



**MECHANISMS FOR MANAGEMENT  
OF THE GTI, with a consideration  
on inclusion of traditional  
and indigenous knowledge  
perspectives on current  
taxonomic systems**

**REPORT** of meeting held 20 December 1999  
at **UNESCO**, Paris

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### **Aim of the Meeting:**

This document reports on a meeting held at UNESCO headquarters, Paris on December 20, 1999, to consider the document UNEP/CBD/SBSTTA/5/4 - Review of the Global Taxonomy Initiative (GTI), and to provide a joint perspective on actions and outcomes needed to accelerate implementation of the GTI. Particular interests of the meeting were the mechanisms of management for the GTI, and a focus on inclusion of traditional and indigenous knowledge perspectives on current taxonomic systems. The meeting also benefited from attendance by the GTI Programme Officer from the CBD Secretariat, acting in an advisory capacity. This document results from that meeting, and is provided in the spirit of helping Parties inform their positions and provides actions for the discussion in SBSTTA.

The Attendance List is at Annex 1.

### **Background and Introduction**

Following a series of meetings held over the past two years (listed in Annex 2) a number of recommendations have been suggested, formally and informally, to the Convention, on how the GTI might be implemented. There is now a need for a more detailed plan of action, and suggestions for pilot phases for implementation. UNESCO, in response to calls at its last general conference in November 1999, organised a one-day meeting, in an attempt to provide further specific advice on key outstanding issues. The views are not necessarily attributable to any one of the participants, but are provided simply to accelerate decision-making on this issue.

The Executive Secretary, in response to the request of SBSTTA4, has prepared a note (UNEP/CBD/SBSTTA/5/4 available at <http://www.biodiv.org/sbstta5/docs.html>) to identify a coordination structure and some options for baseline initiatives for the GTI. An area the meeting touched on particularly, concerned the incorporation of traditional and indigenous knowledge in taxonomy. The outcome of the World Conference on Science in Budapest, July 1999, especially emphasised the need to take account of this knowledge in developing the body of scientific knowledge (see <http://helix.nature.com/wcs>). UNESCO and its partners WWF (World Wide Fund for Nature) and the Royal Botanic Gardens, Kew, have promoted this in part through the *People and Plants Initiative*, and through *Botany-Asia 2000*.

### **A. Overall objectives, approach and guiding principles**

The overall objectives of the GTI follow the implementation of the Convention in the three key areas of identification, assessment and monitoring; conservation; and sustainable use. The body of knowledge required to underpin these objectives is dauntingly large, as spelt out in UNEP/CBD/SBSTTA/5/4/para.6, and yet the GTI *must* begin at once to coordinate, direct and enhance current efforts, in order to

maximise outputs useful to the work of the Convention. The approach outlined by the Executive Secretary, and supported by this meeting, is to build on existing activities wherever possible and to focus on delivery of products useful to the Convention over both the short and long term. While there will be a large range of tangible outputs, activity must be directed to three key outcomes:

- Increasing the body of taxonomic knowledge and techniques
- Gathering the current information available in a standardised format, and
- Building an information base to support the achievement of other Articles of the Convention

Accordingly, this meeting sought to place particular emphasis on capacity building in taxonomy worldwide, and the integration of traditional taxonomic knowledge with scientific taxonomic knowledge in achieving conservation and sustainable use.

### **B. Proposed elements of the baseline taxonomy initiatives**

The Executive Secretary identifies four major elements of work, discussed here in turn.

#### ***Element 1: Identification of priority information requirements***

The suggested approach is to **prioritise** taxonomic efforts, based on the needs of conservation and sustainable use of biodiversity. In the first instance, a case study approach, in a limited number of regions is recommended. Different geographic regions with issues relevant to the ecosystem theme areas of the Convention (namely agro-biodiversity, dryland ecosystems, forest biodiversity, inland waters, marine and coastal, mountain biodiversity) would be selected for study, while also taking into account cross-cutting issues such as alien species, the ecosystem approach, access to genetic resources, protected areas, traditional knowledge and benefit sharing. The degree to which some ecosystems may be especially affected by lack of taxonomic knowledge is uncertain. There appears to be no reliable indicator for this, but some rapid analyses would help answer the question, and thus direct appropriate effort into the future.

The key question is *How do we choose which regions, and which themes get addressed?*

This meeting suggested the use of the existing seven regional networks of BioNET-INTERNATIONAL (see Annexure 4), to put forward proposals that address key priority information requirements within each region to the proposed Coordination Structure of the GTI, to make recommendations to the Executive Secretary. This should occur immediately, so that the Executive Secretary can make informed recommendations for action to CoP5. (These regional networks have already, or are in the process of, conducting regional taxonomic needs assessments).

#### ***Element 2: Undertaking assessments of national taxonomic capacity***

At all stages of discussion of the GTI, the issue of capacity, whether infrastructure, human resources, training or information has been emphasised. This problem is global, affecting both developed and developing countries, albeit in different ways and with different perspectives. Buried in this issue is the reality of unequal distribution of taxonomic collections and the country of origin of the specimens. While there exist some specific attempts to address the issue of capacity building, including the

rehabilitation of taxonomic information to country of origin, a detailed plan is required, which makes manageable and achievable efforts to improve capacity.

Such a plan must analyse the needs for facilitating assessments of national taxonomic capacity. A desired output is the integration of reporting on taxonomic capacity into the national reporting process. A further desired output is enhanced local and regional capacity in taxonomy (not just reliance on key individuals). The importance of networking between institutions and individuals is crucial here, and appropriate mechanisms should be developed and facilitated by the Executive Secretary. One possible suggestion is the use of Centres of Excellence and regional cooperative research ventures to drive forward taxonomic effort and assist in identifying gaps in knowledge and effort. An example of this type of networking is the successful implementation of the BioNET-INTERNATIONAL model, and this existing technical networking mechanism could easily be added to by the GTI as a *modus operandi*.

### ***Element 3: Using the GTI as a communication tool***

The GTI must be more than simply research and development. It must be a means of communication about biodiversity, and taxonomy must shed its somewhat academic image. Taxonomy can, in many ways, claim to be the first information science, and so should have little difficulty in being a medium of communication.

#### *How can this happen?*

The prime desired output would be an increase in taxonomic information in shared formats – through increased use of Information Technology, like the Web and other new tools.

Secondary desired outputs include the compilation of best taxonomic practices and the establishment of plans to help create, enhance and sustain new or existing regional taxonomic networks that promote the GTI. The Clearing House Mechanism (CHM) logically has a role here, and its decentralized system composed of national CHM operational nodes can assist in the exchange of taxonomic information as well as in the establishment of related scientific and technical cooperation that may be needed. However to be effective the CHM itself needs greater support from Parties at both the national level and in the centralized node of the Secretariat.

Activities, which fit into these categories that are already being established, include:

- The Global Biodiversity Information Facility being set up by the OECD (see <http://www.york.biosis.org/gbif/>)
- Species 2000, an international project indexing the world's known species (see <http://www.sp2000.org>, <http://www-sp2000.nies.go.jp/> and <http://www.usa.sp2000.org>)
- DIVERSITAS activities on systematics, including the International Union of Biological Sciences Systematics Agenda 2000 International (see <http://www.icsu.org/DIVERSITAS>), GaiaList 21, and the Ocean Biogeographic Information System (see <http://core.cast.msstate.edu/censhome.html>)
- The BioNET-INTERNATIONAL website (see <http://www.bionet-intl.org>), is specifically designed to link regional cooperative networks and share learning and expertise.

#### ***Element 4: Integration into thematic and cross-cutting work programmes***

Cross-cutting themes in the Convention are assuming greater importance. In particular, issues such as alien species, the ecosystem approach, traditional knowledge and benefit sharing have all achieved greater prominence in recent meetings of the CoP and SBSTTA. Quality taxonomic information is key to the success of these themes. As with the issue of ecosystems that may be poorly understood taxonomically, discussed under Element 1, a rapid survey could show where the taxonomic knowledge gaps exist for these cross-cutting issues.

Taxonomic information is essential for the identification, selection and establishment of conservation sites at the most appropriate locations to form effective networks for conservation of biodiversity. It is also essential for the assessment and monitoring of biodiversity and sustainable use of biological resources. Monitoring systems need to be more than just regular inventory, they need to include social groups involved in management and use, in order to maximise adaptive management. In nearly all cases, they therefore should include community institutions, since nearly all parts of the world are used by people. Specialist knowledge holders, such as herbalists, within communities, should play a role, as should everyday users, with a range of monitoring techniques employed suitable for their skills and interests. While monitoring systems may often be lead by agencies, such as park, forestry and agricultural agencies, they should work collaboratively with communities, and new monitoring systems lead by local communities must be accelerated if we are to succeed in our objectives.

Monitoring systems, especially involving local communities, should be based on integrating local taxonomic systems with western scientific understanding, nomenclature and units of measurement. Local taxonomic systems need to be translated into western scientific taxonomy to gain access to wider bodies of knowledge about species. The GTI should encourage day-to-day monitoring by local communities with support from agencies and specialist scientists, such as expert ornithologists or botanists. All groups involved in monitoring should have access to scientific systems of identification and information, which need to be orientated to their practical requirements (see case study at Annex 3).

#### **C. Identification of a coordination structure for the Global Taxonomy Initiative**

The Executive Secretary has proposed a steering group to advise the CBD Secretariat on the GTI, composed of interested UN Agencies and representatives from key taxonomic institutions. This leads to some particular questions.

##### ***How to choose key taxonomic institutions in each region?***

Some institutions regard themselves highly but may not have the expertise to realise the goals of the GTI, and there are many such institutions that should be regarded as being of key importance. Over the next few years, the importance of continuity of personnel involved, especially if expertise is held by a single individual, is paramount to the success of maintaining momentum in the GTI. The regional representative must play a significant role in maintaining contact with many individuals and agencies in each region. The recommendation from this meeting is for each CBD regional grouping to nominate their representative (and an alternative for back-up) rather than selection of a key institution. It will then be the responsibility of this individual to maintain the necessary links throughout the region. This concept is highly successful

in the BioNET-INTERNATIONAL model, where each regional network has a *Network Coordinator* responsible for overall regional liaison.

### ***The need for criteria and guidelines***

In designing projects to be undertaken under the GTI umbrella, it will be necessary to demonstrate local, regional and global perspectives, ability to cooperate and collaborate with sister organisations, to show regional networks are in place, a strong commitment to capacity building and incorporation of traditional taxonomic knowledge into work programmes. This meeting also recognises that many projects will also need to investigate the use of new technology for dissemination of information if they are to be successful in achieving broad use of their results. The Coordination structure of the GTI may wish to formalise these criteria.

### ***Using existing networks***

A potential model exists and could be expanded and enhanced for the GTI, namely the existing seven regional (geo-political) networks of BioNET-INTERNATIONAL (see Annex 4). This network, using its sub-regionally based structure, could provide advice for the selection of a representative for the GTI Coordination Structure from each region, and more importantly act as the conduit for information flow to and from the scientific and user community.

The networks are already fairly inclusive in each region and can include individuals as well as institutions. The representative could be a rotating position.

### ***What would the inter-governmental agencies contribute to the GTI Coordination Structure?***

FAO	agriculture expertise, forests, under utilised food crops
WHO	medicinal plants, traditional knowledge
UNEP	links to wider environment and development programmes of the UN
UNESCO	the MAB programme and experience from the network of Biosphere reserves, DIVERSITAS programme, traditional knowledge, Botany 2000

### ***Role of Non-Governmental Organisations***

Since June 1992, the WorldWide Fund for Nature (WWF), UNESCO and the Royal Botanic Gardens, Kew have been collaborating in the *People and Plants Initiative* on the equitable and sustainable use of plant resources. In cooperating with local, national and regional institutions of research, community development, higher education and park management, *People and Plants* seeks to promote local community development programmes for the improved management of plant resources, to encourage greater involvement of local people in devising and implementing strategies for the conservation of biological diversity, to increase local capacities and capabilities for research, training and management of natural resources, and to diffuse methodological guidelines and information materials. Field activities include work in biosphere reserves, World Heritage Sites and other areas where the sponsoring organisations have been active in the past, with field training activities organised at international, regional, national and local levels. Information and guidance materials include a series of conservation materials (three produced to date), working papers (six available so

far) and a handbook designed to improve accessibility of ethnobotanists to sources of information in the management of natural resources, conservation and community development (five issues to date). An 'ethnobotanist database' has also been built up, with more than 4000 persons currently on the database mailing list.

Funding for *People and Plants* field activities comes from a variety of sources, including the European Commission, the MacArthur Foundation, WWF-Africa programme, the UK government Darwin Initiative, the UK Department for International Development and the UK National Lotteries Charities Board. Two regional funds-in-trust projects implemented by UNESCO focussed on eastern and southern Africa (funded by the government of Norway) and on the Hinukush-Himalaya (in cooperation with the International Centre for Integrated Mountain Development (ICIMOD), funded by the government of Denmark, see <http://www.south-asia.com/icimod.html>). Support for research and training activities includes technical underpinning through three *People and Plants* field coordinators, as well as the staff of the three sponsoring organisations, at headquarters and in the field. Activities within the *People and Plants Initiative* are animated and shaped by a Steering Committee, which meets on an annual basis. For further information including the text of the various handbooks see <http://www.kew.org.uk/peopleplants>.

The *People and Plants Initiative* is currently planning its third phase which will take the form of regional projects in capacity building in ethnobotany applied to conservation and the sustainable use of plant resources. One of the principal goals of the Asia regional project (for example, to be based in Malaysia, Nepal and Pakistan) is the foundation of a new permanent organisation concerned with the identification and promotion of best practices in ethnobotany. It would be desirable to link this project through BioNET-INTERNATIONAL to building capacity in the taxonomic infrastructure of these Asian countries.

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## **Annex 2: Preceding meetings and background documents**

Crete, October 1997  
<http://www.icsu.org/DIVERSITAS/Plan/pe3.html>  
Systematics: Inventorying and Classification

Darwin, February 1998  
<http://www.anbg.gov.au/abrs/flora/webpubl/darwinw.htm>  
The Darwin Declaration  
UNEP/CBD/COP/4/Inf.28

London, September 1998  
<http://www.anbg.gov.au/abrs/flora/webpubl/london.htm>  
The Global Taxonomy Initiative: shortening the distance between discovery and delivery  
UNEP/CBD/SBSTTA/4/Inf.1

New York, September 1998

<http://research.amnh.org/biodiversity/publ/publ.html>

The Global Taxonomy Initiative: using systematic inventories to meet country and regional needs

UNEP/CBD/SBSTTA/4/Inf.7

Paris, February 1999

<http://www.biodiv.org/sbstta4/docs-e.html>

Implementing the GTI: recommendations from DIVERSITAS element 3, including assessment of present knowledge of key species groups (draft document)

UNEP/CBD/SBSTTA/4/Inf.6

### **Annex 3: Case Study**

WWF is involved in the evolution of a monitoring system involving the local community at Shey Phoksundo National Park in Nepal. The park has about 3000 inhabitants, who use many medicinal plants. Only the local people have, and will have, the detailed information of their distribution, and conservation skills necessary for monitoring their continuing existence and the sustainability of collection. Park staff need to be able to check on the status of species using more scientific techniques, to determine whether community management is effective and instigate adjustments if necessary. The Park will require such additional monitoring if commercial collection (rather than subsistence use) is to be allowed. While local monitoring uses local taxonomic units, these need to be related to scientific taxonomic units to ascertain the wider conservation status of the species and to be able to make available to the communities and the Park information on their uses and management, based on experience elsewhere.

### **Annex 4: BioNET-INTERNATIONAL – a global partnership for capacity building in biosystematics**

BioNET-INTERNATIONAL is a global partnership of people and institutions for developing countries to acquire and maintain the scientific skills, technologies and facilities needed to achieve and sustain realistic self-reliance in biosystematics to underpin sustainable development, conservation of biodiversity and the eradication of poverty. It is a facilitating mechanism to provide the vital biosystematic support for national and regional programmes for sustainable agricultural development, conservation and sustainable use of natural resources and for the broader interventions needed to assist full implementation of the Convention of Biological Diversity.

BioNET-INTERNATIONAL is comprised of a series of inter-linked sub-regional LOOPS (Locally Organised and Operated Partnerships). These south-south technical cooperation networks operate by mobilising, pooling and optimising the use of existing biosystematic skills and resources within the sub-regions for the benefit of all LOOP members, supported by a consortium of developed country expert institutions via north-south cooperation. Individual LOOP priorities are prescribed by the member countries via a National Coordinator participating in LOOP deliberations. Each regional LOOP network is managed by a Network Coordinator.

The BioNET sub-regions upon which the LOOPS are based, accord closely to those prescribed by the United Nations development agencies. The principles of the Technical Cooperation Networks are based on those of Technical Cooperation between Developing Countries (TCDC) as prescribed by UNDP. Currently there are seven extant LOOPS in over 120 countries, with up to 17 such LOOPS planned. The currently established LOOPS are:

<b>LOOP</b>	<b>Region</b>	<b>Geo-political Basis</b>
CARINET	Caribbean	CARIFORUM (24 countries)
SAFRINET	Southern Africa	SADC (15 countries)
ASEANET	South East Asia	ASEAN (10 countries)
PACINET	South Pacific	Pacific Community (25 countries)
EAFRINET	East Africa	East Africa Community (6 countries)
WAFRINET	West Africa	West Africa Community (18 countries)
EUROLOOP	Europe	25 European countries in a Technical Support Consortium

Negotiations regarding formulation of further LOOPS are currently underway, and could be an ideal opportunity for linking regional network establishment to the GTI.