

International Workshop on the Recovery and Digitization of Climate Heritage in the Indian Ocean Rim Countries and Islands

Maputo, Mozambique

21 to 24 April 2014

Programme



World
Meteorological
Organization
Weather • Climate • Water



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Canada



BACKGROUND AND GOALS

Understanding the science explaining the role of the Indian Ocean in triggering regional and larger scale climate variability and related extremes such as droughts, heavy monsoon and flooding is important to sustainable global development. East African droughts, Australian droughts, flooding in Southern Africa which also frequently hits Mozambique, flooding in India and Pakistan just to name a few, have caused large socio-economic impacts in the affected countries, often resulting in disasters. Developing a strong data foundation will help in achieving an improved understanding of the role of key climate drivers that lead to these extremes. These data will also provide information on the characteristics of the extremes and enable improved prediction of their occurrence in a timely manner. Over many years, the World Meteorological Organization and the National Meteorological and Hydrological Services (NMHS) have made significant efforts in capturing climatic data. However, a substantial amount of old climate archives going back to the 19th century are available but often stored under poor conditions. Large parts of these archives are on paper and need to be recovered, imaged and digitized before they deteriorate beyond use. The implementation plan for the Global Framework for Climate Services (GFCS) includes large scale Data Rescue as a priority area. The workshop aims to:

1. Provide information on major regional and international data rescue projects and activities and the vast potential to recover historical weather and climate observations from both terrestrial and marine sources around and across the Indian Ocean basin;
2. Provide a forum for NMHSs from across the Indian Ocean region to assess gaps, challenges and opportunities with regard to accessing historical weather and climate data in the region and abroad;
3. Inform climate experts from NMHSs about modern Data Rescue and data analysis methodologies and tools through a dedicated parallel technical session; and
4. Agree on an implementation plan for an INdian Ocean Data REscue Initiative (INDARE) aimed at enhancing the quality and quantity of historical terrestrial and marine weather and climate observations. INDARE will therefore constitute a vital basis for the GFCS in the region, and the genesis of long-term collaborative efforts in the region, on climate data and its use in providing climate services.

Three side meeting/events are also planned. A side meeting will provide information on the African Ministerial Conference on Meteorology (AMCOMET). Two side events, one will be a preparatory meeting for the **3rd International Conference on Small Island Developing States (SIDS)** (Samoa, September 2014) aimed at informing the NMHSs on ways to engage in the processes leading up to the Conference. The second side event will inform participants about progress of the implementation of the Canadian funded GFCS project “Programme for Implementing the Global Framework for Climate Services (GFCS) at Regional and National Scales” and will seek the specific engagement of countries in planning and carrying out some of the activities.

PARTICIPATING COUNTRIES

Myanmar	Kenya	Seychelles
Pakistan	Madagascar	Tanzania
Sri Lanka	Maldives	
Yemen	Mauritius	
	Mozambique	

International Scientific and Coordination Committee

Prof. Rob Allan	Dr Atanasio Joao Manhique
Dr Joseph R. Mukabana	Dr Richard Crouthamel
Dr William Wright	Mr Raj Booneeady
Prof. Manola Brunet	Dr Gudrun Rosenhagen
Dr Albert Klein-Tank	Dr Philip Brohan

Contact:

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WMO Secretariat, Geneva

Mr Omar Baddour: obaddour@wmo.int Mrs Josepha Potter: jpotter@wmo.int

PROGRAMME

Day 1: 21 April 2014 Plenary session

Raising awareness on GFCS, data rescue and other applications and the potential for better understanding and analyzing climate extremes and forecasting based on up to date knowledge on global and regional climate drivers (monsoons, ENSO, MJO etc).

Day 2: 22 April 2014 Two parallel sessions

- Decision making and policy with a focus on GFCS and related data requirements, Permanent Representatives or their high officer delegates. The afternoon sessions will include also a side event to provide information on SIDS conference scheduled for September 2014 in Samoa and a side meeting to inform on AMCOMET.
- Technical workshop covering data rescue, inventories, scanning and digitization, quality control and data homogenization, climate indices and analysis of climate extremes (for the experts).

Day 3: 23 April 2014

Morning: Plenary session

- A way forward to establish an Indian Ocean Data Rescue (INDARE) Initiative supporting the GFCS implementation and responding to data requirements and needs in the region for the international community.

Afternoon: Side event and Technical Workshop

- Side event on Canada Project
- Continuation of Technical Workshop with experts

Day 4: 24 April 2014 Technical Workshop –continuation

- Continuation of Technical Workshop with experts

SPONSORS: The workshop is financed by the World Meteorological Organisation, the Government of Norway and the Government of Canada.

WORK PLAN

International Workshop on the Recovery and Digitization of Climate Heritage in the Indian Ocean Rim Countries and Islands, Maputo, Mozambique, 21-24 April 2014														
	08h00	09h30	10h30		11h00	12h30		14h00	16h00		16h30	17h30	17h30	18h30
Monday 21/04/2014	Registration	Opening ceremony		Coffee Break	Plenary 1 - Session 1		Lunch Break	Plenary 1 - Session 2		Coffee Break	Plenary 1 - Session 2 (cont)			
					Raising awareness Chair: A. J. Manhique			Needs and gaps Chair: L. Chandrapala			Needs and gaps (cont) Chair: L. Chandrapala			
Tuesday 22/04/2014	Parallel session A			Coffee Break	Parallel session A (cont)		Lunch Break	Parallel session A (cont)		Coffee Break	Side event 1			
	Decision making and formulating policy Chair: J. Mukabana				Decision making and formulating policy Chair: J. Mukabana			Panel Session Moderator: R. Allan			SIDS conference F. Lucio	AMCOMET J. Mukabana		
	Parallel session B				Parallel session B (cont)			Parallel session B (cont)			Parallel session B (cont)			
	Technical workshop Lead: M. Brunet				Technical workshop Lead: M. Brunet			Technical workshop Lead: M. Brunet			Technical workshop Lead: M. Brunet			
Wednesday 23/04/2014	Plenary 2			Coffee Break	Plenary 2 (cont)		Lunch Break	Side event 2		Coffee Break	Side event 2 (cont)			
	Discussion on INDARE Chair: F. Lucio				Discussion on INDARE (cont) Chair: F. Lucio			Canada project Convenor: C. T. Avellan			Canada project (cont) Convenor: C. T. Avellan			
								Technical workshop Lead: M. Brunet			Technical workshop Lead: M. Brunet			
Thursday 24/04/2014	Technical workshop Lead: M. Brunet				Technical workshop Lead: M. Brunet			Technical workshop Lead: M. Brunet			Technical workshop Lead: M. Brunet			

WORKSHOP AGENDA

DAY 1: 21 April 2014

08:00-09:30 **Registration**

Opening Ceremony

09:30-09:45 Address by WMO

09:45-10:00 Address by Dr Atanasio Joao Manhique, Permanent Representative of Mozambique with WMO

10:00-10:15 Opening address by a High official dignitary from the Government of Mozambique

10:15-10:30 Introduction of the workshop: WMO

10:30-11:00 Coffee break and group photo

Plenary 1

Session 1: Raising awareness on the need for climate data

Chair: Dr Atanasio Joao Manhique

Key lectures

11:00-11:20 GFCS overview – status and implementation: **Filipe Lucio**

11:20-11:40 Capacity needs and challenges for LDCs and SIDS in the region: **Joseph Mukabana**

Scientific lectures

11:40-12:00 MJO and ENSO (including IOD) influence on the regional climate: **Rob Allan**

12:00-12:20 State of knowledge on climate prediction and projections in the region: **Philip Brohan**

12:20-12:40 Discussion

12:40-14:30 Lunch break

Session 2: Overview of needs and gaps for recovering, digitizing and managing climate records in the region (including land and marine data)

Chair: Lalith Chandrapala

14:30-16:30 Country perspectives: **NMHS representatives**

16:30-17:00 Coffee Break

17:00-17:10 Centre for World Environmental History: **Vinita Damodaran**

17:10-17:20 Marine climate data and related issues: **Gudrun Rosenhagen**

17:20-17:30 UK DFID-Met Office data rescue project in Tanzania: **Aidan Green**

17:30-17:45 High quality long-term climate data sets project and initiatives: **Manola Brunet**

DAY 2: 22 April 2014

Parallel session A

Decision making and formulating policy with a focus on GFCS and related data requirements

Chair: **Joseph Mukabana**

09:00-09:20 International Climate Assessment and Data sets potential for GFCS in the region. **Omar Baddour** on behalf **Albert Klein Tank**

09:20-09:40 Progressing ACRE (Atmospheric Circulation Reconstruction over the Earth) in the region: **Rob Allan**

09:40-10:00 Marine Climate Data System of JCOMM: **Gudrun Rosenhagen**

10:00-10:20 International Environmental Data Rescue Organization **IEDRO**: **Teddy Allen**

10:20-10:30 Discussions

10:30-11:00

Parallel session B

Technical workshop on the analysis of climate data and climate indices

Lead: **Manola Brunet**

09:00-09:30 Climate Change indices and analysis of climate extremes, ETCCDI guidelines: **Manola Brunet**

09:30-10:00 Data recovery, needs, techniques and tools: **Philip Brohan**

10:00-10:30 Controlling data quality and homogeneity: **Manola Brunet**

Coffee Break

11:00-11:20 WMO efforts in data rescue and climate data management systems: **Omar Baddour**

11:20-11:40 An Integrated data rescue initiative for the Mediterranean Basin, **MEDARE**: **Manola Brunet**

11:40-12:00 IOC strategy for Climate Change Adaptation: **Jean-Paul Gaudechoux**

12:00-12:20 Discussion on Session A

12:20-12:30 Introduction to INDARE

12:30-14:00

11:00-11:30 Climate marine data and international data archives: **Gudrun Rosenhagen**

11:30-12:00 Application of the RClmDex to Quality Control daily temperature and precipitation data: **Alba Gilabert**

12:00-12:30 Preparation for hands-on session, data files: **Alba Gilabert and Manola Brunet**

Lunch Break

Panel Session:
Building consortium for accelerating Data Recovery in the Indian Ocean Basin

Moderator: **Rob Allan**

14:00-15:00 Moderator set the stage, panelists introduce briefly key issues

15:00-16:00 Discussions and recommendations on the consortium

16:00-16:30

Technical workshop on the analysis of climate data and climate indices (cont)

14:30-16:00 Hands-on session

Coffee Break

16:30-17:30 [Side event 1: update on SIDS conference](#)
Convener: **Filipe Lucio**

17:30-18:30 [Side meeting on AMCOMET](#)
Convener: **Joseph Mukabana**

16:30-18:30 Open discussion on challenges and opportunities for international expert collaboration

DAY 3: 23 April 2014**Plenary 2****Chair: Filipe Lucio**

09:00-10:30 Discussion on the INDARE implementation document

10:30-11:00 Coffee Break

11:00-12:30 Recommendations for implementing INDARE

12:30-14:00 Lunch Break

14:00-16:00 **Technical workshop on the analysis of climate data and climate indices (cont)**Side event 2: Information on Canada Project
Convener: **Ms Cecilia Tamara Avellan****Lead: Manola Brunet**14:00-14:30 Climate indices and climate change in the South West Indian Ocean
Raj Booneedy

14:30-16:00 Hands-on session

16:00-16:30 Coffee Break

16:30-18:30 Side event 2 (cont): Information on Canada Project

16:30-18:30 Hands-on session

DAY 4: 24 April 2014**Technical workshop on the analysis of climate data and climate indices - continuation****Lead: Manola Brunet**09:00-09:30 Overview of experiences in the analysis of climate extremes: **Manola Brunet**

09:30-10:30 Hands-on session

10:30-11:00 Coffee Break

11:00-12:30 Hands-on session

12:30-14:00 Lunch Break

14:00-16:00 Hands-on session

16:00-16:30 Coffee Break

16:30-17:30 Discussion on steps forward, indices, scientific paper and communication.

For more information, please contact:

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