

TIMOR-LESTE



Anticipatory: Drought, May–July 2017

	Very unlikely	Unlikely	Somewhat likely	Likely	Very likely
Likelihood	Very low	Low	Moderate	Significant	Major
Severity/expected impact	Very low	Low	Moderate	Significant	Major
Need for international assistance	Very low	Low	Moderate	Significant	Major

The food security crisis is expected to escalate at the start of the dry season in July.

Anticipated scope and scale

Timor-Leste has been experiencing a severe drought due to the El Niño phenomenon since the end of 2015. The latest rainy season, which takes place from November 2016 to May 2017, has been insufficient and erratic, maintaining drought conditions on most of the island. In the next three months, rains are expected to remain insufficient with the onset of the dry season in June.

Food security continued deteriorating in the November–February lean season. With the start of the dry season in June, expectations of a poor harvest make it likely that people will continue to rely on livestock for food. Food intake reduction and a lack of diet diversity is likely to escalate malnutrition rates.

National and international response is underway, but the government has not declared an emergency

Priorities for humanitarian intervention

- **Food:** Crop losses are likely to result from below-average harvests due to insufficient rains. Livestock resources are already strained as people rely on them during the lean season, and this is likely to continue as a coping mechanism in the upcoming dry season. Food insecurity is likely to increase.
- **WASH:** Water shortages are likely to escalate during the dry season, and people will have to resort to using unsafe water sources. This is compounded by poor sanitation facilities, which is likely to accelerate the spread of diseases.

Priority groups or areas

- **Eastern and southern coastal areas** were most affected during the 2015/2016 drought, and registered escalating levels of food insecurity due to crop and livestock losses.

Humanitarian constraints

Poor road conditions hamper aid delivery.

Limitations

No figures available on people affected by the current drought.

Anticipated crisis impact

The November 2016 to May 2017 rainy season has not provided sufficient rains in the southern coast as of February 2017 (IFRC 28/02/2017). The harvest that generally occurs between February and July is likely to have below average yields. Food security is likely to deteriorate over the course of the dry season due to crop and livestock losses as well as poor harvests, notably in the five districts most affected by the previous drought – Baucau, Cova Lima, Lautem, Oecusse and Viqueque.

During the lean season, people relied on their livestock for food. As the lean season ended in February, people are likely to continue to rely on their livestock, which will be further strained. Limited access to water is likely to be exacerbated, which simultaneously increases the risk of disease transmission. Food insecurity and health vulnerabilities will likely result in escalating malnutrition rates, which are already high in Timor-Leste. Coping strategies such as food intake reduction are already being used (IFRC 28/02/2017).

Drought and crisis 2015/2016: During the 2015/2016 drought, approximately 350,000 people – around one-third of the population – were severely affected by the climatic conditions (FAO 05/07/2016). Insufficient rains particularly affected the coastal plains, including eastern, and southwestern parts of the country, where population density is high (FAO 05/07/2016, CARE, Oxfam 18/03/2016). Baucau, Cova Lima, Lautem, Oecusse and Viqueque districts were most affected (IFRC 28/02/2017).

Food security deteriorated in these areas, as harvests were below-average, livestock was depleted and people resorted to coping mechanisms such as reduced meals and dietary diversity. In March 2016, at least 100,000 people were estimated to be food insecure and 70,000 livestock were lost (CARE, Oxfam 18/03/2016, UNDP 13/01/2017).

One-fifth of the surveyed population during the 2015/2016 drought resorted to alternative water sources because of water shortages, generally relying on water of poorer quality.

Prolonged dry seasons in 2002–2003 and 2004–2005 also resulted in failed harvests and increased food insecurity (HPA 02/2016).

Food

Food insecurity is likely to escalate, particularly in already vulnerable areas in the east and south coast. FAO has projected 2016 maize output to be a further 8% lower than 2015's already sharply reduced level. As of July 2016, the projected cereal deficit during

the marketing year 2016/17 was expected to reach 174 377 tonnes (rice: 110,619 and maize: 63,758) (FAO 05/07/2016). Food deficit in 2017 will be the third consecutive year of deficit.

As of February 2017, no yield was expected during the February–July harvest due to the drought conditions, which is concerning as the population heavily relies on maize and rice harvest as staple food. The potential to plant larger scale crops to compensate for low staple food harvests was considered limited (IFRC 28/02/2017). Although limited rains were reported on the southern coast between November 2016 and February 2017, which encouraged planting, no rains have been reported in Baucau and Lautem, which are some of the areas worst affected by the previous drought (IFRC 28/02/2017).

Access to food is also a challenge upland areas (UNDP 13/01/2017). Repeated crop failure is compounded by livestock depletion, notably in eastern zones, and alternative livestock sources are limited. In the next few months, it is likely that households will keep relying on their livestock for food. This will further deplete already strained livestock that were the primary source of food during the lean season that ended in February. Poorer households might need to rely on their seed stock for food, which will impact on later seasons as it will reduce income and ability to purchase new supplies when the rains arrive (IFRC 28/02/2017).

41% of the Timorese population are estimated to live below the poverty line (IFRC 28/02/2017). Agriculture is one of the most vital industries in the country, and 70% of the population rely on rain-fed subsistence agriculture, therefore people are particularly vulnerable to food losses (CFE-DMHA 16/07/2016, IFRC 28/02/2017). Poor soil and climate conditions severely affect food security, with an estimated 22% of the population chronically food insecure and 44% of the population vulnerable to becoming food insecure (CARE, Oxfam 18/03/2016).

2015/2016: The El Niño-induced drought resulted in crop failure and severe livestock reduction, notably in eastern areas (IFRC 28/02/2017). In July 2016, severe cereal production deficits were reported for the second consecutive year, notably in Ainaro (south west), Lautem (east), Ermera (northwest), Liquica (north), coastal regions of Viqueque (south) and around Dili, the capital (FAO 05/07/2016).

In the worst impacted areas, at least 100,000 people faced Minimal (IPC 2) food security outcomes (CARE, Oxfam 18/03/2016). Coping strategies included reduced food intake and overreliance on livestock (IFRC 28/02/2017). 70,000 livestock died during the drought (UNDP 13/01/2017). Due to a lack of water, 60,430 affected households reported deaths of animals, and 25,611 households (amounting to about 21% of all households) reported diseases in their animals (FAO 05/07/2016).

WASH

As of January 2017, 83 *sucos* (villages) hosting approximately 180,000 people were facing water shortages (UNDP 13/01/2017). As the dry season starts in June, it is likely that insufficient rains in reservoirs will result in severe water shortages and negatively impact food security, livelihoods, health, and nutrition in these areas.

Only 27% of the rural population has access to improved sanitation facilities in Timor-Leste (Index Mundi 08/10/2016). Open defecation, mostly practiced in rural areas, is likely to impact the quality of water, and increase the risk of contracting water-borne diseases (IFRC 28/02/2017).

2015/2016: Insufficient rains led to water shortages and water quality deterioration (CARE, Oxfam 18/03/2016). As a coping strategy, an inter-agency assessment concluded that one-fifth of respondents sought alternative sources of water during the previous drought. In rural areas, people travelled to collect water from protected wells, and long queues and waiting times were reported. Overuse of water sources decreased water quality and increased the risk of contamination. Two-thirds of respondents to an assessment reported that they resorted to unprotected water sources (CARE, Oxfam 18/03/2016). Restricted water supplies also resulted in disputes within communities (CARE, Oxfam 18/03/2016).

Health

Poor sanitation and lack of access to drinking water is likely to accelerate the spread of diseases transmitted by water and food (CARE Oxfam 18/03/2016, IFRC 28/02/2017). The risk of infectious disease in Timor-Leste is high due to a general lack of access to clear drinking water and clean sanitation facilities. Hepatitis A and typhoid are the most common diseases transmitted through contaminated water or food. Stagnant and unsafe water is likely to allow for the breeding of mosquitos that then transmit malaria, which is present in Timor-Leste. In addition, nearly 85% of the Timor-Leste population live in rural areas and have limited access to healthcare facilities (CFE-DMHA 16/07/2016).

Nutrition

Malnutrition rates in Timor-Leste are already alarming, with 50.2% of children under five suffering chronic malnutrition and 37.7% underweight. Lack of diverse diet results in pregnant women particularly suffering from anaemia, being underweight, and stunting in

young children (CARE, Oxfam 18/03/2016). Coping mechanisms to mitigate food shortages such as food intake reductions and reduced dietary diversity are likely to escalate the nutrition situation (CARE, Oxfam 18/03/2016, IFRC 28/02/2017).

Vulnerable groups affected

Women are responsible for collecting water and have to travel longer distances to reach water sources in drought conditions. Young girls also support women in water collection activities and are more exposed to risk of disputes at the collection point due to limited water available (CARE, Oxfam 18/03/2016).

Humanitarian constraints

Roads are in poor condition in Timor-Leste, and access to poorer communities, which are likely to be most severely affected by drought, is difficult (CFE-DMHA 16/07/2016).

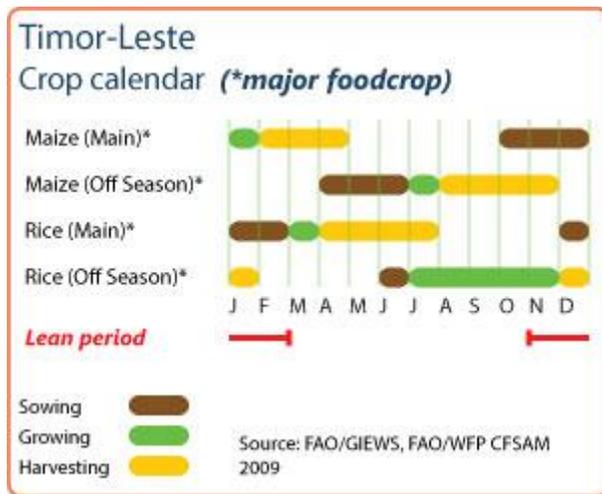
Remote areas in mountainous regions in the centre of the island are difficult to access, but are less affected by food insecurity than coastal areas.

Potential aggravating factors

Seasonal calendar

The extended rainy season runs from November to May (CARE, Oxfam 18/03/2016). The upcoming dry season which runs from June to October is likely to see escalating temperatures which will likely lead to water shortages and impact potential harvests.

The lean season occurs from November to February. Rice harvest is upcoming and is likely to be below-average, which is concerning since rice is a staple food in Timor-Leste.



Source: FAO

Natural disasters

Timor-Leste is vulnerable to extreme weather conditions such as tropical storms and floods from November to April. This contributes to the vulnerability and resilience of communities which are repeatedly affected by natural disasters (CFE-DMHA 16/07/2016).

Contextual information

El Niño

The current drought experienced by Timor-Leste is driven by the El Niño meteorological phenomenon, and began in 2015. On average, El Niño occurs every two–seven years and can last up to 18 months. El Niño results in extreme weather events such as storms and droughts. In Timor-Leste, it has led to insufficient rains and droughts. Although El Niño was at a neutral stage as of February 2017 as climatic conditions were near average, late and insufficient rainy season is likely to impact food production (IFRC 28/02/2017).

Response capacity

Local and national response capacity

The National Directorate for Disaster Management is the main body for disaster preparation and response, and operates under the authority of the Ministry of Social Solidarity. District Disaster Management Committees operate at the local level. The National Authority for Civil Protection, under the Ministry of the Interior, also plays a role in natural disaster response. Early warning systems in Timor-Leste are in place at district level, but not at the village level. They are irregular and not linked with each other in all areas of the country (CFE-DMHA 16/07/2016).

During the 2015/2016 drought, authorities sought assistance (IFRC 28/02/2017). However, the government has not declared the current drought a disaster, and there is concern that although the government is coordinating response with international organisations, the response is insufficient (IRIN 12/10/2016).

International response capacity

Several international organisations such as FAO and IFRC are already operating in-country and coordinate with the government to protect water sources, supply farmers with seeds, improve market access and carry out nutrition-related activities (IRIN 12/10/2016).

Information gaps and needs

- No figures of people affected by the current drought.
- No figures on acute malnutrition as well as prevalence of disease.
- No specific information on how different communities are affected and their varying coping mechanisms.

Lessons learned

- Previous assessments in Timor-Leste have been largely carried out in areas where humanitarian agencies were already present, which may lead to gaps in coverage (Plan International 29/02/2016).
- The food insecurity associated with drought may also exacerbate chronic malnutrition (Everyday Health 14/08/2014; Stanke, Kerac, Prudhomme, Medlock and Murray, 2013).
- Drought and the consequent loss of livelihoods may trigger population movement, particularly rural–urban migration (IPCC 2007; IFRC, 4 Apr 2013). Population movement can lead to increases in the prevalence of communicable diseases and poor nutritional status resulting from overcrowding, and a lack of safe water, food, and shelter (IPCC 2007).
- As observed in other countries, education may be impacted by drought as schools may be in need of water (IFRC, 4 Apr 2013).

Key characteristics of host population and area

Key indicators

Total population	1,261,072
% population in rural areas	67.2%
Gender and age distribution of population	
0-14 years	41.43% (male 268,578/female 253,897)
15-24 years	20.11% (male 128,678/female 124,870)
25-54 years	29.79% (male 180,750/female 194,916)
55-64 years	4.88% (male 31,349/female 30,194)
65 years and over	3.79% (male 22,852/female 24,988)
State capital	Dili
Lighting sources	Kerosene: 71% EDTL: 21% Solar: 6% Other: 2%
Cooking sources	Fire and firewood: 81.3% Kerosene: 4.6% Clean energy: 12.9%
WASH	
Access to improved drinking water	urban: 91.5% of population rural: 68.6% of population total: 74.7% of population
Access to improved sanitation	urban: 81% of population rural: 38% of population total: 49% of population
Health	
Life expectancy at birth	68 years
Maternal mortality ratio	215 deaths per 100,000 live births
Infant mortality rate	36.3 deaths/1,000 live births
Physicians density	0.07 physicians/1,000 population
Nutrition	
Children under five underweight:	37.7%
Chronic malnutrition:	58%
Acute	18.6%
Literacy rates	67.5% of the total population 15 and over

Sources: Mercy Corps (2011), CIA World Factbook (2016), UNICEF (2013),