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STATEMENT OF THE FIFTH SESSION OF THE SOUTH-WEST INDIAN OCEAN CLIMATE OUTLOOK FORUM (SWIOCOF-5) SEYCHELLES, 19-23 SEPTEMBER 2016

SUMMARY

From October to January :

- Below average rainfall is likely in the northern part of the region including Comoros, Seychelles and the northern parts of Mozambique and Madagascar.
- Near to above average rainfall is likely over the southern part of the region including southern Mozambique, southern Madagascar and South-Africa.
- Near to below average rainfall is likely over the islands of Mauritius and Reunion.

The dry signal on the northern part of the SWIO region is expected to weaken during the second half of the targeted period.

Near to below average cyclone activity is expected during the coming cyclonic season.

THE FIFTH ANNUAL SOUTH WEST INDIAN OCEAN REGIONAL CLIMATE OUTLOOK FORUM

The Fifth Southern Western Indian Ocean Climate Outlook Forum (5th SWIOCO) was held in VICTORIA, Seychelles, 19-23 September 2016 to present a consensus outlook for the 2016/2017 rainfall season over the SWIO region. Climate scientists from the SWIO National Meteorological and/or Hydrological Services (NMHSs), Meteo-France, ACMAD and the SADC Climate Services Centre (CSC) formulated this outlook. Additional inputs were acquired from other global climate prediction centres namely, European Centre for Medium Range Weather Forecast (ECMWF), Canadian Centre For Meteorological and Environmental Prediction (CCMEP), Beijing Climate Center (BCC), Korea Meteorological Administration (KMA), Météo-France and Bureau of Meteorology, Australia (BoM), International Research Institute for Climate and Society (IRI), Japan Meteorological Agency (JMA) and UK Met Office. This outlook covers the major rainfall season from October 2016 to January 2017. The outlooks are presented in overlapping three-monthly periods as follows: October-November-December (OND); November-December-January (NDJ).

This Outlook is relevant only to seasonal (overlapping three-monthly) time-scales and relatively large areas and may not fully account for all factors that influence regional and national climate variability, such as local and month-to-month variations (intra-seasonal).

Users are strongly advised to contact the National Meteorological and Hydrological Services for interpretation of this Outlook, additional guidance and updates.

METHODOLOGY

Using statistical, other climate prediction schemes and expert interpretation, the climate scientists present at SWIOCOF determined likelihoods of above-normal, normal and below-normal rainfall and other parameter relevant to the region such as Tropical Cyclone Activity and Temperatures, for each area for overlapping three monthly periods i.e. October-November-December (OND – Figure 1), November-December-January (NDJ – Figure 2). Above-normal rainfall is defined as lying within the wettest third of recorded (30 year, that is, 1971 -2000 and 1981-2010 mean) rainfall amounts; below-normal is defined as within the driest third of rainfall amounts and normal is the middle third, centred on the climatological median. The climate scientists took into account oceanic and atmospheric factors that influence our climate over SADC region. In particular the El Niño-Southern Oscillation (ENSO) is foreseen to remain between neutral to weak cold phase also referred to as La Niña, during the bulk of the rainfall season. In addition, the Indian Ocean Dipole is substantially negative and is likely to return to neutral conditions during the summer season.

OUTLOOK

The period October to January over the SWIO region is typically a transition season before the main rainy season, also referred to as the cyclonic season. The present outlook considers two overlapping seasons (OND and NDJ).

CURRENT STATUS OF THE CLIMATE SYSTEM

Following the major El Nino event of 2015/2016, the SST conditions in the central Pacific have moved to below normal (with temperatures hovering around the La Nina threshold). Consistently, the Indian Ocean Dipole (IOD) over the equatorial Indian Ocean is in a substantial negative phase (close to historical records). This last index is one of the main climate drivers for some parts of this region at seasonal scale. Another regional climate driver, so-called SIOD (Subtropical Indian Ocean Dipole), is currently negative.

EXPECTED EVOLUTION OF THE MAIN CLIMATE DRIVERS FOR SWIO REGION

Most global climate models suggest that :

- conditions in the central pacific will remain slightly colder than normal and close to La Nina threshold.
- IOD is likely to return to normal conditions by the end the period.
- SIOD is likely to shift towards positive values by the middle of the rainy season.

Based on these global forecasts, climate models suggest a consistent response over the central part of the Indian Ocean through a large subsidence anomaly pattern (weakening potential convection).

OUTLOOKS for OND 2016 and NDJ 2016/2017

Given these SST anomalies, sub-surface temperature patterns and trends, knowledge and understanding of seasonal climate variability over the South West Indian Ocean region as well as available long range forecasts products, the following outlooks are provided for October 2016 to January 2017 precipitation and the upcoming cyclone season (2016/2017).

Precipitation :

OND 2016 :

- Below average rainfall is likely in the northern part of the region including Comoros, Seychelles and the northern part s of Mozambique and Madagascar.
- Near to above average rainfall is likely over the southern part of the region including southern Mozambique, southern Madagascar and South-Africa.
- Near to below average rainfall is likely over the islands of Mauritius and Reunion.

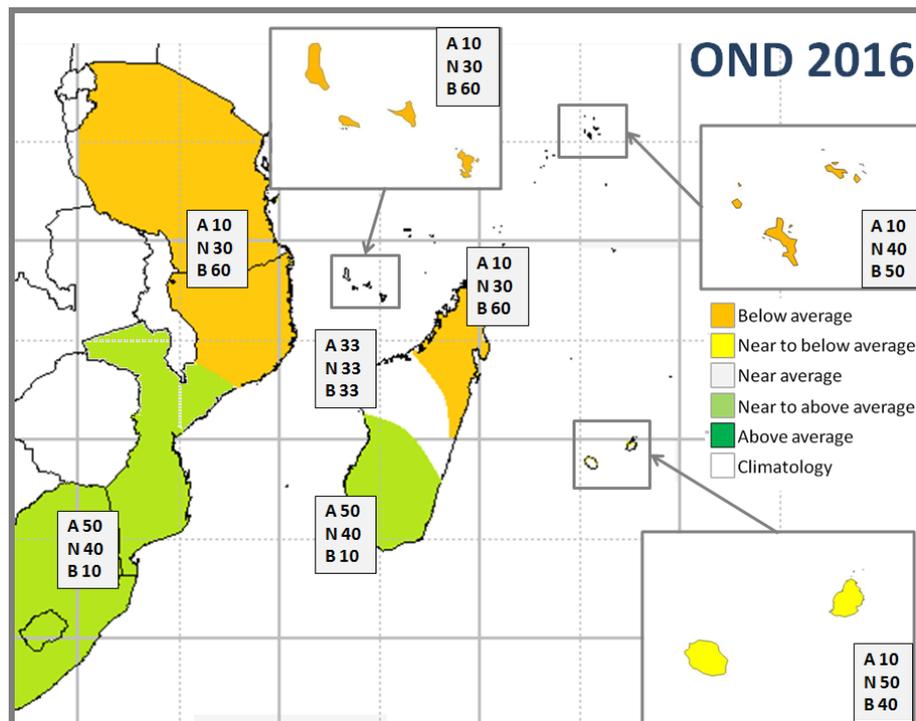


Figure 1 : Consensus forecast of precipitation for OND 2016 in SWIO region

NDJ 2016 :

- Near to below average rainfall is likely in the northern part of the region including northern part of Mozambique, Comoros, Seychelles and northern Madagascar.
- Near to above average rainfall is likely over the southern part of the region including southern Mozambique, southern Madagascar and South-Africa.
- Near average rainfall is likely over the islands of Mauritius and Reunion.

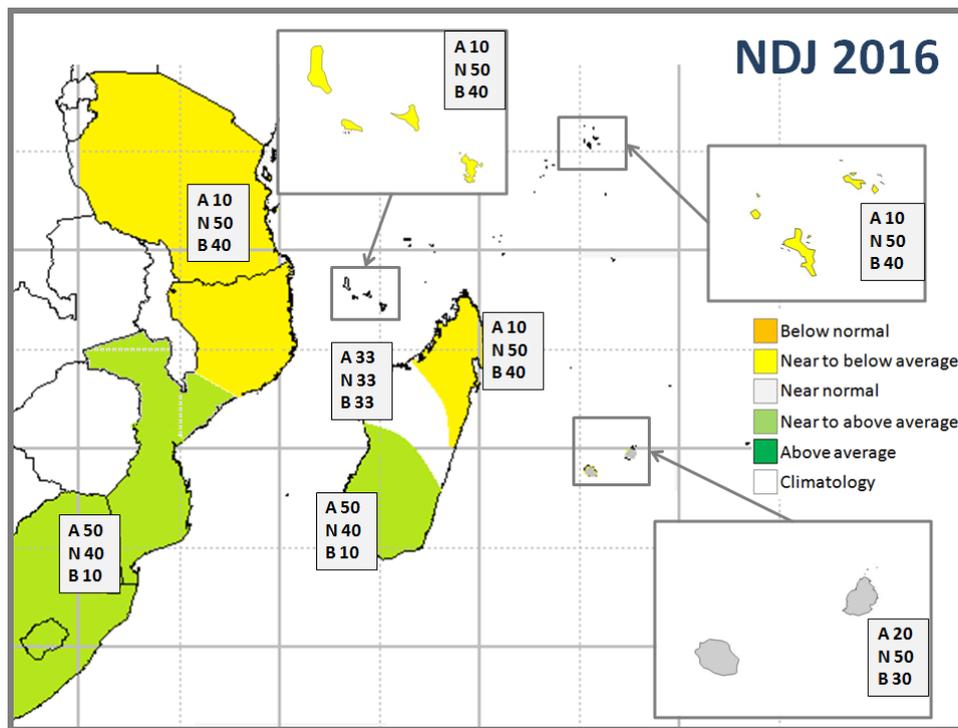


Figure 2 : Consensus forecast of precipitation for NDJ 2016/2017 in SWIO region

Rainy season ONSET 2016 :

Considering the observation of a delayed reversal of the Indian monsoon flux and the negative phase of the IOD (that is forecast to persist during the OND season), there is some indication for a delayed onset of the rainy season over the SWIO region where usually, the onset is expected in October or November.

Cyclone activity :

- Number of tropical storms or cyclones are likely to be near to below average.
- Tropical storms or cyclones are likely to follow more westward tracks than usual.

Temperatures :

In comparison to the last summer season over most of the SWIO region that experienced significantly above average temperatures, the upcoming summer 2016/2017 will likely see a return to near average temperatures.

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 for local details and updates.

An outlook update specific to the cyclone activity will be provided by RSMC Reunion in october 2016 at <http://www.meteofrance.re/climat/previsions-saisonnieres>