

# RA V 13<sup>th</sup> TRAINING COURSE ON TROPICAL CYCLONE

NADI, FIJI 09-13 Sept 2019

## COUNTRY REPORT TIMOR-LESTE



**PRESENTED BY:**

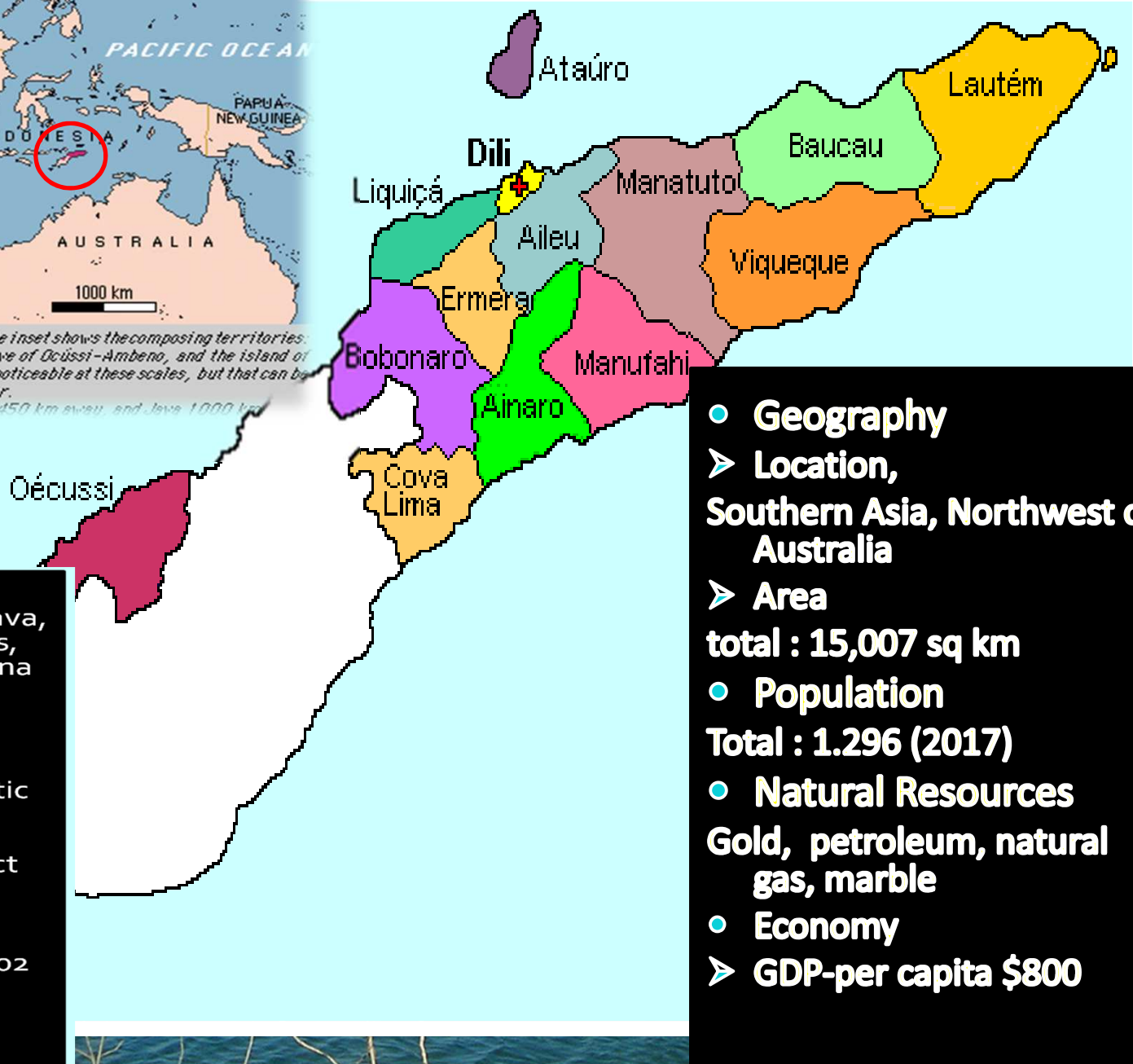
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**Direção Nacional de Meteorologia e Geofísica (DNMG)**

# Republic Democratic of Timor-Leste



East Timor and the surrounding countries. The inset shows the composing territories: the mainland (with capital Dili), the enclave of Oússi-Ambeno, and the island of Atauro. There's still the tiny isle of Jaco, unnoticeable at these scales, but that can be imagined as a dot in the easternmost of Timor. Across the Timor Sea, Australia is at about 450 km away, and Java 1,000 km.



## Agriculture

➤ Coffee, rice, corn, cassava, sweet potatoes, soybeans, cabbage, mangoes, banana, vanilla

## Government

➤ Country name : RDTL/Republic Democratic of Timor-Leste  
➤ Capital Dili  
➤ 13 administrative district  
➤ Independence 28 November 1975  
➤ Restoration of Independence 20 May 2002  
▪ Official Language,  
➤ Portuguese and Tetum

## ● Geography

➤ Location, Southern Asia, Northwest of Australia

## ➤ Area

total : 15,007 sq km

## ● Population

Total : 1.296 (2017)

## ● Natural Resources

Gold, petroleum, natural gas, marble

## ● Economy

➤ GDP-per capita \$800

# Introduction



- As a section of Civil Aviation on 2000 (UNTAET)
- Establish on 2003 up to date
- Become a Member of WMO on 4/12/2009, 189<sup>th</sup>  
(Ratification by PN on 24/02/2009)



# CURRENT SERVICES



- Provide daily weather forecast, 3 days forecast and 7 days forecast to the public (sources: BoM, BMKG, JMA, RIMES, ECMWF).
- Provide Data observation to BoM - Darwin to prepare TAF (Terminal Aerodrome Forecast )and METAR for aviation.
- Prepared data observation and data analysis to entity that needed.
- Not working for 24/7, except for those who work in the weather observation section at the Airport.
- We have 2 International Airport and 8 technical observer (with international flights 4 times a day ). everyday.



The current climate conditions in Timor-Leste is the dry season, so high temperature during the day around 31/32 degree mostly in the coastal areas and very cold at night with 17 degree sometimes 10 degree in the mount area.

# CLIMATE IN TIMOR-LESTE

Driver by :

- MONSOON
- ENSO
- MJO
- IOD
- TROPICAL CYCLONE
- LOCAL





# Natural Disaster in Timor-Leste

- Heavy rainfall
- Floods
- Drought
- Earthquake
- Windstorms
- Landslide





# Impacts related of tropical cyclone or other severe weather events



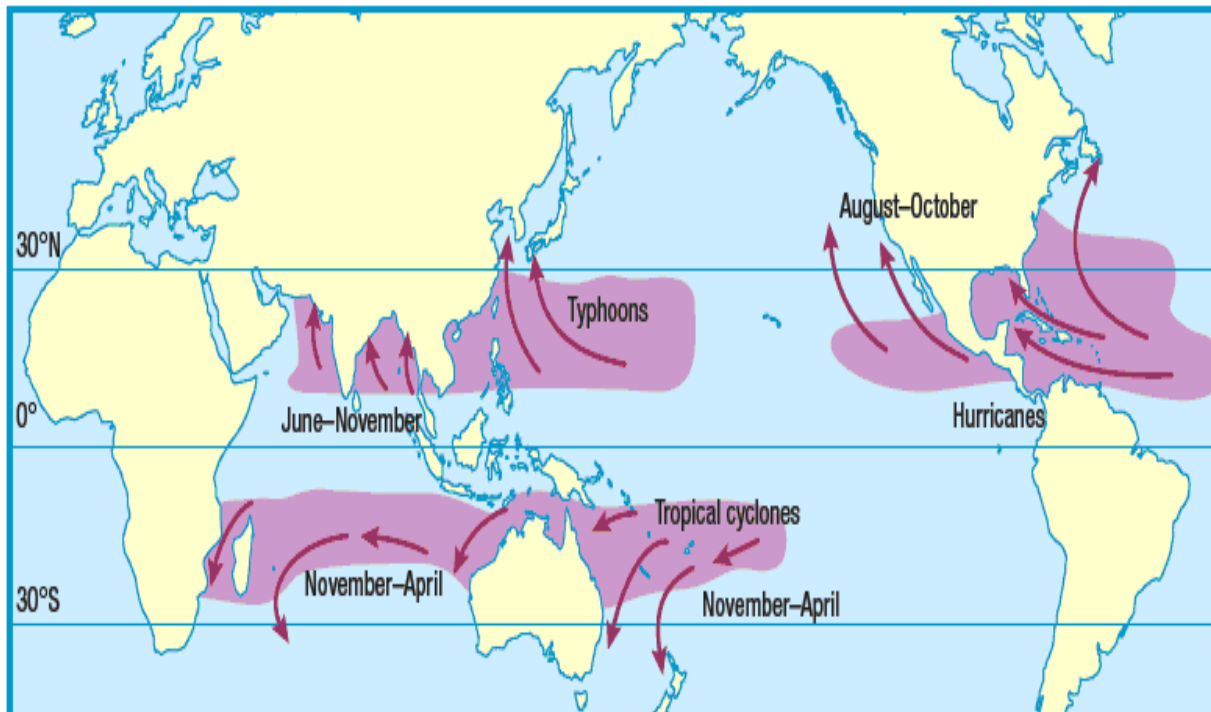
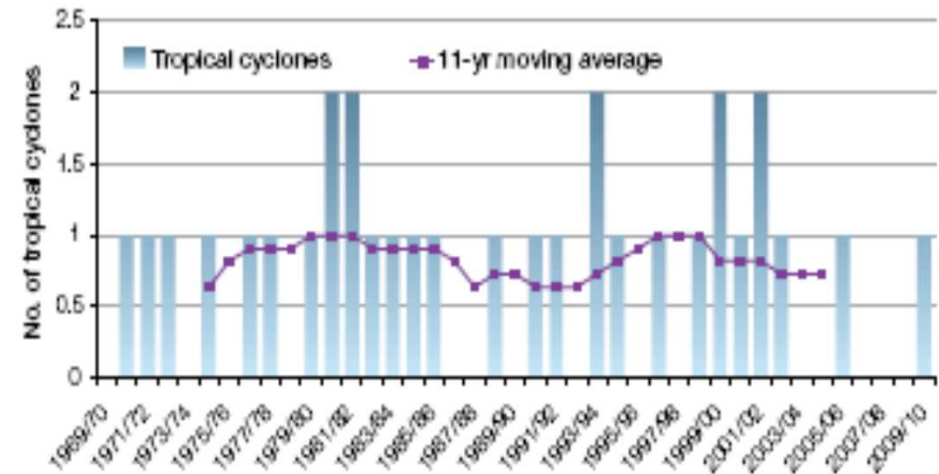




# Tropical Cyclone

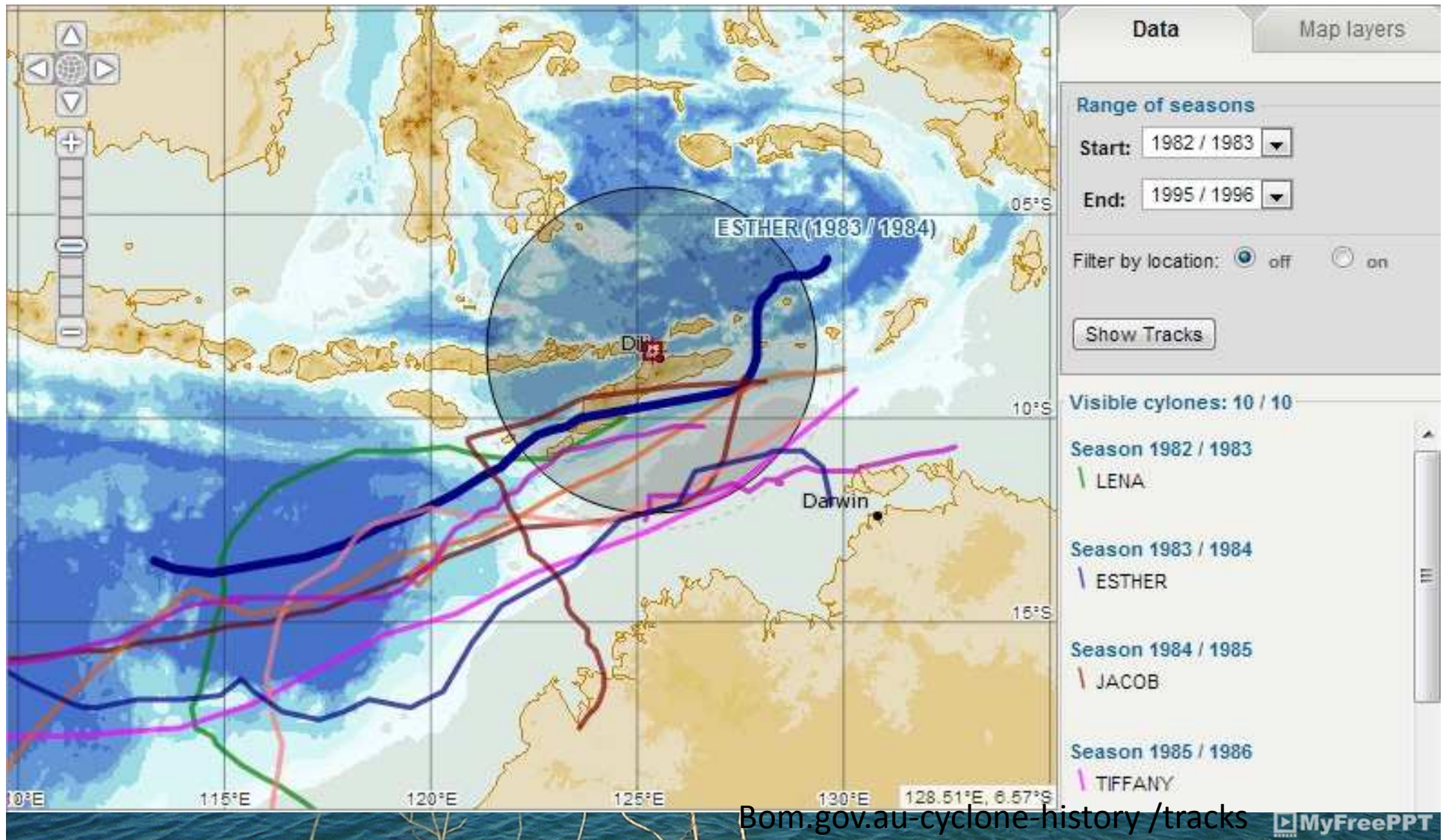
On average eight Tropical Cyclones per decade pass within 400 km of Dili, with most occurring between November and April. However, the **impact is usually weak** due to Timor - Leste's proximity to the equator.

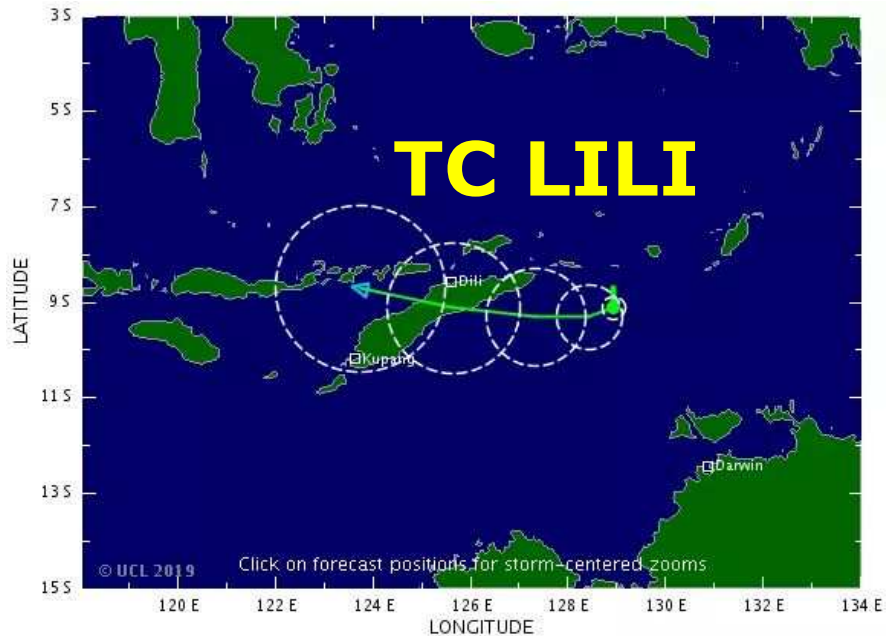
Tropical Cyclones Passing Within 400 km of Dili



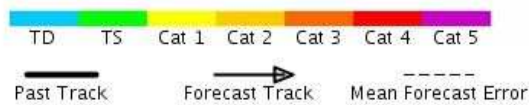


This picture shows the movement of tropical cyclones that passed through Timor-Leste from 1982 to 1996.

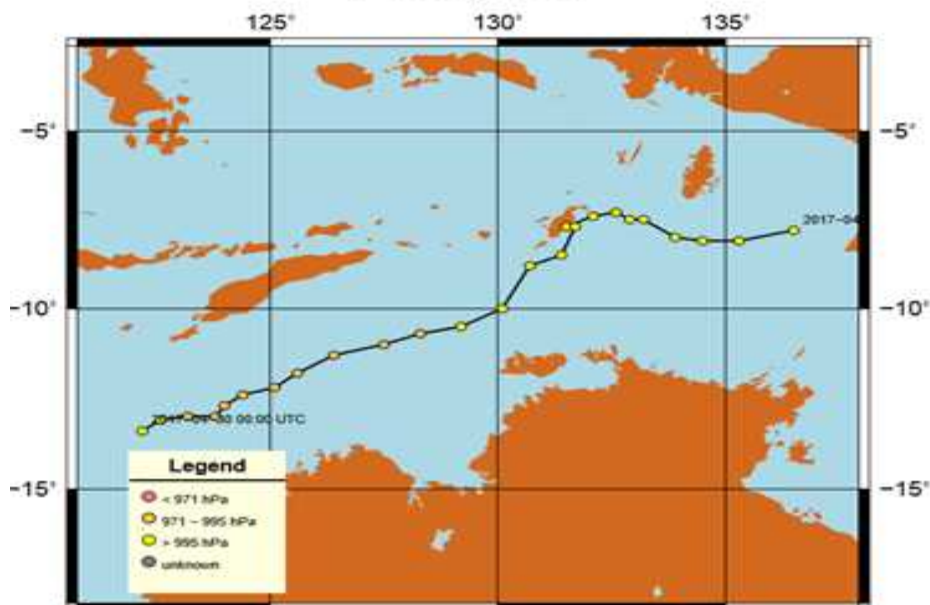




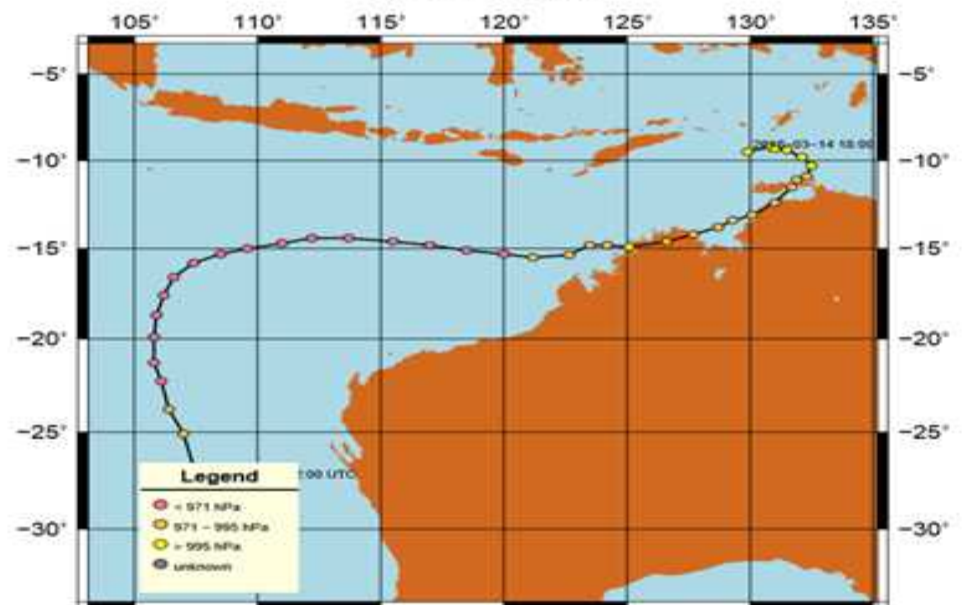
- Tropical Cyclone Frances 2017
- Tropical Cyclone Marcus 2018
- Tropical Cyclone Lili 2019



Frances



Marcus

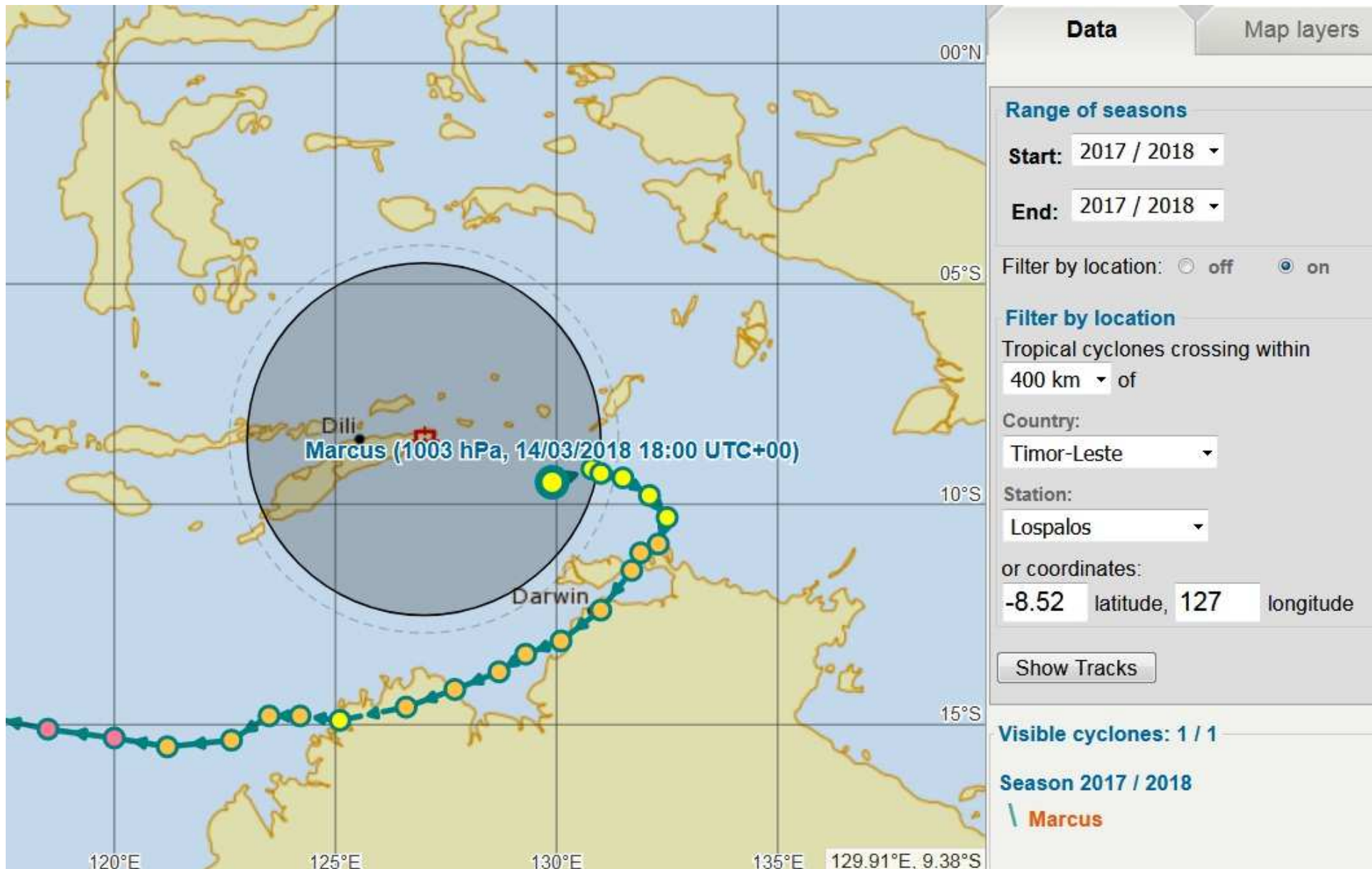


# Tropical Cyclone Frances

## April 26, 2017

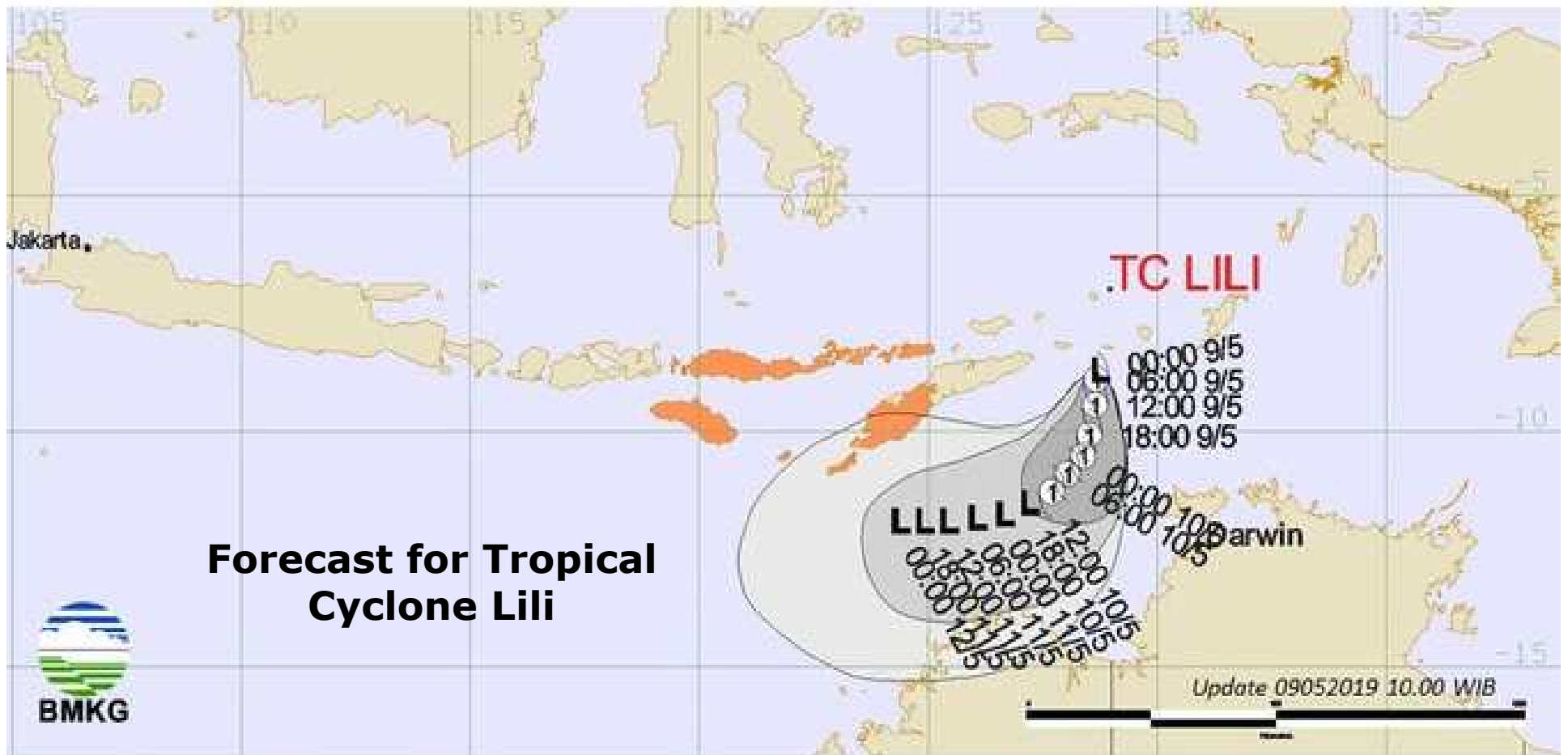


# Tropical Cyclone Marcus March, 14 2018



# Tropical Cyclone LILI May, 9 - 12 2019

Prakiraan Lintasan Siklon Tropis Lili  
Tanggal 9 – 12 Mei 2019



# Extreme events caused by Tropical Cyclone Lili – May, 2019

## Strong wind



## Flooding



## Bridge Broke



## Bridge broke



# DNMG INFORMATION RECEIVED



## Tropical Cyclone Advisory (Nov – Apr)

- High Seas Weather Warning
- Tropical low Track

## Weekly tropical climate note

- Madden - Julian Oscillation (MJO)
- ENSO
- Indian Ocean Dipole

BOM Product  
↓  
Up to date





# SPECIAL TROPICAL CYCLONE ADVISORY FOR INDONESIA AND TIMOR-LESTE

## issued by Perth TCWC at 1931 UTC on 23 December 2014

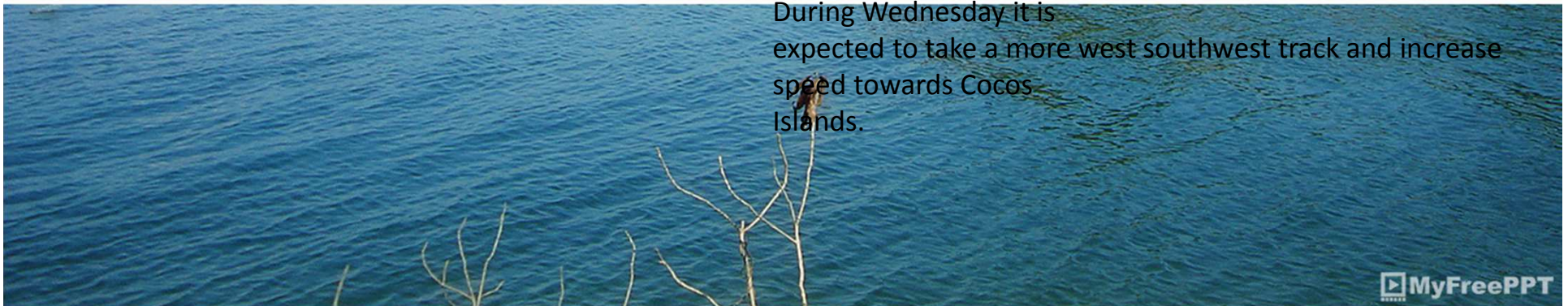


### Tropical Cyclone: Tropical Low

Data At: 1800 UTC  
Latitude: 10.1S  
Longitude: 100.3E  
Location Accuracy: within 30 nautical miles  
Movement Towards: south  
Speed of Movement: 3 knots  
Maximum 10-Minute Wind: 30 knots  
Central Pressure: 1002 hPa  
Dvorak Code: T2.5/2.5/D1.9/24HRS STT:S0.0/6HRS  
Radius of 34-knot winds NE quadrant:  
Radius of 34-knot winds SE quadrant:  
Radius of 34-knot winds SW quadrant:  
Radius of 34-knot winds NW quadrant:  
Radius of 48-knot winds NE quadrant:  
Radius of 48-knot winds SE quadrant:  
Radius of 48-knot winds SW quadrant:  
Radius of 48-knot winds NW quadrant:  
Radius of 64 Knot Winds:

### FORECAST REASONING

Position is based on IR imagery with low confidence. Convection has shown improved curvature in the past 12 hours. Curved band analysis yields a DT of 3.0 based on curvature of 0.7 on recent IR imagery but FT is constrained to 2.5 which is consistent with the PAT adjusted MET. Limited objective aids are available. ADT is already at 3.0. The environment is reasonably conducive for development aided by upper outflow poleward, warm SSTs and moist monsoonal inflow. The system is smaller than average in agreement with depiction in high resolution models. As such it is likely to be more reactive to environmental influences and hence intensity is difficult to forecast. Motion has been slow to the south in the last 24 hours. During Wednesday it is expected to take a more west southwest track and increase speed towards Cocos Islands.





# Coordination with emergency managers and other stakeholders



# Extreme Events



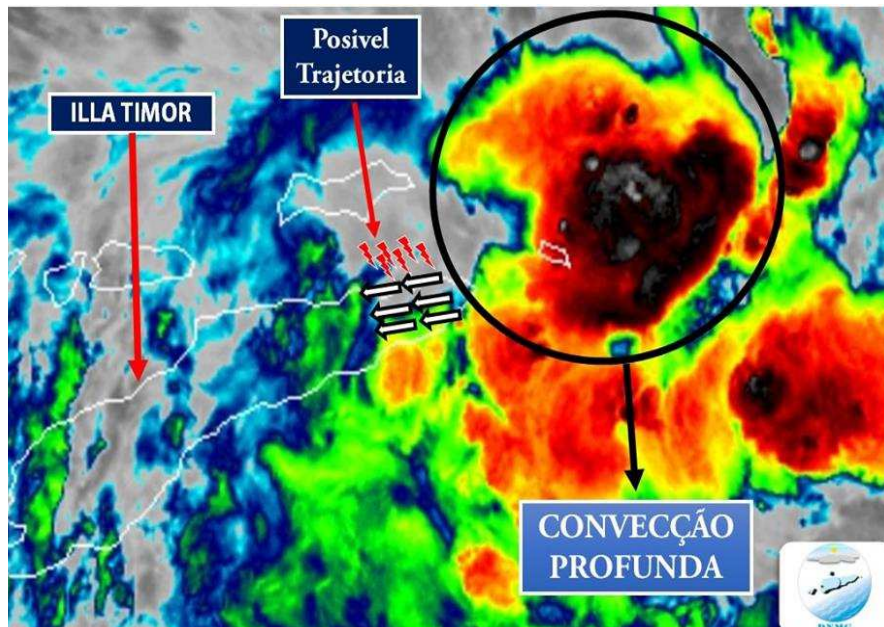
- ❖ Tropical Cyclone
- ❖ El Nino and La Nina
- ❖ Strong wind
- ❖ Heavy Rain

We always have a meeting with all stakeholder to discuss.  
So they can prepare according to their conditions.





DNMG provide the weather information and published through media (Television, Community radio) Social Media (Facebook), stakeholders and important groups that have been created. In case of extreme events, DNMG collaborate with National Disaster Operations Center to disseminated the information. (NDOC has focal point disaster or links to access rural areas in 13 Municipality).



# 3 Days Forecast

## PREVISÃO DO TEMPO PARA CAPITAL DILI 30/08 – 01/09



# Forecast everyday

**DILI**



<b>24-32°C</b>	<b>DADER</b>	<b>LOROKRAIK</b>
	<b>NAROMAN</b>	<b>KALOHAN TAKA</b>
<b>2-9 Km/h</b>		

▶ ⏪ 🔊 28:18 / 45:04 ⚙️ □ 🗉

**MANATUTO**



<b>20-31°C</b>	<b>DADER</b>	<b>LOROKRAIK</b>
	<b>NAROMAN</b>	<b>KALOHAN TAKA</b>
<b>2-9 Km/h</b>		

▶ ⏪ 🔊 29:40 / 45:04 ⚙️ □ 🗉

**VIQUEQUE**



<b>21-28°C</b>	<b>DADER</b>	<b>LOROKRAIK</b>
	<b>KALOHAN TAKA</b>	<b>KALOHAN TAKA</b>
<b>2-9 km/h</b>		

▶ ⏪ 🔊 30:22 / 45:04 ⚙️ □ 🗉

**ATAURO**



<b>24-33°C</b>	<b>DADER</b>	<b>LOROKRAIK</b>
	<b>NAROMAN</b>	<b>KALOHAN TAKA</b>
<b>2-9 Km/h</b>		

▶ ⏪ 🔊 32:13 / 45:04 ⚙️ □ 🗉

# Forecast for Maritime



# CHALLENGES / LACK



- Limited space (Infrastructures)
- Limited Human Resources
- Poor Facilities
- Limited of Equipment's
- Low Internet Access
- Low Budget







## **TO OVERCOME ABOVE CHALLENGES, DNMG REQUIRES:**

- **Need to increase staffs with capabilities and skills and capacity building**
- **Establishment Centre of Weather/Climate Forecast with infrastructure needed**
- **Establishment and upgrade Meteorology infrastructural**
- **Increase number of AWS in 8 Municipalities and District Administrator (Maliana, Ermera, Same, Manatuto, Lospalos, Viqueque and Atauro island.**
- **Establishment of Tide gauges in all Port that exist in Timor-Leste (to measure high tide and wave/sea level rise)**
- **Establishment of weather radar.**
- **Setup and upgrade internet high connection and high speed.**





**Thank You For your  
Attention**

**Obrigado**