



Integrated Global Observing Strategy

CEOP/IGWCO Joint Workshop

28 February 2005, Tokyo

Chu Ishida

JAXA/IGOS-P Secretariat

Outline

- What is IGOS?
- IGOS strategy
- IGOS Themes
- IGOS-P contributions to GEOSS

IGOS partnership

A coalition of international organizations working to define, develop and implement a global Earth observing strategy on a basis of “best effort” and shared interest.

IGOS-P brings together

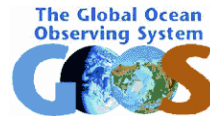
Space agencies



UN organizations



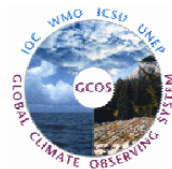
Global observing systems



International science and research programmes

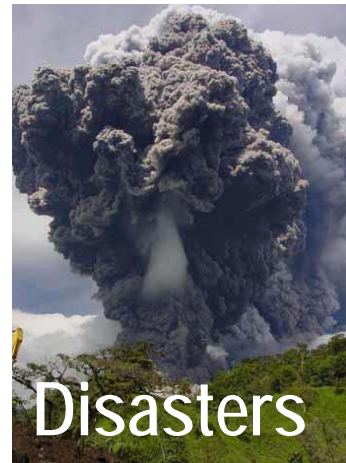
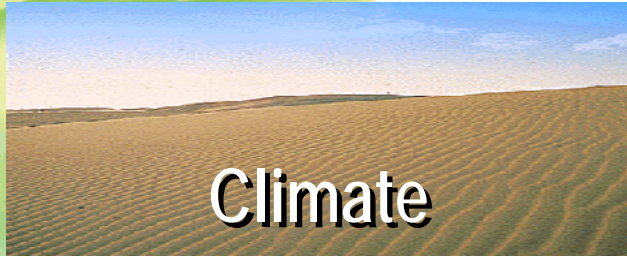


GOS/GAW



IGFA

Need for Earth observations- GEOSS societal benefit areas



IGOS strategy (1)

- Bring together the major surface and satellite-based systems for global environmental observations of the atmosphere, land and oceans in a strategic planning process
- Use the process to build collaboration among partners:
 - A common approach to surface and satellite observations
 - Products that respond to needs defined by users
 - Identifying gaps in observations
 - Exchange information and coordinate efforts
 - Harmonizing measurements

IGOS strategy (2)

- **Cost-effectiveness and a relevant socio economic context by defining:**
 - Who are the users (in policy, research, operational services) and what products do they want?
 - What data, processing and analysis are required to meet those needs?
 - Which observations provide the best data?
 - What observing networks are needed to make the observations?
- **Bring together users, who know best what is needed, with data providers who know best what can be produced**
- **Dialogue between earth observation community and users, such as international conventions, should occupy a central role in an integrated Earth observation plan**

IGOS Themes (1)

- **Process for developing Themes :**
 - Form a group of interested partners and internationally recognized experts
 - Consult user communities to define needs and products
 - Assess current status of observations
 - Identify gaps in coverage and actions required
- **Theme content :**
 - Objectives
 - Roles and responsibilities
 - Milestones
 - Evaluation criteria
 - Level of effort required

IGOS Themes (2)

Under implementation :

- Oceans
- Coral reefs sub-theme
- Carbon
- Water
- Geohazards
- Atmospheric chemistry
- Coastal

Under development :

- Land
- Cryosphere

Selected Theme products (1)

■ Oceans

- Continuity in ocean colour observations
- Seasonal climate predictions for El Niño and La Niña

■ Carbon

- Accurate regional, global estimates of carbon stocks and fluxes
- Improved climate modeling results

■ Water

- Ground-based water observation networks
- Improved global rainfall estimates

■ Geo-hazards

- Topographic and geologic mapping of geo-hazard zones
- Monitoring of ground deformation and seismicity

Selected Theme products (2)

- **Atmospheric chemistry**
 - Air quality forecast and pollution source / transport measurements
 - Forecast of stratospheric ozone and UV irradiance
- **Coastal**
 - Dynamics of change in coral reef systems
 - Estimates of global sediment flows from land into coastal systems
- **Land**
 - High resolution global land cover mapping
 - Active fire monitoring
- **Cryosphere**
 - Snow and ice cover extent
 - Feedbacks on climate and hydrology

IGOS Themes contribute to GEOSS societal benefit areas

IGOS Themes	Status	Relevant GEOSS societal benefit areas
Oceans	In implementation	Weather , Climate
Carbon	In implementation	Climate, Energy
Geo-hazards	In implementation	Disasters, Health
Water cycle	In implementation	Water, Agriculture, Weather, Climate
Atmospheric chemistry	In implementation	Health, Climate, Energy
Coastal & coral-reefs	In implementation	Ecosystems, Biodiversity
Land	In definition	Ecosystems, Biodiversity, Agriculture, Disasters, Climate
Cryosphere	In definition	Climate, Water

IGOS-P Contribution to GEOSS

- IGOS-P offers to serve within the “Science and Technical mechanisms”, as described in the GEOSS Implementation Plan

IGOS-P Message to GEO-5

IGOS-P wishes to stress:

- its endorsement and support for the GEO process resulting in the GEOSS Implementation Plan
- its strong willingness to co-operate with GEO in the implementation of the 10-year Implementation Plan