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PRELIMINARY PROPOSAL FOR A CBD INDICATOR FOR TAXONOMY

Information note by the Executive Secretary

- 1. The Executive Secretary is pleased to circulate herewith, for the information of participants in the meeting of the Ad Hoc Technical Expert Group on Indicators for the Strategic Plan for Biodiversity 2011-2020, an information document entitled "Preliminary proposal for a CBD indicator for taxonomy" submitted by the Coordination Mechanism for the Global Taxonomy Initiative.
- 2. The document is being circulated in the form and language in which it was provided to the Secretariat.

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Preliminary proposal for a CBD indicator for taxonomy

A submission by the Coordination Mechanism of the Global Taxonomy Initiative to the Ad Hoc Technical Expert Group on Indicators for the Strategic Plan for Biodiversity 2011-2020 The proposed indicator

Headline indicator:

Number of maintained species inventories being used to implement the Convention Sub-indicators:

- 1. Number of species inventories of priority taxonomic groups as indicated in Article 7 and Annex 1 of the Convention being created or maintained in country or through collaboration with others, peer-reviewed for accuracy and completeness
- 2. Number of countries identifying in their National Biodiversity Strategies and Action Plans (NBSAPs) the priority taxonomic groups as indicated in Article 7 and Annex 1 of the Convention for which they require inventories
- 3. Number of countries demonstrating use of species inventories through reporting on NBSAPs
- 4. Number of documented voucher specimens accessible in country to support use of species inventories

Background

At COP 10, the Parties to the CBD requested the Executive Secretary of the CBD in consultation with the Coordination Mechanism of the Global Taxonomy Initiative (GTI) and the Ad Hoc Technical Expert Group on post-2010 indicators 'to consider developing an indicator in order to assess the progress on the implementation of the programme of work' of the GTI (COP Decision X/39). Species inventories are a measurable output of the planned activities of the operational objectives of the GTI programme of work. They are also important tools to support each Party's implementation of the CBD and other biodiversity-related conventions such as the Convention on Migratory Species (CMS) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), being especially relevant for monitoring changes in biodiversity and for reporting on the status of biodiversity in National Reports to these conventions. The need for and status of inventories is therefore an important consideration during the process of reviewing the National Biodiversity Strategies and Action Plans.

Species inventories are typically produced for countries or regions or for specific localities e.g. protected areas. They are frequently referred to in biodiversity country studies, NBSAPs and in national reports to biodiversity-related conventions, which – together with data from GBIF, the Catalogue of Life and others - allows for a baseline to be established. Specific questions about species inventories in future national reports to the conventions could relatively easily be answered by Parties and this would provide additional data that allow for measuring progress over time.

The indicator addresses important aspects of Target 19 of the Strategic Plan for Biodiversity 2011-2020 (under Strategic Goal E (Enhance implementation through participatory planning, knowledge management and capacity building): By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied. The indicator is also relevant for other targets, among them target 1 (public awareness of biodiversity), target 9 (invasive alien species) and target 12 (prevention of extinctions).

Linking the indicator to Article 7 (identification and monitoring) and the accompanying Annex 1 of the CBD narrows down the issue of what the inventories of interest should primarily cover (Annex 1, paragraph 2 names 'Species and communities which are: threatened; wild relatives of domesticated or cultivated species; of medicinal, agricultural or other economic value; or social, scientific or cultural importance; or importance for research into the conservation and sustainable use of biological diversity, such as indicator species').

Stressing that the indicator would measure maintained species inventories underlines that such inventories need to be updated and authenticated in order to support the work of conventions.

It is expected that the indicator helps to stimulate taxonomic work in countries and the availability of results of such work for the development and implementation of NBSAPs and other key national environmental documents. In particular, the indicator would provide for stronger links of taxonomic efforts with the implementation of the biodiversity-related conventions, would help to establish and/or update species inventories, and would help to expand inventories to the priority groups referred to in Annex 1 of the CBD.

The indicator would also encourage making use of 'citizen science', i.e. the results of biodiversity monitoring by the public, and of traditional knowledge on biodiversity through closer collaboration with indigenous and local communities.

The 10th meeting of the GTI Coordination Mechanism (CM) in the margins of CBD COP 10 asked Natasha Ali (The Royal Botanic Gardens Kew) and Peter Herkenrath (UNEP World Conservation Monitoring Centre) to develop a draft indicator for taxonomy for the GTI CM to consider, as part of the new post-2010 framework of goals, targets and indicators.

Subsequently, with input from Richard Smith (BioNET), Anna Chenery (Secretariat of the Biodiversity Indicators Partnership at UNEP-WCMC), Alan Paton (The Royal Botanic Gardens Kew) and Junko Shimura (CBD Secretariat), a first draft of an indicator for taxonomy was developed. It was informally shared with the members of the CM and subsequently adjusted to reflect the views of the CM¹. The final version was drafted after consideration of the draft by the 11th meeting of the CM in June 2011.

This work is built on previous indicator work of the CM. In 2010, the 9th meeting of the CM had agreed on a background document that was submitted as an Information document to the third meeting of the CBD Working Group on Implementation of the Convention (WGRI) in order to inform its discussions on the new Strategic Plan (that was subsequently adopted by COP 10). The paper (UNEP/CBD/WG-RI/3/INF/15) suggested taxonomic input, including specific indicators, for the emerging goals and targets of the Strategic Plan. Reference is also made to the discussions at the 10th meeting of the CM on outreach, which explored useful wording for better publicising the GTI, such as 'scientific basis for actions under the CBD', 'scientific discovery of biodiversity', 'biodiversity in local landscapes', 'taxonomy: age of opportunity and technology', 'protecting/ understanding life on Earth', and 'the taxonomic imperative' (UNEP/CBD/GTI-CM/10/3).

Outline of a taxonomy indicator factsheet

It was felt useful to outline the suggested indicator using the structure of the 2010 indicators factsheets (http://www.bipindicators.net/indicatorpublications). The following paragraphs make

¹ Input was provided by Peter Bridgewater, Geoff Burton, Fabian Haas, Leonard Hirsch, Jeff McNeely, Michael Ruggiero and David Schindel.

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suggestions about what kind of information could be developed for the taxonomy indicator under the headings of the 2010 indicators factsheets.

Facts

- o Corresponding targets of the Strategic Plan for Biodiversity: targets 19, 1, 9 and 12.
- Key Indicator Partner: National or international taxonomic institutes to be identified by the GTI Coordination Mechanism
- Data available: Non-standardised data should be available from many countries from biodiversity country studies, NBSAPs and National Reports to the CBD and other relevant conventions. Other key data sources include GBIF and the Catalogue of Life as well as traditional knowledge and the results of 'citizen science' often available through websites of institutes and organizations involved with biodiversity conservation. Future data should also be obtained through targeted questions in the National Reports to the CBD.
- Reason: Improved knowledge about biodiversity is a key aspect of target 19 of the Strategic Plan for Biodiversity. Harmonized taxonomic information should be part of the knowledge base on ecosystems, species and genetic diversity and their values for human well-being to make knowledge meet the needs of the biodiversity-related conventions and be comparable along timelines and biogeographic distributions. Taxonomic information is also key for achieving targets 1 (public awareness of biodiversity), 9 (invasive alien species) and 12 (prevention of extinction). Existing species information is not always available in a seamless manner, the existence and accuracy of inventories is highly variable and information gaps remain. Authenticated inventories at the species level will contribute to the global science base and, if integrated with knowledge at all levels of biodiversity, will support human well-being. Knowing what species a country has is a fundamental requirement for wider knowledge about biodiversity. For example, the updated Global Strategy for Plant Conservation 2011-2020 identifies as goal 1 Plant diversity is well understood, documented and recognized and as the accompanying target 1 An online flora of all known plants. Species inventories are thus a basis for addressing the three objectives of the CBD (conservation, sustainable use, benefit-sharing) as well as the objectives of the other species-based conventions. Furthermore, the Programme of Work for the Global Taxonomy Initiative identifies a number of operational objectives with planned activities, for which the suggested indicator would provide a hook into the Strategic Plan for Biodiversity 2011-2020 and into NBSAPs.
- Status: This indicator will help engage national taxonomic institutes, where they exist, in the NBSAP process but will also encourage the participation of indigenous and local communities through the inclusion of traditional knowledge, as well as the participation of the wider public. A baseline for measuring the indicator, through its three sub-indicators, could be provided by an analysis of the information on species inventories provided in biodiversity country studies, NBSAPs and National Reports to the CBD and other relevant conventions as well as in the databases of GBIF and the Catalogue of Life. Additional information from Parties could be

obtained through the GTI, BioNET and other sources. This analysis would allow for the current status of biodiversity inventories to be identified.

- <u>Indicator how to interpret the indicator</u>: The indicator has a 'headline' (*Number of maintained species inventories being used to implement the Convention*), which provides a concise 'summary' of the indicator. It is, however, broken down into four concrete measurable sub-indicators, which together provide an assessment of the contribution of taxonomy to the implementation of the Convention.
 - Sub-indicator 1: Number of species inventories of priority taxonomic groups as indicated in Article 7 and Annex 1 of the Convention - being created or maintained in country or through collaboration with others, peer-reviewed for accuracy and completeness

Information on this sub-indicator will come from biodiversity country studies, first-round NBSAPs, 1st to 4th National Reports and reports to CMS and CITES as well as established information sources such as GBIF and the Catalogue of Life. Additional information sources should be sought through the GTI and related taxonomy networks as well as from websites collecting biodiversity information from the wider public. Where possible and appropriate, traditional knowledge will be incorporated as well. Focused and consistent questions in the 5th and 6th National Reports could provide more baseline information and first trends. The information should have been checked for accuracy and completeness before being used for creating indicator information.

 Sub-indicator 2: Number of countries identifying in their National Biodiversity Strategies and Action Plans (NBSAPs) the priority taxonomic groups - as indicated in Article 7 and Annex 1 of the Convention – for which they require inventories

A baseline could be established from an analysis of the first-round NBSAPs and progress be measured through the new-generation NBSAPs that will be developed over the next years in response to the new Strategic Plan.

 Sub-indicator 3: Number of countries demonstrating use of species inventories through reporting on NBSAPs

Information on this indicator will also need to be obtained through focused and consistent questions in the 5^{th} and 6^{th} National Reports.

 Sub-indicator 4: Number of documented voucher specimens accessible in country to support use of species inventories

Information on this sub-indicator will be obtained from national sources such as national reports to the CBD, as well as GBIF and the Catalogue of Life. Additional information sources should be sought through the GTI and related taxonomy networks.

- <u>Current storyline</u>: The storyline could be formulated after the analysis of biodiversity country studies, first-round NBSAPs, 1st to 4th National Reports and reports to CMS and CITES as well as the databases of GBIF and the Catalogue of Life.
- National Use: It is expected that a global indicator for taxonomy that Parties are asked to report
 against supports the implementation of the GTI programme of work, in particular its aspect of

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building taxonomic capacity as more efforts will be put into producing, maintaining and updating species inventories, and integrating them into the development and implementation of NBSAPs. The global indicator would also encourage 'citizen science', i.e. the collection of biodiversity information by the wider public and thus encourage building public awareness on biodiversity. It would also encourage the collaboration with indigenous and local communities on the incorporation of traditional knowledge on biodiversity into the implementation of the Convention.
