

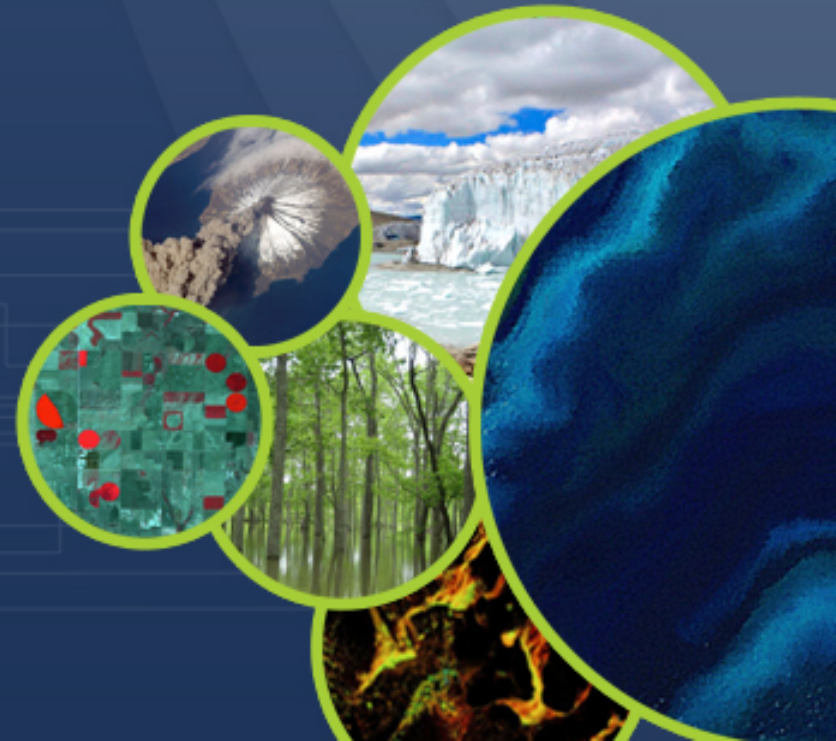


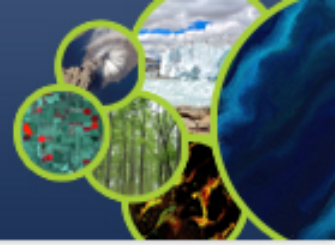
Committee on Earth Observation Satellites

Future of Global Earth Observation A CEOS perspective

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CEOS SIT





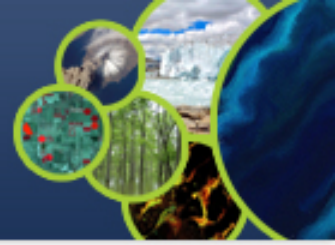
Space segment

Context

- Satellites are, by definition, global systems providing global reach
- Many different parameters are observed
- National space agencies focus on national priorities ...
- ... however, no one agency or nation can provide all space assets required to address the major challenges that face society today ... contradiction?

Clear current and future need for holistic view and coordination of national agency programmes

- To monitor coverage of thematic needs (expressed by user communities, e.g. climate and disasters communities)
- To ensure potential gaps are identified early and are addressed



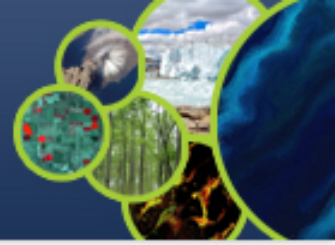
Space segment

Coordination role is carried out by **CEOS** as the space arm of GEOSS, with a specific focus in some domains (where Virtual Constellations/thematic working groups exist)

- Oceans (OST, OCR, SST, OVW) VC
- Atmospheric Composition VC
- Precipitation VC
- Land Surface Imaging VC
- & Climate and Disasters WGs

CEOS coordination focuses on missions providing “free and open” data

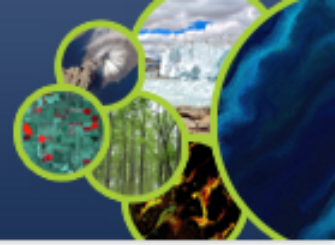
- National space agencies to continue to develop research missions to drive Earth Science research
- Some of these research missions will transition to operational systems ...



Ground segment

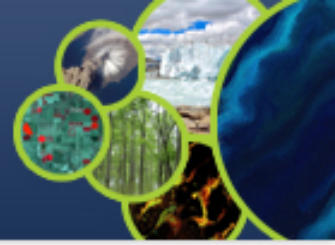
- Some space agencies continue to provide “commercial” data free-of-charge for research activities (Terrasar, Cosmo, Pléiades etc.)
- Aim is to develop R&D activities in themes such as forests (GFOI), Disasters (CEOS WG disasters), Agriculture (JECAM), ...
- Some space agencies have begun to open up heritage data (ERS/ENVISAT, SPOT World Heritage, ...)

Data deluge from satellites is a “game changer” for access and use of satellite data



Ground segment

- New IT infrastructures (cloud based storage and processing, exploitation platforms...) will bring some answers
 - Possibility to provide “analysis-ready” data - basic levels of processing already done (done once, used by many)
 - Possibility to work with data on a remote platform without the necessity of downloading and having appropriate computing power and software in-house
- “Public good” data - mid resolution imagery and science data – will be available on such platforms
- Commercial data must also be available in such infrastructures – how to ensure appropriate economic models?
- Such platforms to facilitate the integration of in situ data?



Ground segment

- Possibility of making available easily in one environment (exploitation platforms) much co-registered data including historical data sets ...
- This is likely to boost data use
- Will viable economic models emerge?
- ... at last the long awaited “Holy Grail” of space agencies? A self-sufficient EO sector?

