

## GEOSS Societal Benefit Area BIODIVERSITY

### Meeting report

#### Defining user needs for a global observation system for biodiversity WMO Headquarters 23-25 October 2006

#### Background:

DIVERSITAS, is mandated by GEO to implement Task BI-06-02, which is: *Building on the framework adopted for monitoring biodiversity trends in the UN Convention on Biological Diversity, conduct a series of workshops and meetings to*

- (i) *define the needs and requirements of the biodiversity information users sector,*
- (ii) *delineate available methodologies and*
- (iii) *identify the adequacy of current and past observational strategies.*

GBIF is mandated to implement Task BI-06-03: *Initiate the development of a strategic plan for capturing historical biodiversity data from natural history collections and the research community.*

DIVERSITAS and GBIF decided to join forces and finances and to have one large joint workshop for these two tasks. During the workshop, DIVERSITAS asked the GBIF invited community to use the meeting primarily to develop the more overarching Task BI\_02\_06, in which GBIF will help to develop the IT-architecture for Biodiversity Monitoring.

#### Goal:

The goals of this meeting were to address Task BI-06-02 and BI-06-03 of GEOSS, focussing on the larger goal to work towards an integrated Global Biodiversity Observation System. Special emphasis was put on the necessity to avoid the historical mistake to allow that solely data providers (i.e. mainly scientists) define the strategy, content and structure of a Biodiversity Observation System.

In contrast, the focus was placed on defining *the needs and requirements of the biodiversity information users sector, in the presence of data providers.*

DIVERSITAS followed the strategy to invite different user communities. The following categories of users were identified and invited:

- ◆ Multilateral agreements
  - UNCBD, UNCCD, Ramsar, etc.
- ◆ The resource user groups
  - Fishery, Forestry, Agriculture, Animal production
- ◆ Conservation planning sector
  - 2010 target, Species conservation, Habitat protection, Evolutionary corridors, ...
- ◆ Health sector
  - Infectious diseases, Virus outbreaks, Parasites, ...
- ◆ Genetic level
  - GMOs, Genetic diversity of cultivars, evolution, ...
- ◆ Research (users as well as providers)

While a fair number of participants from these groups were invited and funded by DIVERSITAS, GTOS and MAB-UNESCO, GBIF invited and funded a number of participants with the goal, to develop a strategic plan for capturing historical biodiversity data from natural history collections and the research community.

## **Workshop:**

Following some welcome words from the organisers of the meeting (DIVERSITAS, GBIF, GTOS and GEO), participants spent their first day listening to a series of presentations setting the scene for discussing user needs, and for articulating a strategy towards a global biodiversity observing system (see agenda).

At the end of day 1, participants agreed to split in 3 working groups to discuss needs in terms of biodiversity monitoring as seen by 1) the resource management community (agriculture, forestry, fisheries); 2) the conservation community; 3) the scientific community. The material produced and collected will be used as source information to define user requirements as part of the Biodiversity System Concept, described in c) below.

Following reports from 3 working groups (WG Resource management/ L Hirsch; WG Conservation/ M Jennings; WG Scientific needs/T Parr), participants were invited to give their thoughts on GEOSS, and on whether they would like to commit to this process. All members welcomed the GEOSS Societal Benefit Area on biodiversity, and committed to facilitate its framing and implementation (Material collected as source information).

Participants spent additional time in plenary and working groups to discuss various elements of:

- 1) A framework and plan within which the development process could operate. This would outline the tasks and products that are needed.
- 2) A System Concept that describes the system we want to build as well as the approach we want to take to build it.

It was decided:

**a-**to produce quickly a short meeting report (this report) summarising the discussion, and outlining decisions and next steps, as an internal document for the group and as a report to GEO.  
(Action: DIVERSITAS).

**b-**to produce a longer report which would serve as draft 0 of a System Concept or science/implementation plan "towards a global biodiversity observing system". A writing team was appointed by the group to produce this document. This would be the most important document of all, as it would describe the user requirements and what GEOSS-Biodiversity is, and will do.

Action: Norbert Jürgens (NJ), Anne Larigauderie (AL), Doug Muchoney, Walter Berendsohn, Wendy Strahm, Woody Turner/Gary Geller. Meredith Lane and Peter Hall offered editorial help as the document develops.

It was pointed out that this System Concept document would be an evolving document, and that the developing process would be iterative. It was agreed that the writing team should first produce a concept, get the group to agree, and then plan the development of its implementation. A possible outline for this "draft 0-Biodiversity System Concept" could be this one:

## ***GEOSS - Global Biodiversity Observation System Concept***

### *Introduction*

- *Vision*
- *Goals*
- *Rationale*

- *Collaboration, partnerships and data sharing ethics*
- *Scope*
- *Document purpose*

#### *Context*

- *GEOSS*
- *Existing systems*
- *Institutional background of all players*
- *Funding mechanism*
- *Challenges*

#### *Existing Observation Systems Description*

#### *Users Description*

#### *Key User Requirements*

#### *System Description*

##### *Data types*

*Data sources (distributed system, adequate spacing and timing, infrastructures)*

*Data architecture, standards and flow*

##### *Analyses*

*Products (definition relevant to user requirements, infrastructures)*

*Transformation of products*

#### *Implementation Approach*

- *Development Strategy and Framework.*
- *Phasing*

#### *Governance, Management, and Policy*

#### *Roles and Responsibilities*

#### *Constraints, Concerns, and Issues*

c) The meeting noted that it would be necessary to appoint some working groups to develop particular points. GBIF would, for example, be interested in leading a group on the use of specimen data as part of a Global Biodiversity Observation System, while DIVERSITAS would be interested in leading a group on scaling issues, plot-type observatories and their technical protocols and interoperability. GTOS would be interested in conducting a survey of existing observations systems.

Action: GBIF, DIVERSITAS, GTOS)

d) In order to put in place the vision articulated in section b), it was decided to produce a technical development framework as soon as possible. It would need to consider a number of key issues such as:

- interoperability between different data types,
- funding strategy (early on to secure money to develop the vision)
- governance structures

e) In order to broaden and to secure the involvement of communities and institutions a number of additional steps were discussed:

- Additional institutions, communities and individuals will be contacted and motivated to join the process (Action: All, use report and 2-pager for GEO III).
- A website and a server for mail list will be established (Action: Norbert Juergens)
- A "Declaration for a Global Biodiversity Observation System" will be jointly developed and opened for signature (Action: Norbert Juergens)
- Additional institutions, communities and individuals of hitherto under- represented user groups will be contacted and asked to define their requirements (Action: Norbert Juergens)
- A short commentary submitted to the journal Nature could create additional visibility for the process and above mentioned activities and website (Action: Norbert Juergens and others)
- D Muchoney (GEO Sec) will work with R Höft (CBD Sec) and Norbert Juergens (DIVERSITAS) to produce a document for SBSTTA 7 (July 07, Germany).

**f)** In order to strengthen the Societal Benefit Area "Biodiversity" within GEOSS, a number of immediate and medium-term activities are necessary:

- A document articulating what GEO could do for biodiversity needs to be produced for the Ministerial meeting of GEO (November 07). It would be important if some ministers could support the biodiversity area at this meeting. D Muchoney/A Larigauderie/ N Juergens will work on this.
- A 2-pager document in time for the November GEO-III Plenary which would convey a positive message to GEO III. This is seen as a key step to get support from GEO. Doug Muchoney will lead this exercise;
- DM will also work on securing a demo booth on biodiversity monitoring at GEO-III, supported by Meredith Lane (GBIF) and Norbert Juergens and Mariam Akhtar-Schuster (DIVERSITAS). Javier de la Torre and Crispin Wilson will develop some digital demo examples for GEO-III.