

USE OF SATELLITE DATA AND PRODUCTS IN CLIMATE MONITORING AND APPLICATIONS

CGMS is informed that, acknowledging the high relevance of satellite data for climate related applications, the WMO Commission for Climatology (CCI) has decided to establish an Expert Team on Climate Monitoring including the use of Satellite and Marine Data & Products.

Through this initiative, the CCI wishes to foster an interaction with satellite experts and provide satellite operators with a feedback mechanism to improve climate monitoring and applications using satellite data and products.

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1 INTRODUCTION

Satellite data and products are becoming increasingly important in carrying out monitoring activities aimed at studying climate variability and changes as well as developing applications in various sectors such as water resources, agriculture, Disasters Risk Reduction and food crisis management. As an example of useful application, the U.S. Agency for International Development's (USAID) Famine Early Warning Systems Network (FEWS NET) reported on methods being developed to improve the ability of early warning systems to identify hazards to food security early enough so that political and budgetary decisions can be made in a timely manner (Eos, Vol. 88, No. 39, 25 September 2007).

While WMO Members have been using satellite observations for several decades in their operational weather activities, many of them are still conducting their climate monitoring activities based primarily on in-situ observations. This is mainly due to limited knowledge on the availability of satellite products for climate purpose.

The WMO Commission for Climatology (CCI) discussed during its fourteenth session held in Beijing, China in November 2005 the benefit and the opportunity to address climate monitoring activities on a broader basis, taking into account the advances of satellite based data sets and potential products. Therefore CCI decided to establish an Expert Team on Climate Monitoring including the use of Satellite & Marine Data & Products (ETCM-SMDP).

2 CCI ACTIVITIES AND WORK PLAN FOR THE 2006-2009 PERIOD

2.1 Among other activities, the CCI Expert Team ETCM-SMDP:

- Advises on the development of the WMO annual state of the climate reports, which are widely distributed in various languages. These reports provide useful information on global temperature trend, extreme weather and climate events occurring in various regions and their impacts, on a regular basis to WMO Members, the research community, international and regional agencies;
- Facilitates coordination of global and regional climate monitoring activities for the benefit of all organizations engaged in this work;
- Takes actions as deemed appropriate to assess and improve the interoperability, availability and homogeneity of data used for global and regional climate monitoring;
- And coordinates and manages a global extremes database, updated annually.

2.2 In its work, ETCM-SMDP takes into consideration the GCOS requirements for Climate Data Records and the needed Essential Climate Variables (ECV), and considers the plans being developed to address climate requirements in the Space-

based Global Observing System¹. Therefore, among its activities, ETCM-SMDP has been given the role to assess the quality and quantity of the available satellite data sets and products for the use in various climate monitoring activities and applications.

3 CONCLUSION

ETCM-SMDP considered in its work plan (2006-2009), assessing the existing capabilities in terms of satellite data and products for the use in monitoring, analysis and reporting on climate anomalies, climate extremes and their impacts. The expected outcomes from this work plan are believed to add value to the existing work on climate requirements for satellite data by enabling satellite operators to get in-depth feedback on the use of their products and services in climate activities.

The CGMS-35 meeting is invited to take note of the CCI/ETCM-SMDP work plan and to consider close interactions with CCI on these aspects, in the future.

¹ See the *Final Report of the Workshop on the Re-Design and Optimization of the Space-based Global Observing System, Geneva, 21-22 June 2007, reported in CGMS-35, WMO-WP-06*