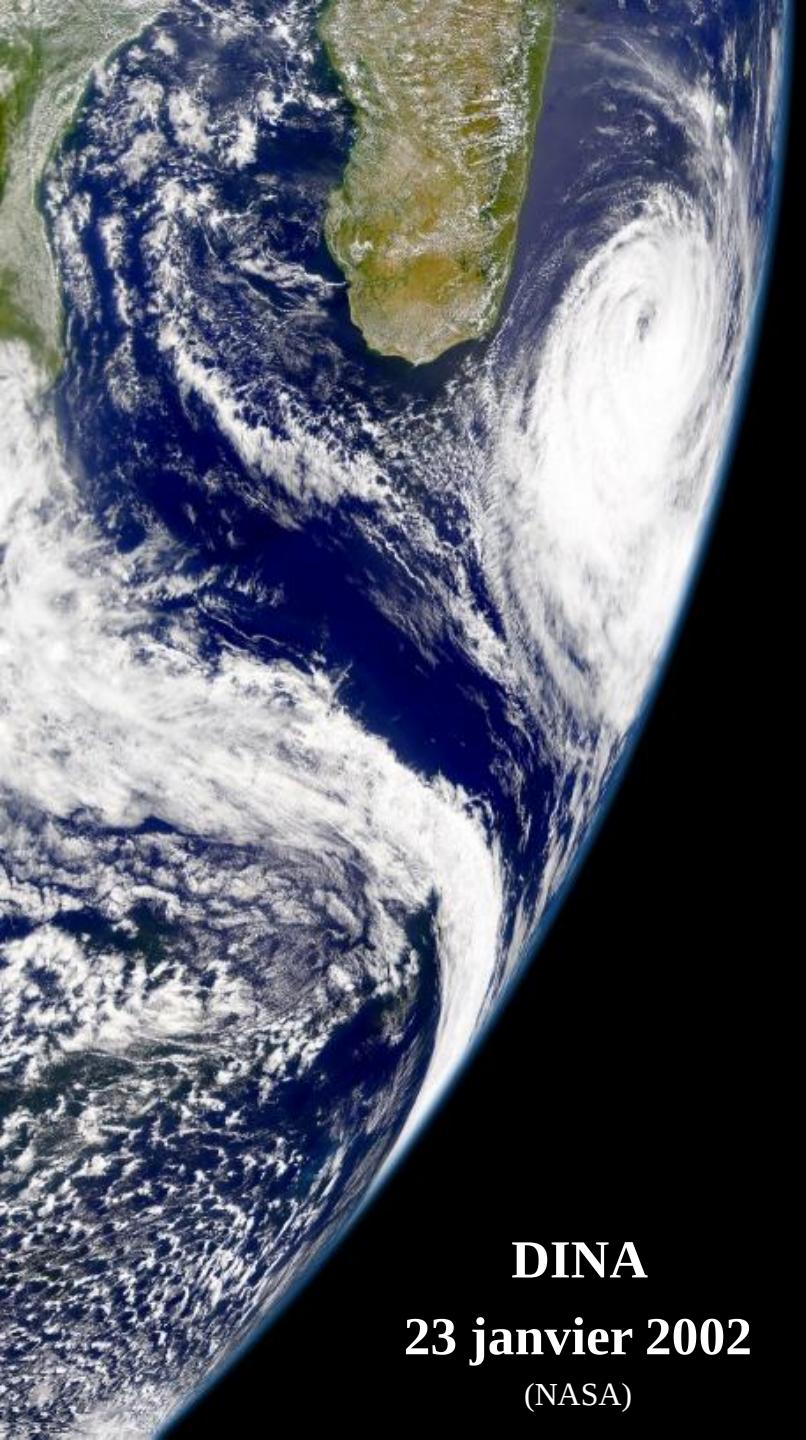




Bulletins émis par le CMRS de La Réunion

Bulletins issued by the RSMC of La Réunion

Stage de formation sur les cyclones tropicaux
OMM/Météo-France sept 2017

Training course on tropical cyclones Sept. 2017

Sébastien LANGLADE– CMRS de La Réunion
08/09/2017

sebastien.langlade@meteo.fr

DINA
23 janvier 2002
(NASA)

Avis/Bulletins émis par le CMRS

RSMC Advisories/Bulletins

Bulletins		Entête <i>Headline</i>	Heure de diffusion <i>Issuance Hours</i>
Bulletin technique de suivi quotidien (ZCIT) <i>Daily Tropical Weather Outlook (ITCZ)</i>	Français	AWIO21	SMT 12 UTC
	<i>English</i>	AWIO20	
Avis spécialisé pour la marine (BMS) <i>Marine warning</i>	Français	WTIO21	SMT 00, 06, 12, 18 UTC
	<i>English</i>	WTIO20, 22, 24, 26	
Bulletin technique d'analyse et de prévision cyclonique CMRS <i>RSMC Tropical Cyclone Analysis and Forecast Bulletin</i>	Français	WTIO31	SMT 00, 06, 12, 18 UTC
	<i>English</i>	WTIO30	
Avis consultatif pour l'aéronautique (OACI) <i>Aviation Tropical Cyclone Advisory (ICAO)</i>	<i>English</i>	FKIO20	RSFTA 00, 06, 12, 18 UTC SMT 00, 06, 12, 18 UTC
Bulletin « BUFR » <i>BUFR bulletin</i>	-	ATIO01	SMT 00, 06, 12, 18 UTC
Bulletin "Best track" <i>"Best track" bulletin</i>	-	AXIO20	SMT



**METEO
FRANCE**

Bulletin sur l'activité cyclonique (ZCIT)

Cyclone activity bulletin (ITCZ)

AWIO20 FMEE 020959

BULLETIN FOR CYCLONIC ACTIVITY AND SIGNIFICANT TROPICAL WEATHER IN
THE SOUTHWEST INDIAN OCEAN

DATE: 2010/02/02 AT 1200 UTC

PART 1 :

WARNING SUMMARY :

Warning nr 03/11 related to the moderate tropical storm FAMI,
issued at 0600Z

Next warning at 1200Z

PART 2 :

TROPICAL WEATHER DISCUSSION :

Transequatorial monsoon flow is moderate to rather strong between
African coastline and 55E and extends up to 18S.

Poleward, a broad talweg extends to 73E and due to the lack of
trade winds flow, ITCZ is only sustained equatorward.

Over the Mozambique Channel,
at the rear of a trough passing to
the South, the associated southerly flow and the monsoon flow feed
the moderate tropical storm FAMI (named at 0600Z).
Over the Indian Ocean, deep convective activity is scattered and
fluctuating between equator and 10S,
east of 63E.

System n 11 :

The system has landed at about 0900Z on the Malagasy west coast in
the vicinity of Belo.

Located at 0930Z, near 20.9S et 43.9E, movement East at 7 kt.

MSLP estimated at 992 hPa.

Max average wind speed (10 min) 45 kt.

Elsewhere there is no other suspect area.

For further details, see warnings n 03/11 and followings

For the next 48 hours, there is no potential for development
of another moderate tropical storm

•Emis avant 12 TU

•*issued before 12 UTC*

•Bulletin technique pour les
services météo de la zone

•*Technical bulletin for
meteorological services of the
area*

Description de l'activité
convective au sein de la ZCIT, des
minima et de leur potentiel de
développement en dépression
tropicale ($Ci \geq 2.5$)

*Description of the ITCZ
convective activity, the observed
lows and their potential for
development as a tropical
depression ($Ci \geq 2.5$)*

Moderate tropical storm genesis potential:

Very low: less than 10%

Low: 10% to 30%

Moderate: 30% to 50%

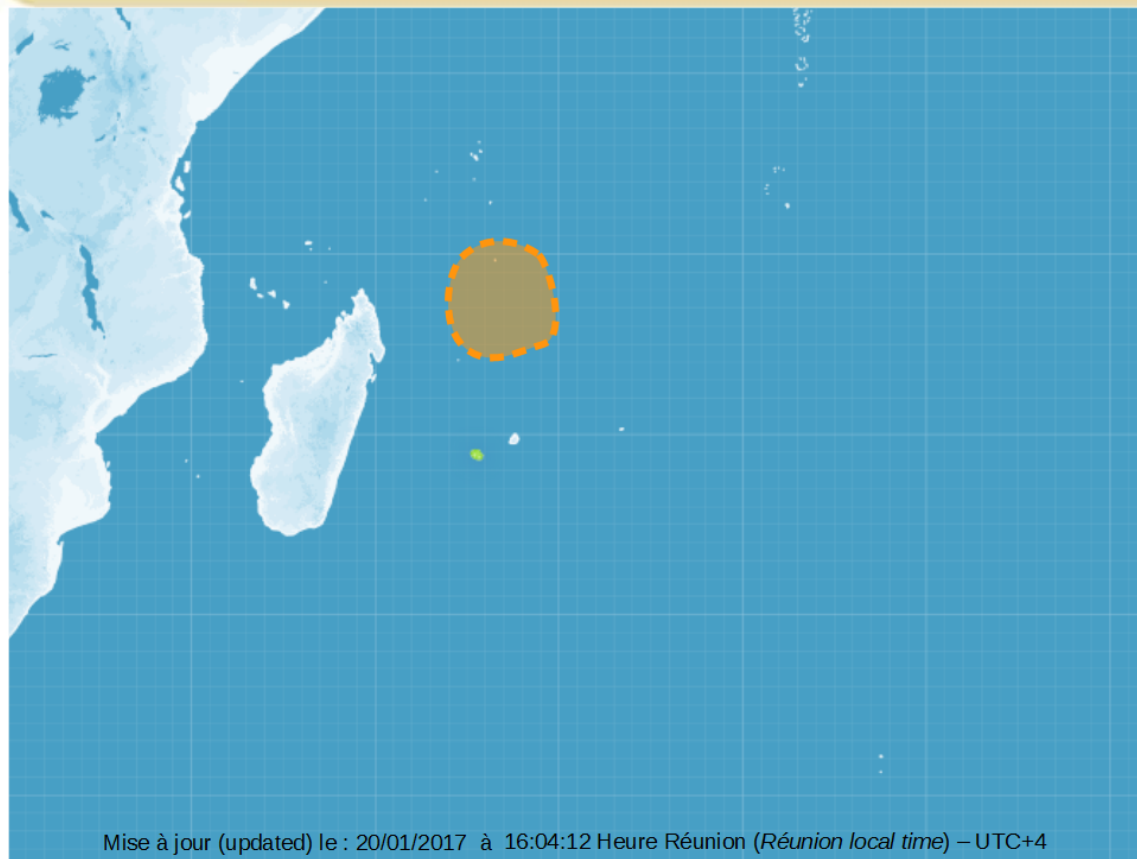
High: 50% to 90%

Very high: over 90%



**METEO
FRANCE**

Carte de cyclogenèse *Cyclogenesis map*



→ New graphical product

showing the potential area(s) of formation of a moderate tropical storm over the next 5 days

→ Issued before 12 UTC

In line with the ITCZ bulletin

→ Available on RSMC websites

LEGEND:



Area within which tropical storm formation is possible over the next 2-5 days.



Area within which tropical storm formation is possible over the next 2 days.



Low probability (< 30%)



Moderate probability (between 30% et 50%)



High probability (> 50%)



Initial position of a suspect area.
The number (optional) is indicative of the associated genesis area



Main general expected motion (optional)



**METEO
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Avis pour la Marine BMS

Marine warning

Système Mondial de Détresse et de Sécurité en Mer (SMDSM)

Global Maritime Distress and Safety System (GMDSS)

- Emis toutes les 6 heures à 00, 06, 12, 18 TU / *Issued every 6 hours*
- A destination des bateaux / *For boats*
- Prévisions jusqu'à 24h
- 24 hours forecasts*

Avertissement *Warning* (<28kt)

Grand frais *near gale* (28-33kt)

Coup de vent *gale* (34-47kt)

Tempête *storm* (48-63kt)

Ouragan *hurricane* (>64kt)

Précision de la position *Location accuracy* : de 20 MN à 90 MN

WTIO20 FMEE 190015

PAN PAN

HURRICANE WARNING FOR METAREA VIII (S)

ISSUED BY METEO-FRANCE/TROPICAL CYCLONE CENTRE/LA REUNION 19/02/2010 AT 0000 UTC.

WARNING NUMBER: 016/12 (SOUTH-WEST INDIAN OCEAN)

10 MINUTES AVERAGE WIND SPEED IN KNOTS (KT)

(WIND GUSTS AT SEA MAY BE ABOUT 40% STRONGER THAN THE AVERAGED WIND).

MINIMUM SEA LEVEL PRESSURE IN HECTOPASCALS (HPA)

(INDICATIVE FIGURE).

HURRICANE WARNING

BEGINNING OF VALIDITY: FRIDAY 19/02/2010 AT 0000 UTC.

PHENOMENON: TROPICAL CYCLONE 12 (GELANE) 968 HPA

POSITION: 16.3S / 62.3E

(SIXTEEN DECIMAL THREE DEGREES SOUTH AND SIXTY TWO DECIMAL THREE DEGREES

EAST) AT 0000 UTC

MOVEMENT: SOUTH 6 KT

THREAT AREAS:

SQUALLY WEATHER EXISTS WITHIN 70 NM RADIUS FROM THE CENTRE , EXTENDING UP TO 200 NM IN THE SOUTHERN SEMI-CERCLE.

HURRICANE FORCE WINDS 65/75 KT AND VERY HIGH TO PHENOMENAL SEAS WITHIN 10 NM RADIUS OF THE CENTER.

STORM FORCE WINDS 50/60 KT AND HIGH TO VERY HIGH SEAS WITHIN 15 NM RADIUS OF THE CENTER EXTENDING UP TO 25 NM IN THE SOUTHERN SEMI-CIRCLE.

GALE FORCE WINDS 35/45 KT AND VERY ROUGH TO HIGH SEAS WITHIN 30 NM RADIUS OF THE CENTER EXTENDING UP TO 60 NM IN THE SOUTHEASTERN SEMI-CIRCLE.

NEAR GALE FORCE WINDS 30KT AND ROUGH TO VERY ROUGH SEAS WITHIN 50 NM RADIUS OF THE CENTER , 150 NM IN THE SOUTHERN SEMI-CERCLE.

STRONG GUSTS UNDER SQUALLS.

FORECAST POSITION AND INTENSITY:

12H, VALID 2010/02/19 AT 12 UTC:

17.5S / 61.8E, MAX WIND = 75 KT, TROPICAL CYCLONE.

24H, VALID 2010/02/20 AT 00 UTC:

18.5S / 61.1E, MAX WIND = 65 KT, TROPICAL CYCLONE.

OTHER INFORMATION:

THE INTENSITY OF THE SYSTEM HAS SLIGHTLY INCREASED DURING THE LAST HOURS. IT TRACKS VERY SLOWLY SOUTHWARDS, BUT IS EXPECTED TO RECURVE PROGRESSIVELY SOUTH-SOUTHWESTWARDS THEN SOUTHWESTWARDS .



**METEO
FRANCE**

Bulletin CMRS

RSMC tropical cyclone advisory

- Emis toutes les 6 heures à 00, 06, 12, 18 TU
- issued every 6 hours at 00, 06, 12, 18 UTC*
- Bulletin technique pour les services météo de la zone
- Technical bulletin for meteorological services of the area*
- Prévisions toutes les 12h jusqu'à 120h
- Forecasts each 12 h up to 120 h*

Précision de la position *Location accuracy* : de 20 MN à 90 MN

Analyse Dvorak *Dvorak analysis*

D : Developing

S : Stationary

W : Weakening

Extension des vents *Extension of winds*

Force du grand frais *Gale force winds (ref. 30kt)*

Force de la tempête *Storm force winds (ref. 50kt)*

Amélioration à venir : indice de confiance de la prévision de trajectoire

Expected improvement: confidence index on the forecast track

WTIO30 FMEE 190015

RSMC / TROPICAL CYCLONE CENTRE / LA REUNION

TROPICAL CYCLONE TECHNICAL BULLETIN (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER : 16/12/20092010

1.A TROPICAL CYCLONE 12 (GELANE)

2.A POSITION 2010/02/19 AT 0000 UTC :

16.3S / 62.3E

(SIXTEEN DECIMAL THREE DEGREES SOUTH AND SIXTY TWO DECIMAL THREE DEGREES

EAST)

MOVEMENT : SOUTH 6 KT

3.A DVORAK ANALYSIS : 5.0/5.0 /D

4.A CENTRAL PRESSURE : 968 HPA

5.A MAX AVERAGE WIND SPEED (10 MN) : 75 KT

RADIUS OF MAXIMUM WINDS (RMW) : 15 KM

6.A EXTENSION OF WINDS BY QUADRANTS (KM):

30 KT

NE: 080

SE: 280

SO: 200

NO: 080

50 KT

NE: 030

SE: 040

SO: 040

NO: 030

7.A FIRST CLOSED ISOBARE (PRESSURE / AVERAGE DIAM): 1010 HPA / 400 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS:

12H: 2010/02/19 12 UTC: 17.5S/61.8E, MAX WIND=075KT, TROPICAL CYCLONE.

24H: 2010/02/20 00 UTC: 18.5S/61.1E, MAX WIND=065KT, TROPICAL CYCLONE.

36H: 2010/02/20 12 UTC: 19.4S/60.6E, MAX WIND=050KT, SEVERE TROP. STORM.

48H: 2010/02/21 00 UTC: 19.8S/60.2E, MAX WIND=035KT, MODERATE TROP. STORM

60H: 2010/02/21 12 UTC: 20.5S/59.6E, MAX WIND=030KT, TROP. DEPRESSION.

72H: 2010/02/22 00 UTC: 21.2S/58.9E, MAX WIND=025KT, TROP. DISTURBANCE.

2.B OTHER INFORMATION:

T=5.0-; CI=5.0-

SYSTEM REACHED AGAIN THE STAGE OF TROPICAL CYCLONE AND THE SYSTEM HAS

SLIGHTLY INTENSIFY, (COLDER CDO). ACCORDING TO ASCAT DATA AT 1756Z AND MW

SSMIS AT 1519Z, GELANE IS CALLED A MIDGET AND MW AQUA AT 2131Z SHOWS A

LITTLE TILD BETWEEN 37 AND 85 CHANNELS.

...

FORECAST POSITIIONS BEYOND TAU 72H:

096H: 2010/02/23 00 UTC: 23.8S/56.0E, MAX WIND=025KT, TROPICAL DIST.

120H: 2010/02/24 00 UTC: 25.7S/52.2E, MAX WIND=025KT, TROPICAL DIST.

Avis consultatif pour l'aéronautique (OACI) *Cyclone advisory for aeronautical purpose*

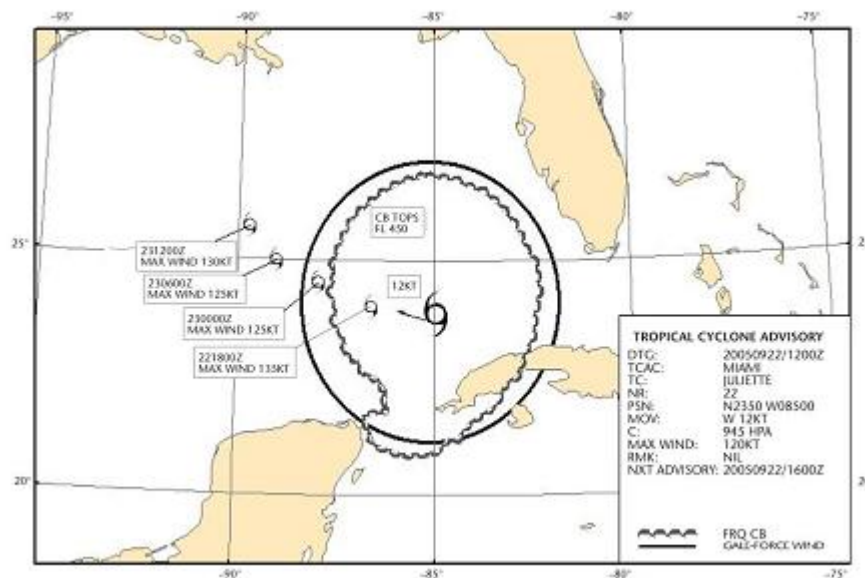
•Centre Consultatif pour les Cyclones Tropicaux dans la région AFI (OACI) *Regional Tropical Cyclone Advisory Center designated by ICAO*

•Emis toutes les 6 h dès le coup de vent/ *issued every 6h when gale winds*

•A destination aéronautique / *For aeronautic services*

•Prévisions toutes les 6h de 12h à 24h / *Forecasts every 6h from 12h to 24h.*

FKIO20 FMEE 191223
TC ADVISORY
DTG: 20100219/1200Z
TCAC: REUNION
TC: GELANE
NR: 14
PSN: S1724 E06206
MOV: S 08KT
C: 930HPA
MAX WIND: 110KT
FCST PSN +06HR: 19/1800Z S1757 E06200
FCST MAX WIND +06HR: 105KT
FCST PSN +12HR: 20/0000Z S1830 E06154
FCST MAX WIND +12HR: 100KT
FCST PSN +18HR: 20/0600Z S1900 E06142
FCST MAX WIND +18HR: 95KT
FCST PSN +24HR: 20/1200Z S1930 E06130
FCST MAX WIND +24HR: 90KT
RMK : NIL
NXT MSG: 20100219/1800Z



•A partir du 18/11/2010 : nouveau produit graphique en complément de l'avis consultatif/ *from the 18/11/2010 : additional chart*

Messages pour les Centres de prévision numérique (BUFR)

Technical messages for NWP centres

```
BUFR3 9 0 0 25 7 0 03 10 02 00 0 1 1 0 42 0
001033 001025 001027 3010 11 301012 301023 008012 002041 019001 202129 201131 019005 201000 202000 019006 019008
008005 010051 008005 010051 019007 008005 008021 202129 201129 011042 201000 202000 019007 008005 109000 031001
202129 201129 019003 201000 202000 103004 005021 005021 019009 205082
001033 125
001025 2 01S
001027 2 ABAIMBA
004001 1 2003
004002 1 10
004003 1 02
004004 1 00
004005 1 00
005002 1 -05.2
006002 1 067.0
008012 1 1
002041 1 0
I
(.....)

005021 1 360
019009 1 200000
019003 1 24.5
005021 1 0
005021 1 90
019009 1 4095000
005021 1 90
005021 1 180
019009 1 4095000
005021 1 180
005021 1 270
019009 1 4095000
005021 1 270
005021 1 360
019009 1 4095000
205082 2 BUFR/REUNION/ANAL YSE/CYCLONE ABAIMBA 02/10/2003 0000 UTC TEMPETE TROPICALE MODERE
1
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- Emis toutes les 6 heures / *issued every 6 hours*

- A destination des centres de prévision numérique / *Destinated to NWP centers*

- Analyse du système avec extension des vents, pas de prévision / *Only analyse (no forecast)*



**METEO
FRANCE**

WEBCMRS

http://www.meteo.fr/temps/domtom/La_Reunion/webcmrs9.0/

Site internet du CMRS La Réunion (accès libre et anglais/français) *RSMC La Reunion Internet web site (free access)*

<http://www.meteo.re>

<http://www.meteofrance.yt>

Sites internet pour la prévision locales sur La Réunion et Mayotte (en français seulement) comportant aussi une rubrique Cyclone

Public website for the general public of La Réunion and Mayotte (in french only). Cyclone page also available.



**METEO
FRANCE**

TC map on website

Le 08/03/2015 à 10h
Heures locales La Réunion

