

Achieving Sustainability for WG Disasters Demonstrators and Pilots

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What is sustainability in CEOS context?



Sustainability means different things for different activities.

There's no one path.

This is not a "simple" transition from science to operations.

In some cases, sustainability may mean broadening the audience of science results to warrant further science investment.

In some cases, sustainability means transitioning to a service-oriented activity.

*Lessons can be learned from failing to achieve sustainability as well (e.g. GEO-DARMA ceasing activity in 2023; *(partial?)* end of seismic demonstrator in 2022...)*

Fulfillment of conditions to ensure continuity in time (resources, etc); threats are right after demo period...

Sustainability Challenges — and approaches to address them



- ❖ Many solutions rely on marriage of free & open data with commercial datasets – **data cost** : a hurdle...
 - Work with hotspots and provide **total coverage at varying resolutions**; ensure solutions are scalable.
- ❖ **Awareness** of specific benefit still limited – many activities have diverse user communities
 - Showcase Demo successes from **stakeholder viewpoints**
- ❖ Understanding of **differences in satellite data** solutions still low (e.g. free&open data vs commercial data)
 - Focus on **integrated solutions** but bring **clear cost-benefit** to show how using commercial data sets augments overall benefit of satellite EO usage
- ❖ Continuous effort to be put on **Capacity Building** (technical, decision makers too) and **co-construction**
 - Strengthen **links WG CapD / WG Disasters**, for synergistic action ; develop **“peer awareness”**

- *Sustainability sub-team circulated questionnaire to Demos and Pilots.*
- *Responses received from RO Demo, Landslide Demo, Volcano Demo and Wildfire and Flood Pilots*
- *Key issues addressed:*
 - ✓ *short and long-term goals and vision;*
 - ✓ *communities of practice and stakeholders;*
 - ✓ *data needs and costs.*



- *All activities except wildfire pilot identified **cost of data** (and in some cases also **value adding**) as significant barriers to sustainability; **data continuity** is a greater issue for science users*
- *Some activities have a very **operational focus** for the long term (RO, Volcano response) while some are more **research focused**. Many are also **mixed** (Wildfires, Landslides, Floods).*
- *Some activities present **commercial opportunities** (Landslides, Floods), but that are not fully mature.*

- *Some communities are **very structured** (Volcano Observatories on national basis, PDNA process for RO) while **others vary significantly from event to event** (Floods, Landslides), without offering renewed institutional interfaces*
- *In the specific case of RO (but is it the only one ?), the **type of users/actors vary highly significantly along the time** : PDNA actors (international and government), then sectorial ministries; local decision makers; monitoring & evaluation actors;*
- ***Contribution to Public Good activities** : a key driver*

Vision for sustainability



- *RO : incremental approach to leverage PDNA funds and similar DRM funding to provide value added products in support of near and medium-term recovery; CEOS-provided data but regional leadership and international network of commercial value-adding providers; indispensable "RO liaison officer" role*
- *Volcanos : science driver with both long-term science objectives and quick response; IVVO vision, where federated approach provides CEOS-provided sat data to network of global users for public good*
- *Landslides : two-pronged approach with continued science globally but regional uptake of existing methodologies for insurance users (semi-commercial)*
- *Flood Pilot : transition from science to operations a significant challenge; engage more closely with end user community. Showcase best practices in FP workshops.*
- *Wildfire Pilot : wrap up user study and conclude; consider new elements (fuel issues?)*
- *Seismic : possible new science activity based on public good response element of previous activity?*

In most cases, "sustainability" implies continued CEOS support, ideally with clear user leadership & leveraged resources; clear need for long-term background missions (IVVO, Seismic)