SCOPE-CM Status Report

Submitted to SEP10
[SCOPE-CM-SEP10]

DRAFT Version 1.0
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1 DOCUMENT CHANGE RECORD

Issue / Revision	*Date*	*Changed Pages / Paragraphs*
1.0	16 March 2015	Initial draft version distributed to SEP members

2 PURPOSE OF THIS DOCUMENT

This document presents the status of the SCOPE-CM in preparation for the SEP 10 meeting scheduled for 23-24 March 2015. It summarises the status of agreed actions, the decisions taken by the SEP after the last meeting in written procedures and it captures the main developments in the reporting period.

3 ACTION REVIEW

This section provides an overview of the action status as per the 10th Executive Panel meeting 23-24 March 2015.

3.1 Actions from previous meetings with status "open" at SEP09 Darmstadt March 2014

Action Number	Actionee	Action	Status at SEP09	Remarks
ACTION-SEP-07-02	Pilot Project 2 leader (CM SAF)	CM SAF to take a lead to develop a SCM-project proposal on SSM/I and SSMIS FCDR, integrating the CM SAF, CDR-Programme and X-CAL activities.	Open	No related LoI submitted. Leave it open until next year.
ACTION SEP-07-05	Secretariat	Secretariat to collect links to the SCOPE-CM Pilot Project activities in order to be able to promote the achievements (e.g. presentations and web pages).	Open	Planned to be done in the context of the SCOPE-CM web page update.
ACTION SEP-08-01	Secretariat	Secretariat with SEP chair to investigate a publication of the SCOPE-CM Phase 2 concept and the first SCM-projects as "Meeting summary" e.g. EOS transactions of the American Geophysical Union.	Open	It is proposed to provide a "Meeting Summary" of SEP09, having now a clearer status of the SCM projects actually started.

3.2 Actions from SEP09

Action Number	Actionee	Action
ACTION-SEP-09-01	All	Assess product maturity
ACTION-SEP-09-02	Secretariat	To collect and generate an interaction matrix between projects. To generate an overall dependency diagram between SCOPE-CM and others (GSICS, CEOS, CGMS VC, SAFs, CCI)
ACTION-SEP-09-03	All	To contribute to the ECV inventory database

Action Number	Actionee	Action
ACTION-SEP-09-04	All	To federate dataset generation and address the release mode
ACTION-SEP-09-05	Secretariat	To update website
ACTION-SEP-09-05	All	Inquire from SCM projects on usage/plans to use THREDDS.
Action specific to project		
ACTION-SEP-09-06	SCM-01	Interaction with SCM-08
ACTION-SEP-09-07	SCM-02/SCM-05	To collaborate. SCM-02 to give its requirements to SCM-05
ACTION-SEP-09-08	SCM-03	To investigate the possibility to include the direct/diffuse fraction to the downward flux density in the albedo product.
ACTION-SEP-09-09	SCM-05	To organise a workshop with GSICS
ACTION-SEP-09-10	SCM-06	Investigate how to put in place a to allow the project to feedback GSICS
ACTION-SEP-09-11	SCM-07	To produce a flow-diagram to identify various contributions to the project and to point out input/outputs
ACTION-SEP-09-12	SCM-08	To inform secretariat in case of lead's change
ACTION-SEP-09-13	SCM-09	To provide an update on the project plan. To investigate the possibility of a 'global' product (LEO + GEO) interaction with SCM-05

4 EVENTS AND ACTIVITIES AFTER THE LAST SEP MEETING

The following activities and events after the SEP09 meeting are reported:

- April 2014: Secretariat provided a status report to the WMO Eighth Session of the Expert Team on Satellite Utilization and Products (ET-SUP-8), http://www.wmo.int/pages/prog/sat/meetings/documents/ET-SUP-8_Doc_08-02_SCOPE-CM.pdf.

- May 2014: SCOPE-CM activities (federated generation of FCDR and ECV data) were mentioned in the report of the 42nd CGMS meeting (http://www.cgms-info.org/index_.php/cgms/index).
- June 2014: SCOPE-activities were presented at the 6th EUMETSAT's WG on Data Record generation.
- November 2014: Secretariat organised a webex teleconference, 7 projects presented their advancements, 17 people attended. All presentation can be found on the webpage: http://www.scope-cm.org/meetings/webex/.

5 DECISIONS TAKEN BY SEP IN WRITTEN PROCEDURE

The following decisions have been taken after the SEP09 meeting by email. They will be captured in the meeting minutes of SEP 10.

Decision 01: SEP approved the SEP 09 meeting minutes Version 1.0 dated June 2014.

6 SCM-PROJECT STATUS

The table below presents the list of SCOPE-CM Projects. The *italic* font indicates the projects for which the updated project documentation is still pending. Changes with respect to SEP09 are marked as **bold**.

ID	Title	Leader	SCOPE-CM Partners	other partners
SCM-01	Sustained generations of upper tropospheric humidity Climate Data Records from multiple sensors with multi-agency cooperation	Lei Shi (NOAA)	NOAA EUMETSAT (CM SAF)	Kiruna University, NCAR, University of Miami
SCM-02	Multiplatform surface albedo demonstrator from polar-orbiting satellites	Terhikki Manninen (EUMETSAT CM SAF)	EUMETSAT (CM SAF and CF) NOAA	University of Massachusetts
SCM-03	Land surface albedo from geostationary satellites (LAGS)	Alessio Lattanzio (EUMETSAT CF)	NOAA JMA	-
SCM-04	*Utility of Satellite derived winds for Monsoon and Cyclone studies over Indian region*	*Suman Goyal (Indian Meteorological Departement)*	*[EUMETSAT]*	*Indian Meterological Departement*
SCM-05	*Advancing the status of the AVHRR FCDR*	*Karl-Göran Karlsson (EUMETSAT CM SAF)*	*EUMETSAT (CM SAF)* *NOAA*	*ESA CCI*

ID	Title	Leader	SCOPE-CM Partners	other partners
SCM-06	Inter-calibration of passive imager observations from time-series of geo stationary satellites (IOGEO)	Rob Roebeling (EUMETSAT CF)	EUMETSAT (CF and CM SAF) NOAA JMA **CMA** **(IMD, NASA)**	-
SCM-07	*Liquid Water Path and Rain Water Path Climatologies in the GPM era*	*Ralf Bennartz (NOAA, CIMSS)*	*NOAA (CIMSS, CIRA)* *EUMETSAT(CM-SAF)*	-
SCM-08	Radio occultation based gridded climate data sets (RO-CLIM)	Hans Gleisner (DMI ROM SAF)	EUMETSAT (CF and ROM SAF)	GFZ NASA JPL Moog UCAR University of Graz
SCM-09	*Sustained production of the International Satellite Cloud Climatology Project (ISCCP) cloud products*	*Kenneth Knapp (NOAA)*	*JMA* *CMA* *EUMETSAT*	*INPE* *NY City College*
SCM-10	Atmospheric Motion Vectors (AMV) and Clear/All Sky Radiances (CSR/ASR) from historical meteorological satellites in geostationary and polar orbit	**Arata Okuyama** (JMA)	JMA (MSC+CPD) EUMETSAT (CF) NOAA (NCDC and CIMSS)	-

An extensive description of each project and their status and plan can be found in the SCOPE-CM webpage: http://www.scope-cm.org/meetings/sep10.

The following part gives a non exhaustive summary of the projects advancement.

The SCOPE-CM Upper Tropospheric Humidity (UTH) project uses data sources from multiple sensors on board both polar orbiting and geostationary satellites. The project aims at advancing maturity levels established by the SCOPE-CM Maturity Matrix Model with multi-agency cooperation. Various studies are carried out based on UTH/FTH datasets. Many of these have been published in peer reviewed literature during the last two years.

The surface albedo project goal is to derive a roadmap for estimation of surface albedo using data from several satellite instruments in polar orbit thus benefiting from increased temporal sampling. The method is demonstrated using AVHRR and MODIS data.

The land surface albedo retrieval from geostationary satellites project has been very active. Project partners were able to held a meeting at EUMETSAT in fall 2014 to discuss and decide on next steps. The venue of a new project member from MeteoSwiss was beneficial to the introduction of cloud masking in the product derivation. All agencies are now using the same ECMWF reanalysis data for the albedo retrieval. Coordinated product validation activities have been initiated both in EUMETSAT and NOAA. The project has also managed to start collaborative software development and share eventually leading to cost savings at individual agency level.

The AVHRR FCDR project goal is defined for achieving a long-term commitment for improving AVHRR GAC FCDR through international collaboration. The project has three main components: a) upgraded visible calibration corrections, b) revised infrared calibration and c) revised navigation based on image-retrieved (coast-line matched) update of orbital model. A new visible calibration correction was delivered to the CMSAF project in October 2014. A Merged AVHRR / HIRS FCDR have been developed. This provides a MODIS or SEVIRI-like spectral information in the IR. 10 years of data exist now. The infrared calibration including the provision of estimates of uncertainty will be greatly enhanced by the EU Horizon 2020 project FIDUCEO (including a thorough revision of the AVHRR infrared calibration procedure) that started 1 March 2015.

All partners of the inter-calibration of passive imager observations from time-series of geo stationary satellites project have been very active this year. The project is extending to more partners. The China Meteorological Administration (CMA) became an official partner of the project. The India Meteorological Department (IMD) and NASA consider becoming new project partners during 2015.

The radio occultation project, RO-CLIM, covers the generation of climatological data from RO and model data. The project leads has been shifted from Dr. A. Von Engeln to the Dr. H. Gleisner from the EUMETSAT ROM SAF in March 2014. The RO-CLIM project largely builds upon the informal ROtrends collaboration between six RO processing centres, extended with expertise on RO technology, re-analysis, and climate modelling. In 2014 the project progresses according to its plan.

Regarding the atmospheric wind vectors and all/clear sky radiances derived from historical meteorological satellites in geostationary and polar orbit, discussion have been initiated

between EUMETSAT and JMA on a potential creation of a global AMV products. In addition, the project activities were coordinated with the IWWG.

7 STATUS OF SCOPE-CM WEB PAGE DEVELOPMENT

EUMETSAT, as SCOPE-CM secretariat, updated the website hosting the SCOPE-CM project, http://www.scope-cm.org.

A webpage for SCM-10 has been created (in October 2014). The meeting item has been populated with document related to the SEP-09 (in April 2014), the webex meeting (in November 2014), and the SEP-10 meeting (in December 2014). All meetings page can be found in http://www.scope-cm.org/meetings

8 SCOPE-CM SEP

Some changes took place in 2014:

- The chair has been taken by Ed Kearns (NOAA) after the SEP-09 meeting in July 2014.
- Jonathon Ross replaced Kerry Sawyer as CEOS observer from the 1st of December 2014.
- André Obregón became the new GEO representative replacing Espen Volden from November 2014.

9 CONCLUSION

The SCOPE-CM Executive Panel is invited to take note of the SCOPE-CM Status Report.