

IPET-OPSLS Updates

- Some idea for enhancing operation-research link -



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Outline

- Overview of IPET-OPSLS
- Recent milestones
- Research-Operation collaborations
 - Open operational data for research
 - Joint task group on closing the gap between research and operations
 - Support on regional climate activity (RCOF/RCC)
- Open discussion: Any requests from WGSIP to IPET-OPSLS?

Overview of IPET-OPSLS (1)

CBS-CCI Inter-Programme Expert Team on Operational Predictions from Sub-seasonal to Longer-time Scales (IPET-OPSLS) is a WMO expert team on operational subseasonal-to-decadal predictions.

Co-chairs: Arun Kumar, Caio Coelho

Core Members: David Jones, Cédric van Meerbeeck, Bertrand Denis, Peiqun Zhang, Laura Ferranti, Jean-Pierre Ceron, Jean-Michel Soubeyroux, Kristina Fröhlich, Yuhei Takaya, Nicolas Fauchereau, Sookyoung Nam, Vladimir Kryjov, Kelebogile Mathole, Jeffery Knight

Last face-to-face meeting: Barcelona, Spain, June 2018

Overview of IPET-OPSLs (2)

Terms of Reference:

- (a) On the basis of requirements from Regional Climate Centres (RCCs), Regional Climate Outlook Forums (RCOFs) and NMHSs, and in the context of the Climate Services Information System (CSIS) of the Global Framework for Climate Services (GFCs), guide future development, outputs including, for example, the GSCU and coordination of components in the production of LRF. The components include Global Producing Centres (GPCs), Lead Centres for Long-range Forecast Multi-model Ensembles (LC-LRFMME), the Lead Centre for the Standardized Verification System for Long-range Forecasts (LC-SVSLRF) and other relevant bodies generating and providing LRF products
- (b) Support CCI and CBS to collaboratively promote the use of GPC and LC forecast and verification products by RCCs, RCOFs and NMHSs, develop interpretation guidance to facilitate their use, and encourage feedback on usefulness and application;
- (c) Support CBS in the implementation of a seamless GDPFS;
- (d) Report on production, access, dissemination and exchange of LRF products and provide recommendations for future consideration and adoption by CAS, CCI, CBS, WCRP and other appropriate bodies;
- (e) In consultation with relevant experts in CAS and CCI and with the CBS Expert Team on Operational Weather Forecasting Process and Support (ET-OWFPS), review developments in verification scores and practices with a view to updating the Standardized Verification System for Long-range Forecasts (SVSLRF)
- (f) Assess applications for GPC status against the designation criteria and make recommendations on designation to CBS;
- (g) Review the rules regarding user access to GPC and LC-LRFMME forecasts products;
- (h) Review the status of sub-seasonal forecasting activities, and promote the availability and exchange of sub-seasonal forecasts and verification products;
- (i) In close collaboration with WCRP, promote international cooperation and research on initialized predictions for timescales longer than seasonal and report on potential for operational predictions to CBS and CCI;
- (j) Review the Manual on the GDPFS (WMO-No. 485) and propose updates as necessary concerning extended and long-range forecasts.

Recent milestones

- **Completion of the "Guidance on Operational Practices for Objective Seasonal Forecasting"**

IPET-OPSLS acknowledges WGSIP's contributions:

Bill M. as a contributing author; WGSIP input on the initial formulation of Table of Contents and reviews.

- **Designation of LC-ADCP and GPCs-ADCP**

IPET-OPSLS acknowledges the WGSIP community for contributions to reaching this milestone.

- **OCP-2 and S2D meetings**

Collaboration across WGSIP and OPSLS in framing these meetings.

R-O link (1): Open operational data for research

More open operational seasonal forecast data

- **Graphical products are now open**

Comments from WGSIP on the content and forecast performance will be useful.

LC-LRFMME: <https://www.wmolc.org/>

- **Availability of hindcast data from LC-LRFMME**

When LC-LRFMME data access policy has been revised and hindcast data from some GPCs is freely available, inform WGSIP of the opening of hindcast data;

(WMO sent a letter to ask GPCs to allow hindcast data distribution from LC.)

Then WGSIP can provide the link to LC-LRFMME data in CHFP website.

Two issues noted at Barcelona meeting.

(a) The duplication in data provision to the CHFP by LC-LRFMME and Copernicus, for example. A related question was could the LC-LRFMME be the vehicle for complementing the CHFP archive (e.g., for serving hindcasts from those GPCs-LRF that are not in the CHFP archive or for which model has been updated)?

(b) Not all GPC models are part of CHFP archive. Missing from the potential contributors are: Pretoria, CPTec, Moscow, Seoul and Beijing, and cases where the hindcasts from the GPCs that have updated their forecast systems

* Data format issue (GRIB&netCDF) was raised and recommendation was made at Cg-18.

R-O link (2): Joint task group on closing the gap between research and operations

Strengthen and formalize WGSIP-IPET-OPSLS link

Several times we have discussed forming a "joint task group on closing the gap between research and operations" and should put that into action. (Recommended at the Barcelona IPET-OIPSLS meeting (2018).) This concept was also presented by Bill Merryfield to the WCRP JSC meeting in April 2018.

One approach could be to pick a specific issue on advancing operational infrastructure and (a) summarizing what is the current state of understanding (e.g., on constructing multi-model ensembles), (b) a set of recommendations on path forward. Issues concerning operations can be picked from the research requirements document we put together.

R-O link (2): Joint task group on closing the gap between research and operations

A list of potential research requirements

was submitted from the Chair and Co-Chair of the IPET-OPSLS to the Co-Chairs of the WGSIP in September 2017. The document was discussed in the WGSIP session during the “Pan-WCRP Modelling Groups” meeting in October 2017, Exeter, UK. Some members of Team have already provided comments/suggestions.

Document link:

http://www.wmo.int/pages/prog/www/DPFS/Meetings/ET-OPSLS_Barcelona2018/documents/Doc-7-3_O2R.doc

(WGSIP response also included)

- **Periodical coordinated inter-comparison of S2IP**
This is also recommended in the TPOS 2020. Second Report (in revision.)
- **Ensemble configuration of S2S forecast system**
including ensemble technique, requirements of the observation.
- **Development of S2S forecast products**
- **Development of S2S verification products**

A WGSIP perspective on above issues will be good to have in guiding the future evolution of the S2S operational forecasting infrastructure.

R-O link (3): Support on regional climate activity (RCOF/RCC)

Further discussion between WGSIP and IPET-OPSLS is needed to identify an effective pathway that link the research requirements from RCCs & RCOFs to WGSIP.

- RCOF Review 2017 recommended:
“In collaboration with CCI/CBS Inter-Programme Expert Team on Regional Climate Activities (IPET-RCA), develop a mechanism whereby research needs from RCCs and RCOFs on prediction aspects can be communicated to WCRP/WGSIP (IPET-OPSLS Co-Chairs).”
- As part of the recommendation from the guidance document, as RCOF practices move towards objective method, help/recommendations from WGSIP will be useful (or needed) on techniques for bias correction, calibration etc.
- Establishing a coordination mechanism between RCOFs and the research (WGSIP) is important for sustained engagement of the research community.

Any requests from WGSIP to IPET-OPSLS

- Any wish list from WGSIP for IPET-OPSLS will be good to have 😊.

Thanks again for continuous WGSIP's support on the operation.