

GEO Wissenschaft & Technologie Ausschuss

U. Gärtner (BMVBS)

S. Rösner (DWD)

Inhalt

- Zweck / Aufgabe
- Stand
- Status
- STC Tasks im Überblick
- Deutsche Beiträge
- Chancen und Herausforderungen
- STC Tasks 2006 - Details
- Near-Term Successes

Zweck / Aufgabe

- STC soll Experten aus dem Bereich Wissenschaften und Technologie in die Entwicklung und Nutzung des GEOSS einbinden.
- Es soll GEO eine fundierte wissenschaftlich technologische Beratung sichern

Stand

- Terms of Reference am 15.12.2005 von GEO-II verabschiedet;
- Erstes Treffen vom 19.-20. April 2006, UNESCO, Paris;
- Zweites Treffen 30. November 2006, BMVBS, Bonn

Status

- **Leitung (Co-Chairs)**
 - **Süd-Afrika** (Dep. of Science and Technology, Adi Paterson)
 - **ICSU** (Thomas Rosswall)
 - **Deutschland** (BMVBS, Udo Gärtner, ex officio für GEO-ExCo)
- **Aktivitäten:**
 - 20 Tasks aus 2006 Work Plan administriert
 - Science Plan für GEO STC in Arbeit
 - Showcases für Ministersegment bei GEO-IV

STC Tasks im Überblick

- Showcases für GEO-IV, 2007:
 - Erzeugung eines globalen Datensatz zur Landnutzungsänderung (AG-06-03)
 - Hydrologische Ensemblevorhersagen im Bereich Wassermanagement (WA-06-02)
- Tasks-Zusammensetzung
 - 1 Disaster - 1 Water - 3 Agriculture
 - 1 Health - 1 Weather - 4 Biodiversity
 - 1 Climate - 6 Ecosystems - 1 Data Mgt.

Deutsche Beiträge (1)

- Teilnehmer an GEO STC-1 aus D:
 - Hr. Gärtner ex officio als Vertreter des GEO ExCo
 - S. Rösner, Deutscher Wetterdienst, nationaler GCOS Koordinator
 - Prof. N. Jürgens, Uni Hamburg (DIVERSITAS)
 - Dr. M. Herold, Uni Jena (GTOS/GOFC-GOLD)

Deutsche Beiträge (2)

- zu Tasks, die dem STC zugeordnet sind:
 - verschiedene DLR-Institute
 - GKSS
 - MPI f. Bio-Geochemie, Jena
 - GeoForschungsZentrum Potsdam (GFZ)
 - Deutscher Wetterdienst
 - Bundesanstalt für Geowissenschaften und Rohstoffe
 - Inst. für Physik und Meteorologie, Hohenheim
 - GTOS/GOFC-GOLD, Uni Jena
 - DIVERSITAS International

Chancen und Herausforderungen (1)

- Nächste Schritte:
 - STC strebt übergeordnete, beratende Funktion für GEO an;
 - Tasks sollen abgegeben werden.
- Chancen für deutsche Einrichtungen
 - Flankierung nationaler und europäischer Forschungsaktivitäten
 - Mitbestimmung bei Steuerung der Implementierung von GEOSS

Chancen und Herausforderungen (2)

- Herausforderungen
 - Aufbau eines nationalen Netzwerkes
 - Operationalisierung von Beobachtungsaktivitäten aus Forschungsprogrammen
 - Identifizierung von neuen Forschungs- und Entwicklungsschwerpunkten
 - Beratung von Entscheidungsträgern

STC Tasks 2006 - Details

(8 Folien)

STC Tasks in 2006 (1)

- DI-06-03: Support the improved integration of InSAR (Interferometric Synthetic Aperture Radar) technology for disaster warning and prediction.
- HE-06-01: Consult with scientists and experts from the health, environment, and Earth observation communities to define the requirements and priorities of the Health communities regarding environmental observations.
 - Kein Point of Contact
 - Leads: Griechenland und IGOS-P
- CL-06-01: Ensure the initiation of international mechanisms to coordinate and maintain sustained climate data reprocessing and reanalysis efforts.

STC Tasks in 2006 (2)

- WA-06-02: Facilitate the development of one (or more) demonstration-project that points to the added value of hydrological ensemble forecasts in water resource-management.
- WE-06-03: Facilitate the development and maintenance of a prototype global operational multi-model ensemble prediction system (e.g. through THORPEX) incorporating easily accessible databases.
- EC-06-01: Support the Integrated Global Carbon Observation (IGCO) development of a global carbon-observing system, in particular improved global networks of in-situ CO₂ observations.

STC Tasks in 2006 (3)

- EC-06-02: Establish an ad hoc Ecosystems Classification Task Force, covering terrestrial, freshwater, and ocean ecosystems, with a mandate to create a globally agreed, robust, and viable classification scheme for ecosystems.
- EC-06-03: Initiate the harmonization of observing-methods and create synergies between ecosystem observing activities and those of other existing groups and mechanisms for terrestrial, freshwater and marine systems.
 - Kein Point of Contact
 - Lead: Russland

STC Tasks in 2006 (4)

- EC-06-04: Explore techniques for up-scaling in-situ ecosystem observations.
 - Kein Point of Contact
 - Keine Lead Organization
- EC-06-05: Complete a survey of the research community involved in in-situ observations and modelling for new platform and sensor needs, or for suggestions for better use of existing systems.
 - Kein Point of Contact
 - Lead: IGBP

STC Tasks in 2006 (5)

- EC-06-06: Conduct an inventory of archived data for ecosystems, identify data gaps, identify data at risk, and evaluate costs of data rescue. In complement, conduct a workshop to define a data archiving strategy taking into account data types, processing levels and supporting media.
 - Kein Point of Contact
 - Keine Lead Organization
- AG-06-02: Consult with scientists and experts from the fisheries, aquaculture, coastal zone management and Earth observation communities at international and regional levels to identify opportunities for enhanced utilization of Earth observations in fisheries and aquaculture.

STC Tasks in 2006 (6)

- AG-06-03: Utilizing global and regional high-resolution land-cover datasets (e.g. GLOBCOVER) and earlier 1-km resolution land cover data sets (e.g. Global Land Cover 2000), implement production of a high-resolution global land-cover change dataset and report. Propose mechanisms for regular analysis and reporting on land cover change building on current efforts and promulgate the use of these products, especially in developing countries.
- AG-06-05: Facilitate the implementation of a demonstration project, initiated by THORPEX and AMMA, on the use of advanced weather and climate ensemble forecasting methods integrating Earth observations, agricultural data and socio-economic data, to develop and improve the predictability of food-supply hazards in Africa

STC Tasks in 2006 (7)

- BI-06-01: Ensure participation of the bio-diversity community into the Ecosystem Task Force (see Task EC-06-02) in order to ensure that the ecosystem classification system developed as part of this task is compatible with bio-diversity observational requirements.
- BI-06-02: Building on the framework adopted for monitoring bio-diversity trends in the UN Convention on Biological Diversity, conduct a series of workshops and meetings to (i) define the needs and requirements of the bio-diversity information users sector, (ii) delineate available methodologies and (iii) identify the adequacy of current and past observational strategies.
- BI-06-03: Initiate the development of a strategic plan for capturing historical bio-diversity data from natural history collections and the research community.

STC Tasks in 2006 (8)

- BI-06-04: Initiate the development of a strategic plan for periodic global assessment of status and trends for species of merit, taking into account the Millennium Ecosystem Assessment and CBD 2010 targets. Include the remote sensing community in this discussion to determine the applicability of remote sensing to this topic.
 - Kein Point of Contact
 - Keine Lead Organization
- DA-06-03: Facilitate the development of demonstration projects promoting the wider use, in other disciplines, of ensemble-based techniques originally developed for weather forecasting.

Near-Term Successes

- inoffiziell -
(3 Folien)

Near-Term Successes (1)

1. Global Fire Warning System - DI-06-13
2. Health Hazard Forecasts for Africa - HE-06-03
3. Air Quality Forecast for Public Health - HE-07-03
4. Solar Energy Data for Developing Countries - EN-07-03
5. Seamless Weather-Climate Prediction System (THORPEX) - CL-07-01
6. Drought Prediction and Management System - WA-06-02
7. Understanding Continental Water - WA-06-05
8. Worldwide Water Quality Monitoring System - WA-07-P1
9. Beijing Olympics High-Precision Weather Project - WE-07-02
10. Global Ecosystem Classification Scheme - EC-06-02
11. Crop Failure Monitoring System - AG-07-02

Near-Term Successes (2)

12. Global Biodiversity Observation and Monitoring Network - BI-07-01
13. Invasive Species Monitoring System - BI-07-02
14. Serving the Users with Better Nowcasting and Forecasting - US-07-01 (Extending Helsinki Testbed)
15. World Portal for Earth Observations - AR-07-02
16. The GEOSS Backbone - Registry of Interoperable GEOSS Components - AR-07-04
17. Global Land Surface Imagery Initiative- DA-07-03
18. GEONETCast - CB-06-04
19. The Donor Challenge - Building Capacity for Earth Observation- CB-07-01(a)
20. The Brazil Book- Public Health and Earth Observation (Brazil) - Outreach Initiative 5.2



Near-Term Successes (3)

- Laufende Initiativen, die von GEO unterstützt werden:
 - Global Tsunami Early Warning System (IOC) – DI-06-04
 - THORPEX Interactive Global Grand Ensemble – TIGGE (WMO)
 - WE-06-03