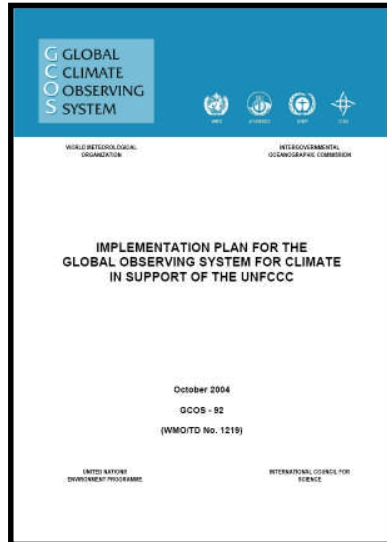


The ESA Climate Change Initiative

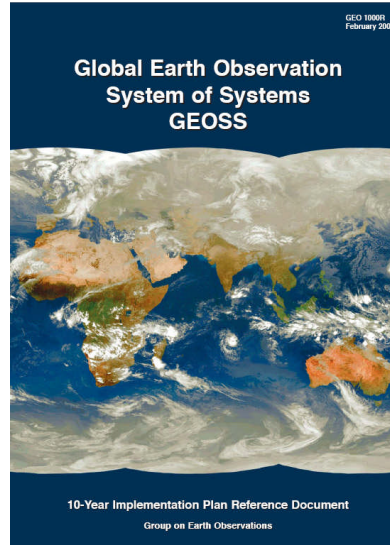
GCOS IP 2004



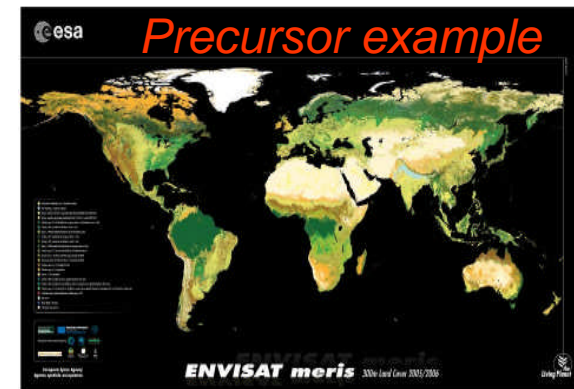
Part of
task
CL-06-01



GEOSS IP 2005



ESA CCI: Production of Essential Climate Variables (ECV) according to GCOS requirements



ESA Ministerial Council, Nov 2008:

Approval of 75 M€ for a six year programme that will provide about a dozen satellite-based ECVs. A strong interaction with the scientific community is an essential part of the programme. Also aims at providing input to the IPCC AR5.

GEO task
CL-06-01



A Climate Record for Assessing Variability and Change

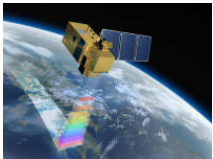
- a) Sustained Reprocessing and Reanalysis of Climate Data
- b) Extending the Record of Climate Variability at Global Scale
- c) Key Climate Data from Satellite Systems

The ESA Climate Change Initiative is part of the *CEOS Implementation Plan for Space-based Observations for GEOSS*



Sentinel 1 – SAR imaging (2011)

All weather, day/night applications, interferometry



Sentinel 2 – Multispectral imaging (2012)

Land applications: urban, forest, agriculture, etc.
Continuity of Landsat, SPOT data



Sentinel 3 – Ocean and global land monitoring (2012)

Wide-swath ocean color, vegetation, sea/land surface temperature, altimetry



Sentinel 4 – Geostationary atmospheric (2017+)

Atmospheric composition monitoring, trans-boundary pollution



Sentinel 5 – Low-orbit atmospheric (2019+)

Atmospheric composition monitoring

The Sentinels are designed for providing data for GMES services, but will also be a fundamentally important data source for science.

Funding

ESA 1.6 B€, EC 0.6 B€

GEO task
AR-09-03



Advocating for Sustained Observing Systems

- a) Global Terrestrial Observations
- b) Legacy of the International Polar Year 2007-08
- c) Global Ocean Observation System
- d) Global Observing System (GOS)

Sentinels are part of the *CEOS Implementation Plan for Space-based Observations for GEOSS*