FOOD SECURITY ALERT

SPECIAL BULLETIN

TIMOR-LESTE, MARCH 2024

HIGHLIGHTS

Spot checks in the municipalities reveal that **despite the start of the rainy season, Timorese people are still facing localized crop failure, reduced access to water, and livestock death** due to untimely, insufficient, and poorly distributed rains.

There is a **looming threat that the current El Niño event will be "historically strong"[1]**. Ongoing El Niño conditions resulted in sharply below-average rainfall between October 2023 and January 2024. **Drier-than-normal conditions will likely persist until April 2024, negatively impacting agriculture output.** This is expected to be followed by excessive precipitation linked to the emergence of the La Niña weather event, **likely resulting in landslides and floods.**

Localized FallArmyWorm (FAW) infestations in most municipalities, **primarily targeting maize crops,** compounded by El Nino effects, are **anticipated to cause significant maize harvest reductions in 2024.**

Retail prices of imported rice remain high in Timor-Leste, at US$0.76/kg in December (or US$18.75 for a standard 25kg bag). **Maize prices peaked in December** at US$2.18/kg, 66 percent higher than a year earlier. Persistent **price increases have progressively reduced the affordability of staple foods for vulnerable families** in Timor-Leste.

360,000 people, more than **1 out of 4 people in the country, are estimated to be facing Crisis or above levels of food insecurity** between November 2023 and April 2024[2]. **The convergence of the El Niño phenomenon and surging rice prices is likely to exacerbate hunger in the country.**

Urgent procurement of rice and specialized nutritious food is necessary to mitigate the deterioration of the food security and nutrition status of the poorest and most vulnerable Timorese families.

PERSPECTIVES FROM THE FIELD: CROP LOSS, WATER SHORTAGE, AND LIVESTOCK DEATHS DUE TO EL NIÑO

WFP continues to conduct spot checks across municipalities to follow the developments of El Niño's impact on the Timorese population. Anecdotal evidence reveals drought-like conditions have resulted in limited water availability (especially in late 2023), crop failure, the outbreak of pests such as the FallArmyworm (FAW) which is expected to drastically reduce 2024 maize output, as well as localized livestock death.

The start of the rainy season in November/December (depending on the areas) brought much-needed relief to communities in terms of access to water, and improved pasture conditions. However, its delayed onset caused the localized failure or underdevelopment of key crops such as maize and rice, the harvest of which is expected to be well below average levels in 2024.

Communities have limited access to weather and climatic forecasts, leading to a lack of preparedness actions to mitigate the impact of high temperatures and insufficient rainfall. Most respondents also revealed a lack of coping capacities as their livelihoods depend on rainfed agriculture, and insufficient rainfall will likely result in reduced access to food and money to buy food. Among the coping strategies mentioned, some communities revealed they sent family members to the capital, Dili, to earn money and supplement their resources by selling products like peanuts, goats, and chickens.

Despite the start of the rainy season, Timorese people are still facing localized crop failure, reduced access to water, and livestock death due to untimely, insufficient, and poorly distributed rains.

INSUFFICIENT RAINFALL AT PLANTING AND GROWING PERIOD DUE TO EL NIÑO

Between October 2023 and January 2024, cumulative precipitation levels were well below the long-term average across the country (Map 1)[3]. This period corresponds to a critical window for planting and early growing of rice and maize crops (Figure 1). Insufficient rainfall at this point in the cropping cycle usually leads to delayed planting and reduced outputs or failed crops.

In past El Niño events, the drying impacts have resulted in a sharp reduction of agricultural output leading to a deterioration of the food security situation for a large portion of the population[4].
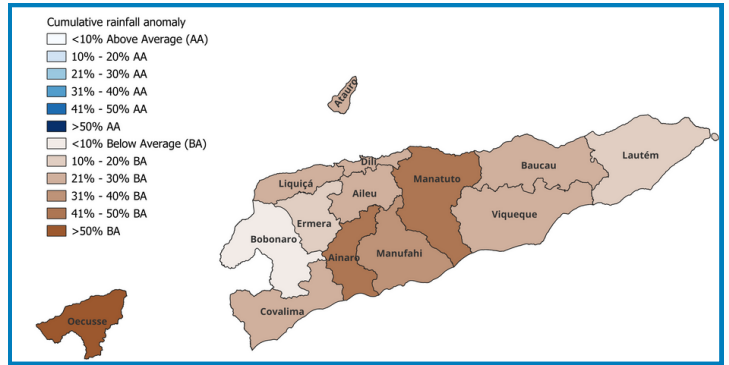
Map 1: October 2023 to January 2024 cumulative precipitation anomaly compared to the Long Term Average (LTA). Map developed by WFP TL.

Source: WFP DataViz Climate Explorer and FAO-GIEWS

Low precipitation levels recorded in Timor-Leste between October and January, particularly in Oecusse, Ainaro and Manatuto.
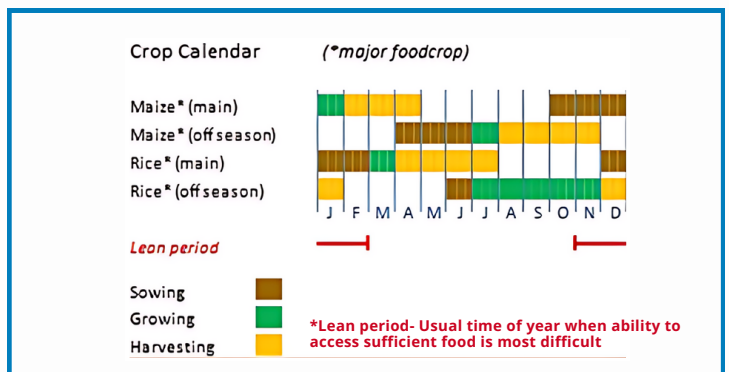

Figure 1: Timor-Leste crop calendar.

Source: FAO-GIEWS

The International Research Institute for Climate and Society (IRI) predicts El Niño conditions to persist with high probability through April/May 2024, as shown by Figure 2 and Map 3[5]. In addition, there is a greater than 55 percent chance of at least a "strong" El Niño persisting through March 2024 and a 35 percent chance of this event becoming "historically strong" for the November-January season[6].

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3 In these maps, red colors indicate lower-than-average rainfall levels while blue shows areas with above-average precipitation.
4 For further information on the impact of the 2015 El Nino on Timor-Leste food security, see: WFP-FAO-MALFF Food Security Alert – Special Bulletin, Timor-Leste – October 2023: https://www.wfp.org/publications/food-security-alert-special-bulletin-timor-leste-october
5 IRI ENSO Forecast November 2023, accessed on 13 December 2023: https://iri.columbia.edu/our-expertise/climate/forecasts/enso/current/
6 IRI ENSO Forecast November 2023, accessed on 12 February 2024: https://iri.columbia.edu/our-expertise/climate/forecasts/enso/2023-November-quick-look/?enso_tab=enso-cpc_update

By the time the El Niño strength is expected to reduce, La Niña conditions are forecasted to pick up (see Figure 2), without a transition period for recovery. The La Niña weather event is expected to bring landslides and floods caused by heavy rainfall,
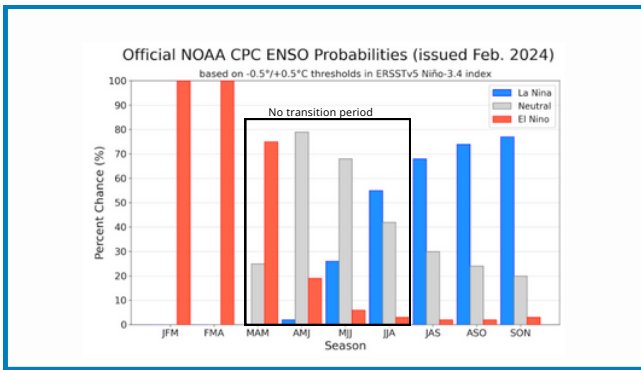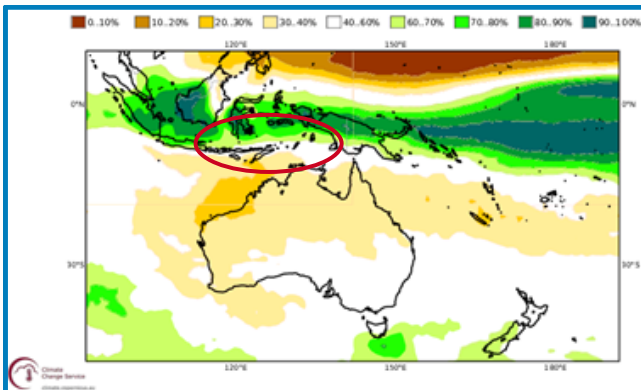

**Figure 2: El Niño-Southern Oscillation (ENSO) forecast.**

Source: IRI, CPC Official Probabilistic ENSO Forecast

Dry conditions associated to El Nino until April (Map 2) expected to be immediately followed by excessive rainfall associated to La Nina from June, causing landslides and floods.

Map 2: CS3 Multi-system Seasonal Forecast Probability of above-median precipitation (February - April 2024, issued January 2024).

Source: Copernicus Climate Change Service
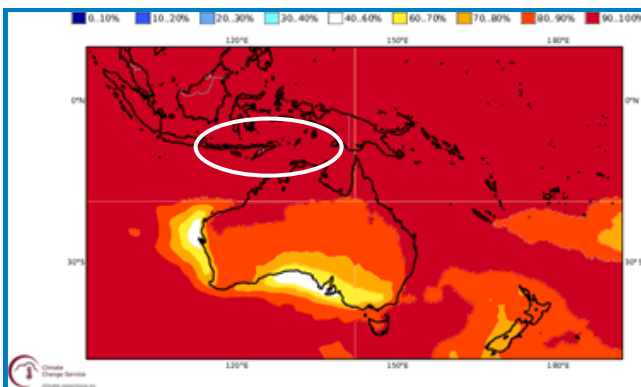
Map 3: CS3 Multi-system Seasonal Forecast Probability of above-median temperature (February - April 2024, issued January 2024).

Source: Copernicus Climate Change Service

Map 2 shows that between February and April 2024 cumulative precipitation levels will likely continue to be below-average[7] while map 3 indicates high probability of above-average temperatures in the same time range in Timor-Leste[8].

The Combined Drought Index (CDI), established by the Ministry of Agriculture Livestock, Fisheries and Forestry (MALFF) and the National Directorate of Meteorology and Geophysics (NDMG), in collaboration with FAO, has been issuing drought alerts for the entire country. As of mid-February 2024, 10 out of 14 municipalities had reached or exceeded the 60% CDI threshold, while Ermera, Lautém, Liquiçá and Manufahi show CDI values below the threshold (Figure 3)[9]. The CDI operates on a monthly basis with a lead time of 3 months and is scheduled for the first week (decade 1) of each month. Changes in the CDI values are influenced by various indicators that contribute to prolonged drought, including ENSO, IOD, Soil Moisture, Rainfall (both observed and forecasted), and the Vegetation Health Index (VHI).
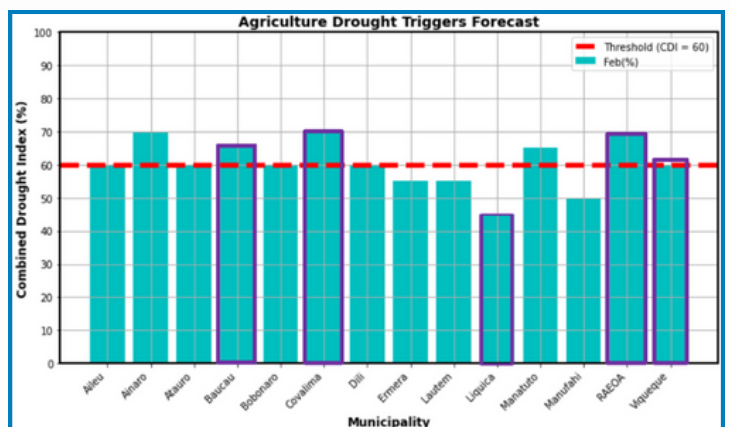

Figure 3: Combined Drought Index (CDI), February to May 2024, issued in February 2024[10]

Source: MALFF and NDMG, in collaboration with FAO

Localized FallArmyWorm (FAW) infestations have been reported in most of the municipalities, with maize crops being the main target. The impact of El Nino, coupled with that of FAW infestations will likely lead to severe maize harvest reductions in 2024.

7 Brown areas correspond to 10-20% probability of above-average rainfall levels, therefore 80-90% probability of below-normal precipitation volumes.
8 Red areas indicate 90-100% probability of above-average temperatures, thus pointing at near certainty for hotter than normal temperatures during the reference period.
9 Source: Agriculture drought report forecasting (February 2024), FAO, UNEP, MALFF, CPA, NDMG, Green Climate Fund.
The monthly CDI report combines key indicators of drought impacts to provide an assessment of drought risk at the municipal level, and aims to inform anticipatory action to be taken in advance of drought impacts. The 60% trigger indicates a threshold at which the risk is assessed to be high enough to warrant the allocation of resources to act, based on historic assessments of loss and damage.
10 Columns marked with purple border indicate municipalities where FAO has initiated Anticipatory Action (AA) initiatives in phase one: Baucau, Covalima, Liquica, Oecusse, and Viqueque. Phase two of implementation is currently underway in four municipalities, excluding Liquica due to the indication of a lower risk of agricultural drought as showed by the CDI analysis.

RICE AND MAIZE PRICES AT VERY HIGH LEVELS IN TIMOR-LESTE

International rice prices reached very high levels in 2023, due to strong consumer demand and limited global availabilities. In Timor-Leste, strongly rice import-dependent, the surge of international prices put upward pressure on already high domestic quotations. The FAO All Rice Price Index reached the highest nominal value since August 2008 in January 2024, reaching 142.8 points, which is 13 percent above the previous year's level (Figure 4).

Reflecting the trends in the international rice market and supported by the introduction of restrictions on Indian rice exports, which constitutes the largest portion of Timor-Leste rice imports[11], retail rice prices rose sharply in the second half of 2023. The national average in November reached a peak at US$0.78/kg, despite price stabilization measures introduced by the government in late September[12]. In December, the measures started to have an impact on prices as they declined slightly, averaging US$0.76/kg, although remaining almost 30 percent above the previous year's level, corresponding to an average price of US$18.75 for a 25 kg bag (Figure 5).
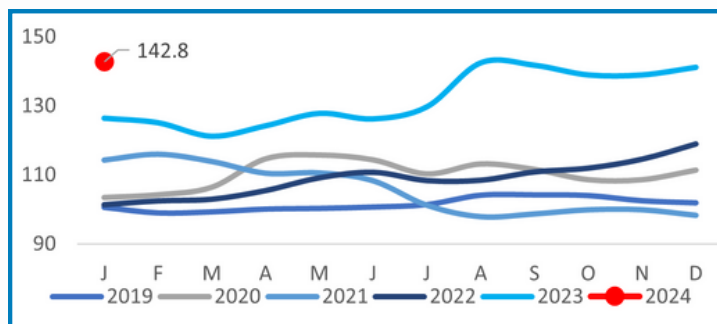

Figure 4: FAO all rice price index, 2019-2024 (January), 2014-2016.

Source: FAO Markets and Trade

Due to the expectation of a reduced harvest of maize as well as increased demand for the grain following rice price increases, maize quotations rose steeply in late 2023 in Timor-Leste, further limiting economic access to staple foods for the poorest households. In December 2023, the national average retail price of maize amounted to US$2.18, 66 percent higher than a year earlier (Figure 6).

Maize plants damaged by pests. (Bobonaro, Elena Conte WFP)

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11 For further information on Timor-Leste dependence on Indian rice imports and the impact on the country of trade measures implemented by the Government of India:
- WFP-MALFF Food Security Alert – Special Bulletin, Timor-Leste - August 2023: https://www.wfp.org/publications/food-security-alert-special-bulletin-timor-leste
- WFP-FAO-MALFF Food Security Alert – Special Bulletin, Timor-Leste – October 2023: https://www.wfp.org/publications/food-security-alert-special-bulletin-timor-leste-october

12 With Decree-Law 76/2023 of 29 September 2023, the Council of Ministers fixed the wholesale price of imported rice at US$12 per 25kg-bag, with the wholesaler companies obtaining a subsidy of US$5 per 25kg-bag of imported rice. In addition, 30,000 tonnes of rice were allocated as a reserve for social interventions in emergency situations, in the warehouses of the National Logistics Center (CLN). Source: Jornal da Republica, Decree law 76/2023: https://www.mj.gov.tl/jornal/?q=node/13
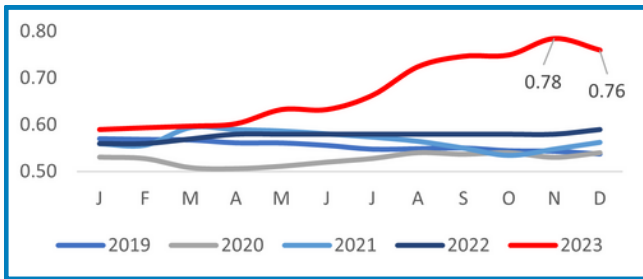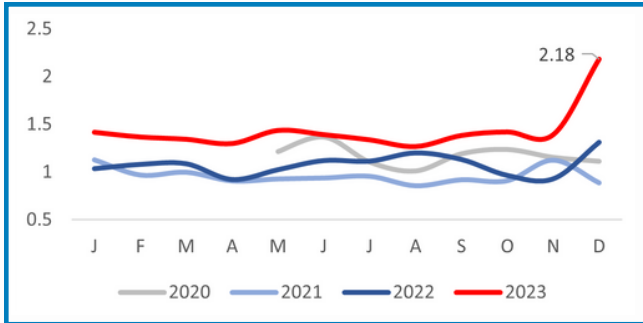
Retail prices of imported rice remain high in Timor-Leste, at US$0.76/kg in December. Maize prices reached a peak in December, at US$2.18/kg, 66 percent higher than a year earlier.

The reliance of the Timorese people on imported rice, coupled with price fluctuations of rice and maize, and global rice trade dynamics, significantly affect the availability and accessibility of these crucial food staples. The situation is concerning as the existing food security issues in the country may worsen due to the intensifying El Niño Southern Oscillation (ENSO) conditions in the upcoming months.

Based on the results of the Acute Food Insecurity Integrated Phase Classification (IPC) Analysis carried out in late 2023, and published on 29 February 2024, an estimated 360,000 people are currently facing crisis or above levels of food insecurity (IPC Phase 3 or above), of which 18,592 people are identified in emergency conditions (IPC Phase 4). This is a severe deterioration compared to the same period in 2022, when the IPC analysis found 300,000 people facing IPC Phase 3 and above levels of food insecurity between November 2022 and April 2023.

Most concerningly, the IPC Analysis anticipates a further worsening of food insecurity during the post-harvest season (May -September 2024), a period when food access and availability typically improve. During these months, the number of people facing food insecurity is projected to rise to 364,000.

The main drivers of food insecurity were found to be poverty, drought-like conditions linked to the ongoing El Nino event, high food prices, and the impact of climatic shocks such as floods and landslides.

Dry rice field. (Covalima, WFP)

Rice being sold in Maumate market. (Oecusse, Ejilo Ulan WFP)

More than 1 in 4 people in the country estimated to be facing Crisis or above levels of food insecurity between November 2023 and April 2024.

Rice fields left uncultivated due to insufficient rainfall at planting time, left to livestock for grazing (Bobonaro, Elena Conte WFP).

⚠ RECOMMENDED ACTIONS TO TAKE AS SOON AS POSSIBLE

- **Manage resources wisely:** Implement comprehensive strategies for managing water sources and watersheds, including conservation measures, reforestation projects, and community-based initiatives.

- **Diversify staple food:** Invest in research and development to enhance the availability and accessibility of drought-resistant crop varieties like sorghum.

- **Explore other nutrition-sensitive value chains:** Foster the diversification of livelihoods and food sources by exploring alternative value chains such as fish farming and aquaculture.

- **Work together for food security:** Activate coordination platforms with government and humanitarian partners, ensuring a framework for prompt response and improved joint monitoring systems for food security.

- **Nutritious food access for vulnerable communities:** Ensure operational readiness by procuring rice and Specialized Nutritious Foods, for the most vulnerable, guaranteeing quality through rigorous checks and adherence to international food safety standards.

- **Protect the food you grow:** Enhance best practices on supply chain planning and management, and increase warehousing and storage capacities to preposition food and non-food items for a swift response.

- **Study weather patterns to support farmers:** Implement proactive humanitarian measures to lessen projected impacts and safeguard Timor-Leste's population including accurate and consistent weather information, which enables early action while providing agriculture and water resources to farming communities.

- **Boost food reserves for tough times:** Expand national reserves to mitigate drought-related impacts on agriculture and food supply, and counter fluctuations in production and food prices.

- **Understand why food prices change:** Evaluate local market retailers to assess the availability and affordability of rice and other essential food items within the country.

- **Identify those most in need of food:** Continue periodic monitoring and develop vulnerability and targeting criteria to identify vulnerable communities and families.

ANNEX: EL NINO MONITORING RESPONSES FROM THE MUNICIPALITIES

Atauro (suku Macadade, aldeias Ilitimur and Arlo, information provided by Chiefs of Aldeia)
- November: water supply fell short of meeting sanitation and washing needs, compelling residents to travel longer distances to access it. To supplement, water for drinking and cooking was available for purchase in tanks and bottles. Livestock deaths have been observed, further exacerbating the community's challenges.
- February: following the start of the rainy season, the water supply has improved, however, maize crops were reported to be in worse than usual conditions, especially for farmers who planted in January. By contrast, crops planted later, in February, when the rain became more regular, were reportedly healthier.
- Access to information regarding climatic and weather forecasts remains limited and primarily reliant on radio broadcasts and social media platforms. This poses a continuous hurdle for the community's disaster preparedness and response strategies.

Bobonaro (sukus Holsa, Ritabou, Odomau; information provided by Chiefs of Suku)
- February: water availability has improved since November, after the rainy season started, however, some farmers missed the optimal planting time for rice or maize and some did not plant at all. The delayed onset is likely to result in reduced harvests as rainfall is still not regular nor well distributed as of February. Some croplands have also been damaged by sporadic heavy rains.
- Communities expressed the need of agricultural inputs support and training to farmers on best practices to alleviate the impact of dry weather conditions on crops and livestock.

Covalima (suku Matai; information provided by Chief of Suku)
- February: rain levels were still insufficient for normal crop growing. Farmers started planting crops late or did not plant, anticipating harvest losses due to the below-average precipitation.
- Communities may face significant challenges with food access, unless improvements in rainfall patterns occur, given that their livelihoods rely on rainfed agriculture.
- Pregnant women and people with disabilities were identified as particularly vulnerable groups due to potential obstacles in accessing clean water sources.

Dili (suku Wenunuc, aldeia Wenunuc, information provided by former Chief of suku):
- November: severe water shortages, livestock deaths, and crop losses. Water volume from primary sources like wells and electric pumps was reported to be significantly lower than the previous year. Failed crops and livestock deaths due to lack of water and dry pastures were observed.
- To cope, some community members had shifted to alternative income sources such as casual labour collecting firewood, sand, and stones for sale to construction companies. Mutual support within the community through resource sharing and aiding the most vulnerable members was a prevalent coping strategy.
- February: seasonal leafy greens (spinach, water spinach, etc.) benefited from the start of the rainy season, but maize was underdeveloped hampering timely harvest. The volume of groundwater and the greenness of pastures have improved, allowing access to water for cooking, washing and feeding livestock.

Ermera (suku Riheu, aldeia Sosoher, information provided by Chief of aldeia and one farmer)
- November: Water scarcity from the usually reliable river source forced communities to prioritize essential needs. Decreased crop production, especially of coffee, maize, cassava, and horticulture were observed, severely affecting the community's access to food and income. Deaths of chickens and pigs have also been observed.
- To combat these challenges, community members resorted to sharing resources, conducting traditional rituals to beckon rain, and employing water conservation practices. Access to climatic and weather forecasts is reported to be limited.
- February: despite the increase in rainfall levels, some communities are still experiencing a lack of water and reduced production of cassava, taro, and banana.

Lautem (suku Parlamentu, aldeia Ira-Ara; and suku Com, aldeia Etepiti. Information provided by Chiefs of aldeias)
- February: below-average precipitation levels. Rains improved access to water from springs but were not sufficient to recover conditions of some crops such as maize, pumpkin and nuts. This prevents farmers from selling their goods in the market and reduces their income. Pasture conditions remained below-average, causing localized death of animals such as cows, buffalos and goats.
- The interviewed communities reported not having any coping mechanisms in case of lack of food or money to buy food as they rely on traditional farming.

Manufahi (suku Babulu, information provided by Chief of suku):
- February: The delayed onset of the rainy season resulted in below-average crop conditions, likely leading to a reduced harvest in 2024, particularly rice and maize.
- Some farmers reported that their maize was negatively impacted by pests.

Oecusse (suku Taiboco, aldeia Maquelab and suku Usitaqueno, aldeia Nibin, information provided by Chiefs of aldeia):

- November: Shortages of clean drinking water and reduced water supply for crops were reported. Some crops failed or were damaged by dryness and pests, especially in coastal areas. To alleviate the crisis, the Civil Protection Authority provided clean water to select communities. Livestock deaths have been also observed.
- The main coping strategy reported was sending family members to the capital Dili to earn money and supplement their resources by selling products like peanuts, goats, and chickens. In extreme cases of food scarcity, communities would consume less preferred items such as sago/akar, a food made from the trunk of palm trees[13].
- February: the situation has improved considerably, especially in mountainous areas, where communities reported water levels to have increased. In the coastal areas, rain levels have also raised, but remain below the average volumes (rainfall are observed 2/3 days per week as compared to almost every day in the previous year). As a result, despite the start of the rainy season, some harvests were lost and other croplands are underdeveloped.
- The limited knowledge of climate forecasts hampers farmers' ability to plan their cropping season and take preparatory measures in case of drier than average weather conditions, leaving them heavily reliant on observational cues.

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13 Palm trees are cut down, the trunk is sliced and it is made into flour, then used to produce a sort of flat bread.