

DEMOCRATIC REPUBLIC OF TIMOR LESTE MINSTRY OF AGRICULTURE AND FISHERIES Seeds of Life - PO Box 221, Dili Timor-Leste





# El Niño Timor-Leste Update: Low rainfall impacts on animal health

1/01/2016 - 15/01/2016

There has been a continued period of patchy rainfall across Timor-Leste where some localised areas have received enough rain whereas other areas have received very little rain. Timor-Leste has received generally less than 50% rainfall compared to normal years in December and January is looking worse. Farmers are reporting more animals are losing condition and dying. An extra map has been included to indicate those areas where reports were received of sick and dying animals. This is due to animals losing condition due to lack of feed, eating feed of poor quality and reduced water supply. The dry weather has resulted in a delay in the preparation of rice fields in a number of areas which are shown on the rice (Hare) map. Some springs are still low or not flowing. A number of crops have died and some farmers are replanting if they get enough rain.

## From West to East...

Oecussi has continued to receive enough rain and crops are reported to be doing well.

**Bobonaro** has received some more good rains in the main valley and into the mountains but the area around Atabae and Balibo continues to remain dry.

**Covalima** has had some rains in the mountains but the coast is fairly dry which is putting the recently planted crops at risk.

**Liquica** has received continued good rains in the mountains. All along the coast is still very hot and dry with many crops withered and some have failed.

Ermera has had good rains and crops are growing well.

**Dili** is still dry. Atauro has received little rain and farmers who've recently planted are concerned.

**Aileu** has received some good rain in the western area but eastern areas around Liquidoe are very dry.

Rainfall deficit in December compared to historical average:

- Baucau plateau = 45% lower
- Betano sth coast = 80% lower
- Aileu town = 57% lower
- Pante Maccassar = 41% lower

Ainaro has not received a lot of rain across the municipality. Mountain crops are still healthy but the hot coastal areas are a concern.

**Manufahi** has received little rainfall especially along the coast, some crops are dying and some farmers are trying to replant their corn.

**Manatuto** has received patchy rain during this period. The north coast is still dry but some rain was received in the mountains.

**Baucau** on the plateau received some rain of 30mm on the 7<sup>th</sup> of January but this was not enough for the corn crops which continue to wilt and die.

Viqueque is still very dry with only one day of rain with 17mm. It is very difficult along the south coast and rice field preparation is being delayed. There are numerous reports of animals dying in this region. Rain was received after the 15<sup>th</sup> which may alleviate some areas.

Lautem on the eastern end has had very little rain and farmers report continued wilting of crops.

Alert (areas that require more intensive assessment to ascertain needs of communities):

- Eastern districts of Baucau, Lautem and Vigueque losing crops and animals.
- South coast areas from Dotik through to Suai
- North west areas of Bobonaro including Atabae and Balibo

Some information for this report was gathered from a short survey of 41 lead farmers of commercial seed producing associations. Their comments reflect the general condition of their localised area but not necessarily the whole administrative area. Other information sources include Catholic Relief Services, Camoes, staff from Ministry of Agriculture and Seeds of Life.

Many areas have had very low rainfall for an extended period of time and this situation may continue throughout January.

Regards,

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Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH







Food and Agriculture Organization of the United Nations







### Informasaun Mapa



Dadus iha geral deit liu husi husu agrikultor sira iha posto administrativo. Se karik sala ruma favor ida kontatu ba samuel.bacon@seedsoflifetimor.org.

Agricultural Land Use & GIS Reversification of Application and Applications Seeds of Life Fini ba Moris Produsaun: S. Bacon Data: 20/01/2016 Projeksaun: WGS84 Lokasaun: S -8.8o, E 125.8o Skala: 1:1250000

## Informasaun Dadus

### Kona ba Hare: La kuda - sidauk kuda hare Balu kuda ona - iha fatin balu, laos P. Admin hotu Moris diak - hare lao diak no buras Namlaik - hare komesa sae aat tanba bee menus Balu koileta - iha fatin balu sei koa hare Balu mate - mate iha fatin balu deit Barak mate - hare barak mate iha Posto Admin

### Legenda

Hare (Rice)

- 🔲 la kuda (not grown)
- seidauk kuda (not yet planted)

## Animal

## Janeiru 1/01/16 - 15/01/16

Mapa ida ne'e hatudu deit fatin ne'ebe ita hetan informasaun kona ba animal nia kondisaun. Dala barak husi ema ida deit entaun ita tenki konfirma situasaun iha Munisipal.

(This map only shows information that has been received about animal condition. Often this is from only one person in the area and the reports need to be confirmed in the Municipality)





### Informasaun Mapa



Dadus iha geral deit liu husi husu agrikultor sira iha Posto Administrativo. Se karik sala ruma favor ida kontatu ba samuel.bacon@seedsoflifetimor.org.

## Agricultural Land Use & CIS

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## **Informasaun Dadus**

#### 1921 - 1921 - 1921 - 19

Kona ba Batar: La kuda - sidauk kuda batar Moris diak - batar lao diak no buras Namlaik - batar komesa sae aat tanba udan menus Balu mate - mate iha fatin balu deit Barak mate - batar barak mate iha Posto Admin

# Legenda

### Animal



- Krekas (low condition)
- Balu mate (some died)
- Barak mate (many died)



## NDVI Anomaly (Monthly)

The Normalized Difference Vegetation Index (NDVI) measures the greenness of ground cover, and is used as a proxy to indicate the density and health of vegetation. NDVI values range from +1 to -1, with high positive values corresponding to dense and healthy vegetation, while a low and/or negative NDVI value would indicate poor vegetation conditions or sparse vegetative cover. The NDVI anomaly indicates the variation of the current dekad to the long-term average, where a positive value (for example 20 percent) would signify enhanced vegetation conditions compared to the average, while a negative value (for instance -40 percent) would indicate comparatively poor vegetation conditions.

Source: http://www.fao.org/giews/earthobservation/country/index.jsp?lang=en&code=TLS



## Vegetation Health Index (Monthly)

The Vegetation Health Index (VHI) is a composite index. It combines both the Vegetation Conditon Index (VCI) and the Temperature Condition Index (TCI). The TCI relates the current temperature to the long-term maximum, as it is assumed that higher temperatures tend to cause a deterioration in vegetation conditions. A decrease in the VHI following, for example, a decline in the VCI (relatively poor green vegetation) and an increasing TCI (warmer temperatures) would signify stressed vegetation conditions, and over a longer period would be indicative of drought.

Source: http://www.fao.org/giews/earthobservation/country/index.jsp?lang=en&code=TLS

## Some rainfall and soil moisture information from 3 live weather stations:

### Viqueque



Viqueque town has received 17mm on the 8<sup>th</sup> with some good follow up rain after the 15<sup>th</sup> of January.



Note the very dry soils getting down below 10% before rainfall.

### Laklubar



Only a little rain received up until 17<sup>th</sup>, January, which received good rainfall of nearly 90mm in one day.



Laklubar soil moisture levels are now looking good.

### Los Palos



Los Palos plateau received very little rainfall up until 15<sup>th</sup>, January, which was alleviated by two rains in the last few days.



These rains in Los Palos have helped to lift the soil moisture content to reasonable levels.

Live data sourced from new ALGIS website: <u>http://algisagromet.weebly.com/weather-data.html</u>

# Integrated Multi-Satellite Data for Rainfall

Rain in first week of January, 2016:



Rain in second week of January, 2016:



Source: <a href="http://pmm.nasa.gov/data-access/google-earth">http://pmm.nasa.gov/data-access/google-earth</a>

# Outlook

The outlook looks like possible further rains which may still be patchy. There is extra rainfall activity predicted around the Timor island over the weekend of the 23<sup>rd</sup> and 24<sup>th</sup>. This may lead to some areas receiving rainfall while other areas remain dry.

Below shows rainfall forecast map for Saturday morning, 23/1/2016.



Forecast for 08:00 AEDT on Saturday 23 January 2016

Source: http://www.bom.gov.au/australia/charts/viewer/index.shtml accessed 20/01/2016