



Food and Agriculture
Organization of the
United Nations

El Niño

Anticipatory Action and Response Plan

August–December 2023

Mitigating the expected impacts of El Niño-induced climate extremes
on agriculture and food security



Summary

The question is no longer if El Niño will happen, but what we must do to mitigate its impacts. There is a greater than 90 percent chance that El Niño will continue through the end of the year, and international climate agencies forecast a moderate to strong El Niño continuing into 2024. This will increase the likelihood of extreme weather and climate hazards, ranging from drought to floods and storms. Such early warnings clearly call for early action.

El Niño-induced climate hazards pose high risks to food security. The world enters this El Niño cycle already with a record 258 million people experiencing acute hunger and only 20 percent of the funds needed to deliver food security assistance to the most vulnerable. Many countries facing humanitarian crises also risk being affected by El Niño impacts in the coming weeks and months. The last El Niño in 2015-2016 severely affected more than 60 million people, causing 23 countries to appeal for international humanitarian assistance totalling USD 5 billion.

By disrupting rainfall and temperature patterns, El Niño may strongly impact agriculture, rural livelihoods and food security. Farmers, pastoralists, fishers and other small-scale producers bear the most direct and immediate impacts of climate shocks. Effective early action must therefore concentrate on preventing damage and loss to crops, livestock, productive lands, waters and infrastructure to protect food at its source. This not only safeguards local food supply but also mitigates wider effects on communities, local economies and humanitarian aid requirements. FAO studies show that every USD 1 invested in anticipatory action can create a return for farming families of more than USD 7 in avoided losses and added benefits.

FAO's El Niño Anticipatory Action and Response Plan requires USD 89 million to deliver immediate support to the most at risk and affected populations in the second half of 2023.

The Plan's aims are three-fold:

1. **Mitigate El Niño disaster impacts through anticipatory actions**, such as helping fishers protect their boats ahead of storms, reinforcing river embankments ahead of floods, distributing drought-tolerant seeds to rainfed farmers and protecting livestock health.
2. **Capitalize on the positive spillover effects of El Niño and offset losses**, for example by supplying seeds to flood-affected farmers so they can plant and regain a harvest as flood waters recede.
3. **Deliver early response where El Niño causes devastation**, including through prepositioning the most time-sensitive supplies such as veterinary medicines, seeds and water bladders, while providing cash to severely affected families to meet their most immediate needs.

El Niño is a natural climate phenomenon, in which surface waters of the central and eastern Pacific become unusually warm and cause changes in weather patterns around the world.

El Niño re-occurs every 2-7 years and typically lasts 9-12 months.

Its unique slow onset, periodic pattern, and lead-times of prediction make it possible to design anticipatory policies and prepare emergency responses a few months in advance.

The current El Niño immediately follows a three-year La Niña phase, which brought the opposite extremes to affected countries, including severe drought to the Horn of Africa.

Current geographic coverage of the Plan

East Africa

Ethiopia, Kenya, Somalia, Uganda

Southern Africa

Madagascar, Malawi, Mozambique, Zimbabwe

Latin America

The Plurinational State of Bolivia, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Peru, Bolivarian Republic of Venezuela

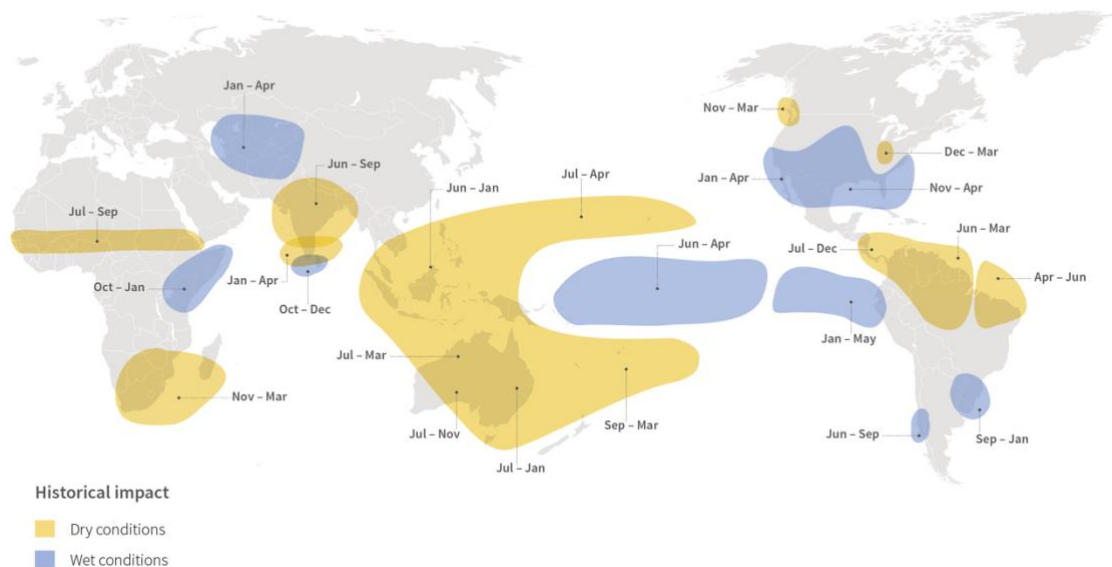
Asia and the Pacific

Bangladesh, Cambodia, Fiji, Lao People's Democratic Republic, Timor-Leste, Viet Nam, Papua New Guinea, the Philippines

FAO's Plan currently prioritizes action in 25 countries at highest risk of El Niño impacts within the year based on analysis of historical trends, latest seasonal forecasts, agricultural seasonality and the vulnerability of populations at risk. The triggers for anticipatory action have already been reached in some countries in East Africa, Latin America and Southern Africa. FAO was able to immediately initiate anticipatory actions in 12 prioritized countries in these regions thanks to flexible funding from donors such as Belgium, Canada, Germany, Norway and Sweden. In other countries, FAO has advanced preparations in place, that involve local partners and suppliers of goods, to ensure activities can start quickly.

Effective anticipation and response to El Niño requires flexible funding at scale to allow for agile planning and rapid action when and where it is needed most. The activities costed within this plan must start in 2023 to achieve the planned objectives. Contributions made to FAO's Special Fund for Emergency and Rehabilitation Activities (SFERA) will support fast decision-making, disbursement of funds and actions on the ground. Some of the most urgent activities in this plan require funding by mid-August, including to get the right seed varieties to farmers to secure a crop despite the odds of drought or flood conditions. FAO urgently calls for funding to support rural communities at scale and in time.

Figure 1. Historical El Niño trends.



Source: Columbia Climate School International Research Institute for Climate and Society. 2023. El Niño and rainfall. In: *ENSO Resources*. [Cited 3 August 2023]. <https://iri.columbia.edu/our-expertise/climate/enso/>

Context

The El Niño Southern Oscillation (ENSO) is a naturally occurring pattern of climate variability (alternating between El Niño and La Niña episodes). It occurs every two to seven years and has a major influence on weather patterns over many parts of the world, driving extreme weather events including drought, flooding and storms.

In July, the World Meteorological Organization (WMO) declared the onset of El Niño conditions as a result of rapid and substantial changes in oceanic conditions observed in recent months. Similarly, the US Climate Prediction Center ENSO forecast indicated that the tropical Pacific is experiencing El Niño conditions and an El Niño Advisory^a issued in June remains in effect. The majority of climate model predictions and expert assessments indicate very high probability (90 percent) of El Niño persisting until the end of 2023. Furthermore, the Indian Ocean Dipole is expected to shift to positive in the coming months, further reinforcing the expected effects of El Niño in some areas. The latest International Research Institute (IRI) multi-model precipitation forecasts initialized in July for August to January 2024 indicate the latest probabilities of below- and above-normal rains.

El Niño can have strong repercussions on agricultural livelihoods and food security across many regions, affecting especially the most vulnerable people who are already experiencing acute food insecurity. The impact of ENSO events on agriculture and food security can be severe and cause significant human suffering and economic loss. The 2015-2016 El Niño episode severely affected over 60 million people worldwide, causing 23 countries to appeal for international humanitarian assistance totalling USD 5 billion.

The Food and Agriculture Organization of the United Nations (FAO) has developed Anticipatory Action protocols and is part of inter-agency anticipatory action frameworks in many of the countries historically affected by El Niño, and where food security is a major concern. In close coordination with governments and other key partners, FAO is already implementing anticipatory action to mitigate the impact of forecast El Niño-induced climate extremes on agriculture and food security. However, the available financial resources are extremely limited compared to the expected effects of this phenomenon.

^a Issued when El Niño or La Niña conditions are observed and expected to continue.

Objectives

FAO's El Niño Anticipatory Action and Response Plan aims to protect the food security and livelihoods of rural communities at high risk of El Niño impacts in 2023. Its activities cover two critical time windows: (i) acting ahead of El Niño shocks to prevent their impacts and (ii) delivering first responses where devastation from El Niño could not be avoided. The Plan's overarching aims are to:

1. **Mitigate El Niño disaster impacts through anticipatory actions**, such as helping fishers protect their boats ahead of storms, reinforcing river embankments ahead of floods, distributing drought-tolerant seeds to rainfed farmers and protecting livestock health.
2. **Capitalize on the positive spillover effects of El Niño and offset losses**, for example by supplying seeds to flood-affected farmers so they can plant and regain a harvest as flood waters recede.
3. **Deliver early response where El Niño causes devastation**, including through prepositioning the most time-sensitive supplies such as veterinary medicines, seeds and water bladders, while providing cash to severely affected families to meet their most immediate needs.

Geographic coverage

FAO's plan currently prioritizes actions in 25 countries across East and Southern Africa, Asia and the Pacific, and Latin America. The countries were identified by assessing historical impacts of El Niño and considering key factors such as latest seasonal climate forecasts, agricultural seasonality and current vulnerabilities.

The below steps were taken to identify priority countries at high-risk of El Niño impact during the coming months for anticipatory action:

- The IRI El Niño and rainfall map^b (page 3) was used to list the countries historically impacted by El Niño and outline when El Niño historically shifts rainfall patterns in those countries (months) and how (dry/wet).
- Seasonal climate forecasts for the August–January period were applied as a filter, with countries facing normal conditions removed from the list. The main sources used include global forecast models (e.g. IRI Seasonal Climate Forecast, European Centre for Medium-Range Weather Forecasts [ECMWF], WMO), as well as regional and national seasonal climate forecasts when available.
- Agricultural seasonality was analysed to determine which agricultural seasons will potentially be affected during the outlook period.
- Additional factors considered include current humanitarian needs, as well as the risk analyses conducted by the Inter-Agency Standing Committee (IASC) Global ENSO Analysis Cell.^c

Based on these criteria, the countries prioritized under the Plan are as follows.

Region	Below-normal rainfall	Above-normal rainfall
Asia and the Pacific	Bangladesh, Cambodia, Lao People's Democratic Republic, Timor-Leste, Viet Nam, the Philippines, and Papua New Guinea	Fiji (cyclone)
Southern Africa	Madagascar, Malawi, Mozambique and Zimbabwe	
Latin America and the Caribbean	The Plurinational State of Bolivia, Colombia, El Salvador, Guatemala, Honduras, Nicaragua, Peru and the Bolivarian Republic of Venezuela	Ecuador
East Africa		Ethiopia (eastern), Kenya, Somalia and Uganda (southern)

^b In some cases, this has been triangulated with the FEWS NET teleconnection.

^c The IASC Global ENSO Analysis Cell is an inter-agency group that is convened based on the Standard Operating Procedures for early action to El Niño/La Niña episodes. Since early April 2023, the Cell continues to meet on regular basis to identify the priority countries at highest-risk of humanitarian impacts of El Niño episode, with a focus on different sectors. The outcome analysis is followed by a summary note and disseminated to relevant humanitarian and resident coordinators of prioritised countries calling for anticipatory action planning and close monitoring of climate information at regional and country level. Participants in the Cell include ACAPS, FAO, International Federation of Red Cross and Red Crescent Societies, International Organization for Migration, IRI, Médecins Sans Frontières, Office for the Coordination of Humanitarian Affairs, SCI, Office of the United Nations High Commissioner for Refugees, United Nations Children's Fund, World Food Programme, World Health Organization, WMO.

Countries where the impact of El Niño is expected to occur after the period covered by available climate forecasts were not included in the Plan. Importantly, the list of countries prioritized does not include all of the countries at risk of being affected by El Niño-induced hazards. The list focuses specifically on countries where FAO plans to support actions to reduce expected humanitarian impacts. As new forecasts will become available, the country coverage of the Plan will be updated accordingly.

Funding needs and modalities

El Niño impacts will unfold in different places, at different times, with varying intensity and impact. The Plan urgently requires USD 89 million to implement short-term interventions in response to the evolving forecasts and needs. Flexible funding is sought to the greatest extent possible, channelled to FAO's SFERA funding mechanism.

Funds are needed most immediately to carry out anticipatory actions in time. The triggers for anticipatory action have already been reached in East Africa, Latin America and Southern Africa. FAO was able to immediately initiate anticipatory actions in 12 prioritized countries in these regions thanks to flexible funding from donors such as Belgium, Canada, Germany, Norway and Sweden. In other countries, FAO has advanced preparations in place, that involve local partners and suppliers of goods, to ensure activities can start quickly once new triggers are reached.

The Plan is risk-based and forward looking. Therefore, there is an unavoidable level of uncertainty with regards to the actual occurrence of the forecast hazards. For this reason, the activities are planned, following a no-regret approach. An adaptive approach will be used to ensure that resources are re-allocated where they are most needed to prevent and mitigate the effects of El Niño across the world. The plan will be updated on a regular basis to reflect latest developments and new forecasts.

Priority actions by region

East Africa

Context

Since October 2020, the region has been hit by the most extensive and persistent drought episode since at least 1981. The drought damaged livelihoods and incurred debilitating, repeated cumulative shocks to herds, crops, water availability and household incomes in southern and southeastern Ethiopia, northern and eastern Kenya and Somalia. Although the ongoing rainy season (March–May) has generally been above average, recovery from a drought of this magnitude will take years.

Seasonal forecast

For the Horn of Africa, El Niño is associated with above-average rains during the October–December rainy season. Another global weather phenomenon called the Indian Ocean Dipole, similar to El Niño but in the Indian Ocean, is also forecast to be positive, with above-average rains across the Horn of Africa that will likely strengthen the impacts of El Niño. Current seasonal forecasts for October–December reflect a likely situation that is in line with expected impacts from an El Niño and positive Indian Ocean Dipole. All major meteorological agencies^d show an increased probability of above-average rains. Several agencies, including the Intergovernmental Authority on Development (IGAD) Climate Prediction and Applications Centre and the Climate Hazards Centre, have also released recent alerts indicating an elevated probability of above-average rains.

Expected impact on agriculture and food security

El Niño-induced above-average rainfall could support the recovery from the ongoing drought conditions experienced in the region, improving crop and livestock production. However, such rains can also result in heavy rainfall episodes, flooding and landslides especially in eastern Ethiopia, Kenya, Somalia and southern Uganda. Therefore, households that have already experienced back-to-back shocks over the past several years face an increased risk of additional crop and livestock losses, infrastructure damages, population displacements and water-borne diseases. This includes cholera, which is already a major source for concern across the region. After a drought and especially when there is no time to transition between droughts and floods, livestock are often nutritionally challenged and stressed, leading to reduced immune system functioning, increasing the likelihood of diseases. Furthermore, wet conditions enhance the probability of vector-borne diseases.

It should be noted, however, that the impacts of El Niño are not homogeneous across the region. In the western parts of the East Africa region, such as South Sudan, the Sudan, and western Ethiopia and Kenya, the rainfall pattern is different from the eastern Horn of Africa with significant rainfall received between now and September. In these areas, El Niño is associated with below-average rains during this rainy season. While below-average rains may somewhat reduce the risk of flooding in flood-prone areas such as South Sudan, they, along with dry spells and conflict, could negatively impact agricultural production and exacerbate already alarming food insecurity levels.

^d The agencies include the National Oceanic and Atmospheric Administration, WMO, IRI, ECMWF and the United Kingdom Met Office.

Planned activities

 USD 20 million

 400 000 people

FAO is already launching anticipatory actions for floods in Ethiopia, Kenya, Somalia and Uganda. However, additional support is needed to implement anticipatory actions and rapid response interventions at a larger scale. Immediate support should include unconditional cash and animal health interventions to limit the spread of flood-induced diseases. In areas where floods will not be averted and crops will be partially or totally destroyed, the residual soil moisture from the receding flooding will still allow farmers to enjoy a harvest if supported for immediate replanting and with tools and equipment to protect the harvest.

Prioritized actions:

- Provide unconditional cash to the most vulnerable households to support their activities to prepare for and cope with the impact of floods.
- Deliver animal health interventions to reduce the risk of flood-induced disease outbreaks and parasites.
- Distribute seeds for rapid replanting using the receding floodwater.
- Distribute hermetic bags and tools to help farmers safely store their harvest.

Figure 2. East Africa priority countries seasonal calendar.



Source: FAO. 2023. *Internal document*. Rome.

Southern Africa

Context

According to the latest Famine Early Warning Systems Network (FEWS NET) update in June 2023, most households across the region are engaging in harvesting, which is improving household food access and dietary diversity. Staple food supplies have improved in parts of the region where rainfall was average to above average, including in surplus-producing areas of Lesotho, northern parts of Zimbabwe, central and northern Malawi, northern and central Madagascar, and northern Mozambique. However, acute food insecurity persists in cyclone Freddy-affected areas of Mozambique and Malawi, the grand south of Madagascar, and conflict-affected areas of Mozambique and the Democratic Republic of the Congo, with populations facing Crisis outcomes in Integrated Food Security Phase Classification (IPC) Phase 3. The number of people experiencing Stressed (IPC Phase 2) and Crisis (IPC Phase 3) outcomes will likely increase from June to September, as household food stocks decline through the dry season.¹

Seasonal forecast

Rainfall forecasts initialized in July for October–December 2023 and November–January 2024 showed enhanced probabilities of below-normal precipitation over Southern Africa. The Southern African Regional Climate Outlook Forum and national downscaled forecasts are yet to be undertaken.

Expected impact on agriculture and food security

In Southern Africa, El Niño-induced drought in 2023 could impact the performance of the main agricultural season between October 2023 and March 2024, especially in countries and areas that registered below-average cereal production in 2022/23 as a result of climate extremes (cyclones). Croplands in countries likely to face dry conditions are highly susceptible to water stress, with potential adverse implications on crop yields in the 2023/24 season. Drought could also lead to an increased incidence of plant and animal pest and disease outbreaks.

In 2015/16, El Niño-induced drought affected an estimated 32 million people in Southern Africa. In 2023/24, high impacts on food security are expected, especially in areas like southern Madagascar that experienced recurrent drought over the past years. According to the latest IPC analysis in Madagascar, the number of people in IPC Phase 3 and above could increase from 1 million in June–September 2023 to 1.72 million in January–April 2024.^e

Severe food security impacts are expected also in Malawi, especially in areas that experienced severe flooding during the last agricultural season.² In Malawi, IPC Phase 3 outcomes are likely to prevail during the lean season, particularly in the southern districts of the country. The government^f estimates that the number of people in IPC Phase 3 and above is expected to increase from 3 million in June–September 2023 to 4.1 million in October–March 2024. According to the latest FEWSNET IPC analysis, based on the El Niño forecast and other drivers, a high impact on food insecurity is expected in the historically

^e Madagascar IPC acute food insecurity analysis, June to April 2024, endorsed by the Government of Madagascar, yet to be published.

^f Malawi IPC Acute Food insecurity Analysis, July to March 2024, endorsed by the Government of Malawi, yet to be published.

drought-affected areas of Mozambique, with pockets of IPC Phase 3 conditions expected throughout the country between October and January 2024.³

In Zimbabwe, a strong impact on food insecurity is expected considering that more than 80 percent of farmers do not have access to irrigation. There is increasing concern that an erratic start to the 2023/24 rainy season due to El Niño will limit the regeneration of pasture and water resources and the recovery of livestock body conditions, particularly in drier southern and western areas of the country. Widespread IPC Phase 3 outcomes are expected between October and March, mainly driven by the forecasts for below-average rains, soaring inflation and widespread unemployment.⁴ According to the latest ZIMVAC analysis, 2.7 million people are expected to be food insecure between January and March 2024.⁵

Planned activities



USD 20 million



420 000 people

FAO will work with partners to ensure that early warnings and related agricultural advisories are disseminated to at-risk people, and that anticipatory actions are implemented to protect the livelihoods of the most vulnerable people ahead of the forecast drought. Anticipatory actions will contribute to minimize crop losses, ensure continuation of food production through short-cycle off-season crops, and improve the availability and management of scarce water resources for crops and livestock.

If the expected hazards materialize, FAO will conduct post-disaster impact assessments and kick-start activities to address the remaining needs of affected people. This will contribute to protect development gains, strengthen the humanitarian–development–peace nexus and build the resilience of communities in the face of future shocks.

FAO is already launching a set of anticipatory actions in the prioritized countries, where drought anticipatory action protocols are in place. However, the resources mobilized are not enough. Urgent additional support is required to ensure the following actions can be implemented at the required scale and coverage in 2023.

Priority actions:

- Disseminate early warnings and agricultural advisories widely to ensure farmers are aware of appropriate risk management options to minimize crop, livestock and other livelihood losses.
- Provide farming inputs, including drought-tolerant short cycle crop seeds (cereals and legumes) for the main 2023/24 season, vegetable seeds, small irrigation kits and training in water management.
- Protect animal health and productivity, through livestock disease monitoring, vaccination and treatment, community watering points, distribution of feed and drought-tolerant fodder seed, as well as poultry and small ruminants where appropriate.

- Protect community fisheries resources and aquaculture assets and provide fishing kits.
- Deliver cash programmes, including unconditional cash, cash+ (cash transfers plus seeds to support off-season production) and cash for work associated with small-scale irrigation, water harvesting and soil conservation.

Figure 3. Southern Africa priority countries seasonal calendar.



Source: FAO. 2023. *Internal document*. Rome.

Asia and the Pacific

Context

El Niño has contrasting impacts across Asia and the Pacific. It can bring both too much rain and also too little to the region. Historically, and depending on the strength of the El Niño, sub-regions face the following conditions:

- Southeast Asia: drier conditions and heightened typhoon activity.
- South Asia: a mix of both drier and wet conditions depending on the time of year and geography.
- Pacific Islands: located in the epicentre of El Niño, the region experiences all key climatic forms of the event. Fiji, Samoa, Palau, Papua New Guinea, the Marshall Islands and the Federated States of Micronesia can experience drier conditions. Conversely, the Solomon Islands, Vanuatu, Tuvalu and Kiribati can experience much wetter conditions. Overall, the subregion can also experience heightened cyclone activity.

To address challenges in Asia and the Pacific, adopting a multi-hazard approach is of utmost importance. Past occurrences of El Niño events have revealed the simultaneous risks of multiple hazards, such as droughts occurring alongside floods or cyclones being followed by droughts. El Niño intensifies the frequency of natural hazards while also bringing them closer in time and space. For instance, during the 2015/16 El Niño event, both Vanuatu and the Philippines encountered a cyclone-vis-drought scenario. In both countries, the cyclones were particularly severe, classified as Category 5, resulting in widespread devastation to the agriculture sector. This led to significant losses in crops and livestock and caused damage to boats and fishing equipment. The unfortunate timing of these cyclones was aggravated by the subsequent onset of dry conditions, further hindering the communities' ability to recover and restore their agricultural activities. The compounding effects left livelihoods already compromised and severely challenged their capacity to bounce back from the disasters.

Seasonal forecast

Long-range precipitation forecasts (3-6 months) showcase typical signs of El Niño across the region. Based on seasonal forecasts, Timor-Leste is currently raising significant concerns due to the strong indications of drier than usual conditions. These conditions are expected to persist until the end of the year. Additionally, over the next six months, other Southeast Asian countries, including the Philippines, Viet Nam, Lao People's Democratic Republic and Cambodia are likely to experience similar patterns, although this shift may occur at a later stage since the monsoon rains are predicted to be normal for now. Furthermore, Pacific nations such as Fiji, Vanuatu and Papua New Guinea are also anticipated to follow this trend. In Pakistan, the southern region typically experiences drier conditions from June to September, while the northern region usually receives more rainfall from January to April. However, current seasonal forecasts indicate normal weather patterns across the country. Bangladesh can further experience both drier and wetter conditions that require close monitoring. The Pacific Island sub-region is further showing both above average and below average precipitation forecasts; El Niño is also associated with higher typhoon activity in the Central Pacific basin.

Expected impact on agriculture and food security

Diverse impacts on agriculture and food security are expected across the region, considering the variety of contexts and agroecological conditions. Potential drought in Southeast Asian countries (Cambodia, Lao People's Democratic Republic, the Philippines, Timor-Leste, Viet Nam) is expected to cause losses in main cereal crops (e.g. rice, maize), pulses as well as perennial cash crops (e.g. coffee, pepper). The aquaculture sector could be significantly impacted by saltwater intrusion, especially in the Mekong Delta region which is also a water lifeline for many at-risk families. Increased livestock mortality, especially among small stock (e.g. chickens, ducks) is expected due to higher temperatures, pasture depletion and lack of drinking water, potentially leading also to animal disease outbreaks. Crop losses are possible in Bangladesh, especially the secondary Bo crops, which account for about 35 percent of the annual output. In Fiji, cyclones could result in damages to fishing boats and fishing equipment, sugarcane and root vegetable production, as well as livestock death.

El Niño events, historically, have been associated with a rise in food insecurity due to decreased crop production and lower yields in Asia and the Pacific. This, in turn, has led to an increase in food prices both within the region and on a global scale. Notably, the Mekong River delta has experienced significant impacts, with countries like Viet Nam relying heavily on this area, which contributes to more than half of their national rice production and 70 percent of aquaculture. Additionally, the drier conditions brought about by these episodes can lead to water stress, reducing water availability for agricultural activities, drinking water supplies and hydropower generation. Moreover, areas experiencing such dryness face a higher risk of forest fires, posing further challenges to the region's environmental stability. Furthermore, the agriculture sector is susceptible to the onset of pests and diseases during these periods. For instance, in the Philippines, mice outbreaks can occur with drier conditions that can devastate maize crops already under stress from lack of precipitation.

Planned activities



USD 12 million



626 105 people

FAO urgently requires funding to expand and strengthen anticipatory action efforts in the prioritized countries. Additionally, it seeks support for rapid response interventions to support families affected by disasters. Prolonged periods of drought can significantly impact plant growth, leading to reduced yields, while powerful cyclones can swiftly devastate livelihoods and assets. The funds will be used to implement a range of activities tailored to each country's context, comprising both anticipatory action and rapid response measures.

Priority actions for drought:

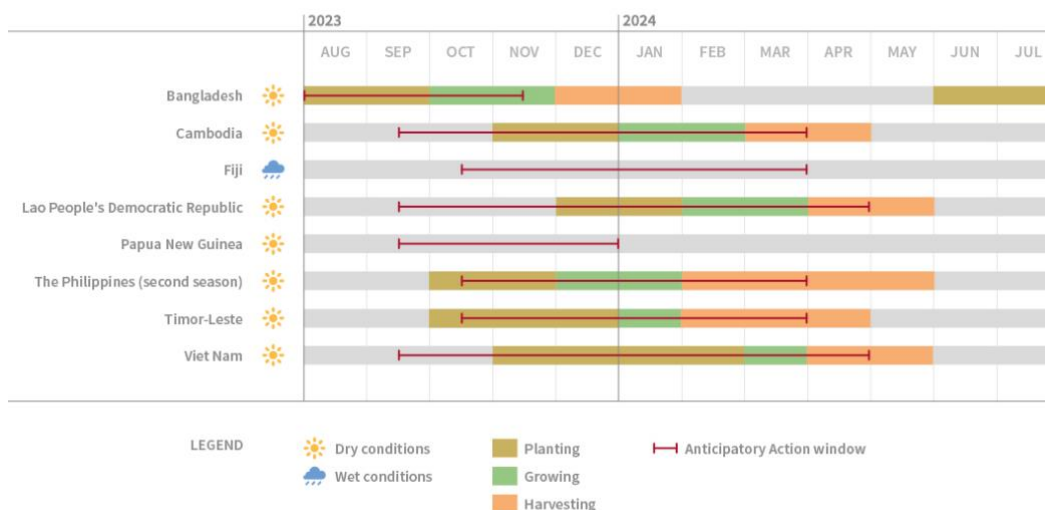
- Disseminate early warnings on the most suitable planting time and conduct awareness campaigns and trainings on good water management practices and post-harvest techniques for food preservation.
- Provide water harvesting and storage equipment.

- Deliver cash assistance, such as cash for work to increase water storage capacity (e.g. water points, ponds, wells) and multi-purpose cash to support access to basic needs and services, including irrigation.
- Provide farming inputs, including drought-tolerant seeds, short cycle crop seeds, micro-gardening and micro-irrigation kits for rapid food production during affected seasons, as well as drip irrigation for perennial crops, followed by inputs to restore crop production in the immediate aftermath of drought.
- Distribute livestock feed before drought impacts animal health, set up fodder banks, and restock small livestock and fingerlings to rapidly restore production in the immediate aftermath of the drought.
- Provide fisheries assistance packages.

Priority actions for floods/cyclones:

- Disseminate early warning messages with agricultural advisories.
- Distribute seed/feed storage silos.
- Provide animal feed at evacuation points.
- Protect fisheries assets, including boat strengthening kits and watertight drums to keep fishing gear safe.
- Support boat repair and fishing gear replacement after cyclones.
- Distribute root crops and support the chain of farm to market.
- Deliver cash assistance, including multi-purpose cash to ensure access to food and other basic needs and cash-for-work to help rebuild markets.
- Carry out animal re-stocking.

Figure 4. Asia and the Pacific priority countries seasonal calendar.



Note: No specific cropping season is indicated for Papua New Guinea and Fiji, as the planting of root crops (e.g. taro, cassava, kumara) is continuous and rotational.

Source: FAO. 2023. Internal document. Rome.

Latin America and the Caribbean

Context

In recent years, smallholder farmers in Latin America and the Caribbean have faced a succession of shocks with cascading effects on their food security and agricultural livelihoods. Added to the socioeconomic impacts of the COVID-19 pandemic, were those of the war in Ukraine and of extreme weather events. Today, many communities are still struggling to recover from the 2020 hurricane season – the strongest on record for the region.

These drivers are combined with the fragility of the food systems on which the most vulnerable populations in rural areas depend. In 2022, 17.8 million people in the region experienced Crisis or Emergency levels of acute food insecurity (IPC Phase 3 and above). Thus, any new shock or stressor has a more devastating impact on food security.

Seasonal forecast

The latest forecasts indicate below-normal precipitation is predicted over northern South America (Colombia, the Bolivarian Republic of Venezuela) and Central America (El Salvador, Guatemala, Honduras, Nicaragua), consistent with El Niño impacts. Forecasts also indicate that below-normal rainfall is expected in the Plurinational State of Bolivia and eastern Peru. On the other hand, above average rains are forecast towards the end of the year in coastal areas of Ecuador.

Expected impact on agriculture and food security

In the Plurinational State of Bolivia, below-normal precipitation could affect the summer planting season. This could cause delays in planting and losses of key crops such as maize, potatoes, quinoa, as well as impacts on livestock due to lack of pastures, feed and water, leading to higher incidence of diseases and higher mortality rates. According to the Government of Colombia, about 3.8 million ha of crops are under high threat of El Niño-induced drought, and many animals risk being affected and displaced. In Ecuador, the Ministry of Agriculture and Livestock identified 36 cantons as being at high or very high-risk level from potential floods occurring at the end of the year; potential crop and livestock losses could amount to USD 136 million. In the Dry Corridor of Central America (El Salvador, Guatemala, Honduras, Nicaragua), below-average rains are expected to delay planting for the postrera season and reducing the availability of surface waters for irrigation, leading to lower crop yields; the livestock sector will likely be affected with possible increased incidence of animal diseases and mortality rates. In Peru, El Niño is expected to cause rainfall deficits in some regions of the country, especially in the highlands of Puno, Moquegua and Tacna, affecting staple crop and livestock production. In the Bolivarian Republic of Venezuela, drought is expected to cause partial or total loss of crops in the arid zones of La Guajira, Zulia and Falcon states, particularly affecting small farmers; further, livestock (cattle, sheep, goats) are expected to be impacted by increased temperatures, depletion of pastures and water resources. El Niño-induced changes in precipitation patterns are also expected to affect fisheries and aquaculture production across the prioritized countries.

The impacts of El Niño-induced hazards could cause further deterioration in acute food insecurity across the affected countries. According to FAO's Data in Emergencies (DIEM), most agricultural producers in the Dry Corridor are smallholders who already face food insecurity and challenges in accessing agricultural inputs and commercializing their produce. In Colombia, it is estimated that 22.4 million people are at risk of food insecurity due to the El Niño phenomenon, of whom 2 303 children under 5 years of age are at risk of acute malnutrition. Indigenous communities would be particularly affected especially due to impacts on agricultural livelihoods. In Peru, it is envisaged that many farmers would leave the countryside and end up falling into poverty and destitution. In the Bolivarian Republic of Venezuela, it is estimated that at-risk indigenous population may face significant lack of food due to reduced production and increasing prices.

Planned activities



USD 36.9 million



1 157 685 people

FAO has already launched anticipatory actions to mitigate the expected impact of drought in Colombia, El Salvador, Guatemala, Nicaragua, Honduras and the Bolivarian Republic of Venezuela. Additional resources are urgently needed to expand the scale and coverage of the interventions, and to ensure support can be provided to vulnerable households across all prioritized countries. The sequencing and combination of activities would depend on each country context and agricultural calendars.

Priority actions for drought:

- Implement El Niño risk communication strategies for the agriculture sector.
- Deliver drought-tolerant and short-cycle seeds ahead of the planting seasons, provide backyard vegetable gardening kits, and support community seed banks.
- Implement cash assistance (unconditional cash transfers and cash+).
- Conduct trainings on water resource management practices, and rehabilitate water harvesting, storage and irrigation systems.
- Protect livestock assets, through animal health campaigns; sanitary and zoonotic disease control campaigns; provision of animal feed, fodder seeds and support to fodder storage and conservation.
- Distribute water in areas where water collected through rainwater harvesting systems was insufficient.
- Provide fishing inputs and trainings on fishing as a livelihood diversification strategy.
- Provide training and support to establish community savings and loan schemes.
- Restock animals when needed and conditions allow.

Priority actions for floods:

- Clear drainage canals and support conservation work to avoid soil erosion.
- Distribute waterproof silos to safeguard crop seeds, tools, fishing gear.
- Support livestock evacuation from areas exposed to flood risk and supply fodder to evacuation centres.
- Carry out animal health campaigns to prevent flood-induced animal diseases.
- Undertake activities to prevent plant pests likely to emerge with abundant rains.
- Repair flood-affected assets, such as livestock shelters, fishing boats and related storage facilities.
- Deliver unconditional cash transfers through social protection systems.

Figure 5. Latin America and the Caribbean priority countries seasonal calendar.



Source: FAO. 2023. *Internal document*. Rome.


Coordination

The activities foreseen in the Plan cannot be implemented in isolation. FAO will continue to coordinate closely with affected communities and their national and local governments, including disaster risk management authorities and ministries of agriculture, as well as national meteorological services and civil protection. Country led efforts are reinforced by strong collaboration with regional organizations such as IGAD, Southern African Development Community, the Association of Southeast Asian Nations, the Pacific Islands Forum and the Coordination Centre for the Prevention of Natural Disasters in Central America.

Coordination on anticipatory action is pursued through global platforms, such as the Anticipatory Action Task Force, the Anticipation Hub and Risk-Informed Early Action Partnership, as well as through regional and national technical working groups for anticipatory action. Where the cluster system is active, coordination with humanitarian actors will be ensured both within the Food Security Cluster and across clusters. Joint implementation with partners will be favoured wherever possible, including through Central Emergency Response Fund inter-agency anticipatory action frameworks. Close coordination and collaboration with the World Food Programme will be ensured wherever both agencies are activating anticipatory action protocols.

Notes

- ¹ **FEWSNET**. 2023. Southern Africa Key Message Update May 2023: Ongoing harvest is improving food access, but food prices remain high. <https://fews.net/sites/default/files/generated-reports/2023/southern-africa-key-message-update-2023-05-1685562990.pdf>
- ² **FEWSNET**. 2023. Malawi Acute Food Insecurity: July–September 2023 projected outcomes. In *FEWSNET*. [Cited 3 August 2023]. <https://fews.net/southern-africa/malawi>
- ³ **FEWSNET**. 2023. Malawi Acute Food Insecurity: July–September 2023 projected outcomes. In *FEWSNET*. [Cited 3 August 2023]. <https://fews.net/southern-africa/mozambique>
- ⁴ **FEWSNET**. 2023. ZWL prices drop following a decline in exchange rates. In: *FEWSNET*. [Cited 3 August 2023]. <https://fews.net/southern-africa/zimbabwe/key-message-update/july-2023>
- ⁵ **Zimbabwe Vulnerability Assessment Committee**. 2023. *Rural Livelihoods Assessment*. Harare, Zimbabwe. Food and Nutrition Council.



FAO's Anticipatory Action uses risk analysis and forecasts to trigger interventions before a crisis escalates into a humanitarian emergency.

REQUIRED CITATION

FAO. 2023. *El Niño: Anticipatory Action and Response Plan, August–December 2023. Mitigating the expected impacts of El Niño-induced climate extremes on agriculture and food security*. Rome. <https://doi.org/10.4060/cc7267en>

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Office of Emergencies and Resilience
OER-Director@fao.org | Anticipatory-Action@fao.org
fao.org/emergencies

Food and Agriculture Organization of the United Nations
Rome, Italy



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