

# Roadmap for the implementation of a Climate Watch System (CWS) in the WMO region of Europe (RA VI)

## I. Workshop statement

Noting the various aspects of vulnerability in the WMO Region of Europe (RA-VI) and the WMO efforts for enabling Nations to better deal with climate extremes in a changing climate, participants agreed to establish a CWS in RA VI as an element of Early Warning System based on the general guidelines provided within the WMO/ CCI technical document on climate watches (WCDMP-No 58 / WMO/TD-No 1269) and the WMO brochure on "*Climate Watch System/ Early Warning against Climate Anomalies and Extremes*" [http://www.wmo.int/pages/publications/showcase/documents/CWS\\_EN\\_v1.pdf](http://www.wmo.int/pages/publications/showcase/documents/CWS_EN_v1.pdf)

The participants recognized that climate watch activities fit well in the new international and regional context of climate services and adaptation such as the GFCS, the Nairobi Work Programme of UNFCCC, the Strategy Plan of RA VI and the National Adaptation Plans of Actions (NAPAs) in the region.

A Climate Watch System (CWS) is an operational cooperative system for climate early warning based on existing meteorological facilities and infrastructure at regional and national level. It involves user in its design, operation and evaluation. A CWS builds on existing weather early warning systems by adding advisories on climate extreme events such as heat waves, cold waves, extended heavy precipitations leading to flooding, rainfall / soil moisture deficiency leading to drought conditions, severe wind storms extending beyond weather scales, extended snowfall, etc . A CWS purpose is to support sector Early Warning System particularly water resources, agriculture and health sectors by providing timely climate monitoring and long range forecasting information.

## II. Key issues and specific recommendations

### II.1 Format, content & dissemination of climate advisories (climate watches)

- i. Definition of the time scale addressed by a climate watch: starts when weather warnings end (after 3-5 days), and extends up to several months ahead;
- ii. A climate watch will be issued based on observed and/ or expected climate anomalies with indication of duration, update and termination of the advisory;
- iii. Two formats are proposed for RA-VI:
  - Generalised advisory for public use,
  - Specialised advisory for specific sector users including additional information such as uncertainty and potential impacts;

### II.2 User aspects of (national) climate watches

- i. Establish an inventory of extreme weather events and their impacts;
- ii. Establish a formal mechanism for evaluation of the advisories and user feedbacks, as part of Quality Management System (QMS);
- iii. Adopt a multidisciplinary approach to enable users to make best use of climate information including climate watches

### II.3 Consider basic infrastructure requirements and needs for (national) climate watch implementation, including the role of the RA VI (Pilot) RCC-Network and the SEECOF mechanism

- i. Address the need for practical tools for downscaling LRF
- ii. Availability and accessibility of data and products including quality information
- iii. Best use of existing capabilities and infrastructure such as RCC, GPCs, RCOFs, NMHSs (meteorological and hydrological [services] [authorities]), ECMFW, EUMETNET, EUMETSAT, etc. ...

## II.4 Research and development aspects including capacity building

- i. Limited predictive skill on monthly to seasonal timescales in most of RA-VI region
- ii. There is a need for standardization of definition and characterisation of extreme events
- iii. Further development and improvement of meteorological and hydrological models;
- iv. Determining climate indices for both monitoring and predicting at different time scales;
- v. Lack of human and technical capacity at NMHS level in some parts of the Region

## III. Action Plan

*The following actions were proposed for the short and medium term*

Action	Who/ responsibility	Timeline
Make presentations in the workshop available as PDF on the Internet.	Host	Soon
Make the report of this workshop available to the members.	WMO	6 months
Develop a RA VI Climate Watch template.	Group 1	6 months
Establish a Task Team on the implementation of CWS in RA VI. WGCH to draft Terms of Reference.	MG via WGCH	6 months
RCC-CM to liaise with RC-LRF and RCC-CD on development of appropriate guidance material and products, including a knowledge data base on climate extremes and their impacts in the region, to support national CW Advisories.	RCC-CM	2 years
NMHSs to develop criteria, in cooperation with users, for issuing CW Advisories.	NMHSs	
To finalize through communication with all RA VI members regional and sub-regional inventories of hazards to be addressed by CW in our region. Based on the outcomes of this workshop and analyses done in for the 2003 CLIPS workshop (Erfurt), and on WMO DRR data bases.	RCC-CM	6 months
RCC-Network to coordinate establishment of a standard reference period for CWS in the Region.	RCC-Network	6 months
RCC-Network to extend their products beyond the border of RA VI. This might need some coordination with neighbouring RAs.	RCC-Network	2 years
RCC-CM to also make available underlying gridded data of their monitoring products.	RCC-CM	6 months
RCC-Network to liaise with the research community (CCI, WCRP, EU FP7, ...) to address research issues relevant for implementing a CWS.	RCC-Network	2 years
Improvement of hydrological models and modelling systems.	WCRP, CHy	Long-term (beyond 2 Years)
Training on Climate Watch and user related aspects, including communication.	WMO	6 years

#### **IV. General recommendations**

1. Ensure that appropriate liaison mechanisms are established between GMES (Global Monitoring for Environment and Security) and the CWS in the region.
2. To encourage LRF providers, RCCs and observational data owners to consider providing access to daily data;
3. To identify a set of requirements for necessary data and indices that should be made available by LRF, GPCs and RCCs to support implementation of CWS.
4. Undertake implementation of CWS as a voluntary pilot phase to develop initial best practices (countries volunteering: Turkey, Serbia, Finland);
5. Extend RCOF mechanism to other sub-regions of RA VI such as SW-Europe and the polar region;
6. CCI accelerates its work on extreme weather and climate events to support implementation of CWS;
7. Encourage NMSs and NHSs to establish a dialogue with users and stakeholders;