

STATEMENT OF THE SIXTH SESSION OF THE SOUTH-WEST INDIAN OCEAN CLIMATE OUTLOOK FORUM (SWIOCOF-6) SEYCHELLES, 18-22 SEPTEMBER 2017

SUMMARY

Climate information

From October through January (2017/18) :

- Close to normal average rainfall is likely over most of the South West Indian Ocean (SWIO) region for the **October-November- December** season (OND).

- During the **November-December-January** season (NDJ), normal to above rainfall is expected over the Mascarenes Islands (La Réunion and Mauritius), the eastern part of Madagascar and southern part of Mozambique. The remaining parts of the region (Seychelles, Tanzania, north part of Mozambique, west coast of Madagascar, Comoros, East of South-Africa) are expected to receive close to normal rainfall.

Near normal cyclone activity is expected during the coming cyclonic season.

Information for sectoral users :

While the two previous years saw low tropical storm activity, this coming season is expected to come back to normal activity (9 to 10 named tropical depression). Consequently, the risk of tropical cyclone impact is greater and we advise decision makers to refer to their national meteorological services for further details or updates.

THE SIXTH ANNUAL SOUTH WEST INDIAN OCEAN REGIONAL CLIMATE OUTLOOK FORUM

The Sixth Southern Western Indian Ocean Climate Outlook Forum (SWIOCOF-6) was held in Mahé, Seychelles, 18-22 September 2017 to prepare a consensus outlook for the 2017/2018 rainfall

season over the SWIO region. Climate scientists from the SWIO National Meteorological and/or Hydrological Services (NMHSs), Meteo-France, and ACMAD formulated this outlook. Additional inputs were considered from global climate prediction centres (GPCLRFs) namely, European Centre for Medium Range Weather Forecast (ECMWF), Canadian Centre For Meteorological and Environmental Prediction (CCMEP), Météo-France, Bureau of Meteorology from Australia (BoM), International Research Institute for Climate and Society (IRI), UK Met Office and National Center for Environmental Prediction (NCEP). This outlook covers the major rainfall season from October 2017 through January 2018. The outlooks are presented in three-monthly rolling 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 objective climate prediction methods 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 rolling 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 mean, that is, 1981-2010) 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 SWIO region. In particular the El Niño-Southern Oscillation (ENSO) and regional climate drivers such as the Indian Ocean Dipole (IOD) and the Subtropical Indian Ocean Dipole (SIOD).

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 a strong positive SIOD event during austral summer 2016/2017, a weak positive IOD phase through austral winter 2017, and a nearly neutral ENSO over the course of the last 12/18 months, a rapid drop in the sub-surface sea temperature over the central Pacific developed in the last weeks. A warm Sea Surface Temperature (SST) spell persists in the area between the central Indian Ocean sub-tropics and the Mascarenes and Comoros Islands.

EXPECTED EVOLUTION OF THE MAIN CLIMATE DRIVERS FOR SWIO REGION

Most global climate models suggest that :

- conditions in the central Pacific are expected to move just beyond the La Nina threshold. This weak event should not persist beyond the austral summer period.
- IOD is likely to return to normal conditions by the end of December.
- SIOD is likely to remain within positive values through the OND and NDJ periods.

Considering the late start of the La Nina event (that usually develops at the end of boreal spring), and its weak intensity, the atmospheric reaction over the Indian Ocean should be limited.

OUTLOOKS for OND 2017 and NDJ 2017/2018

Given these SST anomalies, sub-surface temperature patterns, 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 2017 to January 2018 precipitation, temperature and the upcoming cyclonic season (2017/2018).

Precipitation :

OND 2017 :

- Close to normal average rainfall is likely over most of the South West Indian Ocean (SWIO) region for the **October-November- December** season (OND).

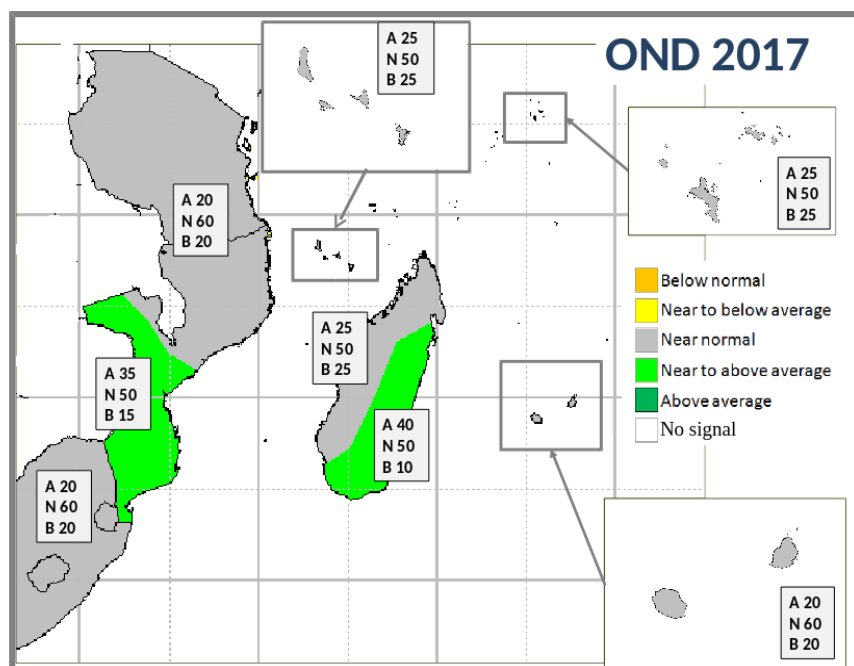


Figure 1 : Consensus forecast of precipitation for OND 2017 in SWIO region

NDJ 2017 :

- During the **November-December-January** season (NDJ), normal to above rainfall is expected over the Mascarenes Islands (La Réunion and Mauritius), most parts of Madagascar and southern part of Mozambique. The remaining parts of the region are expected to receive close to normal rainfall.

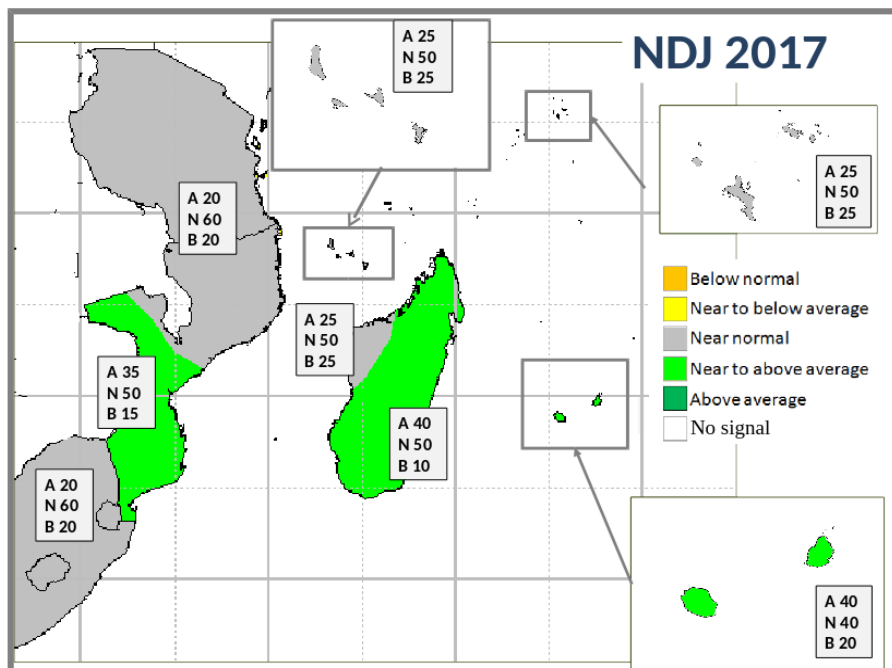


Figure 2 : Consensus forecast of precipitation for NDJ 2017/2018 in SWIO region

Cyclone activity :

The number of tropical storms or cyclones is likely to be near average over the region.

Regarding the large scale climate drivers, no significant signal allows to identify any preferred genesis location or track typology.

Temperatures :

Considering the persistence of above normal SST conditions over most of the SWIO region and the long term observed trends, temperatures are expected to stay above normal for OND and NDJ periods.

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 November 2017 at <http://www.meteofrance.re/climat/previsions-saisonnieres>