



REGIONAL CLIMATE OUTLOOK FORUM

**SWIOCOF-04**

Moroni, Comoros  
25-29 January 2016



Theme: “*Seasonal climate forecasts: A Climate Service to build resilience and reduce climate risks in the South West Indian Ocean Region*”

STATEMENT FROM THE FOURTH SOUTH WEST INDIAN OCEAN REGIONAL  
CLIMATE OUTLOOK FORUM (SWIOCOF-04),  
MORONI, COMOROS

Produced by

The African Centre of Meteorological Applications for development (ACMAD) in collaboration with the National Meteorological and Hydrological Services from the Indian Ocean Commission countries, WMO Global Producing Centers for Long Range Forecasts and the International Research Institute for Climate & Society at Columbia University in New-York

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## SUMMARY

For the upcoming rainy season, El Niño will result in particular by weak trade winds in the tropics of the region and below average tropical cyclone activity across the southwest basin of the Indian Ocean. Near average to slightly below average number of tropical cyclone days is very likely during coming months

From January to March 2016:

- **Above to near average precipitation** is very likely over Great Comoros Island
- **Near average precipitation** is expected over Anjouan, Moheli and Mayotte, half of Tanzania, la Reunion, Mauritius, eastern Madagascar western South Africa.
- **Below to near average precipitation** is very likely over most of northern Mozambique, southern west Tanzania, western Madagascar, central and eastern South Africa.

From February to April 2016:

- **Above to near average precipitation** is very likely over Great Comoros Island
- **Near to above average precipitation** is very likely over northern and east of Madagascar
- **Near average precipitation** is expected over Anjouan, Moheli and Mayotte, most of Tanzania, la Reunion, Mauritius, eastern Madagascar, northeastern Mozambique and South Africa.
- **Below to near average precipitation** is very likely over most of Mozambique, southwestern Tanzania and central to eastern South Africa.

## **A- THE SOUTH WEST INDIAN OCEAN REGIONAL CLIMATE OUTLOOK FORUM**

The Fourth South West Indian Ocean Regional Climate Outlook Forum (SWIOCOF-04) was held in Moroni Comoros from 25 to 29 January 2016 to prepare and present a consensus outlook for the 2016 precipitation and cyclone season over region. Climate experts from the Indian Ocean Commission (IOC) National Meteorological and Hydrological Services (NMHSs), the African Centre of Meteorological Applications for Development (ACMAD) and WMO Global Producing Centres for Long Range Forecasts contributed to the formulation of this outlook. The outlook is presented for the January to April 2016 cyclone season and two overlapping three months periods for precipitation (January-February-March and February-March-April 2016).

## **B- METHODOLOGY**

The outlook below is generated using outputs from:

- WMO Global Producing Centres for Long Range Forecasts products and IRI at Columbia University;
- Statistical Seasonal Forecasting Systems;
- Analog year analysis;
- Composite analysis;
- Knowledge and understanding of regional climate variability, trends including evidences, causes and phenomena driving climate variability.

Climate experts assessed the likelihood of above, near and below average precipitation for each area (Figures 1 and 2).

## **C- RECENT CLIMATE CONDITIONS AND OUTLOOK**

From June 2015 to January 2016 moderate to strong El Niño observed in the ENSO region. Most models and expert assessments indicate that a strong El Niño will continue through the Northern Hemisphere winter 2015-16, followed by weakening and a transition to ENSO-neutral during the late spring or early summer 2016.

Over the tropical north Atlantic region, near to above average SSTs have been recorded since July 2015. This pattern is expected to persist during the coming few months.

The equatorial and southern tropical Atlantic has been near average during few past months. This pattern is expected to evolve toward near to above average during the coming months.

Positive SST anomaly dominated most of the tropical Indian Ocean during past months. Southeastern tropical Indian Ocean (SETIO) Index increased. Most models and expert assessments support a persistence over most of equatorial and southern tropical Indian Ocean during the coming forecast period.

Over the subtropical Indian Ocean, a SSTA pattern similar to a slightly neutral phase of the Subtropical Indian Ocean Dipole (SIOD) mode has been observed during past few months. Most models and expert assessments are favorable for a persistence of this pattern during the coming forecast period.

Given these global tropical SSTs patterns and related trends above, knowledge and understanding of regional climate variability and predictability, analysis and interpretation of global seasonal monitoring and forecasting products, the following

precipitation and cyclone frequency, days and tracks are expected during the forecast period:

For the upcoming rainy season, El Niño will result in particular by weak trade winds in the tropics of the region and below average tropical cyclone activity across the southwest basin of the Indian Ocean. **The SWIO basin is very likely to record near to below average number of tropical cyclone activity during 2015-2016 season with 1-4 cyclones and 4-6 storms.**

From January to March 2016:

- **Above to near average precipitation** is very likely over Great Comoros Island
- **Near average precipitation** is expected over Anjouan, Moheli and Mayotte, half of Tanzania, la Reunion, Mauritius, eastern Madagascar, western South Africa.
- **Below to near average precipitation** is very likely over most of northern Mozambique, southern west Tanzania, western Madagascar, central and eastern South Africa.

From February to April 2016:

- **Above to near average precipitation** is very likely over Great Comoros Island
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- **Below to near average precipitation** is very likely over most of Mozambique, southwestern Tanzania and central to eastern South Africa.

## D- ADVICES AND RECOMMENTIONS

This section summarizes advices and recommendations for user sectors. Vigilance is required over the whole region.

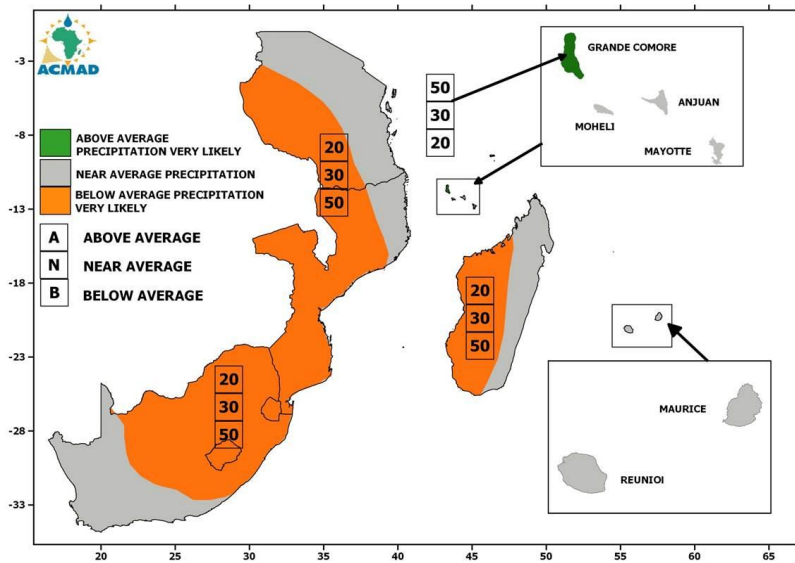
### **For zone where average or above average rainfall has enhanced probability:**

- ✓ Prioritize high land areas for planting;
- ✓ Avoid low land areas and on a slope;
- ✓ Develop barriers for crop protection against runoff;
- ✓ For early planting, use long cycle crop varieties;
- ✓ Provide more fertilizer or pesticides to mitigate leaching by heavy rains;
- ✓ Increase the area planted to maximize gains;
- ✓ extend and monitor rain water reservoirs;
- ✓ Prepare for a more extensive collection and storage of fodder;
- ✓ keep animals away from river banks to avoid drowning;
- ✓ Plan for more vaccines and drugs for water related diseases;
- ✓ monitor water reservoirs and take timely decisions to cope with the risk of failure on hydraulic structures;
- ✓ Take measures to reduce negative effects of high humidity on crop drying and conservation;
- ✓ Prepare emergency plans useful in case of flooding;
- ✓ Prepare emergency interventions in case of bad crop yields;
- ✓ Monitor water quality to prepare for pollution of aquatic ecosystems resulting in algal blooms;
- ✓ Plant more trees;
- ✓ Take preventive measures taking into account the risk of road damages that may prevent access to some important agriculture belts;
- ✓ Increase monitoring of water-borne diseases;
- ✓ Monitor epidemic malaria areas;
- ✓ Increase vigilance for cholera and diarrhea;

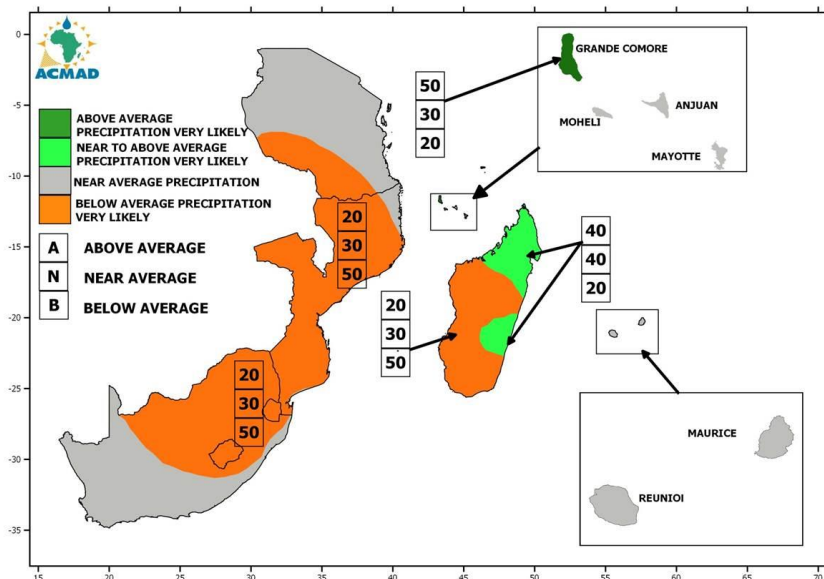
### **For zone where average or below average rainfall has enhanced probability:**

- ✓ • prioritize low land areas for planting;
- ✓ • use water conservation techniques;
- ✓ • Choose crop varieties resistant to rainfall deficits;
- ✓ • Plan to start dry season farming earlier than usual;
- ✓ • Plan for irrigation to manage possible rainfall deficits;
- ✓ • Plan an early start of transhumance;
- ✓ • prepare or rehabilitate water points for animals;
- ✓ • prepare for possible deficits in the water in reservoirs;
- ✓ • prepare for emergency assistance in case of crop failure;
- ✓ • Increase vigilance in managing conflicts between farmers and pastoralists;

**SEASONAL PRECIPITATION FORECAST FOR SOUTH WEST  
INDIAN OCEAN BASIN  
VALID FOR JANUARY-FEBRUARY-MARCH 2016  
ISSUED ON JANUARY, 28 2016**



**SEASONAL PRECIPITATION FORECAST FOR SOUTH WEST  
INDIAN OCEAN BASIN  
VALID FOR FEBRUARY-MARCH-APRIL 2016  
ISSUED ON JANUARY, 28 2016**



Map showing the zones with respective probabilities for terciles : A= Above average ; N : Near average; B : Below average

*This outlook is produced at the regional scale. Thus, its interpretation should be for regional use. For local and/or country adaptation and applications needs, it is highly recommended to consult the National Meteorological and Hydrological Services.*