

Terms of Reference
Polar Space Task Group (PSTG) SAR Coordination Working Group

November 2014

One of the major successes of the International Polar Year (IPY) in 2007-2008 was the unprecedented amount of high-resolution synthetic aperture radar (SAR) satellite imagery collected over the polar regions and the high quality data products that have since been generated. This outstanding accomplishment relied on a well-coordinated effort on the part of several space agencies, satellite operators and the science community.

Mandate

Building on the successful International Polar Year Space Task Group (IPY-STG) SAR Coordination Working Group, and in order to fulfill the need for inter-Agency mission acquisition planning and to carry out implementation actions at agency level, the Polar Space Task Group (PSTG) is re-enacting the SAR Coordination Working Group with the aim 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 SAR Coordination Working Group (hereafter: SAR CWG) shall be a subsidiary group to PSTG and coordinate its activities and membership with the PSTG.

The SAR CWG shall have the following mandates:

1. Identification and prioritization of multi-frequency SAR acquisitions on polar regions on the basis of the needs coming from scientific and related applications communities.
2. Maintain constant dialogue with these communities.
3. Maintain constant dialogue with private sector data provider partners.
4. Sharing of information on the current status of the SAR missions and the activities on polar regions.
5. 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 satellite data providers, to exploit the advantages of each mission and share the load.

The SAR CWG will provide the following benefits to commercial satellite data providers:

- A reference point for remote sensing acquisitions on polar regions;
- Efficiency through collaboration with other space agencies and commercial satellite 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;
- Definition 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.
- A 3-year Implementation Plan will be developed by the group. This plan will follow the strategic direction of the PSTG Strategic Plan, and it will comply with the capacities and constraints of the member agencies. Annual revision of this 3-year rolling plan.
- 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.

Key Success Factors

The key success factors are identified as follows:

1. Get the commitment of the science community and engagement throughout the entire process.
2. Ensure engagement of SAR operating agencies and commercial satellite data providers.
3. Define milestones and calendar (meetings, definition of requirements, progress reports, etc.)
4. Identify members' roles and responsibilities (Space and Ground segment organizations, Science Community, Commercial Satellite Data Providers).
5. Identify outreach and communication opportunities in coordination with PSTG.

Governance

Policy Framework

The PSTG SAR Coordination Working Group has been established as a sub-group of the PSTG and so it supports the PSTG policy framework, as documented in the PSTG Terms of Reference.

Reporting Framework

The PSTG SAR Coordination Working Group shall informally report to the PSTG, and shall support that body's reporting to WMO.

Membership

The membership of the PSTG SAR Coordination Working Group will be as inclusive as possible and will include:

- All SAR Operating Agencies (thematic experts and mission managers)
- Other agencies (i.e. optical) to ensure availability complementary datasets
- Members of the science community representing thematic sectors of priority
- Members of the "commercial arm" of SAR missions.

Chair

The Chair of the PSTG SAR Coordination Working Group will be a representative of a space agency with a SAR mission. The Chair will rotate to another such agency every three years. The Chair is a Member of PSTG.

Meetings

Meetings will take place at least once per year, and will be hosted by the member space agencies.

Secretariat

Secretariat will be provided by the WMO Space Programme office.

Reference:

PSTG Terms of Reference
PSTG#1 Final Report
PSTG#2 Final Report
IGOS Cryosphere Theme Report 2007