



CBD



**CONVENTION ON
BIOLOGICAL DIVERSITY**

Distr.
GENERAL

UNEP/CBD/SBSTTA/3/Inf.32
2 September 1997

ORIGINAL: ENGLISH

SUBSIDIARY BODY ON SCIENTIFIC, TECHNICAL
AND TECHNOLOGICAL ADVICE
Third Meeting
Montreal, Canada
1 to 5 September 1997

GEF WORKSHOP: REMOVING THE TAXONOMIC IMPEDIMENT

Submission by the Government of Australia

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GEF WORKSHOP: REMOVING THE TAXONOMIC IMPEDIMENT.

BACKGROUND

Impediments to the proper conservation, management and sustainable use of biological diversity are many. A key impediment, however, which is especially relevant to enabling implementation of Articles 6-8 of the CBD is the taxonomic impediment. Included in this issue are problems of collection maintenance and management, data basing and dissemination of information, support for research and, vitally, training for developing countries. While traditional focus for taxonomic impediment has been terrestrial, the recent coming into force of UNCLOS, and the creation of EEZ's with their special responsibilities, has meant a focus on marine taxonomy is now also critical.

An undervalued resource for policy makers concerned with global biodiversity is the information contained in the collections of major centers of systematics *ie* natural history museums and botanical gardens. These collections (some gathered over centuries) provide critical and fundamental baseline information on the natural world over long time periods. Many of these collections are automated so that accurate data can be obtained on species and habitats at local, regional, national, and global levels.

Ironically, at the very time when national governments and international groups are pursuing biodiversity strategies, collection information in the world's systematic institutions is underutilized. At the same time, shrinking national budgets are threatening the very care of these collections and access to information. Increasingly, the major systematic centers recognise that only with greater cooperation on regional and global scales can collections be properly secured for future generations and information contained in their collections then be available to policy makers.

A sound taxonomic base is a prerequisite for the conservation of biological diversity, and sustainable use of biological resources. Knowledge of what species occur where must underpin all sound natural resource management decisions. The present GEF Operational Plan does not address taxonomy *per se* but does speak to addressing issues at the ecosystem level. The Operational Plan also focuses on the need for research, and for applying technology (such as geographic information systems) to biological inventoring and rapid assessments. Both of these latter activities are intimately linked to systematics. Identification and analysis of major causes of biodiversity loss is also underpinned by taxonomy. The GEF Operational Plan thus in a positive manner already embraces taxonomy with its scope.

LESSONS LEARNED IN THE PAST

Over the past decade, developed country museums and herbaria have been struggling with the confines of limited national budgets to convert to electronic form the information contained in their institutions. Impediments to progress include: 1) lack of a consensus on data standards; 2) lack of consensus on software and hardware requirements; 3) nomenclature issues; and 4) development of adequate linking mechanisms. Consensus has been achieved that one great data base system is not the proper approach and greater emphasis will need to be placed on linking existing systems *via* a distributed method, assuring developing countries have the adequate capacity to access this information.

Considerable debate also remains as to what level of detail should be included. This issue becomes even more urgent in the context of meeting national goals for the Convention of Biological Diversity and other Environmental Agreements. Despite efforts to create a World Council on Collections Resources little progress has been made to link taxonomic collections on a global basis. To date, the most effective form of informal collaborations have been through regional consortia such as the Association of Systematic Collections (primarily for North America) and the recently established European consortium of Taxonomic Facilities. Also efforts on a regional basis are being developed (but not yet implemented) for the Caribbean and East Africa. In the case of the Caribbean, the National Museum of Natural History of the Smithsonian Institution and the Center for Marine Conservation are leading a planning effort with regional institutions to create an effective Caribbean Basin Biodiversity Information Networks.

PREVIOUS SBSTTA DISCUSSION

SBSTTA 2, meeting in Montréal in September 1997, made a start in considering this issue. In its Recommendation II/2 the following matters *inter alia* were recommended to the CoP3;

The Conference of the Parties should consider instructing the Global Environment Facility to support a Global Taxonomy Initiative, providing the necessary funds for the following actions related to capacity-building in taxonomy:

(a) *developing national, regional and subregional training programmes;*

- (b) *strengthening reference collections in countries of origin including, where appropriate, the exchange of paratypes on mutually agreed upon terms;*
- (c) *making information housed in collections worldwide and the taxonomy based on them available to the countries of origin;*
- (d) *producing and distributing regional taxonomic guides;*
- (e) *strengthening infrastructure for biological collections in countries of origin, and the transfer of modern technologies for taxonomic research and capacity-building; and*
- (f) *disseminating taxonomic information worldwide, inter alia by the clearing-house mechanism.*

A number of other issues were raised, with respect to capacity building, training, research, information dissemination and collections.

For example, on information sharing :

Taxonomic information to assist capacity-building in taxonomy should be included within the clearing-house mechanism. The taxonomic work embodied in existing archives and inventories, field guides and publications needs to be updated and readily accessible through worldwide services and the duplication of work already conducted should be avoided. The dissemination of information should further the objectives of the Convention and be linked to user needs.

and on collections :

Since taxonomy generally involves the use of biological collections, those concerned should consider the adoption of mutually agreed-upon material transfer agreements or equivalent instruments in accordance with the provisions of the Convention on Biological Diversity for exchange of biological specimens and information relating to them.

With respect to these issues, the Conference of Parties, meeting in Buenos Aires, decided as follows :

8. Recommends to Parties that they explore ways to make taxonomic information housed in collections world-wide readily available, in particular to countries of origin;

9. Instructs the Subsidiary Body on Scientific, Technical and Technological Advice
 - (a) To provide scientific advice and further guidance, through its thematic work on ecosystems, to the fourth meeting of the Conference of the Parties, to assist in the national elaboration of Annex I of the Convention, using as guidance the elaboration of the terms as set out in paragraphs 12-29 of document UNEP/CBD/COP/3/12;
 - (b) Further to review methodologies for assessment of biological diversity and make recommendations for their application to the fourth meeting of the Conference of the Parties;

10. Requests the institutional structure of the interim financial mechanism of the Convention to provide financial resources to developing countries in order to address the need for capacity-building, including taxonomy, to enable them to develop and carry out an initial assessment for designing, implementing and monitoring programmes in accordance with Article 7, taking into account the special need of small island States.

THE ROLE OF THE GEF

Taxonomy clearly falls under the concept of "enabling activities" and can be addressed under the existing GEF Operational criteria. Taxonomy in fact underpins all the priority areas identified in the Plan although only two GEF projects in the current portfolio address this area. Operational implementation of the COP recommendation therefore requires great care.

ISSUES NEEDING FURTHER CONSIDERATION

- how to progress making taxonomic information immediately available to users - including other conservation conventions eg CITES; - eg can CBD act as the taxonomic source for other Conventions, through eg the CHM?
- how to ensure cooperation between potentially competing global initiatives which are currently in a development phase. They include DIVERSITAS/Systematics 2000; OECD Bioinformatics forum; Species 2000, IUCN/BCIS and *Flora of the World*.
- levels of funding needed for training, collections, research and other forms of capacity building?
- issues/challenges to the role of taxonomic activity in the implementation of national strategies, and the development of comprehensive national reports

- provision and linkage of taxonomic information with conservation information (distribution, status, genetics etc) in an appropriate framework - ie. linked to sound biogeographic, and habitat descriptions
- how to blend traditional and new data and information dissemination techniques , including ensuring conventional paper based products are supported by data gathering and production methods using tools like GIS and data bases.
- how to ensure conservation assessments of biodiversity elements are underpinned by sound taxonomic knowledge of the flora and fauna and other organisms. Presently few agencies match ecosystem data with species data with inventory information (ie. biological surveys), yet these are the layers required for decision making.

RECOMMENDATION

To advance these issues, it is proposed SBSTTA agree the Global Environmental Facility, and the Secretariat co-ordinate a proposed approach which should be reported directly to the next CoP, as a response in part to CoP decision III/10.