



SWIOCOF-10

SWIOCOF evolutions and WMO initiative

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SWIOCOF

On-line PreCOF

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The Guidance document

- ***Guidance on Operational Practices for Objective Seasonal Forecasting*** prepared under the auspices of the World Meteorological Organization Commission for Climatology (CCI) and Commission for Basic Systems (CBS), through concerted efforts by a group of around 10 authors.
- Writeshop in December 2018,
- External review from around 20 experts,
- Incorporation of comments, suggestions, corrections by April 2019 and final draft ready for publication end of spring 2019
- Final version published and disseminated

The content

■ 9 chapters dedicated to seasonal forecast + an executive summary,

- Introduction to seasonal forecast
- Components of a seasonal forecasting system,
- Seasonal forecast products
- Guidance on good practices for developing objective seasonal forecasts,
- WMO Infrastructure and resources for seasonal forecasts
- Other sources of seasonal prediction products
- Other aspects of seasonal prediction and variability
- Examples of good practices followed at NMHS, RCCs and RCOFs
- Future prospects for seasonal and other long range forecasts
- References, Resources, Glossary, Acronyms,

Chapter 4 : Guidance on good practices for developing objective seasonal forecasts

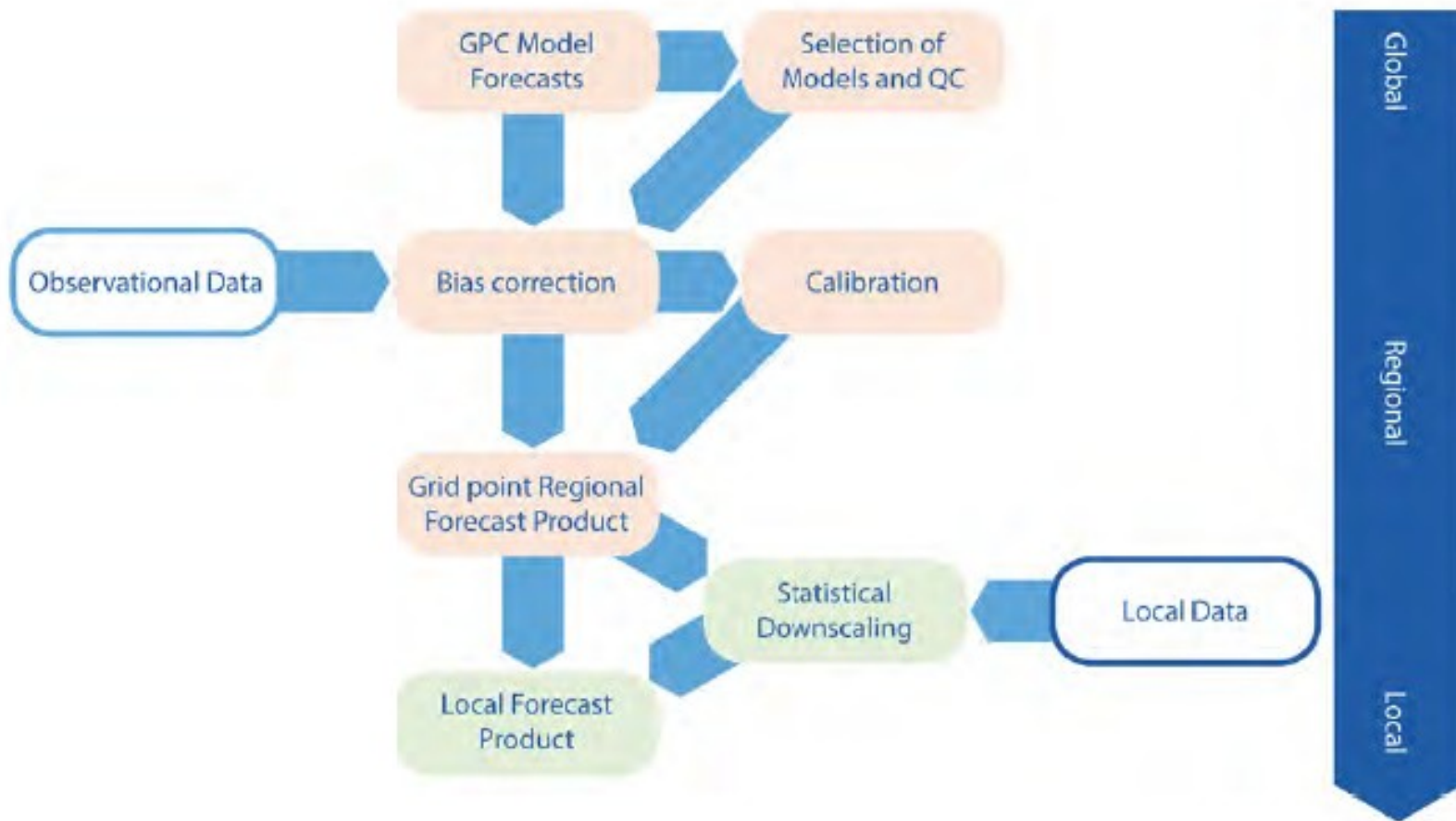


Figure 4.7: An outline of the recommended procedure for developing seasonal forecasts at regional and national level starting from the forecasts from GPCs-LRFs. The first step in the forecast development process is the choice of GPCs-LRF models that will be available in a consistent manner, and if desired,

The content

■ 10 main recommendations,

- Follow a traceable, reproducible, and well-documented procedure (including model selection, bias correction, calibration and statistical downscaling) that is amenable to assessments of forecast quality (verification).
- Use **dynamical climate models**, including multi-model ensembles as the primary basis for seasonal forecasts.
- Establish and maintain observational databases (including databases associated with reanalysis and other blended analysis products) of adequate quality, length of record and spatial resolution for verification, bias correction, calibration and monitoring drivers of seasonal predictability.
- Identify and monitor **drivers of predictable climate variability** and assess their representation and prediction skill in models.

The content

■ 10 main recommendations,

- **Ensure forecasts are verified** according to established standards, keep archives of past forecasts, and conduct post-season assessments.
- Provide forecast information together with historical performance (for example, skill and reliability).
- Use clear and non-technical language for the communication of seasonal forecasts, including emphasizing the probabilistic nature of seasonal forecasts and inherent uncertainty.
- Collaborate across regions influenced by the same climate drivers in forecast production through mechanisms such as RCOFs.

The content

■ 10 main recommendations,

- Provide seasonal forecasts as well as regular updates on a fixed operational schedule tailored to the applicable decision-making context.
- Establish user feedback and product upgrade mechanisms and support co-production of tailored products.

The Intra-ACP program

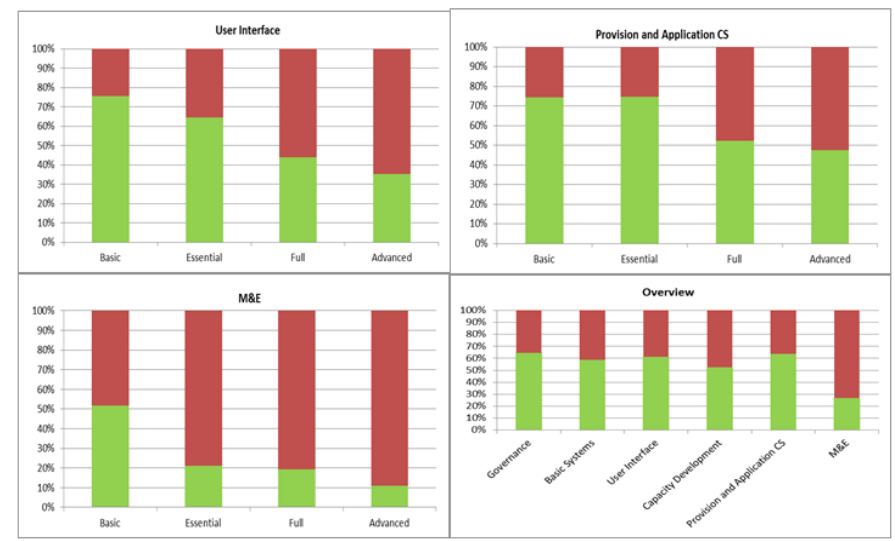
■ Intra ACP Program (ClimSA)

- Program EU funded dedicated to climate information services value chain
- 7 ACP sub-regions (5 in Africa including SWIO, Caribbean and Pacific Islands)
- 5 major output :
 - **Output 1:** supports a structured interaction among the users, researchers and CS providers in ACP regions by contributing to the development of UIPs.
 - **Output 2:** addresses the GFCS Climate Services Information System (CSIS) component especially targeting the provision of climate services at regional and national scales.
 - **Output 3:** addresses the GFCS components Observations and Monitoring; and Research, Modelling and Prediction.
 - **Output 4:** supports the enhancement of the capacity of ACP regions to generate and apply climate information and products tailored to their needs
 - **Output 5:** supports the enhancement of climate informed decision-making and mainstreaming of climate services into processes at the regional and national levels.

The content

Climate Services status in ACP regions

– Climate services functional capacities as indicated by ACP countries in WMO administered checklist



The Intra-ACP program

■ The actions

- Output 1 : Structured interaction between the users, researchers and climate services providers in ACP regions through a User Interface Platforms
 - Activity 1.1: Conduct overall coordination for the conception and development of the UIP
 - Activity 1.2 : The AUC, African RECs and RCCs, CIMH and SPREP establish/strengthen and promote the use of regional User Interface Platforms for selected priority sector(s)
 - Activity 1.3 : The African RECs and RCCs, CIMH, and SPREP establish/strengthen and promote the use of national User Interface Platforms (in 7 countries in total, one per sub-region) for selected priority sectors

The Intra-ACP program

■ The actions

- Output 2 : Provision of climate services at Regional and National level is effectively guaranteed and secured and Climate Service Information Systems (CSIS) are strengthened
 - Activity 2.1: Enhance RCC capacities to produce, deliver and improve climate services through CSIS at regional level
 - Activity 2.2 : Facilitate implementation and coordination of the CSIS (in collaboration with JRC and its Climate Station)
 - Activity 2.4 : Establish and improve Climate Data Management Systems (CDMS)
 - Activity 2.6 : Development and Demonstration of a National Climate Service production chain

The Intra-ACP program

■ The actions

- Output 3 : Access to Climate Information improved by strengthening Observation and Monitoring systems as well as Research, Modeling and Prediction
 - Activity 3.1: Assess impact of existing gaps in climate observing networks on the produced climate services by this programme and invest in ground infrastructure to improve such services
 - Activity 3.3 : Define and consolidate requirements for user driven services and provide feedback to international data providers for all sub-regions
 - Activity 3.4 : Ensure RCCs have operational access to existing climate information produced at national level through NMHSs, including data rescue (recovery and digitalisation)
 - Activity 3.5 : Provide methods and tools for observational datasets and model inter-comparison at the regional scale to RCCs to assess which datasets are fit-for-purpose for their region

The Intra-ACP program

■ The actions

- Output 4 : Capacity of ACP regions is enhanced to generate and apply climate information and products relevant to their particular concerns
 - Activity 4.1 Develop and implement capacity building plan on strategic and thematic issues at ACP, regional, sub-regional and national levels to augment the capacity of stakeholders in every step of the climate services value chain in line with the Competency Framework for Climate Services
 - Activity 4.2 : Organize Intra-ACP Climate Services ACP yearly fora
 - Activity 4.3 Set up a dedicated Information platform/Portal to exchange best practice, make information available for specific need and encourage cooperation between the regions
 - Activity 4.4: Set up a master scholarship programme for ACP students

The Intra-ACP program

■ The actions

- Output 5 : Climate-informed decision-making is enhanced in ACP regions, gap is bridged between climate science and policy for improved mainstreaming of climate services into policy processes at regional and national levels
 - Activity 5.1: Communications and knowledge management for effective climate services.
 - Activity 5.2 : Mainstream climate services into national and regional policies and programmes (not funded).
 - Activity 5.3 : Bring added-value to climate services through integration of socio-economic elements, analytical components and visualization tools. (thanks to 4.2 achievements/output)

The Intra-ACP program

Overview of Deliverables

Output 1

- Assessment Reports, Guideline for trainings, Training workshops, NFCS, Socio economic benefits, Risk assessment, Communication material,

Output 2

- Reports, Training workshops, Action plans for RCCs, Guideline on CSIS-R, CST platform operationalized, improved CDMS, NFCS production chain

Output 3

- Strategy and action plan to fill data gaps, Improved data availability at RCC level, Trainings, **Regional specific guidance for the production of objective seasonal forecast**, associated improved CST support

The Intra-ACP program

Overview of Deliverables

Output 4

- Capacity Building strategy and Action plan, Knowledge products, yearly fora, Knowledge management platform/portal, potential collaboration with WMO Fellowship programme,

Output 5

- Funds for communication and awareness raising activities, Funds to participate to relevant international conferences (COP, UNFCCC, Regional conferences ...)

Activity 3.5

■ Regional specific guidance for the production of objective seasonal forecasts

- Report available for the SWIO region : dissemination done by WMO secretariat to IOC at summer 2021
- Main content
 - Purpose and scope of the guidance
 - Current status of the RCOF
 - Analysis of limitation, needs and gaps (with respect of the production of objective seasonal forecast)
 - Development of the regional-specific guidance
 - Recap of Key recommendations
 - Executive summary

Activity 3.5

■ Recommendations

4. Development of practical regional-specific guidance for operational production of Objective Seasonal Forecasts
 - 4.1 Data
 - 4.2 Model selection and MME
 - 4.3 Operations
 - 4.4 Methods and Tools
 - 4.5 Processes (including traceability and documentation)
 - 4.6 User support
 - 4.7 Regional organization (and synergies)
 - 4.8 Capacity Building and training
 - 4.9 R&D
 - 4.10 Sustainability

Activity 3.5

Overview of the Key recommendations

More than 30 recommendations

- 3 about data, 4 about models, 6 about operations, 8 on Methods and Tools, 2 on the processes, 4 on the regional organisation, 3 about CB and trainings, 5 about R&D activities

Highlight of the recommendations

- Ensure the success of the implementation of improved operations.
- Build and provide a more refined regional dataset (in term of space scale) by using ERA5 or other potentially useful data initiative.
- Implement one more model from C3S and from SAWS as well.
- Improve the multi parameter model composition and its documentation (for individual models)
- Provide the scores corresponding to the regional forecast
- ...

Activity 3.5

Overview of the Key recommendations

Highlight of the recommendations

- Start to build a simple MME based on existing used models (e.g. equal weighting) and investigate other softwares which compute already some MME composition.
- Explicit the followed processes (see list) and prepare the associated documentation
- Strengthen the African regional collaboration
- Clarify the regional governance and decision body
- Investigate the potential need for a RCC

RCC issues (Output 2)

- WMO should propose a scoping meeting end of October/beginning of November to discuss this topic.
- A new consultancy should be provided to SWIO for RCC implementation and improvements (in the frame of activity 2.1)



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