

GEO BON Genetic Diversity Report

There is an emerging understanding of the need for a comprehensive and integrated observation system for biodiversity at genetic, species and ecosystem levels for the purpose of protecting and improving biodiversity (Scholes et al., 2008, 2012). Responding to this need, the GEO Biodiversity Observation Network (GEO BON) was formed in February 2008. Then, GEO BON (2010) developed a detailed implementation plan. More recently, GEO BON identified the following priority activities in the GEO Workplan 2011-2015.

1. Promoting standards for data collection and management of terrestrial species and ecosystems observations.
2. Major components of an initial, worldwide network of biodiversity observations will be in place, starting with terrestrial and freshwater ecosystems.
3. Initial reporting mechanisms will be in place for a variety of biodiversity-relevant topics, starting with ecosystem and genes.

As part of the third priority activity, the GEO Workplan 2011-2015 set up the goal to release "genetic diversity report" as follows:

GEO BON, through key partnerships, will promote observations on genetic diversity not only on crop plants and other economically important species, but also on wild genetic diversity. Activities will use new technologies, and use new modelling approaches linked to global databases. Activities will draw on intensive studies of important species, including rapidly declining species, rapidly increasing species (including invasives), keystone species, flagship species and commercially important species. In the case of global legume diversity assessments, approximately 10,000 species are targeted. A "genetic diversity report" will be released in 2012, before CBD COP11.

Putting together a team for editing of the GEO BON Genetic Diversity Report

This is a challenging task because there is no global mechanism to observe and assess the state and trend of genetic diversity (Yahara et al. 2010). As the first step to develop this mechanism and edit the preliminary version of Genetic Diversity Report before CBD COP11, held in October 2012 in India, a workshop will be held, February 14-15, 2012 in Kyushu University, Fukuoka, Japan.

The Genetic Diversity Report will include the following sections:

Genetic diversity loss in crops and crop relatives
Genetic diversity loss in timber trees
Genetic deterioration under captive breeding
Genetic deterioration of rapidly declining and threatened species
Genetic changes under climate changes
Genetic changes of invasive alien species
Genetic changes of model organisms in the wild

References

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Contact

TetsukazuYahara

Department of Biology

Kyushu University

81-92-642-2622

tet.yahara@gmail.com