Sustained Coordinated Processing of Environmental Satellite Data

for Climate Monitoring

SCOPE-CM

(Formerly named R/SSC-CM)

1st Executive Panel Meeting (SEP-01)

25-26 February 2009

Minutes

1. Introduction and Background

After reception of the proposals for pilot activities in the five agreed areas of mutual interest, and after an initial teleconference on the status of the proposals, the Executive Panel of the SCOPE-CM (formerly named R/SSC-CM) held its first meeting with the main purpose of analyzing the proposals and deciding upon their approval. The meeting agenda was distributed by the SCOPE-CM Secretariat via e-mail prior to the meeting.

The meeting took place 25 - 26 February 2009 in the WMO Headquarters in Geneva.

2. Participants

Organisation	***Name***	***Role***
EUMETSAT	Lothar Schüller	SEP Member, representing L. Sarlo
JMA	Toshiyuki Kurino	SEP Member and Proposal # 4
NOAA	John Bates	SEP Member and Proposals # 2 and 5
GCOS	Stephan Bojinski	SEP Member
GSICS and CGMS	Mitch Goldberg	SEP Member (via Telephone)
WMO Space Programme	Barbara Ryan	SEP Member
CEOS	Ivan Petiteville	SEP Member
WMO Space Programme	Jerome Lafeuille	SEP Member
EUMETSAT/CM-SAF/DWD	Jörg Schulz	Proposal # 1 and 2
EUMETSAT	Leo van de Berg	Proposal # 3 and 4
GCOS	William Westermeyer	GCOS Expert (Day 1 only)
WCRP, CliC, Environment Canada	Barry Goodison	WCRP Expert
NOAA, CliC, and WOAP	Jeff Key	WCRP Expert (Via Telephone)
NOAA	Andrew Heidinger	Proposal # 1 Via Telephone
ESA, ESRIN	Einar Herland	Day 2 only
EUMETSAT	Peter Albert	SCOPE-CM Secretariat

3. List of Recommendation, Decisions and Actions

This section summarises the recommendations, decisions and actions agreed within the SEP.

3.1. Recommendations

REC-SEP-01-01 The SEP strongly recommends to include GOES processing on surface albedo and AMVs with the same/similar algorithm than for Meteosat and GMS in order to enable the generation of homogeneous global products.

REC-SEP-01-02 Requests for and use of the products should be reported in the progress reports for the pilot activities, to the extent allowed by applicable laws and data policies.

3.2. Decisions

DEC-SEP-01-01 The maturity matrix and the GCOS Guidelines should be used as a basis for the assessment of existing and intended SCOPE-CM products. This assessment should be used to monitor the status and document the progress of the activities/projects. The application of the maturity matrix is considered helpful to quantify the status and identify the actions to be taken to reach higher maturity levels.

DEC-SEP-01-02 The SEP approves the five proposals for initial SCOPE-CM products and the relevant teams are encouraged to kick-off and/or continue the activities. The SEP appreciates the high quality of the proposals and the intended activities and products.

DEC-SEP-01-03 The SEP decided to rename the R/SSC-CM initiative to SCOPE-CM, with the meaning “Sustained Coordinated Processing of Environmental Satellite Data for Climate Monitoring”

DEC-SEP-01-04 EUMETSAT has been confirmed as the SCOPE-CM secretariat.

DEC-SEP-01-05 The next teleconference of the Executive Panel (SEP-02) should be held in July 2009

DEC-SEP-01-06 Next real meeting of the Executive Panel (SEP-03) should be held before the CEOS plenary (2-4 November 2009) and CBS-Ext(10).

3.3. Actions

ACTION-SEP-01-01 WMO SP: Ask the WCRP to provide information on the GEWEX Radiation Panel Working Group on Data Management tasks and activities (including a list of group members) as an input for analysis of potential area of overlap and proper interfacing with the SCOPE-CM data working group.

ACTION-SEP-01-02 GCOS Secretariat to provide the draft / final GCOS guidelines for the generation of satellite-based datasets and products meeting GCOS requirements

ACTION-SEP-01-03 SCOPE-CM Secretariat to draft a SCOPE-CM Technical Guide providing definitions of relevant SCOPE-CM terminology for review by SEP Members.

ACTION-SEP-01-04 SCOPE-CM Secretariat to prepare an assessment table template based on the maturity matrix.

ACTION-SEP-01-05 The Projects are requested to populate the table with descriptive information per category and also to give feedback to the model in identifying improvements. **Due: before September 2009**.

ACTION-SEP-01-06 SCOPE-CM Secretariat to prepare a consolidated version of this SCOPE-CM assessment table for the next SEP meeting, (which could also be published as a web site (e.g. hyperlinks)).

ACTION-SEP-01-07 SCOPE-CM secretariat to prepare a template for reporting the progress of the pilot activities.

ACTION-SEP-01-08 SCOPE-CM Secretariat to update the Implementation Plan (the main change is the new naming) and to distribute to SEP members for review.

ACTION-SEP-01-09 WMO Space Programme to provide the GSICS Information, Services and Product Roster to SCOPE projects for review and feedback.

ACTION-SEP-01-10 SEP members to make proposals and agree on a chair and vice chair of the SEP.

ACTION-SEP-01-11 WMO SP to seek confirmation of CMA readiness to participate in the SCOPE-CM pilot projects.

ACTION-SEP-01-12 SCOPE-CM Secretariat to request the initiators of each proposal to indicate a point of contact with complete references.

ACTION-SEP-01-13 WMO Space Programme to circulate a draft description of the process for designating SCOPE-CM centres.

4. Detailed meeting summary

4.1. Outcome of the REP teleconference 8 January 2009 (Lothar Schüller)

The minutes of the teleconference have been provided by Lothar via e-mail to the SEP members. He introduced shortly through the main outcomes and recommendations.

4.2. Report on the outcome of the discussion at CM-09 (Jerome Lafeuille)

A paper was prepared by WMO for the 9th Consultative Meetings on High-level Policy on Satellite Matters (CM-9) describing the progress on the implementation of SCOPE-CM.

The CM-9 meeting:

- asked to clarify the terminology with respect to "operational" climate monitoring products,
- generally suggested to involve R&D agencies, and
- specifically suggested to integrate the WCRP/GEWEX product production into the SCOPE-CM concept.

In response to the points raised by the CM-9, the Executive Panel notes that

- the key term with respect to climate monitoring products created by SCOPE-CM is "sustained". The long-term commitment of institutes/organisation is the key aspect for a direct contribution to SCOPE-CM;
- the SCOPE-CM implementation plan makes reference to and foresees participation of R&D agencies;
- the SCOPE-CM Scientific Advisory Group (SSAG) is tasked to coordinate the research activities;
- R&D institutes can in principle become SCOPE-CM centres.

Another item discussed at the CM-9 was the linkage of the SCOPE-CM into the WMO structure. CM-9 acknowledged that the scope of SCOPE-CM was mainly global and encouraged renaming the initiative with effect to remove the word "regional". It agreed that the CBS would be informed of the designation of SCOPE-CM centres, and would be invited to support the SCOPE-CM concept.

The Executive Panel was reminded that the SCOPE-CM Implementation Plan foresees, "*… representatives of WMO and GCOS as full members, as well as representatives of CGMS/GSICS and CEOS as associated members to assure communication and coordination between the initiatives.*" As a partnership among WMO, CGMS and CEOS, the SCOPE-CM has a strong linkage to WMO, but is not under the authority of a particular WMO body.

It is, however, noted that relevant WMO bodies should be kept informed about any developments and / or decisions, in order to allow WMO Members to fully participate in, and benefit from the SCOPE-CM.

ACTION-SEP-01-01 WMO SP: Ask the WCRP to provide information on the GEWEX Radiation Panel Working Group on Data Management tasks and activities (including a list of group members) as an input for analysis of potential area of overlap and proper interfacing with the SCOPE-CM data working group.

4.3. GCOS Guidelines for SCOPE-CM products generation (Stephan Bojinski)

The GCOS guideline "Generation of Satellite-based Datasets and Products meeting GCOS Requirements" has been presented to the Executive Panel by Stephan Bojinski from the GCOS Secretariat. This guideline is intended to (i) help institutions/groups within SCOPE-CM to self-assess whether their ECV satellite products are meeting

GCOS requirements, and (ii) to ensure that the institutions/groups within SCOPE-CM generating products provide the users with sufficient information to allow them to assess the quality of those products, i.e. their "climate-worthiness"..

A review of the GCOS requirements is currently ongoing, with a due date of late 2009.

It was agreed that a definition of terms (e.g. climate data record, operational, sustained) should be developed for the SCOPE-CM in order to avoid misunderstanding and ambiguities.

ACTION-SEP-01-02 GCOS Secretariat to provide the draft / final GCOS guidelines for the generation of satellite-based datasets and products meeting GCOS requirements

ACTION-SEP-01-03 SCOPE-CM Secretariat to draft a SCOPE-CM Technical Guide providing definitions of relevant SCOPE-CM terminology for review by SEP Members.

4.4. Maturity index (John Bates)

John Bates presented the maturity index model to the Executive Panel.

It was agreed that ultimately, SCOPE-CM should target to reach maturity index levels 4 to 6.

Jörg Schulz proposed to start using the maturity index model in the EUMETSAT CM-SAF.

The application of the maturity index model in SCOPE-CM will be a pilot activity. It was proposed to announce regular assessments of the applicability of the model.

In the current phase, assessment of the compliance with respect to the maturity index model is expected to be based on self-assessment by the data set producers. However, later, external assessment can be added.

The EUMETSAT SAF concept with well documented self-assessment provided in the form of validation documents, and external reviews of those documents could be a model for SCOPE-CM. It was, however, noted that dependencies from formal bodies should be avoided.

DEC-SEP-01-01 A maturity matrix, such as the one currently developed by NOAA, and the GCOS Guidelines should be used as a basis for the assessment of existing and intended SCOPE-CM products. This assessment should be used to monitor the status and document the progress of the activities/projects. The application of the maturity matrix is considered helpful to quantify the status and identify the actions to be taken to reach higher maturity levels.

ACTION-SEP-01-04 SCOPE-CM Secretariat to prepare an assessment table template based on the maturity matrix.

ACTION-SEP-01-05 The Projects are requested to populate the table with descriptive information per category and also to give feedback to the model in identifying improvements. **Due: before September 2009**.

ACTION-SEP-01-06 SCOPE-CM Secretariat to prepare a consolidated version of this SCOPE-CM assessment table for the next SEP meeting, (which could also be published as a web site (e.g. hyperlinks)).

4.5. Proposals for SCOPE-CM pilot activities

All five proposals have been presented to the Executive Panel. The SEP approves all proposals.

DEC-SEP-01-02 The SEP approves the five proposals for initial SCOPE-CM products and the relevant teams are encouraged to kick-off and/or continue the activities. The SEP appreciates the high quality of the proposals and the intended activities and products.

ACTION-SEP-01-07 SCOPE-CM secretariat to prepare a template for reporting the progress of the pilot activities.

REC-SEP-01-01 The SEP strongly recommends to include GOES processing on surface albedo and AMVs with the same/similar algorithm as for Meteosat and GMS in order to enable the generation of homogeneous global products.

REC-SEP-01-02 Requests for and use of the products should be reported in the progress reports for the pilot activities, to the extent allowed by applicable laws and data policies (i.e. anonymously).

4.6. WCRP and SCOPE-CM (Barry Goodison, Jeff Key)

Barry Goodison gave a presentation on the potential collaboration and interfaces between The World Climate Research Programme (WCRP and the SCOPE-CM in which he stated, that the WCRP can offer:

1. An assessment of long-term observation needs. WCRP began studying space mission requirements for climate research in 2002.
2. WCRP climate products.
3. WCRP Observations and Assimilation Panel (WOAP) as an intermediary between the SCOPE-CM Executive Panel and WCRP projects.

He also mentioned the planned WMO Global Cryosphere Watch (GCW), with a strong involvement of WCRP, as a potential mechanism supporting validation and data standards.

4.7. Cooperation with GSICS

Mitch Goldberg (NOAA) presented the current status of the Global Satellite Intercalibration System (GSICS) and identified several areas for collaboration per SCOPE-CM pilot activity proposal:

- Proposal 1:
  - Better characterize AVHRR spectral response functions using IASI and AIRS, Simultaneous Nadir Overpasses (SNO) for IR and using DCC (Deep Convective Clouds) method for visible channel.
- Proposal 2:_
  - SSM/I intercalibration
- Proposal 3:
  - Calibration and intercalibration of Geostationary Visible (using DCC) and Infrared Channels
- Proposal 4:
  - Intercalibration of geostationary imagers using AIRS/IASI
- Proposal 5:
  - Improved characterization of HIRS water vapour channel using IASI. GSICS characterizes the theoretical differences between different HIRS instruments with IASI, and compares these theoretical differences with HIRS SNO.

He pointed out potential benefits for collaboration between the SCOPE-CM teams and the GSICS Data Working Group (GDWG) on:

- Data archiving/metadata standards
- Coding standards
- Documentation standards
- Standard ATBD contents

4.8. New name of R/SSC-CM

DEC-SEP-01-03 The SEP decided to rename the R/SSC-CM initiative to SCOPE-CM, with the meaning "Sustained Coordinated Processing of Environmental Satellite Data for Climate Monitoring"

ACTION-SEP-01-08 SCOPE-CM Secretariat to update the Implementation Plan (the main change is the new naming) and to distribute to SEP members for review.

4.9. Any other business

It was recalled that CMA, a founding member, had confirmed at CM-9 its readiness to participate in SCOPE-CM.

DEC-SEP-01-04 EUMETSAT has been confirmed as the SCOPE-CM secretariat.

ACTION-SEP-01-09 WMO Space Programme to provide the GSICS Information, Services and Product Roster to SCOPE projects for review and feedback.

ACTION-SEP-01-10 SEP members to make proposals and agree on a chair and vice chair of the SEP.

ACTION-SEP-01-11 WMO SP to seek confirmation of CMA readiness to participate in the SCOPE-CM pilot projects.

ACTION-SEP-01-12 SCOPE-CM Secretariat to request the initiators of each proposal to indicate a point of contact with complete references.

ACTION-SEP-01-13 WMO Space Programme to circulate a draft description of the process for designating SCOPE-CM centres.

DEC-SEP-01-05 The next teleconference of the Executive Panel (SEP-02) should be held in July 2009

DEC-SEP-01-06 Next real meeting of the Executive Panel (SEP-03) should be held before the CEOS plenary (2-4 November 2009) and CBS-Ext(10).

4.10. Way forward

March 2009: The 14th session of the Commission for Basic Systems (CBS-XIV) will be informed of the development of the SCOPE-CM initiative, including its new name. The CBS will be invited to encourage WMO Members to support the SCOPE-CM initiative and to consider expanding the concept to the use of satellite data to other application areas.

April 2009: The 15th session of the GCOS/WCRP Atmospheric Observation Panel for Climate (AOPC) will be informed of the development of SCOPE-CM by a WMO Space Programme representative. Views of the Panel are seen as welcome input to this development.

July 2009: 2nd SCOPE-CM Executive Panel (SEP-02) by teleconference to review the status of the pilot activities, establish SEP subgroups, rules of procedures and terms of references.

September 2009: GEWEX Radiation Panel Working Group on Data Management 16-18 September in Maryland, USA. The WG should be informed on SCOPE-CM and the planned establishment of a SCOPE-CM Data Management Group.

October 2009: GEWEX Radiation Panel Meeting 13-16 October 2009 in Bonn, Germany. This opportunity should be used to inform about the SCOPE-CM objectives and activities and to discuss potential collaboration and interfaces. Jörg Schulz is a member of the GEWEX Radiation Panel.

October 2009 3rd SCOPE-CM Executive Panel Meeting (SEP-03) potentially combined with the first meetings of the SEP subgroups (SSAG and SDWG).

Annex 1: Agenda for the 1st SCOPE-CM Executive Panel Meeting (SEP-01)

WMO Headquarters, Geneva

Room 5J

25-26 February 2009

25 February 2009

13:00 Welcome (Barbara Ryan)

1. Status of the R/SSC-CM initiative

13:15 Outcome of the REP teleconference 8 January 2009 (Lothar Schüller)

13:30 Report on the outcome of the discussion at CM-09 (Jerome Lafeuille)

2. Guidelines and Criteria for future R/SSC-CM products

14:00 GCOS Guidelines for R/SSC-CM products generation (Stephan Bojinski)

14:30 Maturity index (John Bates)

15:00 Break

3. Proposals for R/SSC-CM pilot activities

15:30 Proposal 1 -- "AVHRR based cloud and aerosol properties"

16:00 Proposal 2 -- "SSM/I total water vapour, precipitation and liquid water path" (Jörg Schulz)

16:30 Proposal 3 -- “Surface Albedo/clouds and aerosols from Geostationary Satellites” (Leo van den Berg)

17:00 Proposal 4 -- “Atmospheric Motion Vectors and clear sky radiance” (Toshi Kurino)

17:30 Proposal 5 -- “Upper Tropospheric Humidity” (John Bates)

18:00 Adjourn for the Day

26 February 2009

09:00 – 15:00

4. Discussion and Decision on the Pilot Activities

5. Cooperation/Interfaces with WCRP

6. Cooperation with GSICS

7. New Name of R/SSC-CM

8. Implementation Plan including review of ToRs

9. Establishing the REP Subgroups

10. Rules of Procedure for REP

11. Next Steps and Way Forward

12. AOB

13. Wrap up and summary

Annex 2: SCOPE-CM Executive Panel Nominated Members

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(Nomination to be confirmed)

CGMS and GSICS

Mitch Goldberg

Chairman, GSICS Executive Panel

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