Economically (2.0), integrating nutrition indicators into mVAM reduced the cost of data collection compared to standalone SMART surveys. Socially, the data facilitated transparent and needs-based targeting of marginalized groups, ensuring that the most nutritionally vulnerable populations received appropriate support.

Technical assistance to government

Support the Development of a Mechanised Packing System (MPS) – PHILIPPINES

Overview and Investment

This investment represents WFP's support to the Government of the Philippines in strengthening national disaster preparedness through the Mechanized Packing System (MPS). Implemented in two key government facilities—the National Resource Operations Center (NROC) and the Visayas Disaster Response Center (VDRC)—the system was designed to automate the packing and prepositioning of Family Food Packs (FFPs), replacing traditional manual processes with industrial-grade packing lines. The initiative included facility upgrades and staff training to ensure operational sustainability and efficiency. The Philippines faces frequent natural hazards, including multiple typhoons annually, making rapid food distribution critical for saving lives and protecting livelihoods.

Emergency and Counterfactual

The MPS was deployed during Typhoon Odette (2021), enabling rapid packing and dispatch of food assistance. In the counterfactual scenario, manual packing would have required significantly more time and labor, delaying the distribution of essential supplies to affected populations. Without the MPS, response operations would have faced longer lead times and higher logistical costs, limiting the ability to meet urgent food needs in disaster-affected areas.

Results

The financial analysis indicates a Return on Investment (ROI) of 1.6 per disaster, meaning that for every dollar invested, the government generated USD 1.60 in cost savings. Time savings were equally critical: the MPS reduced disaster response time by approximately seven days, enabling faster delivery of food assistance compared to pre-MPS operations. This one-week reduction significantly improved operational readiness and ensured earlier access to food for communities isolated by floods and typhoons.

Qualitative impacts were notable across three dimensions. In terms of human well-being (2.0), the MPS helped prevent hunger during critical periods when markets were disrupted, reducing the risk of malnutrition and protecting household assets. From an economic perspective (3.0), the system supported local livelihoods by sourcing rice domestically, stabilizing prices, and protecting smallholder farmers' incomes, while avoiding large-scale imports that could depress local markets. On the social dimension (3.0), the success of the MPS strengthened trust between WFP and the Government of the Philippines, reinforcing collaborative partnerships and enhancing confidence in WFP's role in national disaster preparedness and response.

Support the Implementation of a Commodity Tracking System (CTS) - MALAWI

Overview and Investment

Malawi is highly vulnerable to natural disasters, including floods, droughts, cyclones, and landslides, driven by its tropical climate and reliance on rain-fed agriculture. To strengthen national emergency preparedness and response capacity, WFP invested approximately USD 76,000 between 2023 and 2025 in a set of interventions supporting the Department of Disaster Management Affairs (DoDMA).
These activities included the reintroduction of a Commodity Tracking System (CTS) to provide near-instant visibility of stock levels and reduce pipeline breaks, integration of Final Distribution Point (FDP) and road access mapping to optimize last-mile delivery. These measures aimed to improve planning, reduce delays, and minimize losses during high-volume emergency operations

Emergency and Counterfactual

The analysis draws on data from the drought response in the 2024/25 lean season. In the counterfactual scenario, manual tracking systems would have continued, leading to no visibility and accountability, increasing the risk of commodity losses. Based on past evidence of substantial success with similar interventions in reducing losses, the analysis applies a conservative assumption of 20 percent loss reduction to estimate benefits.[4]

Results

The combined investment delivered significant operational benefits, with an estimated ROI of 3.0. The CTS alone reduced planning and dispatch timelines by 2 – 4 days, improving the speed and reliability of commodity flows during the lean season response.

Qualitative impacts were equally important. In terms of human well-being (2.0), these measures reduced delays in food delivery, lowering the risk of hunger and malnutrition during critical periods. From an economic perspective (2.0), route-based planning supported by FDP mapping is expected to further reduce transport costs by optimizing fleet allocation and minimizing reliance on external contractors.

Anticipatory Action Interventions

Deliver Cash in Anticipation - BANGLADESH

Overview and Investment

The anticipatory action (AA) system in Bangladesh represents a comprehensive preparedness investment designed to enable early humanitarian response based on predictive hazard forecasts. Established as part of WFP's broader preparedness strategy, the system integrates several critical components: policy and protocol design, real-time trigger monitoring, beneficiary database management, and mobile-based cash disbursement mechanisms. These elements work in concert to ensure that assistance can be delivered before disaster impacts materialize. The system is built for sustained operational use, with the capacity to activate in response to seasonal flood risks and other forecastable hazards. Its design reflects a shift from reactive to proactive humanitarian programming, leveraging data and technology to reduce response delays and improve cost-efficiency.

Emergency and Counterfactual

In 2024, the AA system was activated in response to forecasts of severe flooding across major river basins, including the Jamuna, Sylhet, and Eastern flood zones. Based on pre-agreed triggers and early warning thresholds, WFP delivered cash assistance to 89,560 households—approximately 447,800 people—via Bkash mobile wallets before floodwaters reached affected communities. The counterfactual scenario used for ROI estimation assumes a conventional during-shock response, where assistance would have been delayed until after flood impacts.

4 Government food supply management systems have shown significant loss reductions in India (Pingali & Puri, 2025) and the Philippines (Gammad et al., 2024). However, due to differences in context, we apply a very conservative estimate of a 20 percent loss reduction.

Results

The activation of the AA system resulted in substantial operational and financial gains. The investment achieved a return on investment (ROI) of 5.7, indicating that every USD 1 spent yielded USD 5.70 in avoided costs. The intervention resulted in substantial time savings, with assistance delivered 88 days earlier than would have been possible under a conventional response model.

Distributing cash in anticipation of floods had a strong positive impact on both human well-being (2.5) and economic (2.3) impacts. AA-supported households reported improved food security three months after the flood and significantly reduced negative coping strategies in the immediate aftermath. Beneficiaries spent about 95% of the cash transfer on essential needs such as food and healthcare, underscoring its role in safeguarding well-being. Economically, even the small remaining portion was strategically used for home repairs, agricultural inputs, and cattle feed—enabling households to replant crops and protect livelihoods.

Pilot an AA Plan in Social Protection - Peru

Overview and Investment

In 2023, WFP Peru launched a pilot project to design and implement an anticipatory action (AA) model integrated into national social protection systems. The initiative was carried out in close coordination with the Ministry of Development and Social Inclusion (MIDIS), INDECI, and subnational governments, aiming to institutionalize AA mechanisms within government structures. WFP's role included developing the AA plan, providing technical guidance, strengthening institutional capacity through trainings and simulations on early warning protocols, activation procedures, and beneficiary registration systems. The system was implemented in Atumplaya, a rural community in Moyobamba district, targeting 2,000 people vulnerable to recurrent flooding along the Mayo River. Anticipatory actions included early cash transfers to 245 families, dissemination of evacuation alerts. The AA plan, valid for 2025 and 2026, aims to reduce flood impacts and protect livelihoods through faster and more predictable assistance.

Emergency and Counterfactual

The AA system was activated during the February 2025 floods in Atumplaya. In the counterfactual scenario, assistance would have followed a traditional post-impact response, requiring assessments and procurement before delivery.

Results

Adjusted for hazard rate, depletion, and scaling, this translates into an ROI of 1.2. Time savings were 30 days, enabling families to secure assets, prepare evacuation routes, and purchase essentials before the disaster struck.

Qualitative impacts were substantial. In terms of human well-being (2.7), early transfers helped maintain food consumption levels above 90% and reduced negative coping strategies, while timely alerts ensured no lives were lost. From an economic perspective (2.3), anticipatory planning avoided severe damage to homes and farmland and stimulated local markets through early cash injections.

Annex 3

Risk Profile

This methodology provides a standardized approach to estimate the mean annual occurrence rate of severe disasters in countries included in the ROI study. It ensures comparability across contexts and focuses on events that significantly impact food security and typically require WFP intervention. The model covers hazards relevant to WFP operations, including cyclones, droughts, earthquakes, epidemics, floods, landslides, storms, tsunamis, and volcanic eruptions. The rate of severe disasters is a key variable in the ROI formula.

The methodology defines what qualifies as a severe disaster, summarizes data sources, establishes vulnerability-based thresholds, and calculates annual occurrence rates using historical disaster data.

Disaster data

Historical disaster data from EM-DAT[5] is used to estimate likelihoods. EM-DAT provides records of relevant events and affected populations—those requiring immediate assistance for survival needs such as food. The analysis uses the past 25 years due to improved data quality.

Severe Disasters

The threshold for a severe disaster is determined by a country's vulnerability to food insecurity. Countries with high prevalence of acute food insecurity have usually lower coping capacities, making even moderate disasters potentially overwhelming. In such contexts, WFP support becomes essential. Conversely, countries with lower food insecurity typically possess stronger institutions and disaster preparedness, allowing them to manage moderate events independently.

Thus, the severity threshold is inversely related to vulnerability:

High vulnerability ➡ lower threshold (smaller shocks have greater impact)

Low vulnerability ➡ higher threshold (only large shocks necessitate WFP involvement)

This ensures that severity is assessed not solely by disaster magnitude, but by its potential impact on food security and coping capacity.

Vulnerability is proxied by the prevalence of acute food insecurity, using the latest IPC estimates or equivalent data such as WFP's CARI. The analysis considers populations facing Crisis levels of acute food insecurity (IPC Phase 3 or above). Because historical data is not consistently available for the full 25-year period, only one recent data point is used to determine the vulnerability level.

The defined thresholds for a country are reported in the table below. If the analysed disaster relatively affected fewer people than the selected threshold, that value was used as the national threshold for severe disasters.

Assigned level of vulnerability	Crisis levels of AFI (% of total population)	Affected by disaster (% of total population)
High	>30	2
Medium	15-30	4
Low	<15	6

The relative thresholds for defining a severe disaster are multiplied by the total population of the country to obtain absolute thresholds that can be compared with the number of affected people reported by EM-DAT. To account for population changes over the past 25 years, the

5 https://www.emdat.be/

population size from the year of each disaster is used. This approach generally results in higher thresholds over time. Population data is sourced from UNDESA, using the Medium Variant estimates for 2024.

The resulting absolute thresholds are then compared with EM-DAT data to determine the number of severe disasters in each country over the past 25 years. This approach also enables a data-driven selection of hazards: only those hazards with at least one event meeting the threshold are considered.

Mean Annual Occurrence Rate of a Severe Disaster

The mean annual occurrence rate of a severe disaster is an important variable for the calculation of the ROI for preparedness activities.

The mean annual occurrence rate of severe disasters is calculated as follows:

$$MAOR_{SD} = \frac{1}{T} \sum_{t}^{T} O_t$$

MAOR_SD: Mean annual occurrence rate of severe disasters

O_t: Occurrences of severe disasters in year t

T: Number of years in the observation period (25 years: 2000 to 2024)

WFP/Abubakar Garelnabei

Annex 4

Quantitative Methodology

Preparedness investments generate two main types of quantifiable benefits:

- **Cost savings**: Lower emergency logistics and procurement costs, reduced losses, and avoidance of other expensive last-minute operations.
- **Time savings**: Faster delivery of assistance.

Depending on the type of activity, we consider both WFP-specific benefits and government benefits (for example, when supporting government).

To calculate the ROI of preparedness investments, a counterfactual approach is applied. This method compares actual emergency outcomes with estimated outcomes in a scenario where the investment had not been made. Benefits are determined as the difference between actual emergency costs and time (with the investment) and estimated counterfactual costs and time (without the investment). This approach isolates the added value of preparedness by modeling what would have occurred in its absence.

For example, in the case of food prepositioning, the actual emergency cost includes purchasing, transporting, and storing food before a disaster. The counterfactual scenario assumes that the same quantity of food would need to be purchased and imported at the time of the emergency, potentially at higher market prices and with increased transport costs. The difference between these two scenarios represents the cost savings attributable to preparedness.

Cost savings

Calculating the financial ROI of investments requires four main types of cost data, which are collected from country offices, and an adjustment to standardize these benefits to the scale of an average severe disaster in the country. Finally, we apply a formula to compute the ROI.

Cost Data

For each ROI calculation, the following cost data was collected from the country offices:

- **Initial investment in preparedness** includes all funding used to set up the preparedness activity. This covers both staffing costs for design and development and material costs such as equipment or infrastructure. For example, if a warehouse is established for food prepositioning, the initial investment would include construction costs.
- **Variable costs** refer to recurring annual expenses required to maintain the investment, regardless of whether an emergency occurs. These might include warehouse maintenance, staff refresher training, or IT system upkeep. Unlike emergency-related costs, these are ongoing and not tied to a specific event.
- **Actual emergency cost** represents the response costs incurred during a recent emergency where the preparedness investment was used. For instance, if food was prepositioned, this could include the transportation costs of delivering those commodities during a flood. It does not include costs that would also occur in a counterfactual scenario.
- **Counterfactual emergency cost** reflects what the response would have cost without the preparedness investment. This estimate is based on scenarios informed by past response methods or evidence from similar emergencies. For example, if food had to be imported during the same flood instead of being prepositioned, the counterfactual cost would account for higher transportation and

procurement expenses.

Cost savings/Benefits

The cost savings—or benefits—of the preparedness activity for the observed emergency are calculated as the difference between the counterfactual emergency cost and the actual emergency cost.

Because actual emergency costs are based on one or a few events, and emergencies vary significantly in scale, benefits are adjusted to reflect the size of an average severe disaster in the country over the past 25 years. This adjustment applies a scaling factor derived from the number of affected people:

Benefits_severe disaster = Benefits_actual emergency × Affected people_severe disaster/ Affected people_actual emergency

A scaling factor of 1 means that the actual emergency and the average severe disaster are of similar size, so no adjustment is needed. If the scaling factor is greater than 1, it indicates that the actual emergency was smaller than the average severe disaster, so the benefits are scaled up. Conversely, if the scaling factor is less than 1, the actual emergency was larger than the average severe disaster, and the benefits are scaled down. This adjustment ensures that the estimated benefits reflect the typical scale of a severe disaster in the country rather than the specific event for which data was collected.

This approach assumes that response costs scale proportionally with the number of affected people.

ROI calculation based on cost savings

ROI is calculated using a simple and transparent formula:

$$\text{ROI} = \frac{\sum_{t=0}^{T} \frac{\text{Benefits of severe disaster}_t \times \text{Rate of severe disaster} \times (\text{Depletion rate})^t}{(1+r)^t}}{\sum_{t=0}^{T} \frac{\text{Investments (initial and variable)}_t}{(1+r)^t}}$$

Where:

- **Average Benefits of a severe disaster** are the estimated savings from investing in preparedness compared to a scenario without such investments (counterfactual).
- The estimated benefits are adjusted by the **Rate of a severe disaster**. This mean annual occurrence rate is context-specific and is derived from the calculations presented in the risk profile
- A **depletion rate** is applied to account for potential reductions in investment effectiveness over time.
- The **timeline (T)** refers to the reference period for investments and benefits. It can vary depending on the investment type (e.g., infrastructure may have a longer useful life than a training program).
- The **discount rate (r)** quantifies the present value of expected future cash flows, ensuring that future benefits are compared fairly to present-day investment costs.

Time savings

Time savings are also estimated for each investment category and expressed as the reduction in response time (e.g., number of days gained). Time savings help reduce suffering and save lives. While not directly monetized in the ROI formula, time savings are a critical dimension for humanitarian impact and are presented alongside cost savings to provide a comprehensive picture of value.

We calculate time saving of investments as:

Time saving=Response time with investment in preparedness- Response time without investment in preparedness

Annex 5

Qualitative Methodology

Summary

This methodology is designed to capture qualitative benefits of emergency preparedness activities. It provides a structured framework to assess impacts across three domains: human well-being (H), economic impacts (E), and social impacts (S) (see table below for details). The approach combines qualitative insights—through quotes that reflect the breadth and nuances of these benefits—with a scoring system that enables comparison across different activities.

A set of structured questions has been developed for each of the six investment categories: Infrastructure, Pre-positioning, Staffing and Learning, Data and Systems, Technical Assistance to Government, and Anticipatory Action Interventions. The questions are part of the ROI Data-Entry tools.

Domain	What it captures
Human well-being	The preparedness activity helps reduce the impact of disasters on human well-being by decreasing food insecurity, malnutrition, illness, injuries, and mortality etc.
Economic impacts	The preparedness activity helps mitigate the negative impacts on both the local and broader economy. It reduces disruptions to livelihoods, market instabilities, disruptions of essential service providers, and minimizes infrastructural damage etc. Additionally, monetary savings should be captured that are not fully accounted for in the quantitative ROI model.
Social impacts	The preparedness activity helps reduce the impact of disasters on social relations within and among affected communities. It helps to prevent an erosion in social cohesion, lowers social risks such as tension, crime, violence, unrest, and conflict, mitigates forced migration and reduces discrimination against marginalized groups.

WFP/Sayed Asif Mahmud

Methodology

The qualitative assessment begins with standardized questions for each dimension—Human Well-being, Economic Impacts, and Social Impacts. For every investment category, a tailored set of questions is applied, with minor adaptations to reflect the activity. The questions for the Staff and Learning category are provided in the box below.

Staff and Learning – Open-ended Questions from Guidelines

HUMAN WELL-BEING:

• What improvements in food security, nutrition or health - or reductions in mortality - did you observe during the emergency as a result of the preparedness activity's outcomes (e.g., trained staff's activities, better-coordinated response, or others)?"

• Any other positive effects on people's well-being?

ECONOMIC IMPACTS:

• How did the preparedness activity's outcomes (e.g., trained staff's activities, better-coordinated response, or others) help protect livelihoods or local markets?

(Examples: continuity of essential services, temporary employment, reduced spoilage or damage)

• Were there any cost savings or avoided losses not captured in the quantitative ROI?

• Any other positive effects on the local economy?

SOCIAL IMPACTS:

• How did the preparedness activity's outcomes (e.g., trained staff's activities, better-coordinated response, or others) affect social cohesion?

(Examples: interpersonal trust, perceived fairness and participation)

• Did the outcomes of the preparedness activity (e.g., trained staff's activities, better-coordinated response, or other outcomes) help reduce social tensions, unrest, or conflict?

(Examples: improved access, reduced competition for resources, safe spaces)

• Did the outcomes of the preparedness activity (e.g., trained staff's activities, better-coordinated response, or others) support inclusion of vulnerable or marginalized groups (e.g., women, children, persons with disabilities, marginalized ethnic identities)?

• Did the outcomes of the preparedness activity (e.g., trained staff's activities, better-coordinated response, or others) prevent displacement or strengthen trust between communities and humanitarian actors?

• Any other positive social effects on the local community not yet mentioned?

Technical experts provide narrative responses for each dimension, drawing on evidence and experience to illustrate impacts. Each response has a length of between 150 and 250 words. These responses are reviewed for completeness and consistency.

Scoring

Once consolidated, impacts are scored using a standardized scale that compares activities across domains. Responses are compiled in one sheet for comparability. Each activity is evaluated across three domains, and sub-scores are aggregated into an overall impact score.

The scoring process follows several important principles to ensure consistency and fairness.

First, accepted impact thresholds are applied, such as whether a preparedness activity enables response within 72 hours. These thresholds are then adjusted for context, with lower thresholds applied in countries with higher vulnerability (for example, where acute food insecurity is widespread).

To avoid double counting, any data already used in the quantitative analysis is excluded from the qualitative scoring. In addition, activities that achieve their intended purpose but do not generate positive impacts—or even create negative impacts—in the assessed domains are omitted. For instance, preparing vulnerability-based targeting can reduce costs compared to blanket targeting, but it may also lead to adverse social impacts. In such cases, the activity would be excluded from scoring for social impacts.

WFP/Abubakar Garelnabei

Annex 6

Practical Guidance for Applying the Methodology

To conduct the ROI analysis, dedicated Data-Entry tools have been developed. The tools include:

- A web-based tool for quantitative data, qualitative data, and the risk profile.
- An Excel file that can be used to do the scoring of the qualitative dimensions.

The data-entry tool enables users to upload all information required to conduct a comprehensive ROI analysis, covering both the quantitative inputs for the cost- and time-savings ROI and the qualitative data. The tool is largely self-explanatory and is accompanied by built-in guidance, including detailed instructions within the workbook to support accurate data entry.

Before using the tool, some preparatory work is required for each investment case under analysis: identify the emergency from which actual costs should be collected, define the counterfactual scenario, and gather any relevant reports or secondary sources that can help substantiate and strengthen the qualitative information provided.

To provide a brief overview of the tool's contents, the sheets are as follows:

1. Context: Information on the investment analysed, the emergency the data relate to, and the financial details.
2. Cost savings data: Fixed costs, variable costs, actual costs (event), and counterfactual costs.
3. Time savings data: Response time with and without the investment.
4. Summary calculations: Initial calculations to validate and sense-check the data.
5. Risk profile: Entry of food security data, EM-DAT data, and population data.
6. ROI results: Cost-savings calculation and visualizations.
7. Information for qualitative data collection: Includes a detailed description and an illustrative example.
8. Human well-being: Questions guiding qualitative data entry.
9. Economic benefits: Questions guiding qualitative data entry.
10. Social benefits: Questions guiding qualitative data entry.
11. Download sheet: Page to download the data.

Ideally, this analysis is carried out by a team with complementary expertise. The structure remains the same whether the analysis is conducted for case studies within one country office or, as in the current study, by GHQ in collaboration with country offices.

Roles in the Analysis Team:

- **Analyst** – Leads the ROI study by selecting case studies, collecting and aggregating data, conducting the analysis, and calculating ROI. This role is well suited for a VAM (Vulnerability Assessment and Mapping) Officer due to the analytical complexity and variety of data sets involved.
- **Technical Focal Point** – A colleague working on emergency preparedness in a technical team who helps identify relevant case studies and facilitates connections between the analyst and technical experts.
- **Technical Expert** – Provides the raw data and subject-matter expertise based on direct experience with implementing preparedness activities featured in the case studies (typically a Programme Officer in the Country Office).

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