

WARSAW, 23 SEPTEMBER 2014

INFORMATION NOTE**ON THE MAIN OUTPUTS FROM THE SESSIONS OF THE RELATED TECHNICAL COMMISSIONS****1. Commission for Hydrology**

The Commission for Hydrology (CHy) at its fourteenth session (2012) identified five thematic work areas for its activities in the intersession 2013-2016: Quality Management Framework – Hydrology (QMF–Hydrology); Data Operations and Management; Water Resources Assessment; Hydrological Forecasting and Predictions; and Water, Climate and Risk Management. The new Data Operations and Management theme was established largely to oversee the testing, evaluation, and potential adoption of WaterML 2.0 as a WMO standard for information exchange. CHy re-established an Advisory Working Group (AWG) composed of ten members to carry out the CHy work-plan with support from experts in the four Open Panels of CHy Experts (OPACHEs). Among the members are from RA VI Mr Yuri Simonov (Russian Federation) – responsible for Hydrological Forecasting and Prediction thematic area and Mr Jan Daňhelka (Czech Republic) responsible for Water, Climate and Risk Management thematic area; furthermore, Mr S. Pecora and Ms M. Bussetini (Italy) are assisting respectively Mr T. Boston (Australia) in the Data Operations and Management thematic area and Messrs A. Cardoso (Brazil) and S. Kim (R. of. Korea) in the Water Resources Assessment thematic area, with specific focus on ecological flow.

CHy has continued the implementation of the project on Assessment of the Performance of Flow Measurement Instruments and Techniques (http://www.wmo.int/pages/prog/hwrrp/Flow/flow_tech/index.php) and has launched a web site on Quality Management Framework and the use of standards in data collection activities by NHSs (<http://www.wmo.int/pages/prog/hwrrp/qmf-h/index.php>). As a complementary action in order to facilitate the development of policies, frameworks and information sources for promoting standardization/guidance of the most suitable equipment a proposal for a Hydrometric Technology Verification Program (HTVP) is being considered. In the framework of the working agreement with ISO, a preliminary list of ISO documents that would be of most interest to NHSs

A note on Stationarity and Non-stationarity was reviewed and approved, and has now been published on the CHy website.

(http://www.wmo.int/pages/prog/hwrrp/publications/statements/Stationarity_CHy_Statement.pdf)

The open source MCH (Meteorology, Climatology and Hydrology) data management system, originally developed in Spanish has been translated into English and French and installed in several countries among which Albania and Bosnia Herzegovina as well as in Kosovo.

The French translations of the Guide to Hydrological Practices (WMO No. 168) and the Manual on Flood Forecasting and Warning (WMO No. 1072) have been completed; the Guide has already been published. Training material to support courses on the Manual on Stream Gauging (WMO No. 1044) has been developed and is available in English, Spanish and Russian, and the French version is under preparation. CHy Communities of Practice, (<http://www.wmo.int/chy/communities/>) have been established in particular for the MCH database management system and for the Stream Gauging Training Material for Instructors to favour the sharing of experience, tutorials and new developments by a worldwide community of users.

Further details on the activities of CHy and of HWRP programme area are available on the web page: <http://www.wmo.int/pages/themes/water/>.

Recent updates are also available at: https://www.wmo.int/edistrib_exped/grp_tc_chy/en/2014-07-21-CHy-195-CLW-HWR-CHy_en.pdf.

Collaboration and Cooperation

The Arctic-HYCOS planning and implementation meeting was held in Geneva on 26-27 March 2014. It was attended by representatives of Canada, Finland, Iceland, Norway, Russian Federation, Sweden, and USA. It was agreed that the project during its initial phase would focus on collecting data on discharge and possibly sediment transport and temperature, leaving water quality data, ice thickness and dates of freeze-up and break-up of ice to a later phase. A working group, comprising representatives of Canada, Russian Federation (Mr V. Vuglinsky), Sweden (Mr D. Gustafsson), and the United States of America was established to define the selection criteria for the stations. The list of stations to be included in the project database shall be established by March 2015.

During CHy-14 in 2012 Italy made the offer to provide the DEWETRA system for real-time hydrometeorological risk monitoring and warning, to countries that make the request. A presentation workshop was organized in Rome (Italy) in October 2013 to introduce the system capable of integrating data from different sources and produce several types of maps for risk management decision-makers. The workshop was attended by representatives of 17 countries among which from RA VI Georgia, FYR of Macedonia and Moldova. The system had been previously also provided to Albania. A Cooperation Agreement between WMO and the Italian Department of Civil Protection (the “owner” of the software) has been signed to provide a framework for this technology transfer activity.

Risk Management

As a part of the activities of the Associate Programme on Flood Management, the following IFM Tool have been finalized and published:

- Conducting Flood Loss Assessments (2nd Ed.) Tool #2
- Applying Environmental Assessment (2nd Ed.) Tool #3
- Risk sharing in Flood Management (2nd Ed.) Tool #8
- Transboundary aspects of Flood Management Tool #18
- Flood Forecasting and Early Warning Tool #19
- Flood Mapping Tool #20

The following IFM tools are expected to be published soon or are in advanced stage of preparation:

- Regulations and Technical Standards for Flood Management
- Health and Sanitation Aspects of Flood Management
- The Role of the Media in Flood Management
- Social Impact Assessment and Public Perception of Flood Risk in IFM
- Effectiveness of Flood Management Measures + Case studies
- Crisis Mapping and Crowdsourcing in Flood Management
- Flood Management in a Multi-hazard Environment for the Private Sector

Within the framework of the IPA project "Building Resilience to Disasters in Western Balkans and Turkey" a training course on Flood Losses Assessment has been organized in May 2014 in Sarajevo (Bosnia-Herzegovina). It was attended by 16 participants from 6 Balkan countries, representing NHSS and civil protection agencies.

The implementation of the projects in the Black Sea and Middle East (BSME-FFG), and South East Europe (SEE-FFG) regions of the Flash Flood Guidance System is continuing. For the first a series of training courses has been organized during 2014 at HRC headquarters in USA as well as in some countries (Armenia, Azerbaijan, Georgia) to familiarize local forecaster with the usage of the system and the integration of local information. For the latter, the initial system development (delineation of basins, adaptation of high resolution weather prediction model over a limited domain, etc.) has been completed.

WMO has continued providing scientific and technical backstopping to UNECE in the implementation of the pilot projects on adaptation to climate change in transboundary basins under the Water Convention, implemented in the basins of Neman (Belarus, Russian Federation, Lithuania), Dniestr (Moldova, Ukraine) and Chu-Talas (Kyrgyzstan, Kazakhstan) rivers.

2. Commission for Climatology

Outcomes of the session

The 16th Session of the World Meteorological Organization (WMO) Commission for Climatology (CCI-16) convened in Heidelberg, Germany, from 3 to 8 July, 2014. It session was preceded by a Technical Conference on Climate Services – Building on CLIPS legacy which addressed the following thematic threads:

- CLIPS evolution and achievements – facilitating standards and consistency in preparation of seasonal outlooks through RCCs and RCOFs.
- The importance of the systematic collection and archival of climate data for reliable climate services
- Improvements needed to better monitor climate and to provide outlook products for climate information services at global, regional and national levels.
- Research challenges for improving climate predictions at regional scales

The Session elected Dr Tomas Peterson (USA) as CCI President and Ms Barbara Tapia (Chile) as Vice-President, and established five Open Panels for CCI Experts (OPACEs), on Climate Data Management,

Climate Monitoring and Assessment, Climate Prediction, Projection and their Delivery Mechanisms, User Interface for Climate Adaptation and Risk Management, and Capacity Development.

The Commission endorsed the proposal of the Management Group to establish an Implementation Coordination Team (ICT) on Climate Services Information System (CSIS) directly reporting to the Management Group, to coordinate the contributions from all five OPACEs. It also agreed that the President should be supported by a High-Level GFCS Adviser, in consideration of account the continued and enhanced role of the Commission in supporting the implementation of the GFCS

More information on CCI-16 is available in the report at the CCI web site: http://www.wmo.int/pages/prog/wcp/ccl/index_en.php. Details on CCI structure are available at: <http://www.wmo.int/pages/prog/wcp/ccl/cclstructure.php>.

The Commission recognized the role of Regional Climate Outlook Forums (RCOFs) as effective platforms to bring together countries having common climatological characteristics and facilitate consistency in the access to and interpretation of the available information and to deliver a range of regional monitoring and outlook products. The Commission further recognized that, they also promote stakeholder awareness, feedback and decision-support oriented products and agreed that enhancing, strengthening and expanding the RCOF process, improving technical inputs and methods, enhancing efficiencies and increasing user focus will augment the sustainability of RCOFs (Resolution 1 (CCI-16) –Regional Climate Outlook Forums).

Essential progress was made in the region during last intersession in terms of strengthening and expanding RCOFs (MedCOF, NEACOF). A Regional Climate Outlook Forum for the Arab Countries (ArabCOF) is being considered and a regional scoping meeting will be held in Jordan to initiate discussions and propose actions for its establishment. The proposal will be submitted for consideration to the Arab Permanent Committee on Meteorology of the League of Arab States at its 31st Session in early 2015. The Secretariat to the Arab Permanent Committee on Meteorology would serve as the coordinating secretariat for the ArabCOF. Discussions are going on for the establishment of Polar Arctic RCOF, with this purpose a Scoping workshop is being planned for the Q1 2015.

The Commission noted that National Climate Outlook Forums (NCOFs), and National Climate Forums (NCFs) are envisioned as key national platforms for promoting regular dialogue and inter-agency coordination in responding to climate variability and change, and urged Members to take up NCOF/NCF implementation as a key component of GFCS implementation at the national level.

The Commission noted the recent progress of the OPACE 4 Expert Team on Climate Risk and Sector-specific Climate Indices (ET-CRSCI) on identifying new “impacts-driven” indices relevant to climate-sensitive sectors, developing standardized software “ClimPACT” and promoting the use of these indices through pilot training workshops. The Commission encouraged holding of inception training workshops in different sub-regions, and also further work on improving the indices as well as software, including other critical economic sectors sensitive to climate.

Collaboration and Cooperation

The Commission urged the presidents of regional associations and their subsidiary bodies to pursue strengthened partnership with CCI for coordinating and facilitating the implementation of climate-

related activities and promoting the implementation of the Global Framework for Climate Services (GFCS) at the regional and national levels. In addition, the Commission requested the president of CCI to actively pursue effective communication with the presidents of the Regional Associations as appropriate.

The Commission noted with satisfaction that the chairpersons of the working groups dealing with climate-related matters of all the six regional associations participated in the meeting of the CCI Management Group in October 2013 and agreed that such interactions are essential to understand the regional perspectives on how CCI can be more effectively engaged with the regional initiatives and contribute to the national level climate activities. Therefore it urged presidents of regional associations to facilitate the interactions between their climate and GFCS-related subsidiary bodies and the OPACEs and their teams

Regional Climate Centres (RCCs) are recognized as an operational regional component of the Global Framework for Climate Services. RAVI RCC-Network provides wide range of products and services to the NMHSs in the Region. However, since this Network doesn't have a specific node devoted to training and capacity development, it is recommended (among other activities planned by the WG) to strengthen training component across the three nodes, offering more capacity development activities.

Risk Management

European initiative for climate service observation and modelling (ECOMS) is a new initiative to improve Europe's ability to effectively prepare for and manage climate-related risk on our society, fully funded by the European Commission (<http://www.eu-ecoms.eu/>). ECOMS was launched on 6 November 2012 and consists of three individual international projects NAACLIM, EUPORIAS and SPECS:

- NAACLIM "North Atlantic climate", led by the Institute of Oceanography of Hamburg University in Germany, which focuses on improving our understanding of the predictability of the climate in the North Atlantic/ European sector through oceanic observations and on the assessment of decadal climate forecasts
- SPECS led by the Institut Català de Ciències del Clima (IC3) in Spain, which will deliver a new generation of climate prediction systems for seasonal-to-decadal time scales, to provide actionable climate information for a wide range of users <http://www.specs-fp7.eu>
- EUPORIAS, led by the Met Office in the UK, which will work on maximising the usefulness of the seasonal to decadal climate information through a close collaboration with the end users <http://www.euporias.eu/>

For other activities in this area the WGCH could liaise with the OPACE 4 User Interface for Climate Adaptation and Risk Management Expert and Task teams, to coordinate relevant activities.

3. Commission for Agricultural Meteorology

The sixteenth session of the Commission for Agricultural Meteorology (CAgM-16) was held in Antalya, Turkey from 10 to 15 April 2014. There were 95 participants from 53 Member countries of the Commission with 19 observers and invited experts. An International Conference on Promoting Weather and Climate Information for Agriculture and Food Security was held from 7 to 9 April preceding CAgM-16 with 96 conference participants from 64 countries. The Conference was organized in 7 technical sessions in which 26 papers were presented.

CAgM-16 adopted four Focus Areas for the work plan of the Commission in its intersessional period 2014–2018: Operational Agricultural Meteorology; Science and Technology for Agricultural Meteorology; Natural Hazards and Climate Variability/Change in Agriculture; and Capacity Development in Agricultural Meteorology.

The CAgM aligned its activities with the priorities as established in the WMO Strategic Plan and, in particular, the importance placed on the Commission's contributions to Service Delivery, the Global Framework for Climate Services, Disaster Risk Reduction and Capacity Development.

WMO Members are encouraged to nominate more experts to participate in the Open Panels of CAgM Experts (OPCAMEs) and facilitate their active participation in the work of CAgM in the four Focus Areas. CAgM will try to increase the use of electronic media and teleconferencing in carrying out its activities and supported the continued use of such tools with a view on strengthening communication and feedback mechanisms of relevant CAgM projects and activities.

CAgM noted the need to develop standards and guidelines for global soil moisture measurements in support of the International Soil Moisture Network (ISMN) which is coordinated by the Global Energy and Water Exchange Project (GEWEX), GEO, and the Committee on Earth Observation Satellites (CEOS). CAgM will establish and coordinate a Soil Moisture Demonstration Project (SMDP) to develop these standards and guidelines, which would also provide valuable support to the mission and objectives of the WIGOS and GFCS.

The RA VI Working Reports on Agricultural Meteorology will be published by WMO in the 4th quarter of 2014.