



Met Office
Hadley Centre

Introduction and look back to Brasilia 2013

Richard Graham, Met Office Hadley Centre
Chair: CBS/CCI Expert Team on Operational Predictions from
Sub-seasonal to Long time-Scales (ET-OPSL)

WMO Workshop on Operational Climate Prediction, 9-11
November 2015, Pune, India



Workshops on Operational Climate Prediction

- Increased interaction between operational centres: GPCs, RCCs, NMHSs, RCOFs
- Increase communication between operational and research communities – guiding research
- Plan(s) of action to strengthen operational practice – improving climate services for members
- Workshop title broadened to reflect “all (climate) timescale” scope of GFCS

Science programme and organising task teams

- Arun Kumar (NOAA) – chair
- Richard Graham (Met Office)
- Andre Kamga (ACMAD)
- Sivananda Pai (IMD)
- Caio Coelho (CPTEC)
- Adrian Trotman (CIMH)
- Raizan Rahmat (MSS)
- Jean-Pierre Ceron

Logistics (WMO):

Maud Steiner (CCI)
Pascal Gomez (CBS)

Local Organising Committee (IITM):

Dr Suryachandra Rao and
Monsoon Mission Team

WMO secretariat

- Rupa Kumar Kolli , Anahit Hovespyan (CCI)
- Abdoulaye Harou, Alice Soares (CBS)

Objectives of this workshop

- Context setting: GFCS, Climate Services Information System; Brasilia 2013
- Review and discuss recent prediction research advances – sub-seasonal to decadal prediction
- Review support for operational climate prediction: infrastructure and products/tools
 - GPCs, Lead Centres, RCCs, RCOFs, other initiatives
Global Seasonal Climate Update (GSCU), Climate Services Toolkit
- Share practices and experience in operational seasonal forecasting (questionnaire) – **Session 4 talks – please focus on forecast procedures**

Expected outputs work of breakout groups

- **Guidance document for preparing operational seasonal forecasts:** standard recommended procedures, best practices etc.
- **How to further shape/develop the Global Seasonal Climate Update** (review the September-October-November 2015 issue)
- **How to further shape/develop the Climate Services Toolkit**
- Recommendations go to ET-OPSLS (first quarter 2016) and other relevant WMO Teams – **please contribute to these developing products!**

WMO workshop on Operational Long-range Forecasting: GPCs and RCCs in support of NMHSs and RCOFs

<https://www.wmo.int/pages/prog/www/CBS-Reports/DPFS-index.html>



25-27 November 2013, INMET, Brasilia, Brazil

Aim: identify priorities for strengthened cooperation and enhanced exchange of data, methods and tools between Global Producing Centres of Long-Range Forecasts (GPCs) and Regional Climate Centres (RCCs), and to develop a plan of action to realise improved operational practice, including in support of NMHSs.

Identified weaknesses in support – started actions to remedy **bold = addressed in current workshop**

1. Lack of ready access to GPC hindcast and forecast data products in the data format required
2. Insufficient information on the regional skill levels of the GPCs' prediction systems (to make informed use)
3. **Lack of access to tools for RCCs to process GPC output (calibration, combination, downscaling, verification)**
4. **Lack of guidance, training and technical manuals on the interpretation of GPC output in preparation of regional forecasts**
5. The need for earlier forecast issue time and longer-lead forecasts from the LC-LRFMME
6. The need for an expanded range of forecast products from GPCs, particularly for key climate indices such as the IOD
7. **The need for mechanisms/forums to strengthen GPC-RCC interaction and to facilitate the sharing of operational experience**
8. **The need for greater interaction between research and operational communities (to accelerate research on aspects of interest to operations)**

Progress (1)

- **All recommendations were tabled at the March 2014 meeting of the CBS/CCI Expert Team on OPSLS**
- 1. Improved access to data.**
 - ET Task Team formed to review and look at e.g. open data platforms.
 - 2. Improved GPC verification information**
 - Centralised approach to verification agreed - bringing greater consistency to verification products
 - See products in GSCU (similar to become available on LC-LRFMME website)
 - 3. Lack of access to tools.**
 - Inventory of downscaling tools used by GPCs compiled and provided to the ET-RCCs – facilitate/prompt 1-2-1 collaborations
 - 4. Lack of guidance, training, technical manuals**
 - This workshop

Progress (2)

5. Earlier issue, longer-lead LC-LRFMME forecasts

- Earlier issuance: Raised at ET-OPSLS , but issue time dependent on GPC issue time
- Longer lead: LC-LRFMME website now includes interactive lead-time selection

6. Expanded range of forecast products

- New mandatory SST indices: Nino regions, IOD, tropical Atlantic
- New highly-recommended “extremes” products: temperature and rainfall

7. Mechanisms to strengthen GPC-RCC interaction

- Regular workshops on **Operational Climate Prediction** now supported by WMO
- Experience in generating long-range forecasts to be shared this workshop.

8. Greater interaction research and operational communities – good progress

- Working Group on Seasonal to Interannual Prediction (WGSIP) joining operational community at this workshop

Programme

Note: different format this year

Day 1

- **Session 1:** broad context - and overview
- **Session 2:** research overview (activities of WGSIP)
- **Session 3:** WMO infrastructure for long-range prediction and new EU Copernicus programme

Days
1&2

- **Session 4:** Current practices for producing operational long-range forecasts – share experience (questionnaire)

Day 2

- **Break out 1:** Pathways to improve the Global Seasonal Climate Update (GSCU)
- **Break out 2:** Requirements for the Climate Services Toolkit

Day 3

- **Break out 3:** Develop framework for a guidance document on preparing regional/national long-range predictions
- **Break out summary and workshop recommendations**

Thank you

Any questions?
richard.graham@metoffice.gov.uk

