

**WMO OMM**

World Meteorological Organization
Organisation météorologique mondiale
Organización Meteorológica Mundial
Всемирная метеорологическая организация
المنظمة العالمية للأرصاد الجوية
世界气象组织

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Annex: 1

Subject: WMO training workshop for Indian Ocean, 15–26 November 2021

Dear Sir/Madam,

I am pleased to inform you that the Climate Risk and Early Warning Systems (CREWS) mechanism, in close collaboration with the SERCOM Expert Team on Data Requirements for Climate Services (ET-DRC), is organizing – the World Meteorological Organization (WMO) Training Workshop for Indian Ocean countries on generating basic climate statistics, which will be held virtually via the ZOOM application, from 15 to 26 November 2021.

The training workshop will address key aspects of the National Meteorological and Hydrological Services' (NMHSs) basic climate data management and aggregation processes, thereby underpinning the NMHSs' capacities to contributing to and benefiting from WMO climate-related activities. These activities include the publication of WMO flagship products such as the State of the Climate reports, Climatological Standard Normals, etc. Such flagship products showcase the WMO Members capacities to, and expertise in, delivering world-class authoritative climate information and, in turn, have great potential to raise the visibility of the NMHSs.

Please find attached herewith a concept note, including the schedule for the training sessions (see [Annex](#)).

I am pleased to invite you to nominate one or two participants from your service to attend the workshop. Nominated participant(s) are requested to send their email address to wcdmp@wmo.int with **Instat** (*your country or territory*) in the subject line.

I should be grateful, if you could notify the WMO Secretariat on or before **8 November 2021**. An email confirming receipt of your notification will be sent, and the ZOOM details will be communicated to the nominated participants in due course.

I wish to thank you for your continued support to WMO activities.

Yours faithfully,

Dr Elena Manaenkova
for the Secretary-General

To: Permanent Representatives of Members with WMO (Bangladesh, Comoros, France, India, Indonesia, Kenya, Mauritius, Madagascar, Maldives, Mozambique, Myanmar, Oman, Pakistan, Seychelles, Sri Lanka, South Africa, United Republic of Tanzania, Yemen) (limited distribution)

cc: Regional Offices (Bahrain, Ethiopia, Kenya, Singapore)

WMO Training workshop on generating basic climate statistics

Note: The workshop is mainly funded by a CREWS SW-Indian Ocean project (beneficiary countries: Comoros, Mauritius, Madagascar, Mozambique, Seychelles) and co-funded by WMO to extend participation to La Reunion, Maldives, Sri Lanka, South Africa, Kenya, Tanzania, Yemen, Oman, Pakistan, Bangladesh, Myanmar, India and Indonesia. Members are expected to nominate one or two participants.

The workshop is intended to provide training on basic climate statistics, which are fundamental for Members' participation in WMO activities. It will introduce the open-source software package R-Instat, which has been extended recently to include functionality to support the calculation of Climatological Standard Normals, World Weather Records, National Climate Monitoring Products etc.

The workshop will be held in English with a possibility to ask questions in French, where appropriate (a French version of R-Instat will be made available). A handbook will be developed from the workshop concept to allow participants and other WMO Members to benefit from R-Instat including relevant tutorials and videos. R-Instat is closely linked to Climsoft and will be closely linked to OpenCDMS and collaborating CDMSs.

The meeting will be held via ZOOM, the possibility of French interpretation will be investigated for parts of the opening and feedback sessions.

The workshop will be conducted through six two-hour sessions stretched over two weeks (see draft work plan below).

Date	Session	Content	Resource persons
Monday 15 Nov. 2021 10.00–12.00 Geneva time	Opening, Introducing R-Instat	Scene setting including importance of standard climate datasets; Introduction to R-Instat	Roger Stern (University of Reading, UK), David Stern, Danny Parsons, (IDEAMS, UK); Peer Hechler (WMO); Members of WMO SERCOM Expert Team on Data Requirements for Climate Services (tbc)
Wednesday 17 Nov. 2021 10.00–12.00 Geneva time	A gallery of graphs	How to generate graphs and data visualizations	
Friday 19 Nov. 2021 10.00–12.00 Geneva time	Recovering and tidying climate data	Data rescue, data import, conversion into common formats ready for R-Instat analyses	
Monday 22 Nov. 2021 10.00–12.00 Geneva time	Taking stock and checking the data	Data inventory, quality control, homogenization	
Wednesday 24 Nov. 2021 10.00–12.00 Geneva time	Summarizing data and calculating standard products	Generation of summaries for trend and variability analyses, Climatological Standard Normals, World Weather Records, National Climate Monitoring Products	
Friday 26 Nov. 2021 10.00–12.00 Geneva time	Discussion and feedback Closure	Remaining questions, discussion of workshop content, suggestions for tutorials, videos, handbook, feedback from participants, WMO view including outlook	