

Candidate Supersite selection

Telecon 8 May 2012,

Summarized by Falk Amelung and Thomas Walter

Attendees: Thomas Walter, Mahdi Motagh, Andy Hooper, Tim Wright, Eugenio Sansosti, Matt Pritchard, Eric Fielding, Zhong Lu, Juliet Biggs, Falk Amelung

1. Background and Charge

Falk Amelung updated the group about an approved TeraSAR-X proposal for background acquisitions. The charge to the group is to agree about a transparent process on how to select Candidate Supersites and to develop a prioritized list of targets. We should select about 50 targets. The current quota (500 scenes) is not sufficient for this. However, it is likely that the satellite has sufficient capacity. We also could submit the same list to CEOS and ask for coverage with Cosmo-Skymed or Radarsat-2 of targets not imaged by TSX or where added value is expected. Eric pointed out that DLR is likely to count products instead of scenes, which can help to keep the use of the quota low. A quota of 1000 images was given to WinSAR in 2011 which was used to start imaging some of the targets of interest (<http://winsar.unavco.org/terrasarx.php>).

It is likely that some (or all) potential Supersites will eventually be converted into operational Supersites (with open data access), depending on the progress of GEOSS.

2. Selection criteria for Candidate Supersites

A rating system will be used to rank sites according to:

- GEOSS commitment of the local monitoring agency (e.g. interest in GEOSS and willingness to participate in data sharing pilots).
- vulnerability of the population
- potential for new scientific results, i.e. peer-reviewed articles

Details and suggested sites will be summarized in an independent document. (**action: all**).

3. Currently imaged volcanoes

Several groups are currently imaging different volcanoes (e.g. Colima, Merapi by GFZ, Tunguruaha and Alutu and others by Bristol, Nabbro by Leeds (every 11 days), Santorini and Andes volcanoes by Bristol, Iceland by Andy (although not so frequently), Galapagos by Falk, Aleutians and Cleveland by Lu) but some of the projects are running out of quota and or money. Continued monitoring through the Supersites will be very useful.

4. Candidate Supersites discussed.

Tunguruaha, Alutu, Lascar, Hekla, Fuji, Karymsky, Bezymianny, Sinabung, Montserrat, Popocatepetl, Nyiragongo...

5. Spotlight versus stripmap for volcanoes

Falk thought that Spotlight is best for volcanoes (10x10 km, is higher resolution and better coherence). GFZ made tests at Colima, Mexico and Merapi, Indonesia and found spotlight to be better for local volcanologic problems. Juliet has made excellent experience with stripmap (coherence is fine). The advantages are that we can see deeper sources and cover multiple volcanoes with one frame.

6. Involvement of local monitoring agencies.

The marriage of satellite-based and in-situ monitoring efforts is one of the top priorities of GEOSS. Progress has been made at agencies in well-developed countries (INGV, USGS, Iceland, Turkey, Ecuador) but is slow elsewhere. Several volcano observatories were asked to fill out the Supersites questionnaire but only few responses were received. An efficient way to develop GEOSS could be open access to SAR data for a limited time-period for selected sites with the expectation that the science community involves the local agencies.

7. Committees

We should have a volcano, tectonics and earthquake committee. The committees consist of members of this group and others willing to work. Each committee will have a Chair. The committees should be responsible for the final rating of potential Supersites. The volcano and earthquake committees will also be responsible for the selection of event Supersites. It is important that the committees are open and inclusive (i.e. that outside proposals are fairly treated) so that the Supersites truly represent the community.

Details will be discussed in Santorini. The Santorini symposium attendants of this group will serve as nominating committee (**action: Juliet, Salvatore, Falk, Tim**).

8. Informing the community and e-mail list

There is a need for more e-mail traffic, informing the community about what is going on. There is a list (supersites@earthobservations.org or similar) but it is not used very much nor it is clear whether it works. It will be better to switch to an unavco e-mail list on which we have more control. (**action: Falk**)