

United Republic of Tanzania  
TANZANIA METEOROLOGICAL AGENCY  
**MONITORING OF TROPICAL CYCLONES  
IN TANZANIA**  
**NOVEMBER 2019**  
St. Denis Reunion

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# WHERE ARE WE (TANZANIA)



United Republic of Tanzania  
Ministry of Works, Transport and Communication



Tanzania Meteorological Agency  
ISO 9001:2015 Certified in Aviation Meteorological Services

# CLIMATE OF DODOMA, TANZANIA

- Semi arid climate
- Warm temperature throughout the year
- Average of 500mm of precipitation during rain season
- Wet season from November to April, other time comprises with dry season.



# SERVICES PROVIDED (FORECASTING)

- 24 hrs
- 5 days
- 10days
- 30 days
- Season forecasting
- Aerodrome warning etc.



# RAINFALL REGIMES

The unimodal:

Central,  
South western Highlands and  
Western

The bimodal:

Coastal  
Zanzibar islands and other parts of our country



# FACTORS AFFECTING WEATHER

ITCZ

High pressure systems

Monsoon winds

TC – position, intensity and direction

Congo basin air mass

Local conditions, water mass & topography

# CRITERIA FOR AERODROME WARNING

Obtain briefing of current weather situation of development of CB, Tropical cyclone etc. from Observer from Observer or forecaster on duty.

Study actual weather information from Satellite images and Radar data.

Study different NWP models and general weather forecast

If step 1 to 3 is significant issue and disseminate Aerodrome warning accordingly

Continuous monitoring the weather

Cancelling the Aerodrome warning

# AERODROME WARNING

Tropical cyclones

Thunderstorms

Hail

Sandstorm

Dust storm

Strong wind surface

Volcanic Ash

Rising sand or dust etc





# POSITIVE IMPACTS OF TROPICAL CYCLONES

- Sometimes the winds that are associated with Tropical Cyclones bring heavy to moderate rainfall that favored agriculture sector by provision of optimum rainfall and enough pasture and water for our animals and wild life.
- These rainfall has an impact on fishing industry.

# NEGATIVE IMPACTS OF TROPICAL CYCLO

Due to heavy rainfall sometimes can causes:

Floods affect settlements, infrastructure like roads, railways, bridges, power, farming systems.

Spread of waterborne diseases like malaria.

Fishermen and students are limited on their daily activities.

Communication systems.

# MONITORING OF TROPICAL CYCLONES

TTC bulletin from RSMC – La Reunion

Satellite imagery

Radar

Synergie

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# TROPICAL CYCLONE- KENNETH



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# MONITORING OF TROPICAL CYCLONE-KENNE

21<sup>st</sup> of April 2019:

The deep cloud band rotating around the location near north east of Madagascar.

Located west of 60 degrees East and near 9 degrees South

NWP Models estimated the central pressure at around 1006hPa.

# MONITORING CONT.

22<sup>nd</sup> of April 2019:

We received a bulletin from Meteo-France La Reunion (RSMS MFR) mentioning it to be located near 9.10S/51.50E

Central pressure of 1006hPa

Maximum wind 25kt.

# MONITORING CONT

23<sup>rd</sup> of April 2019:

The system was given a name KENNETH

According to RSMC MFR it was located at around 10.3S/49.6E.

The central pressure was 998hPa

Maximum wind was 35kt

It was estimated to move towards the west at 8kt

# MONITORING CONT

24<sup>th</sup> of April 2019

Position at 09z: 11s/45.2E

Movement: west at 10kt

Maximum wind : 65kt

Central Pressure: 982hPa





# MONITORING CONT

25<sup>TH</sup> of April 2019

Position at 09z: 11.9S/41.3 E

Movement: west-south at 10kt

Maximum wind: 115kt

Central Pressure: 934hPa



# MONITORING CONT

26<sup>th</sup> of April 2019

Position: 12.4S/39.6E (Overland depression over Mozambique)

Movement: west at 5kt

Maximum wind: 35kt

Central Pressure: 995hpa



# MONITORING CONT

The first information to National Disaster Management Office was issued on the 23<sup>rd</sup> of April 2019.

The 1<sup>st</sup> information issued to Public was on the 22<sup>nd</sup> of April 2019.

MA system situation information issued on 21<sup>st</sup> of April 2019

The NDMO ground situation information issued on 24<sup>th</sup> of April 2019

# DISSEMINATION OF WARNING

Providing impact based forecast

Videos and sound clips which were uploaded on TMA websites and shared on social media

TMA website

Disaster management Department –PMO

TV, Radio, Newspapers

Social Media (WhatsApp, YouTube, Facebook, tweeter and Instagram)



# FORMATION/WARNING ISSUED TO MED

22<sup>nd</sup> April 2019 - information presentation by DG

23<sup>rd</sup> April 2019 - information press presentation

24<sup>th</sup> April 2019 - Warning press release (press conference and document) by DG

25<sup>th</sup> April 2019 - Warning update press document by DG

26<sup>th</sup> April 2019 – Warning cancellation press release (press conference and document)



# REACTION OF MEDIA

Many of them visited and /or called the Authority to get more clarification

False/uninformed information was also created by unknown people and circulated within the social media



# FORMATION/WARNING ISSUED TO NDMO

- 23<sup>rd</sup> April information on like hood of formation of TC were issued
- 24<sup>th</sup> April 2019 warning on severe Tropical storm development was issued.
- 25<sup>th</sup> April 2019 update of warning and prevailing development status of the storm (Tropical Cyclone) were issued.
- 26<sup>th</sup> April 2019 mid-day warning cancellation issued.
- 26<sup>th</sup> April 2019 the NDMO chief Executive Officer together with TMA's Director General conducted press conference to the public through media on information of the ground situation and cancellation of warning.



# PRODUCTS ISSUED BY TMA

Press documents

Video clips

Live broadcasting through TV and radio stations.

TMA's zonal office at Mtwara were sharing 30 min to hourly Meteorological data, the ground photo and other information





# SUMMARY

- Tropical cyclones named **KENNETH** is one of the Tropical Cyclone which came near our Country.
- The lowest central Pressure was 934hPa
- It was categorized as INTENSE TROPICAL CYCLONE near 11.9S/41.3E
- Near 10.3S/49.6E it was categorized as SEVERE TROPICAL STORM.
- KENNETH reached the maximum wind speed of 115kt, in Mtwara, the highest wind speed was 60kt.
- The highest rainfall amount recorded at Mtwara weather station was 10mm on 25<sup>th</sup> April 2019



# THANK YOU

TANZANIA METEOROLOGICAL AUTHORITY

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