

# Fifth Meeting of the EC Capacity Development Panel (CDP-5)



**WMO OMM**

World Meteorological Organization  
Organisation météorologique mondiale

Science & Innovation Department:  
update and report on Capacity Development

19 Sept 2022  
Jon Cox

# WMO Science & Innovation

- Science Innovation is host to three research programmes
  - World Climate Research Programme (WCRP)
  - World Weather Research Programme (WWRP)
  - Global Atmosphere Watch (GAW)
- Speaker intro
  - Joined WMO in Jan 22 as P3 scientific officer
  - Resource mobilisation lead SI Dept
  - CD/education/training secondary focus

# Summary: inputs to CDP-5 agenda

- Detailed inputs provided to ET on Cap Dev in WMO Tech Depts (agenda item 14, Thurs AM)
- SI focus on using resource mobilisation to drive capacity development
- Showcase examples of best practice and positive outcomes
- Interdisciplinary action and policy support to encourage civil society input for CD



# Capacity development and LTGs

- Specific focus area in the WMO's long term goal 3
- Also embedded across all SI strategic objectives
- The WMO Scientific Advisory Panel (SAP) and Research Board (RB) fully support importance of capacity development
- SI acts as enabler, supporting NMHSs to use research in policy and planning
- SI leads submission of research proposals focused on regional capacity development
  - EU Horizon call on impact forecasting and early warning systems in Med and north Africa

## FOCUS AREA/OUTCOME D:

A new generation of leadership in science fostered

### Capacity development

- Early career scientists and networks meaningfully engaged in programmes' activities & events
- Training on research methods on weather, climate, water and environmental topics organized
- Science education strengthened, academic communities better engaged, innovative educational tools implemented and support provided to Members and regions



# Research-to-operations to research

- Limited pull through hinders exchange between academia and operational actors (NMHSs)
  - seeking external collaborations helps NMHSs deliver capacity development
- Some examples of good practice
  - UK Met Office academic partnership
- Resource mobilisation is key
  - without funding, research activity is limited
  - external research funding is fundamental



# Research as a catalyst for Cap Dev

- Strategic realignment within WMO ongoing
  - New resource mobilisation strategy
- Hydrology Co-ordination Panel – mandate for SG letter to leaders of national research funders urging support for hydrology research
  - Letter approved and ready
  - Currently gathering database of recipients
  - Circulation expected well before the end of 2022
- Specific activities and funded projects in Research Programmes



# FG on AI for Natural Disaster Mgmt

- The WMO has taken a leading role in how AI can impact NDM and extreme event warnings
  - UNEP, ITU are also partners
- D/SI currently representing WMO at Global AI Summit in Riyadh
- WMO has set up new working group on educational materials
  - Specific cap dev remit (policy briefs, etc)
  - Chaired by Jon Cox

# World Weather Research Programme

Implementation Plan (2024-27) being finalised

WWRP will make society aware of the critical role of weather research and operations

- capacity building and training
- citizen science

WWRP will train the next generation in best practices, technologies, and comms strategies.

- workshops *designed with and for* forecasters and decision makers



# NCAR Advanced Study Programme Workshop on S2S Science (July 22)

- Cap dev for Early Career Scientists is key to support S2S related science
- Developing good course material
- Linking experts from academia and operational centers with graduate students and early career scientists to discuss predictions on S2S timescales

Capacity Development

Early Career scientists

# 7<sup>th</sup> Int workshop on Monsoon (IWM-7)

The International Workshop on Monsoons (IWM) is a major quadrennial symposia/workshops series

IWM-7 has two components:

- Online training workshop (Nov 2021)
- In person scientific workshop (March 2022, New Delhi, India)

Collaborators and organisers:

- India Met Dept, Ministry of Earth Sciences, Government of India
- WWRP Working Group on Tropical Meteorology Research (WGTMR)
- CLIVAR/GEWEX Monsoon Panel, WCRP

# Global Atmosphere Watch

- New GAW Implementation plan (IP) being developed by end 2022
  - strong resource mobilisation component
- Survey shows desire for cap dev funding
- The GAW IP includes several tools facilitating cap building and development
  - Specific ECR engagement, specialized training schools and workshops
  - Training programmes - GAW Training & Education Centre (GAWTEC)
  - GAWTEC trained >400 people (38 courses) in 20 years
  - Knowledge exchange re: operational measurements
  - Modeling/Data-related Intercomparison and Training

# GAW: outlook and future plans

- Develop/maintain database of cap dev efforts
- Use insights from GAW user survey to target new activities in 2024-27 IP
- Manage balance between wholly remote vs hybrid trainings
- ‘Closing the Capacity Gap’ is a core LTG
  - Improved liaison with WMO training centres, etc

# World Climate Research Programme

## WCRP's Core Projects are active in capacity building activities

- Scientific Steering Groups approve specific plans involving ECRs and Global South researchers
- Core Projects are also encouraged to develop proposals for cross-panel and project activities to enhance capacity building

### 2022 examples

Regional Training Workshop:  
Observing Coastal & Marginal Seas, W Indian Ocean  
(June 2022 Mozambique)

Summer School:  
Theory, Mechanisms & Modelling of Climate Dynamics:  
Tropical Oceans, ENSO and Teleconnections  
(July 2022 Italy)

CLIVAR-FIO Summer School:  
Ocean Macroturbulence & Its Role in Climate  
(Aug 2022 China)

Bootcamp: Arctic Processes in CMIP6 (Oct 2022 Denmark)

# WCRP: specific Cap Dev activities

- WCRP promotes training opportunities
  - short duration fellowships (e.g., CliC fellowship)
  - funding of ECR workshops organized by other communities that focus on regional capacity building in climate science.
- WCRP Academy is the research training advisory and coordination arm
  - promotes and advances lifelong learning and global equity in climate science training
- WCRP's Open Science Conference (Kigali, Oct 2023) will have a huge focus on promoting training and capacity building opportunities for the African region.
  - Wide range of side events
  - Symposium for Early and Mid-Career Researchers

# Thank you



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