

Wetlands

GEO BON & GEO Water Cooperation Status, Plans & Opportunities

Adrian Strauch (University of Bonn, Germany)

based on inputs by

Ian Harrison (Conservation International)

Stephan Flink & Lammert Hilarides (Wetlands International)



Outline

- Short introduction to Wetlands
- Representation of Wetlands in GEO
- Cooperation status, plans and opportunities
- Next Steps & Discussion

Scope:

Information about ongoing cooperation, discussion of opportunities and next steps to increase the involvement of the GEO water community



Wetlands

A resource of great socio-economic, ecological, cultural and scientific value.

- **Hotspots of Biodiversity**

- only 1% of world's land surface but almost 10% of world's species

- **Highly threatened ecosystems**

- e.g. Europe has lost about 60% of its wetlands in the past 50 to 100 years

- **Important ecosystem services**

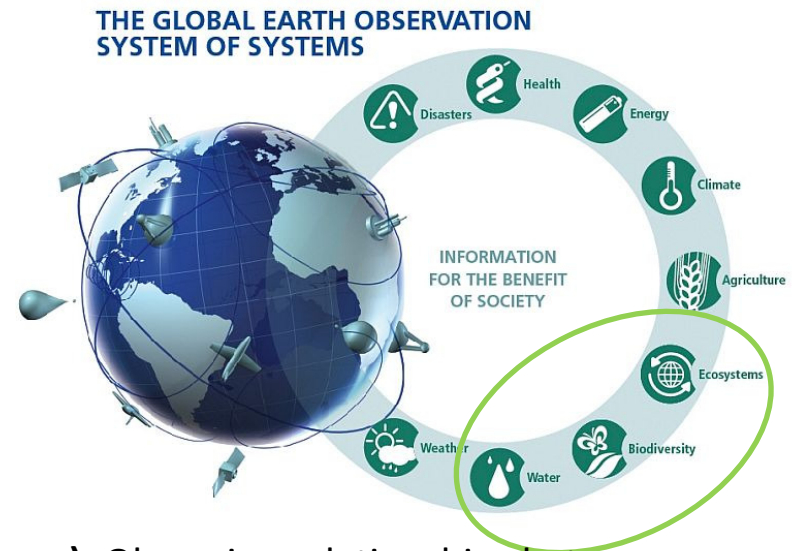
- Water: supply, purification, storage, flood prevention
- Economy: fishery, food production, recreation & tourism
- Climate: climate change mitigation and adaptation → carbon storage
- Cultural: hotspots of human evolution, cultural heritage



Wetlands in GEO

Wetlands in the GEO Workplan 2012-2015

- Defined as Key Ecosystem within the GEO Ecosystem Task
- Global Wetland Observation System is a Key Output of the GEO Biodiversity Task for 2015
- Strong thematic links to different Water Task components (water cycle, water quality)



GEO BON Working Group 4 (Freshwater ecosystem change): Observing relationships between biophysical features of freshwater ecosystems e.g. wetland biodiversity, changes in wetland extent, ecosystem services and livelihoods values

GEO Water/IGWCO: e.g. water quality, environmental flows, sediment transport, river discharge, surface water storage, precipitation, soil moisture

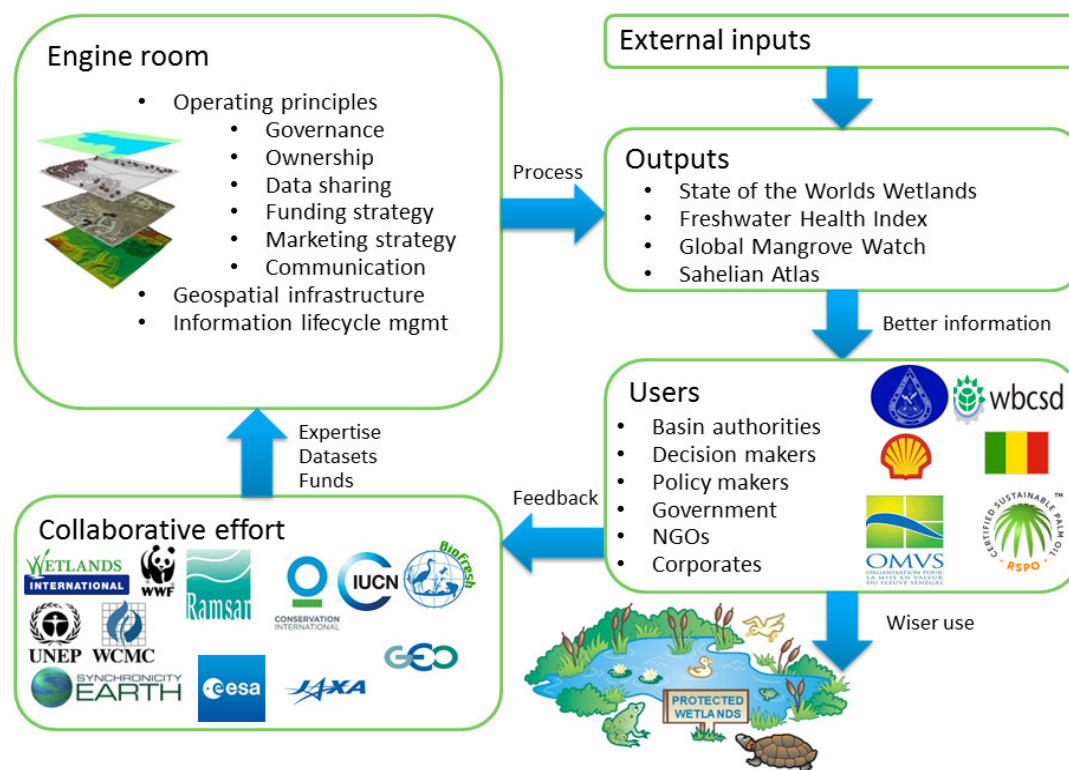
Wetlands offer great potential to **connect different SBAs** because of their transdisciplinary character

- Water, Biodiversity, Ecosystems, (Landcover, Agriculture, Climate)



Global Wetland Observation System

- **Cooperation** between Ramsar Convention on Wetlands, GEO BON, Wetlands International, and others
- **Status:** 5 planning workshops/consultation meetings, 2 User needs assessments, wetland data inventory, Implementation/business plan
- **Next Steps:** Acquire additional funding, launch pilot projects (targeted at supplying information for Ramsar's State of the World's Wetlands reports), develop a GEOSS compatible infrastructure and service
- **Planned pilot project** in cooperation with the Global Mangrove Watch



GEO Water & GEO BON Cooperation

- Initial telecons and discussions have taken place
 - Topics: Funding opportunities, cooperation potentials, data requirements, etc.
- Identification of people interested in supporting future activities (within GEO BON and GEO Water)
- Proposal for Horizon 2020 has been prepared on satellite based wetland-ecosystem observation
 - Waiting for approval



Plans

- Formation of a GEO Wetlands Group?
 - Include other SBAs like e.g. Ecosystems?
- Development of a white paper
 - review the key areas for work and opportunities for advancing knowledge through collaboration between the two groups
 - (i) water cycle monitoring and land cover evaluation;
 - (ii) indicators of change in wetland extent, quality, biotic integrity;
 - (iii) provision of ecosystem goods and services, and the role that biodiversity plays in this, or is supported by this.
 - Presentation of the results
 - in the framework of water, energy, and food security, to have most traction with the international nexus programs that are shaping policy and management planning.
 - at the next GEO plenary (November 12-13) in Libreville, Gabon.
- Regular Telecons / Meetings
- Development of joint wetland projects?



Opportunities I

- **Upcoming Projects**

- **SWOS**, H2020 Proposal, pending
- **GWOS**, concept ready, implementation initiated, additional funding needed
- **Globwetland III**, as successor to GW I&II, focus on Africa and Sentinel I&II data
- Development of a **Freshwater Health Index** by Conservation International, with initial focus on Mekong; 2 year post-doc position being recruited



Opportunities II

- **Global Initiatives**

- SDGs – Sustainable water management – water needs of society vs. ecosystems
- EBVs – (including freshwater related EBVs); initial EBV set developed at GEO BON workshop with about 40 experts; follow-up survey and review completed; another workshop for further development planned for later in 2014
- EWVs – potential to connect this to the freshwater related EBVs?
- Future Earth – Wetlands as area for multidisciplinary projects
- Possible links to Belmont Forum DELTAS project (databases, modeling and analyses)
- Water-Energy-Food Nexus: Wetlands play an important role in the Nexus

- **Funding**

- opportunities for multidisciplinary wetland projects
- upcoming H2020 Calls, ESA Calls, Future Earth, Belmont Forum etc. could potentially be used to form a consortium consisting of different GEO Communities



Upcoming Meetings & Workshops

- World Water Week, Aug/Sep, Sweden
 - Workshop: Water, Energy, Food and Ecosystem Security
- World Lake Conference, Nov, Italy
 - Special Session: EO of Inland and Near-coastal Waters
 - Relevant Themes: „Informatics, Mapping, Ecosystems“, „Ecology and Biology of Inland Waters“, ...
- GEO Plenary, Nov, Gabon
 - Focus on Water, Energy, Food and Africa
 - Presentation of Biodiversity/Water white paper
- IUCN World Parks Congress, Nov, Australia
 - Stream 4 *Supporting Human Life* – session on *Water for Life (Conservation International)*.



Next Steps

- Regular telecons to further discuss
 - next steps, joint activities & progress
 - development of the white paper
 - meeting opportunities
- In person meetings/workshop
 - Maybe as side event at other events
- Formation of a cross-SBA GEO Wetland Group with members of GEO BON, GEO Water, GEO Ecosystems?
 - Raise awareness of wetlands within GEO
 - Support and promote the development of the GWOS
 - Coordinate future activities

