

SAR Coordination WG

- Established to provide coordination across space agencies with SAR missions, to facilitate acquisition and distribution of fundamental SAR satellite datasets, and to contribute to or support development of specific derived products in support of cryospheric scientific research and applications.
- The membership of the SAR Coordination Working Group will be as inclusive as possible and will include:
 - All SAR Operating Agencies (thematic experts and mission managers);
 - Other agencies - to ensure availability of complementary datasets, necessary ground segment and contribution of thematic experts;
 - Members of the science community or scientific team leaders responsible for a specific thematic requirement and who want to ensure that their collective needs are addressed;
 - Members of the “commercial arm” of SAR missions – under invitation by their public counter-part.

PSTG SAR Coordination WG

- Established to fulfill the need for inter-Agency mission acquisition planning and to carry out implementation actions at agency level



- Objectives:

To provide coordination across space agencies with SAR missions, to facilitate acquisition and distribution of fundamental SAR satellite datasets, and to contribute to or support development of specific derived products in support of cryospheric scientific research and applications.

- Open invitation to other space agencies with relevant assets
- Supported by Agencies' commercial partners (MDA, ASF, E-GEOS, etc.)
- Close collaboration with science community - definition of detailed requirements

Value of Coordination

- Provides multi-frequency observation over polar regions (complementary observation and information depth)
- Ensure high-frequency of revisit in the case of “coherent and inter-operable” datasets from various missions
- Ensure workload distribution across agencies – justified by mission constraints and capabilities

Mandate

- Identification and prioritization of multi-frequency SAR acquisitions on polar regions on the basis of the needs coming from scientific and related applications communities.
- Maintain constant dialogue with these communities.
- Maintain constant dialogue with private sector partners.
- Sharing of information on the current status of the SAR missions and the activities on polar regions.
- Ensure that data are being made available to end-users.

Benefits

- The SAR CWG will provide the following benefits to science communities and policy makers:
 - A source of the highest quality and highest volume SAR data available, driven by science and, as appropriate, related application requirements, and be responsive to these requirements.
- The SAR CWG will provide the following benefits to public space agencies:
 - Optimal utilization, on polar regions, of space assets by responding to the requirements of the international science community;
 - Efficiency through collaboration with other space agencies and commercial data providers, to exploit the advantages of each mission and share the load.
- The SAR CWG will provide the following benefits to commercial data providers:
 - A reference point for remote sensing acquisitions on polar regions;
 - Efficiency through collaboration with other space agencies and commercial data providers, to exploit the advantages of each mission and share the load;
 - Recognition for their contribution to this global science initiative.

Activities

- The SAR CWG shall undertake the following activities:
 - Through its link to the PSTG, identification of the main science requirements;
 - Identification of a multi-frequency SAR acquisition plan on polar regions on the basis of the needs coming from scientific community;
 - Identification of a series of individual or collective approaches to ensure data dissemination. In this context, a set of unilateral mechanism, bi- and multi-lateral agreements will be put in place to meet the broad dissemination objectives;
 - Acquisition of multi-frequency SAR datasets according to this plan;
 - Based on agency capacity and mandate, coordinated creation and dissemination of processed information products of societal benefit.

SAR Coordination WG – 1rst meeting

- Frascati – November 12 – 13 , 2012
- Meeting objectives:
 - To discuss and approve the WG terms of reference, governance structure, and define workplan for the next 2-3 year horizon;
 - To hold a planning session on the up-coming and urging activities and requirements , and establish a response strategy to the ice sheet requirements.

Coordinated Response to Ice Sheet Monitoring - North

- Greenland, Svalbard and Canadian ice caps: from Jan to April/May 2013 - to be repeated for 2-3 consecutive years with an increasing number of missions

- Plan: 2013-2015
 - Sensors: RADARSAT-1, TerraSAR-X, Cosmo-SkyMED, ALOS2*, Sentinel1*
 - Goals:
 - Full interferometric coverage of Greenland – Jan to April and Nov to March RADARSAT-1 F1 mode, 3-4 consecutive coverages
 - Full interferometric coverage of Svalbard –March to May and Nov to March RADARSAT-1 F1 mode, 4 consecutive coverages
 - Regions included in science TanDEM-X first and second global DEM acquisitions
 - X-Band missions dense time series over Greenland and Antarctica fast flowing glaciers
 - NSC provides the reception of the RADARSAT-1 data using the Tromsø receiving station
 - NASA provides support to processing and generation of scientific products through the MEaSUREs Program

Access to data is/will be sensor dependent. Agreements for broader access considered

* according to ALOS2 BOS and S1 HLOP when missions will be commissioned.

Coordinated Response to Ice Sheet Monitoring - Antarctica

Antarctica:

- Phased implementation approach taking into account the availability of Sentinel 1 and ALOS 2 in the coming years.

- Plan: 2013
 - Sensors: RADARSAT-2, TerraSAR-X, Cosmo-SkyMED
 - Goals:
 - Interferometric Coverage of Antarctica – April to Sept (visible area for right looking acquisitions) RADARSAT-2 Standard mode, 3 consecutive coverages
 - X-Band missions dense time series over Greenland and Antarctica fast flowing glaciers
 - TanDEM-X Antarctica acquisitions campaign starting with June 2013
 - NASA to provide support for the generation of scientific products through the MEaSURES Program

- Plan: 2014 - 2016
 - Sensors: ALOS 2, Sentinel 1, RADARSAT-2, TerraSAR-X, Cosmo-SkyMED
 - Goals:
 - Interferometric Coverage of Antarctica – ALOS2 coverages as defined in the BOS, Sentinel 1 coverages as defined in the HLOP, RADARSAT-2 three consecutive coverages in left looking mode to cover the region south of 80 degrees
 - X-Band missions dense time series over Greenland and Antarctica fast flowing glaciers
 - NASA to provide support to the generation of scientific products through the MEaSURES Program

Access to data is/will be sensor dependent. Agreements for broader access considered

Satellite Images on New Zealand Post Stamp Series

Image Acknowledgements CSA, ESA and NASA

