

GEOSS Workshop XXVIII – Health and the Environment

World Meteorological Organization, Geneva, Switzerland

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Co-organizers:

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Summary

This workshop addresses steps forward in the expansion of existing health databases such as the WHO Open Health database to more effectively incorporate environmental information. To move in these directions, the workshop will provide a forum to review existing systems, tools and best practices and to identify collaborative operational pilot projects that can address high priority health needs. Particular attention will be on improving the collection and distribution of coordinated epidemiological and environmental information to meet the diverse needs of the health community. This workshop will also launch the "Health and the Environment Community of Practice" . This new community of practice will address the user perspective of issues involving environment and health with an emphasis on using environmental observations to improve health decision-making at the international, regional, country and district levels.

Background

The Global Earth Observation System of Systems (GEOSS) is envisioned to cover all aspects of Earth observations and by this will introduce a new capability for monitoring environmental processes. GEOSS is a complex "system of systems," including sensors, communication systems, spatio-temporal data infrastructures and other components essential for understanding the Earth and its impact on a host of important societal benefits. In addition, GEOSS includes models and data fusion processes to create information from the observation data that is essential for decision making. The 2003 Earth Observations Summit established the objective "*to monitor continuously the state of the Earth, to increase understanding of dynamic Earth processes, to enhance prediction of the Earth system, and to further implement our international environmental treaty obligations*". GEOSS goals are to achieve comprehensive, coordinated and sustained observations of the Earth system, in order to improve monitoring of the state of the Earth, increase understanding of Earth processes, and enhance prediction of the behavior of the Earth system.

The GEOSS 10-year Implementation Plan states that GEOSS will provide the overall conceptual and organizational framework for integrated global Earth observations to meet user needs. GEOSS will be a system of systems consisting of existing and future Earth observation systems, supplementing but not supplanting their own mandates and governance arrangements. It will provide the institutional mechanisms for ensuring the necessary level of coordination, for strengthening and supplementing existing Earth observation systems, and for reinforcing and supporting component systems in carrying out their mandates.

The emphasis of GEOSS is on societal benefits, initially in nine key areas. Sound management of the Earth system, in both its natural and human aspects, requires information that is timely, of known quality, long-term, and global. Interpretation and use of Earth observations requires

information on drivers and consequences of change, including geo-referenced socio-economic data and indicators. The nine areas addressed in the GEOSS Implementation Plan are:

- Disasters: Reducing loss of life and property from natural and human-induced disasters
- Health: Understanding environmental factors affecting human health and well-being
- Energy: Improving management of energy resources
- Climate: Understanding, assessing, predicting, mitigating, and adapting to climate variability and change
- Water: Improving water resource management through better understanding of the water cycle
- Weather: Improving weather information, forecasting and warning
- Ecosystems: Improving the management and protection of terrestrial, coastal and marine resources
- Agriculture: Supporting sustainable agriculture and combating desertification
- Biodiversity: Understanding, monitoring and conserving biodiversity

Although all of the above societal benefit areas (SBAs) of the Implementation Plan are important for GEOSS, this workshop will focus specifically on Health.

The GEO Work Plan

The GEO 2009-2011 work plan takes the GEOSS 10-year Implementation Plan through its midway point, and has an increasing focus on putting the components of GEOSS into place. This phase of the plan will enable connections to be realized between diverse observing, processing, data-assimilation, modeling and information-dissemination systems. The new work plan will also enhance the role of users and Communities of Practice within GEO. The work plan has several tasks associated with Health. GEO is addressing the use of environmental information for predicting and responding to disease and health issues. A long term objective is integration of this information into a global health data base for health system managers. GEO health task HE-09-01, which is the primary task addressed in this workshop, is aimed at improving in-situ environmental and health data collection for the utilization and validation of remotely-sensed data.

Workshop Theme

The workshop will focus on how GEOSS can support the collection & distribution of health and environment information and meet the diverse needs of the health community. The workshop outcome will be a refined set of requirements based on existing developments. These will guide the connection of WHO's Open Health information tool and other health and environmental information systems to the GEO Portal and GEOSS Common Infrastructure (GCI) in the 2009-11 timeframe.

Workshop Objectives

- Confirm approach for developing an integrated GEOSS environment and WHO Open Health Information System
- Expand participation and contributions to GEO Workplan tasks and synergies between tasks

- Launch the “GEOSS Health and Environment Community of Practice”
- Launch an action Plan for collection of environmental health-related information, including a call for contribution
- Formulate recommendations for new Pilot Programs (such as malaria or other disease) to assess and validate the environment-health integrated Information System
- Establish plan for November Workshop in Washington DC, USA

To establish a framework for discussions, the 3 day workshop will include invited presentations by decision makers, user communities’ representatives, providers of health and environmental information, and observation system developers. Break out sessions will allow the audience to further explore key topics in small interactive groups. A concluding session will summarize the workshop outcomes and way forward.