



National Climate Outlook Forums and National Climate Forums

Concept Note

Background

A climate service provides “climate information in a way that assists decision-making by individuals and organizations” (WMO, 2014)¹. The service component involves appropriate engagement, an effective access mechanism and responsiveness to user needs. Such services typically generate and provide contextualized information on past, present and future climate and its impacts on natural and human systems, and apply that information for decision-making at all levels of society.

National Meteorological and Hydrological Services (NMHS), as recognized in the Convention of the World Meteorological Organization (WMO), are a fundamental part of the national infrastructure and play an important role in supporting vital functions of governments. NMHSs provide climate and hydrological information products to enable key economic sectors such as agriculture, fisheries, water resources, forestry and health to anticipate, prepare and respond to climate anomalies and extreme events. Severe weather forecasts with one to three days lead-time are useful in responding to hazards to minimize the loss of assets and lives. Operational climate predictions made months up to a season in advance are useful in contingency planning.

For climate predictions to be useful, they need to be assimilated into institutional systems that connect to decision contexts and community level response. The main challenge is to customize information so that it is relevant to the climate sensitive points of the users’ decision-making process. This requires a good understanding of the needs and requirements of these users. Undoubtedly, sustained dialogue to tailor, interpret, translate and communicate probabilistic science based predictions (seasonal forecasts) in decision-oriented formats would enhance climate services. Mechanisms and projects aimed at creating and facilitating these systemic linkages between climate information producers and users can contribute significantly towards effectively communicating and utilizing climate services.

Regional Climate Outlook Forums (RCOFs) play an important role in bringing different forecasting groups together to facilitate the assessment of available seasonal predictions and the development of consensus-based outlooks for the region of interest. Usually, such forums also provide opportunities for forecast providers to interact with forecast users with the aim of communicating better the content and uncertainties inherent within seasonal predictions. The forums also provide an opportunity for forecasters to better understand the specific variables or their combinations affecting user outcomes and to develop tailored products to support decision-making by key stakeholder groups. There is clearly merit in extending this concept to the national level by establishing operational periodic National Climate Outlook Forums (NCOFs),

¹ WMO, 2014. Implementation Plan of the Global Framework for Climate Services ;
http://www.wmo.int/gfcs/sites/default/files/implementation-plan/GFCS-IMPLEMENTATION-PLAN-FINAL-14211_en.pdf

or more generally National Climate Forums (NCFs). Indeed some countries already conduct such forums on a regular or irregular basis. Some are confined to developing the consensus forecast while others extend their reach into the user communities. Although the nature of NCOFs will likely vary significantly from one country to another, some general concepts are provided here. More detailed guidelines for conducting NCOFs need to be developed, including advice on how best to incorporate user engagement segments.

The Seventeenth session of the World Meteorological Congress (Cg-17), while approving the recommendation of the Sixteenth session of the Commission for Climatology (CCI-16) on NCOFs/NCFs, urged Members to foster partnerships and collaborations between NMHSs and national user groups, through NCOFs and NCFs or other national user-focused mechanisms.

Concept and Scope

WMO has been fostering the implementation of NCOFs that serve as national platforms for regular dialogue among stakeholders seeking improved societal outcomes associated with natural hazards, climate variability, extremes, and change. Such a dialogue process involves the continuous cycle of forecast generation, dissemination, application, and evaluation of application results. It also links the weather and climate information generated by NMHSs with stakeholder decision-making processes to improve the application of climate information, particularly seasonal climate outlooks.

In order to promote more flexibility and dialogue for the design of tailored climate information generally, including data, monitoring, prediction and projection, the NCOF concept can be expanded beyond the “climate outlook” context through NCFs. NCOFs and NCFs provide an essential mechanism for promoting inter-agency coordination and regular multi-stakeholder dialogue between information providers and users at the national level, and therefore could also be viewed as effective mechanisms for national implementation of both the User Interface Platform (UIP) and Capacity Development pillars of the Global Framework for Climate Services (GFCS). Offering excellent opportunities for NMHSs to interact with other stakeholders, NCOFs and NCFs have been included in the GFCS Implementation Plan.

NCOFs, as meetings of experts, will provide technical improvements on the use of seasonal forecasts in sectors by defining impact calibration procedures that would be reviewed and validated in the next NCOF session.

NCFs would be the institutional framework for consolidating fruitful cooperation between climate services deliverers and institutional information users, similar to how the “Groupes de Travail Pluridisciplinaire” were working for decades in Western African countries focusing on food security. The challenge is to succeed in scheduling and performing regular meetings with institutions and sectors, bearing in mind that climate services providers must deliver services for the agriculture/food security, water, energy, health and disaster risk reduction sectors effectively and efficiently.

NCOFs could identify and support the development of tools that automate seasonal forecast delivery to sectors based on specific impacts observed, and define validation methods.

Vision and Objectives

NCOFs facilitate the provision of standardized climate products based on high quality climate information from Global Production Centers (GPCs), Regional Climate Centers (RCCs) and Regional Climate Outlook Forums (RCOFs) at relevant timescales at the national level. The NCOF process is also expected to help communicate the outlooks along with the associated uncertainties in a consistent and effective manner. The

sustained interaction enabled by NCOFs would ultimately lead to a risk management approach that makes use of probabilistic forecasts building resilience in climate-sensitive sectors.

NCOFs/NCFs, and/or similar activities being conducted in many countries around the world, are typically hosted by NMHSs coinciding with key seasons, e.g., in advance of the monsoon or rainy season.

The emphasis of these one- or two-day events is to promote the integration of climate information into decision making processes, including identifying measures that can be taken by the stakeholders to mitigate potentially negative climate impacts and obtain better climate-related outcomes.

The overarching objectives of these forums are to:

- Identify the specific climatic factors affecting user outcomes (e.g., streamflow, soil moisture, frost, rainfall deficiency, heatwaves, exceedance of key thresholds, etc.);
- Co-design tailored products to address identified decision-making needs;
- Ensure that climate information products, including their uncertainties and limitations, are regularly communicated, interpreted and understood by users;
- Discuss user views and obtain feedback for improvement of products and their access;
- Provide an institutional platform for understanding risks and opportunities of past, current and future climate; and for inter-agency coordination of policies, sectoral plans and programs linked to potential impacts of hydro-meteorological hazards;
- Evolve a culture of working together through joint climate information interpretation sessions for managing risks in various climate-sensitive sectors, like agriculture, irrigation, disaster risk reduction and health.

Products available on the weather time scales (up to 10 days) may also be considered as part of the NCOF/NCF proceedings, as many users often refer to weather and climate information in an interchangeable manner – this is an opportunity for the NMHSs to showcase all their products in a seamless manner to the public and raise awareness on their strengths and limitations, thereby managing expectations.

NCOFs/NCFs should be part of a continuous cycle of climate information generation, dissemination, application, and evaluation of application results, with a potential to scale down into sub-national levels reaching out to communities that act upon and benefit from climate information and services.

Expected Outcomes

The main expected outcomes of NCOFs/NCFs include:

- Standardized and tailored climate information and products, including sub-seasonal/seasonal outlooks;
- A regular platform for communication with users and for obtaining their feedback on the usefulness of products and the level of understanding;
- Improved understanding by users of the information communicated by NMHSs;
- Improved understanding of the users' needs in terms of the way information is presented and communicated (formats, standards, visual interpretation, etc.).

Examples include farmers' ability to better prepare for potential wet or dry spells in the upcoming cropping season; better understanding of climate signals by agricultural extension officers to better assist affected farmers; establishment of the links between climate and occurrences of diseases for improved preparedness; and enhanced awareness of disaster risk managers to potential drought, flood or fire events that may occur more frequently in the upcoming season given the climate conditions.

More importantly, these forums give stakeholders the chance to express their views and needs to the NMHS, which can then be taken up on an individual basis. More detailed projects can be formulated from this point

forward. These forums significantly enhance the visibility and the credibility of NMHSs in the national context, while helping manage user expectations and furnishing real solutions.

Structure and Activities

These stakeholder workshops usually follow a programme as outlined below:

- i. Analysis and discussion of current climate, including, inter alia, the precipitation and temperature conditions, based on national climate monitoring products;
- ii. Review and evaluation of the performance of the seasonal forecast issued in the previous season;
- iii. Report of the actions taken by user agencies;
- iv. Delivery of the seasonal climate outlook along with communication of the associated uncertainties, and discussion of potential impacts and preparedness measures to be undertaken;
- v. Provision of updates climate outlooks during the course of the season, and highlighting the need for users to appropriately take them into account;
- vi. Identification of areas for improvement and actions to address gaps in preparation for the coming season, based on the feedback from users on their needs and requirements;
- vii. Special topics and current issues of interest (e.g., climate change and its impacts at the national level) may be also discussed.

Timing, Duration, Frequency

NCOFs are usually held on a regular basis once or twice per year prior to the seasons that are critical to socio-economic sectors, such as rainy or dry seasons. Depending on users' requirements, there could be additional sector-focused sessions.

An "NCOF Core Group" could be formed, and in consultation with this group, NCOF/NCF sessions may be convened during an appropriate month of the year, to give enough lead-time for preparedness and contingency measures. It is desirable that a fixed date range is used to convene NCOF sessions every year, so that the event becomes an integral part of the standard decision-making cycle of all the relevant stakeholders. A post-season verification may also be held with provisions for forecast delivery and application for the next season.

The duration of the NCOF can range from a half day to three days depending on the national context, requirements and stakeholder needs. Typically, a two-day duration has been found to be adequate in most country circumstances for the main NCOF event. The NCOF sessions could even be extensions of typical pre-season governmental or other forms of typical pre-season consultations that may be already taking place in some countries.

It is advisable to schedule NCOFs soon after the respective RCOFs sessions for the region. However, the timing of the RCOFs should not hinder conducting NCOFs, which are essentially stakeholder-driven processes at the country level.

Separate meetings with high-level officials may happen on a regular basis (once every two years) to obtain buy-in and allow for changes at the policy level. Willingness to use products exists at the technical level, but is often constrained by government level processes or policies.

Participation

The NCOF sessions involve official representatives from various governmental and non-governmental agencies, academic institutions, and international donors/partner organizations. All national counterparts are invited primarily from the five priority areas of the GFCS, namely Agriculture and Food Security, Water, Health,

Energy, and Disaster Risk Reduction, as well as from other sectors depending on countries' specifics and priorities. Agricultural Extension Officers often bring along farmers to obtain the climate information first hand and to become leaders in their communities. It is advisable to keep NCOFs open to all interested organizations that support the objectives of rendering climate services. Attendance varies from country to country but may reach up to 60-100 people. In the initial stages of introducing the NCOF concept to a given country, it is also desirable to facilitate the participation of international experts (e.g., WMO experts) who can provide the generic guidance to ensure the application of the required technical standards.

Monitoring and Evaluation

Verification of past forecasts and presentation of these results to the stakeholders should take place on a regular basis to increase confidence and build trust in the capacities of the NMHS. Deviations need to be explained/interpreted in easy, non-technical terms.

Assessment of how products were used in the past season and determination of ways to enhance service delivery are also important to support the continual improvement of the NCOF process in a user-targeted manner. This includes revising the way in which products are delivered to stakeholders (i.e. email to a focal point or to all stakeholders, placing of outlooks in print media, use of social media, etc.).

Funding and Self-sustaining Process

Often it has been a challenge to mobilize resources for RCOFs, basically because of involvement of a large number of participants from different countries, which imposes high costs for international travels. Meanwhile, NCOFs being a national event could be approached on the voluntary basis with contributions from participating institutions, generally in-kind from the beginning. Some external funds could be committed for initial activities when a country project is being implemented, but national managers have to be aware that is a "national" process needing "national" commitment for funds. In principle, countries may not need to have a specific budget to conduct NCOFs, but rather strong interest and a good will from institutions to contribute in-kind, with very modest budgetary support.

National Climate Forums need initially legislation support and most of it could be provided through the implementation of the National Framework of Climate Services. After that, inter-institutional agreements to define NCF Terms of Reference, Focal Points and deliverables schedule would be set. Meetings could be conveyed as physical meetings, or combined remote with face-to-face sessions. If all participating institutions are in the same city, meetings could be performed more frequent on a regular basis, e.g. monthly, or quarterly. Separate sessions for different sectors could be envisaged once the general procedures set up.