



The GEO Biodiversity Observation Network

Monitoring biodiversity trends is critical to the conservation and sustainable use of the world's biological resources. The international community has adopted a series of conventions for protecting the world's species and ecosystems. The most comprehensive such treaty, the Convention on Biological Diversity (CBD), aims to secure the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits from the use of genetic resources. The CBD recognizes the importance of scientific observations to enabling decision-makers to achieve these aims.

The Global Earth Observation System of Systems (GEOSS) will greatly improve the quality and quantity of information about biodiversity. GEOSS is linking together the world's many stand-alone systems for monitoring all aspects of the Earth system, including ecosystems, species and gene pools. It is working to connect biodiversity monitoring networks to other relevant Earth observation networks, such as those that generate data on climate trends and pollution indicators. The Group on Earth Observations (GEO), which is coordinating the construction of GEOSS, advocates for greater investments in biodiversity observation systems and for the full and open access to biodiversity and other Earth observation data.

The GEO Biodiversity Observation Network (GEO BON) is the biodiversity arm of GEOSS. Constituting an essential component of the emerging "system of systems", GEO BON is bringing together the many observing instruments and systems now tracking trends in all aspects of the world's biological diversity. Its 90-plus participating organizations aim to fill gaps in taxonomic and biological information and speed up the pace at which information is collected and disseminated. GEO BON is ascertaining the information requirements of user groups and facilitating interoperability amongst observation systems and databases. GEO BON was launched by the GEO Biodiversity Community of Practice in April 2008; it is also a Task in the GEO 2009-2011 Work Plan.

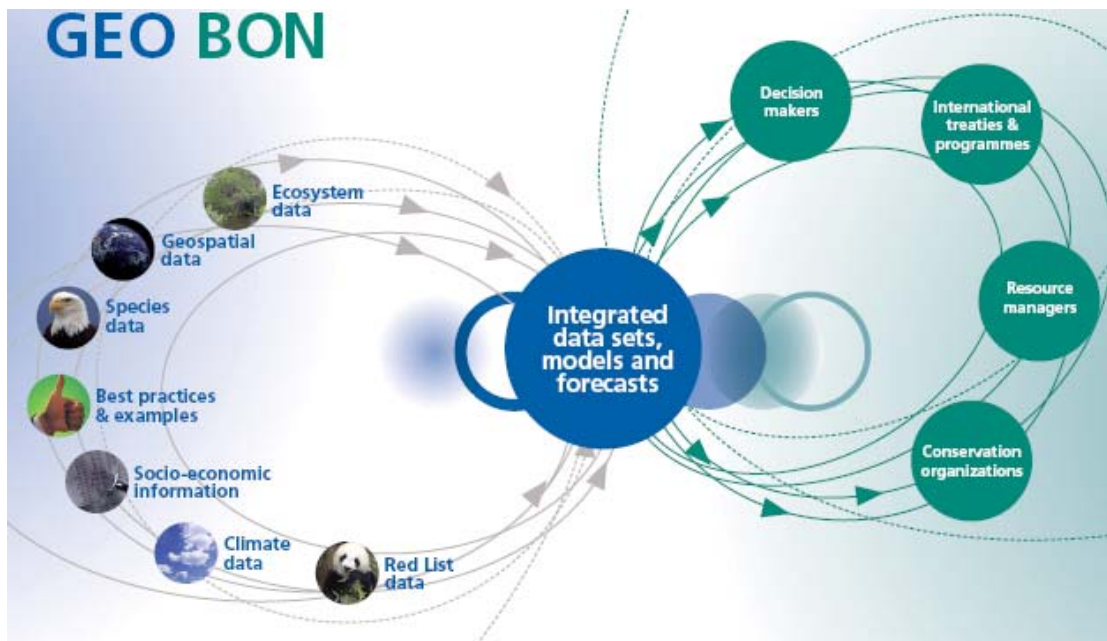
GEO BON is being built on the foundations of existing programs. It promotes synergies and interlinkages amongst the world's monitoring systems and data bases while minimizing overlaps and identifying and filling gaps. For example, the Global Biodiversity Information Facility (GBIF), which has a broad mandate to promote the digitization of historical biodiversity data and facilitate global dissemination of these and other primary biodiversity data, is a major contributor to GEO BON. Other leading organizations participating in GEO BON include DIVERSITAS, the UNEP World Conservation Monitoring Centre, the ILTER (International Long-Term Ecological Research) network, the Council for Scientific and Industrial Research (South Africa), the US National Aeronautics and Space Agency (NASA) and the European Space Agency (ESA), the ASEAN Centre for Biodiversity, and many others.

The implementation of GEO BON is being driven by "early products" and thematic working groups. To quickly demonstrate its effectiveness, GEO BON aims to launch five so-called early products by 2010; these products relate to the lens approach, ecosystems, gap analysis, population & drivers, and protected areas. To ensure concrete progress over the next several years, GEO BON has established eight topical working groups: genetics,



terrestrial species monitoring, terrestrial ecosystems monitoring, freshwater ecosystems monitoring, marine ecosystems monitoring, ecosystem services, in-situ/remote-sensing integration, and data integration & interoperability. Another tool for implementation will be the development of “regional BONs”, starting with the European Commission-funded EBONE for Europe.

GEO BON operates according to an innovative governance structure. Like GEO as a whole, GEO BON relies on the voluntary, best-efforts contributions of its participating organizations. These organizations collaborate with one another on the basis of an agreed concept document and an outline implementation plan; the implementation plan will be further elaborated by mid-2010. Because GEO BON is a Task in the GEO Work Plan, it reports regularly to the GEO community and is well integrated with the overall construction of GEOSS. A steering committee helps to guide the GEO BON process on its way forward.



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