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The GEO Biodiversity Observation Network (GEO BON)

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For information

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A large number of governmental and non-governmental organizations are collaborating through the GEO Biodiversity Observation Network (GEO BON) to coordinate their biodiversity observations. The aim is to provide policymakers, managers, experts, and the general public with improved information on the worldwide status of, and trends in, biodiversity and ecosystem services. The GEO framework facilitates the use of in situ and space-based observations of the world's ecosystems, species, and genetic resources. Combining these observations with data from other GEO societal benefit areas can place the changes observed in biodiversity within their broader environmental, climatic, and socioeconomic contexts. As a globally distributed network of biodiversity data providers and users and a biodiversity Community of Practice, GEO BON actively promotes this integration of biodiversity data with data on climate and other key variables.

Collaboration with the Convention on Biological Diversity (CBD) and its 193 Parties has been a primary activity for GEO BON since the GEO-VII Plenary. In November 2010 in Nagoya, Japan, the 10th meeting of the Conference of the Parties to the CBD adopted a Strategic Plan for Biodiversity 2011-2020, including a set of 20 targets for 2020. The Nagoya conference adopted Decision X/7 inviting GEO BON to prepare an evaluation of existing observation capabilities relevant to the targets contained in this Strategic Plan.

The decision stated that: “The Conference of the Parties ... Requests the Executive Secretary to invite GEO BON, working through organizations conducting biodiversity relevant observations, including, inter alia, the UNEP World Conservation Monitoring Centre and IUCN, to prepare an evaluation of existing observation capabilities relevant to the targets contained in the Strategic Plan for the period 2011-2020 and provide a report in time for the Ad Hoc Technical Expert Group on Indicators for the Strategic Plan for the period 2011-2020 and to a meeting of the Subsidiary Body on Scientific, Technical and Technological Advice prior to the eleventh meeting of the Conference of the Parties[.]”

Another decision, on the “updating and revision of the Strategic Plan for the post-2010 period”, reads in part: “The Conference of the Parties ... Recognizes the need to continue strengthening our ability to monitor biodiversity at all levels including through, inter alia ... Strengthening the capacity to mobilize and use biodiversity data, information and forecasts so that they are readily accessible to policymakers, managers, experts and other users, inter alia, through participation in, and support to, the Group on Earth Observations Biodiversity Observation Network (GEO BON)[.]” This recognition by the world's leading multilateral agreement on biodiversity is an extremely important development that confirms the relevance of GEOSS to high-level policymaking in this area.

In response to the CBD request, GEO BON convened an International Expert Meeting from 1 to 3 March 2011 in Wageningen, The Netherlands, to prepare an “Assessment of the Adequacy of Existing Observation Capabilities for the CBD 2020 Targets.” Hosted by the Alterra Research Centre at Wageningen University, this meeting of over 50 experts drafted texts on the status of current observations for each of the 20 Targets. GEO BON submitted the resulting report to the June meeting of the CBD's Ad Hoc Technical Expert Group Meeting on Indicators for the Strategic Plan for Biodiversity 2011-2020. The Convention's Subsidiary Body on Technical, Technological and Scientific Advice is to further consider the report in November 2011. (See the report at www.earthobservations.org/documents/cop/bi_geobon/2011_cbd_adequacy_report.pdf.)

According to the report, early analysis reveals two major patterns in the gaps in existing observation systems. First, spatial coverage is still very incomplete. Much more biodiversity data exists for the developed world than for the developing world, which, though less integrated into the global

economy, tends to have much higher levels of biodiversity. Second, even in the developed world the availability of time series data is limited. For example, many countries do not yet have a basic system for regular monitoring of species populations for even their most well-known taxonomic groups. The lack of biodiversity time series makes it difficult to separate human impacts on biodiversity from natural variability and, more generally, in understanding any of the drivers of biodiversity change.

The report also explored an alternative approach to considering biodiversity observation capabilities by identifying ‘a set of essential biodiversity variables’, or EBVs. The current EBV focus is on developing key variables directly related to the condition of biodiversity and ecosystem services as well as to some of the social variables directly related to biodiversity.

The need for more complete spatial coverage and observational time series adds urgency to GEO BON’s efforts to establish regional biodiversity observation networks (BONs) to coordinate data collection and sharing at the regional level under the auspices of the global GEO BON. At its Steering Committee meeting in June 2011, GEO BON adopted a plan to develop these regional BONs and coordinate them within the network. In addition, GEO BON is preparing to serve as the observations arm of the new Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES).

2012 will be a year of major activity for the biodiversity community with, among other things, a World Conservation Congress, a Planet under Pressure conference, a UN Conference on Sustainable Development and its preparatory activities, as well as organizational efforts for IPBES. GEO BON and its member partners stand ready to support these efforts, which are often dependent upon biodiversity observations.