



## CONCEPT NOTE ON THE ORGANIZATION OF A SWIOCOF IN 2017

**Scope of the note:** This paper describes the proposal to organize a Regional Climate Outlook Forum (RCOF) dedicated to the South-West Indian Ocean region and including the five Indian Ocean Commission (IOC) members (Comoros, La Réunion (France), Madagascar, Mauritius, Seychelles) plus coastal countries of the South-West Indian Ocean: Tanzania, Mozambique, South Africa.

### Background

The Regional Climate Outlook Forums (RCOFs) have been operational in many parts of the world with the aim to develop and provide consensus-based climate outlooks and related impacts, preparedness and response information on a regional scale. These activities support decision making to manage climate-related risks and support sustainable development. This process was initiated by WMO's Climate Information and Prediction Services (CLIPS) project, in collaboration with National Meteorological and Hydrological Services (NMHSs), regional/international climate centres among many other partners. RCOFs have been recognized to be prominent among the key regional mechanisms to support the implementation of the Global Framework for Climate Services (GFCS), Sendai Framework for Disaster Risk Reduction and Sustainable Development Goals.

IOC members share common geographical and climatic features such as small Islands (except Madagascar), sharp topography, maritime influence, tropical extreme weather events such as torrential rainfall or cyclones, and a similar seasonal cycle typical of the Southern Hemisphere. Due to these geographical and climatic similarities, the IOC members also share a number of concerns and issues in terms of vulnerability to climate variability and climate change. Understanding regional and local climate including teleconnections with large-scale variability, assessing predictability and facilitating tailoring and application of climate information are among the challenges facing the region.

The idea of a regional forum for jointly developing seasonal climate outlooks dedicated to the countries of the South-West Indian Ocean is not new. The interest and feasibility of such a forum was a regular topic for discussion in the regional workshops organized within ACCLIMATE project on the adaptation of IOC countries to climate change: [www.acclimate-oi.net](http://www.acclimate-oi.net).

The workshop held in Saint-Denis de La Réunion at Météo-France (27-30 September 2011) in the framework of ACCLIMATE project led to the organization of a first South-West Indian Ocean Climate Outlook Forum (SWIOCOF) in September 2012. In the absence of sustained financial support and clear governance, SWIOCOFs could not be regularly organized, although it was unanimously agreed that SWIOCOF was of great benefit to the South-West Indian Ocean countries/territories.

In parallel, in June 2012, the African Center of Meteorological Application for Development (ACMAD) held in Moroni, Comoros, a “scoping workshop on seasonal forecasting of cyclone activity in the South-West Indian Ocean region, for climate risk management and adaptation to climate change for sustainable development”. This workshop was followed by two RCOFs in October 2013 and January 2016. In addition, two longstanding RCOFs, namely the Southern African Climate Outlook Forum (SARCOF) and the Greater Horn of Africa Climate Outlook Forum (GHACOF) also extend their scope to conditions in the adjoining Indian Ocean, though their main focus is on the continental climate. However, participants representing the South-West Indian Ocean countries/territories in these forums have indicated that, due to the geographic and climatic specificities of the South-West Indian Ocean region, the applicability of forums targeted at the broader sub-regions is limited.

During the Regional Consultation on Climate Services in the Indian Ocean from 14 to 16 March 2016 in Ebene (Mauritius) under the auspices of the Global Framework for Climate Services (GFCS), noting the initiatives of ACMAD and Météo-France, the World Meteorological Organization (WMO) stressed the need to strengthen the RCOF process within the South-West Indian Ocean sub-region in order to meet the expectations and specificities of island states/territories situated therein.

Finally, a 5<sup>th</sup> edition of the SWIOCOF was held in September 2016 in Seychelles thanks to the financial support of the Government of Canada through the Federal Department of the Environment through the *Programme for Implementing GFCS at Regional and National Scales*. Logistical aspects of SWIOCOF-5 were coordinated by IOC, and technical aspects by Météo-France in La Réunion and ACMAD. Forum participants from the various national meteorological services, sectors, and regional/inter-governmental bodies including SADC, ACMAD and RIMES were unanimous in concluding that:

- SWIOCOF brings much added-value to the South West Indian Ocean (SWIO) region;
- SWIOCOF should be sustained as it is complementary to existing COFs (including SARCOF) as it focuses on phenomena of interest to the island states and coastal regions including cyclones, and it focuses on sectors of particular interest to the region; and
- the Pre-COF training should be expanded.

## **Objectives**

The objectives of SWIOCOF-6 remain unchanged from previous edition:

- reviewing available knowledge and understanding of regional climate variability;
- enhancing exchanges, networks and partnerships on Regional Climate Outlook for the region;
- enhancing core scientific and technical capabilities for RCOF in the region ;
- facilitating access to the essential inputs on large-scale and regional-scale drivers and jointly interpreting their potential influences on the climate over the South-West Indian Ocean sub-region;
- improving seasonal forecast over the sub-region and promoting the usefulness of consensus-based seasonal forecasts in decision making processes within climate-sensitive socio-economic sectors.

## **Dates**

Seychelles Meteorological Authority (SMA) has generously offered to host the SWIOCOF-6 that will be held from 18 to 22 September 2017 in Seychelles.

Why September? The ideal time of year to hold the annual SWIOCOF is considered to be in the month of September, as this period of the year is especially critical for the water sector being in the middle of the dry season. A precipitation forecast covering the last three months of the year (before the onset of the rainy season) is of great interest to decision-makers in climate sensitive sectors. Moreover, September offers the opportunity provide an initial assessment of the expected cyclone activity over the South-West Indian Ocean basin for the next rainy season; however, this tendency should be updated in November considering the latest model

predictions for the whole cyclonic season (December through April). Meteo-France, as the WMO Tropical Cyclone Regional Specialized Meteorological Centre (RSMC) for this region, will produce this up-to-date seasonal forecast.

### **Programme**

To best meet the objectives, SWIOCOF-6 will include a 3 days “pre-forum training and scientific workshop” followed by a 2days “Forum” proper involving media, policy and decision makers.

#### *The Pre-Forum (3 days) will*

- Focus on two main issues facing the South-West Indian Ocean region:
  - Water resources: this issue is a common concern of all countries in the region. Seasonal forecast of precipitation can be of great interest for management of water resources (restrictions on the use of water, hydroelectric power, irrigation, etc.);
  - Cyclone activity of the up-coming season: This is also an issue shared by all the countries of the region, and knowledge of cyclonic activity is essential in order that disaster risk management services develop preparedness for the coming cyclonic season.
- Include a significant training component for the developing country participants including the use of statistical downscaling methods that is especially critical for seasonal rainfall predictions on small islands.
- Produce a consensus statement on seasonal climate outlook including:
  - assessment of current regional climate conditions and related water resources;
  - precipitation outlook for the next 3 months across sub-region (Oct-Nov-Dec 2016); and
  - cyclone activity outlook for the upcoming rainy season for the South-West Indian Ocean basin.

#### *The Forum (2 days)*

- Serves as the venue to communicate the seasonal consensus outlook developed at the pre-forum, and to validate the accuracy of analogous seasonal consensus statements issued by prior SWIOCOFs. The consensus statement developed at the Pre-forum will be communicated both to the general public, via press releases, and to practitioners – climate scientists as well as representatives of key climate-sensitive sectors.
- Facilitates exchanges between the providers of climate products and services, the NMHSs, and the users from climate-sensitive sectors, potentially interested in these services. The Forum provides the opportunity to strengthen the understanding of user expectations, and how to interpret and apply these outlooks, and also to raise sectoral needs and capacity gaps.

### **Participants**

Climate scientists: one representative of each meteorological service of the countries of the area is invited (five IOC members + Mozambique, Tanzania and South Africa) to participate in both the Pre-Forum and Forum (18-22 September). In addition, the Pre-forum and Forum will be attended by four or five international experts in seasonal forecasting, climate modeling and downscaling.

Sectoral representatives: The Forum will also be attended by representatives of priority climate-sensitive sectors in the South-West Indian Ocean region including sectors strongly impacted by the water resources issues and by cyclone activity. One sectoral representative

from each IOC member plus Tanzania, Mozambique, South Africa is invited to participate in SWIOCOF-6 (21-22 September).

Additional participants from the Host Country are, of course, welcome.

Local media will also be invited.

### **Technical inputs for the Pre-COF**

Meteo-France and the African Centre for Meteorological Applications for Development (ACMAD) will coordinate technical support to the forum. In particular, these Centers will prepare large-scale climate data sets (ERA-interim, GPCP, GPCs and RCCs seasonal forecasts, RSMCs Cyclone data) for analysis, interpretation and downscaling activities prior to and during the pre-forum. These data will be provided to all participants to the pre-forum.

Participants from countries will provide local data sets quality checked when possible (precipitation from synoptic stations and local rain gauges, cyclone data archives).

The downscaling process will rely either on CPT software (provided by IRI) or similar software developed in Meteo-France La Reunion under R language.

Each participant at the Pre-forum is asked to bring his/her own laptop on which will install the proposed downscaling tools.

### **Support for SWIOCOF-5**

SWIOCOF-6, including the Pre-Forum, was undertaken with the financial support of WMO, Prefecture La Réunion through Regional Cooperation Funding and ACMAD. Logistical aspects of SWIOCOF-6 are coordinated by IOC, and technical aspects by Météo-France and ACMAD. All the above programmes will be conducted in English and there will be no formal provision for interpretation. However, it is noted that several of the resource persons and participants are bi-lingual, facilitating interactions both in English and French.

### **Contacts for additional information**

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