COMMISSION FOR HYDROLOGY e-FORUM DISCUSSION

HOW CHy CAN CONTRIBUTE TO THE GLOBAL FRAMEWORK FOR CLIMATE SERVICES

Purpose:

To provide the members of CHy, in preparation for the 14th session of the Commission for Hydrology in Geneva, Switzerland, from 6-14 November 2012, with information on the Global Framework for Climate Services (GFCS) and initiate a discussion on how CHy can contribute to the GFCS during the next intersessional period.

Background:

The GFCS has been identified as one of the key priority areas for the WMO by the 16th Congress and it will be essential for CHy to decide at its 14th session how it may be best able to contribute to the implementation of the GFCS.

This document gives some overview information on the GFCS as a background to an e-Forum discussion and to further debate at CHy-14.

The GFCS was initiated as one of the outcomes of the World Climate Conference-3 (WCC-3) <u>http://www.wmo.int/wcc3/</u> held in Geneva in mid 2009. In essence it is seen as a framework for closing gaps in the provision of existing information and services between producers and potential users.

Its primary goal is to ensure the greater availability of, access to, and use of climate services for all countries and a wide range of users, of whom the water sector (including hydrologists) is one major key group. It aims to enhance the availability of climate information and services needed to plan ahead and make sustainable management decisions and it is concerned particularly with communities which are most vulnerable to climate variability and change.

Since 2009 significant advances have been made in definition of the concept and principles of the GFCS, the possible governance structure and the ways in which the framework may be implemented. Much information is available on the WMO (and other) web sites. Key points are indicated below: many readers will already be familiar with the GFCS concepts and will not require repetition of the material, whilst others can gain from the overview here and follow up further information on aspects which are of particular interest at http://www.wmo.int/pages/index en.html. It is likely that there will be further developments between the writing of this note and the holding of CHy-14, notably as an Extraordinary Session of Congress will be taking place in Geneva in October 2012 dealing, in particular, with GFCS issues.

As the 2011 WMO Congress (Cg-XVI) decided that the GFCS will be one of the top five priorities of WMO over the next four years, it is valuable to consider what the implications are for hydrology. Firstly, this is likely to bring an increased level of focus on the linkages

between climatologists and hydrologists; secondly, this, to a degree, will increase the relevance of aspects associated with medium to long planning time scales to hydrology in WMO, in addition to WMO's more traditional focus on shorter-term operational hydrology; and, thirdly, there may be associated funding shifts, whether from in-house initiatives or from extra-budgetary inputs.

Hydrology is plainly a key user of climatological information and, importantly, the hydrological environment is one where some intervention in regimes and conditions is possible to ameliorate outcomes. Whilst perceptions of climate change have plainly been a strong factor in the development of the GFCS initiative, it will be important, too, to consider the 'natural' variability of climate which poses considerable hydrological and water management challenges. Exchanges of information between climatology and hydrology obviously also take place in the direction of hydrologists providing data and understanding for the better representation of land surface behaviour in the atmospheric modelling systems at the core of weather and climate forecasting.

GFCS Activities 2009-2011

A High-level Taskforce <u>http://www.wmo.int/hlt-gfcs/</u> was established after WCC-3 with the remit of defining the GFCS components, of developing governance options, and of outlining a plan for implementation. The taskforce was also charged with making proposals on a series of points, including global data policy and the role of UN systems and other stakeholders.

The taskforce proposed to the 2011 Congress a GFCS structure based on five components:-

- a user interface platform
- a climate services information system
- observation and monitoring
- research, modelling and prediction
- capacity building.

The general approach of the taskforce's report was endorsed by Congress. In terms of GFCS governance, Congress had a preference for an Intergovernmental Board on Climate Services accountable to WMO Congress. Congress entrusted Executive Council with the responsibility of developing proposals, with the involvement of relevant stakeholders including other UN bodies, with addressing the development of the draft implementation plan for the GFCS and with the establishment of draft terms of reference and rules of procedure for the intergovernmental board and its substructures. It is these proposals that it is planned will be considered at the Extraordinary Session of the WMO Congress in October 2012.

Congress also decided to establish a GFCS Secretariat within the WMO.

Executive Council (EC-63), following the 2011 Congress, agreed on follow-up GFCS actions:

 establishment of a task team on GFCS to develop the draft implementation plan, composed of EC members and experts with adequate regional representation; and • consideration of the draft implementation plan by Executive Council in June 2012 prior to presentation to the Extraordinary Session of Congress.

GFCS - The Future

In late 2011 the GFCS secretariat anticipated that the GFCS would, by 2015, establish:-

- a global system to routinely generate and electronically exchange an extensive set of defined climate data and data products;
- an initiative in developing countries to upgrade the climate service capacities and strategies of all vulnerable and low-capacity countries to a baseline level;
- an initial suite of new knowledge products protocols, tools, products and services – developed through multiple initiatives on user interfacing and services development; and
- an ongoing governance mechanism driving GFCS development, particularly by engaging and mobilising stakeholders, user communities and new resources.

Hydrology in the GFCS

It is plainly advantageous that hydrologists are engaged with the GFCS development process at a number of levels. At present, this is largely in the remit of secretariat staff in the Climate and Water Department and such experts as are consulted with, across both the UN system and international and regional agencies. CHy-14 will provide a key opportunity to discuss GFCS aspirations and the involvement of the Commission.

One strand of involvement is through the identification of data and services which hydrologists and water managers require from climatologists. An early start in this area is provided by a forthcoming WMO technical report *'Climate and meteorological information requirements for water management – a review of issues'* by James Dent. Hydrologists also provide a useful link between climatological information and others influenced by water regimes, notably the agricultural sector.

In terms of what hydrologists can offer the climatologial community, it is beneficial to consider whether there are further aspects of hydrological understanding and/or data which are yet to be routinely included in atmospheric circulation models in the anticipation of improved predictive performance. Linked climatological and hydrological modelling is increasingly offering potential in the exploration of water management options.

In terms of the 'user interface platform' indicated above which is seen as a key part of the GFCS structure, the opinion of hydrologists is likely to be sought in terms of functionality and design.

Invitation to Comment

Comments are welcomed regarding hydrological opportunities, concerns, contributions and aspirations in relation to the Global Framework for Climate Services in its formative period. It is important to bear in mind GFCS developments in the establishment of CHy's 2013-2016 work programme, as also in those of Regional Associations and the secretariat.

That said, the other aspects of CHy hydrological endeavours should not be eclipsed. As ever, there is likely to be more demand for hydrological work to be undertaken than there is staff and expert time to meet all aspirations.

The main GFCS web area is at <u>http://www.wmo.int/pages/gfcs/index_en.php</u> and this should be consulted for updates to information in the time since this note was written.

Comments on the GFCS in its interactions with hydrology can be made in advance of CHy-14 through postings on this e-forum. Comments received by 30 June 2012 will be taken into consideration in the preparation of inputs to CHy-14.

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