

UPDATE ON R/SSC-CM

With reference to Recommendation 35.06

The goal of the global network of WMO Regional/Specialized Satellite Centres for Climate Monitoring (R/SSC-CM) is the continuous and sustained provision of high-quality Essential Climate Variables satellite products on a global scale responding to the requirements of GCOS.

Following the adoption of the first R/SSC-CM Implementation Plan in November 2007, a planning meeting was held in April 2008 in Darmstadt to identify initial areas of activities. Five topics were selected:

1. AVHRR-based data set of cloud and aerosol properties;
2. SSM/I total column water vapour, precipitation and liquid water path;
3. Surface albedo, clouds and aerosols from geostationary satellites;
4. Atmospheric motion vectors and clear sky radiances;
5. Upper tropospheric humidity.

The participating organizations have been requested to submit proposals related to these five areas by November 2008. The proposals will be discussed at the first R/SSC-CM Executive Panel (REP) Meeting which is tentatively planned in January 2009.

CGMS-36 is invited to take note.

UPDATE ON R/SSC-CM

1 BACKGROUND

The sixth session of the WMO Consultative Meetings on High-level Policy on Satellite Matters (CM-6) discussed the concept for Regional/Specialized Centres on Satellite Products, expressing the possibility to "...identify specific Centres of Excellence in thematic areas that could be designated Regional/Specialized Meteorological Centres for Satellite Products (Regional/Specialized Satellite Centres)".

Following the workshops held with EUMETSAT, the Satellite Applications Facility on Climate Monitoring (CM-SAF), GCOS, WMO and other satellite operators in 2004 (Hamburg) and 2005 (Nuremberg), the initiative was taken by the EUMETSAT and CM-SAF to propose to WMO a concept for R/SSCs for Climate Monitoring.

A high-level concept paper was prepared by the EUMETSAT Secretariat and presented by the Director-General of EUMETSAT at the seventh session of the WMO Consultative Meetings on High-level Policy on Satellite Matters (CM-7) in January 2007 in Geneva. CM-7 participants welcomed the proposal and urged all participants to work towards development and approval of an Implementation Plan before the forthcoming GEO Summit in November 2007.

A first workshop for refining the concept was convened by WMO at EUMETSAT Headquarters on 15-16 March 2007, with participation from CMA (China), JMA (Japan), NOAA (USA), Deutscher Wetterdienst (Germany), the Committee on Earth Observation Satellites (CEOS) and EUMETSAT. The outcome of the workshop was a detailed concept on a Global Network of Regional/Specialized Satellite Centres for Climate Monitoring, and EUMETSAT was tasked to lead the preparation of an Implementation Plan on behalf of WMO.

An outline of the Implementation Plan was discussed at the first meeting of potential participants of the R/SSC-CM Global Network, which was convened by WMO in Geneva on 16 May 2007, and was attended by representatives from CEOS, CMA, GCOS, JMA, the Meteorological Service of Canada, and the WMO Space Programme Office.

EUMETSAT coordinated the preparation of the Implementation Plan with the support of the participating organizations and input from the third sessions of ET-SAT and ET-SUP in September 2007.

The Implementation Plan was adopted at the second potential participants meeting, held after CGMS-35 in November 2007. The plan is available online at URL:

<http://www.wmo.int/pages/prog/sat/Refdocuments.html#projectdocs>

The organizations present at the meeting committed their participation to the R/SSC-CM global network. They included: the Committee on Earth Observation Satellites (CEOS), the China Meteorological Administration (CMA), EUMETSAT, GCOS, the Japan Meteorological Agency (JMA), the National Oceanic and Atmospheric

Administration (NOAA), the United States Geological Survey (USGS), and the WMO Space Programme. EUMETSAT was nominated as the R/SSC-CM interim secretariat.

2 OUTCOME OF THE R/SSC-CM PLANNING MEETING

As agreed at the second potential participants meeting, a planning meeting was hosted by EUMETSAT on 15-16 April 2008 to prepare the first activities and to consolidate the organizational framework. The meeting was chaired by WMO and attended by representatives of CEOS, CMA/NCC, CMA/NSMC, DWD, ESA, EUMETSAT, EUMETSAT/CM-SAF, GCOS, JMA, NOAA/NESDIS/NCDC and NOAA/NESDIS/STAR.

The following conclusions were agreed:

A request for proposals for sustainable generation of climate products should be issued by WMO to the potentially participating agencies (CMA, EUMETSAT, JMA, NOAA, USGS) and to further relevant agencies to be indicated by CEOS.

Activities should be initiated through a limited number of topics addressing areas of mutual interest that will serve as pilot projects to develop partnerships, without precluding other subjects to be addressed in the future. A list of five topics was agreed and is provided in Annex 1.

The proposals should be formulated according to template that was drafted at the meeting and is provided in its final version in Annex 2.

The scope of R/SSC-CM should be to offer an opportunity of transition from research to operations of ECV product generation; and therefore it is essential to liaise with the relevant science communities and bodies (e.g. WCRP/GEWEX).

WMO to establish the R/SSC-CM Executive Panel (ERP) in inviting the potential participating organizations and CEOS, CGMS/GSICS, GCOS to nominate representatives as interim members in advance of the formal establishment of the R/SSC-CM Centres.

The following milestones were proposed:

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|--|-------------------|
| 1. Template finalized: | end April 2008 |
| 2. Request for proposal | end May 2008 |
| 3. Nomination Interim Executive Panel: | end May 2008 |
| 4. Proposal submission | end November 2008 |
| 5. REP-1 Meeting | January 2009 |

3 LATEST STATUS

On 9 July 2008, the participating organizations were invited by WMO to submit proposals for activities related to the five identified areas of interest before the end of November 2008.

On the same day, these organizations, GCOS and GSICS were invited to nominate interim representatives to the REP by the end of July 2008.

To date, the following persons have been nominated:

EUMETSAT	Lorenzo Sarlo
JMA	Toshiyuki Kurino
GSICS	Mitch Goldberg
NOAA	John Bates

4 NEXT STEPS

Proposals for initial R/SSC-CM activities are now expected to be received by the end of November 2008;

It is expected that the nomination of the initial REP members will be completed by the same date;

The first Executive Panel Meeting is tentatively envisaged in January 2009, to review and decide upon the proposed initial activities and the establishment of the Science Advisory Group (RSAG) and the Data Working Group (RDWG).

ANNEX 1

AREAS SELECTED FOR INITIAL R/SSC-CM ACTIVITIES AND PARTICIPATING ORGANIZATIONS

Proposal 1: AVHRR based data set of cloud and aerosol properties

NOAA (proposal coordinator) + EUMETSAT (CM-SAF):

Proposal 2: SSM/I: total column water vapour, precipitation, liquid water path

NOAA + EUMETSAT (CM-SAF) (proposal coordinator) + CMA
(precipitation):

Proposal 3: Surface albedo, clouds + aerosols from geostationary satellites

JMA + EUMETSAT (Central Facilities) (proposal coordinator) + CM
SAF) + NOAA + CMA

Proposal 4: Atmospheric Motion Vectors (AMV) + clear sky radiance

JMA (proposal coordinator) + EUMETSAT (Central Facilities) + NOAA +
CMA

Proposal 5: Upper tropospheric humidity

JMA + EUMETSAT (CF + CM SAF) + NOAA (proposal coordinator) +
CMA

ANNEX 2

TEMPLATE FOR R/SSC-CM ACTIVITY PROPOSALS

This template is intended for the proposals of initial R/SSC-CM activities. It is separated into four parts, covering:

The broad characteristics of the targeted ECV satellite product and the organizational structure planned to be installed for the task,

The existing assets on which the proposed activity will be built upon,

An outline of the planned activity, including a draft work plan and expected product maturity, and

Existing references and publications.

It should be noted that the draft work plan is not expected to be on a very detailed level. It should, however, indicate a draft timeline and the respective involvement of and share of responsibilities between the different partners of the proposed R/SSC-CM.

ECV satellite product	
ECV satellite product name	
Product characteristics (resolution, coverage)	
Input data sets (FCDR and auxiliary data)	
Planned R/SSC-CM structure¹	
Current capabilities²	
Related existing projects	
Draft work plan	
Technical approach	
Issues to be addressed	
Roles and responsibilities	
Schedule	
Planned calibration / validation activities	
User interaction	
Deliverables	

¹ Leading and partner entities, external partners and cooperations

² E.g. information on existing FCDRs, experience with the production of ECV satellite products, existing infrastructure, algorithms and teams, calibration/validation activities, available documentation and demonstrated maturity

Nature of deliverables ³	
Expected accuracy	
Expected Product maturity	
Planned Archive characteristics	
Acquisition, access, dissemination	
Long term preservation	
Meta data	
Data policy issues (if relevant)	
Dependencies (e.g. GSICS activities) and risks	
Funding situation, including sustainability	
References and publications	

³ Data sets, documentation.