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Please provide summary information on the process by which this report has been prepared, including information on the types of stakeholders who have been actively involved in its preparation and on material which was used as a basis for the report.

Preparation of report:

This report was prepared by GTI National Focal Point for Japan at the National Institute for Environmental Studies where is an independent administrative agency under the Ministry of the Environment of Japan. The report was reviewed through the following ministries, Cabinet Secretariat, Ministry of Foreign Affairs, Ministry of Finance, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Health, Labour and Welfare, Ministry of Agriculture, Forestry and Fisheries, Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure and Transport, and Ministry of the Environment. The Ministry of Foreign Affairs prior to submit to the secretariat of CBD.

Information resources:

The information to prepare this report was collected mostly through the research project on "Global Taxonomy Initiative in Asia and Oceania" supported by Global Environment Research Fund of the Ministry of the Environment (2002-2004). This research project has been carried out by the National Institute for Environmental Studies and major universities and museums indicated below. Taxonomic needs assessment at national and regional level (operational objective 1 of the GTI Programme of Work) was carried out through this project. This project also contains a pilot project to build taxonomic and informatics capacity at regional level (operational objective 2), and held twice of international workshops to draft the programme of work for GTI in Asia and to monitor its progress. In the context of taxonomic information sharing (operational objective 3), the report from another research project "Biodiversity Information Facility" supported by Special Coordination fund for Promoting Science and Technology of the Ministry of Education, Culture, Sports, Science and Technology was also taken to collect relevant information to this report. The research group of this project is also in the list below.

The first GTI regional workshop held after the adoption of GTI Programme of Work (Putrajaya, Malaysia in 2002) focused on prioritization of taxonomic work in Asia. This was followed up by the workshop to monitor and to promote the implementation of GTI in the Asia-Oceania region in 2003 (Tsukuba, Japan). The proceedings of these workshops and The National Biodiversity Strategy of Japan (Revised in 2002) were taken as resources to collect information on the status of taxonomic work in the relevant thematic area and cross cutting issues of CBD.

Research institutes involved in the collection of information for this report:

- National Institute for Environmental Studies
- National Science Museum
- The University of Tokyo, Komaba Graduate School of Arts and Sciences
- Kyoto University Graduate School of Science (including the university museum)
- Kyoto University, The Seto Marine Biological Laboratory
- University of Tsukuba
- Hokkaido University (including the university museum)
- NITE Biological Resource Centre

**REPORT ON IMPLEMENTATION OF PROGRAMME OF WORK FOR THE
GLOBAL TAXONOMY INITIATIVE**

Programme of Work for the Global Taxonomy Initiative

Annex to Decision VI/8

Operational Objective 1. Assess taxonomic needs and capacities at national, regional and global levels for the implementation of the Convention

1. Has your country undertaken any taxonomic needs assessments and identified priorities in this regard?	
a) no (please specify the reasons)	
b) no, but assessment is under way	
c) yes, some needs assessments made (please provide details)	X
d) yes, comprehensive assessments made (please provide details)	
Further comments on country-based taxonomic needs assessments and identification of priorities	
<p>Re 1 c)</p> <p>Information provided by taxonomic societies in botany, zoology and microbiology was compiled. The survey was based on the items that are each society's interests.</p> <p>-----</p> <ul style="list-style-type: none"> • No curators are assigned at most of the herbaria, museums and university collections. Even at some major museums, the shortage of staff is severe for curation of such large number of specimens. Quality of curation needs to be improved in general. • Experts are deficit in lower plants and microorganisms, no taxonomists exist in some phyla in zoology. • Access to information on genetic resources (bacteria and fungi particularly) is limited. • Directory of taxonomists has prepared from the survey in FY2002. Further update should be planned to cover all collections/institutes at country level. 	
2. Has your country worked with other countries in the region to undertake regional taxonomic needs assessments and identify priorities in this regard?	
a) no (please specify the reasons)	
b) no, but some collaborative projects are being considered or planned	
c) yes, some activities undertaken (please provide details)	X
d) yes, many activities undertaken (please provide details)	
Further comments on regional taxonomic needs assessment and identification of priorities	
<p>Regional taxonomic needs and capacity assessment was carried out by sending questionnaire directly to institutes and researchers. Priorities were identified at the workshop based on the results of the survey:</p> <ul style="list-style-type: none"> • Establishing GTI National Focal Points in all countries to complete needs assessment • Research network and communication to increase coverage of taxa to work on • Access to type specimen(culture) of the species found in the region • Access to the literatures on species which were found in the region • Infrastructure to carry out informatics, microbiology, molecular analysis • Regional projects to provide taxonomic information which is feasible with existing capacity 	

3. Is your country involved in any activities as part of a global taxonomic needs assessment?	
a) no	X
b) yes (please provide details)	
Further comments on the involvement in the activities for the global taxonomic needs assessment	
No clear request on the involvement in the activities for the global taxonomic needs assessment has reached to Japan.	
4. Is your country undertaking any activities of public education and awareness to promote the implementation of the programme of work for the GTI?	
a) no	
b) yes, some programmes developed and some activities undertaken (please provide details)	X
c) yes, comprehensive programmes developed and many activities undertaken (please provide details)	
Further comments on public education and awareness programmes and activities	
<p>Re 4 b)</p> <p>GTI guide book (in Japanese) bound with Japanese translation of GTI Programme of Work was published.</p> <p>-----</p> <p>Active involvement of taxonomic societies in botany, zoology and microbiology is important to carry out public education. Public education in the view of ecosystem balance and natural resource is important to cover as well as taxonomic knowledge.</p>	

Operational objective 2. Provide focus to help build and maintain the systems and infrastructure needed to obtain, collate and curate the biological specimens that are the basis for taxonomic knowledge

5. Is your country working to strengthen global and regional capacity building to support access to and generation of taxonomic information ¹ ?	
a) no (please specify the reasons)	
b) no, but some programmes under development	
c) yes, limited capacity building (please provide details)	
d) yes, significant capacity building (please provide details)	X
Further comments on global and regional capacity building to support access to and generation of taxonomic information	
<p>Re 5 d) GTI pilot project in Thailand and Indonesia (2002-4), Japan Society for the Promotion of Science (JSPS) Coastal Oceanography Project (2001-2010), JSPS Insect Inventory Project in Tropic Asia (2001-) etc. ----- The following measures need to be taken to support access to and generation of taxonomic information</p> <ul style="list-style-type: none"> • Long term (at least 5 years) financial backing on information provision for GTI. • Strong leadership of GTI NFPs for the provision and use of taxonomic information. e.g. Coordination of distributed GBIF data providers, Involvement of GBIF and existing data activities for GTI. • Develop a mechanism to ensure credits on databasing work as research achievement to encourage provision of taxonomic data. • Local capacity building on databasing activity by providing tools and training. • Regional cooperation to provide information on internet (proxy server in the country where fast access is available) 	
6. Is your country working with other countries to create and/or strengthen the networks for regional cooperation in taxonomy?	
a) no	
b) no, but consultation is under way	
c) no, but some plans and programmes are under development	
d) yes, some activities undertaken for this purpose (please provide details)	X
e) yes, comprehensive activities undertaken for this purpose (please provide details)	
Further comments on strengthening of existing networks for regional cooperation in taxonomy	
<p>Re 6 d) Participating EASIANET and hosting WWW servers for EASIANET, Species 2000 Asia Oceania and Species 2000 mirroring site at National Institute for Environmental Studies. ----- Accessibility to genetic resources is a key to successful regional cooperation of GTI. Sharing specimen and culture in taxonomic work requires long process to receive permission, and sometimes is not allowed to move them across the national boundary, which inhibits concordance of capacity building in the region. Coordination of existing networks at sub-divided scale of Asia may possibly make the GTI more feasible to meet local needs, due to the countries with different languages, culture and economic & scientific development in Asia, establishment of regional projects in collective manner is difficult.</p>	

¹ Responses to question 5 are expected to focus on, but not limited to (a) human capacity building; (b) infrastructure capacity building.

Operational objective 3. Facilitate an improved and effective infrastructure/system for access to taxonomic information, with priority on ensuring that countries of origin gain access to information concerning elements of their biodiversity

7. Is your country involved in the development of a coordinated global taxonomy information system, in particular the infrastructure to access digitized data/information?	
a) no	
b) no, but some plans are being considered	
c) yes, to a limited extent (please provide details)	X
d) yes, to a significant extent (please provide details)	
Further comments on involvement in the development of a coordinated global taxonomy information system	
<p>Re 7 c)</p> <p>Global Biodiversity Information Facility (GBIF) data provider has been implemented at National Institute for Environmental Studies (NIES).</p> <p>Provision of information from developing countries through the proxy server above was agreed in EASIANET.</p> <p>-----</p> <p>Appropriate ways of data-repatriation to the area where internet-connection is not fast enough to transfer high resolution images needs to be concerned. Information and user-interface in local language need to be provided.</p>	

Operational objective 4. Within the major thematic work programmes of the Convention include key taxonomic objectives to generate information needed for decision-making in conservation and sustainable use of biological diversity and its components roaches

8. Has your country made any taxonomic studies and inventories at the national level, which provide a basic assessment of forest biological diversity, in particular in areas under current threat for habitat conversion, or of high conservation value?	
a) no (please provide the reasons)	
b) no, but some programmes are under development	
c) yes, some studies and inventories made (please provide details)	X
d) yes, comprehensive studies and inventories made (please provide details)	
Further comments on taxonomic studies and inventories made for a basic assessment of forest biological diversity	
<p>Re 8 c)</p> <p>Species Diversity Survey, The Animal distribution Survey (1997~1998)</p> <p>Biodiversity Survey, The List of Japanese Birds(2000)</p> <p>National Survey on the Natural Environment, The List of Plants(1987)</p> <p>-----</p> <p>Inventoring was carried out by the cooperation of parataxonomists and experts in taxonomic societies in botany and zoology in Japan. Wider coverage of taxa and further taxonomic scrutiny in identification of species are under discussion.</p>	

9. Has your country undertaken any taxonomy-related activities relating to marine and coastal biodiversity, in particular taxonomic work related to identification of ballast water organisms and monitoring health of mangrove systems through their invertebrate fauna?	
a) no	
b) not applicable	
c) no, but some programmes are under development	
d) yes, some activities undertaken (please provide details)	X
e) yes, many measures undertaken (please provide details)	
Further comments on taxonomy-related activities identified in the programme of work on marine and coastal biodiversity	
Re 9 d) National Survey on the Natural Environment, The Important Coastal Zone Organisms Survey (1997~2001)	
10. Has your country developed taxonomic support for implementing relevant actions identified in the programme of work on dry and sub-humid lands biodiversity, in particular identification of key indicator taxa like lichens?	
a) no (please provide reasons and plans for improvement)	
b) not applicable	X
c) no, but some programmes are under development	
d) yes, some activities undertaken (please provide details)	
e) yes, many activities undertaken (please provide details)	
Further comments on taxonomic support for implementing the programme of work on dry and sub-humid lands biodiversity	
11. Has your country developed taxonomic support for implementing relevant actions identified in the programme of work on inland waters biodiversity, in particular regional guides to freshwater fish and invertebrates as an input to ecosystem monitoring for river and lake health?	
a) no	
b) no, but some programmes are under development	
c) yes, some activities undertaken (please provide details)	X
d) yes, many activities undertaken (please provide details)	
Further comments on taxonomic support for the implementation of the programme of work on inland waters biodiversity	
Re 11 c) Aquatic plants and animals surveys National Survey on River Environments ----- Involvement of taxonomic experts in identifying species was not fully applied in the monitoring process. Coverage of taxa was still limited. Although some databasing using GIS have started, accessibility to the database is limited.	

12. Has your country undertaken any taxonomy-related activities identified in the programme of work on agricultural biodiversity as well as relevant activities identified in the International Pollinator Initiative and the International Soil Biodiversity Initiative?	
a) no	
b) no, but some activities are being planned	
c) yes, some activities undertaken (please provide details)	X
d) yes, comprehensive activities undertaken (please provide details)	
Further comments on taxonomy-related activities for the implementation of the programme of work on agricultural biodiversity	
<p>Re 12 c)</p> <p>Genetic diversity studies of the genera <i>Oryza</i> and <i>Vigna</i> have been undertaken to investigate their geographical distribution in natural habitats and field conditions, and to better understand phylogenetic relationships between species and within species using molecular markers.</p> <p>-----</p> <p>For the proper monitoring of biodiversity in soil, pollinator species, pathogenic species on agricultural plants requires input from taxonomy.</p>	
13. Is your country developing any taxonomic support for the implementation of the programme of work on mountain biodiversity, in particular identification of biodiversity components unique to mountain ecosystems?	
a) no	X
b) no, but some programmes are under development	
c) yes, limited support (please provide details)	
d) yes, significant support (please provide details)	
Further comments on taxonomic support for the implementation of the programme of work on mountain biodiversity	
14. Has your country developed taxonomic support for the implementation of the programme of work on protected areas?	
a) no	
b) no, but some programmes are under development	
c) yes, some programmes in place and are being implemented (please provide details)	X
d) yes, comprehensive programmes are being implemented (please provide details)	
Further comments on taxonomic support provided to the implementation of the programme of work on protected areas	
<p>Re 14 c)</p> <p>Red lists of wild animals and plants and their databases are developed and made accessible for mammals, birds, reptiles, amphibians, fresh water fishes and plants.</p> <p>-----</p> <p>Monitoring and identification were carried out by cooperation of parataxonomists and taxonomic experts. Museums under local governments at prefecture level are actively involved in these processes.</p>	

Operational objective 5. Within the work on cross-cutting issues of the Convention include key taxonomic objectives to generate information needed for decision-making in conservation and sustainable use of biological diversity and its components

15. Has your country taken any measures to strengthen capacity for the inventory and classification of biodiversity and its components in the development of a national strategy on access and benefit-sharing?	
a) no	X
b) no, but some programmes are under development	
c) yes, some measures taken (please provide details)	
d) yes, comprehensive measures taken (please provide details)	
Further comments on the measures to strengthen capacity for the inventory and classification of biodiversity and its components in the development of a national strategy on access and benefit-sharing	
Japan has not taken any measures for it, however, "Bio Technology strategies", which has developed as national strategy in December, 2002, emphasizes the importance of develop the inventory for biological resources as well as strengthening activities to preserve and analyze those. The strategy also emphasized the importance of cooperation with countries providing biological resources in activities of prospecting, preservation and analyzing for biological resources in terms of ensuring the spirit of the Convention on Biological Diversity including the issue of access and benefit sharing.	
16. Has your country developed taxonomic support to address the issues of invasive alien species?	
a) no	X
b) no, but relevant policy and programme under development	
c) yes, some policies and programmes in place (please provide details)	
d) yes, comprehensive policies and programmes in place (please provide details)	
Further comments on taxonomic support to address the issues of invasive alien species	
<ul style="list-style-type: none"> • More involvement of taxonomic experts is required in quarantine, monitoring and public education. • Hybridisation of wild animals/plants with invasive alien species was proven in some species. To monitor the invasive alien species and possible hybrids, involvement of taxonomists of wide range of organisms is necessary. Long term monitoring project rather than the project by competitive research grant is more appropriate. 	
17. Has your country developed taxonomic information system to support the maintenance, preservation and protection of traditional knowledge, innovations and practices of indigenous and local communities in accordance with Article 8(j) and related provisions?	
a) no	X
b) not applicable	
c) no, but some programmes are under development	
d) yes, some activities undertaken but a system is not in place yet (please provide details)	
e) yes, a taxonomic information system in place (please provide details)	
Further comments on the taxonomic information system to support the maintenance, preservation and protection of traditional knowledge, innovations and practices of indigenous and local communities	

18. Has your country undertaken any taxonomy-related activities that support the implementation of the ecosystem approach and the work in the field of assessments, monitoring and indicators?	
a) no	
b) no, but some programmes are under development	
c) yes, some programmes in place (please provide details)	X
d) yes, comprehensive programmes in place (please provide details)	
Further comments on programmes and activities to support the implementation of the ecosystem approach and the work in the field of assessments, monitoring and indicators	
Ecosystem Approach is mentioned as the base in the National Biodiversity Strategy of Japan. Thus, taxonomy-related activities mentioned above can be taken to support the implementation of the ecosystem approach. Basic ecological research has been carried out in the projects by competitive research grants/funds.	

If your country wishes to provide additional information on implementation of this programme of work, please do so in the following space

Web sites and mailing list for implementation of GTI Programme of Work

- GTI web site : <http://www.gti.nies.go.jp/>
- GTI mailinglist for the regional collaboration: gtiao@nies.go.jp
- GBIF data provider (GTI –Japan) <http://www.gtijp.nies.go.jp/>
- EASIANET web site: <http://easianet.nies.go.jp/hk/>

Databases

- Bacteria name database: *BIOS* : <http://www.bios.nies.go.jp/>
- Flora of Japan on Nomencurator: <http://www.gtijp.nies.go.jp/fojview/index.html>

Publications on GTI:

Shimura J. (ed.): Global Taxonomy in Aisa ISSN 1341-3643-175, 2002

Shimura J. (ed): Building Capacity in Biodiversity Information Sharing. ISBN-900626-03-1C3045, 2003

Shimura J and Matsuura K.: A Guide to Global Taxonomy Initiative (in Japanese) 2004

Kimura S. and Matsuura K.: Fishes of Bitung, Ocean Research Institute, The University of Tokyo., 2003

Workshops held for implementation of GTI Programme of Work

- 1st GTI Regional Workshop in Asia. Putrajaya, Malaysia Sept. 2003
- Joint International Forum on Biodiversity Information: Building Capacity in Asia and Oceania. 4-10 October 2003 Tsukuba Japan