

**Council for Trade-Related Aspects
of Intellectual Property Rights**

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TECHNOLOGY CAPACITY BUILDING: INFORMATION FROM OTHER INTERGOVERNMENTAL ORGANIZATIONS

SECRETARIAT OF THE CONVENTION ON BIOLOGICAL DIVERSITY

Addendum

The present document reproduces the information on technology capacity building which has been received from the Secretariat of the Convention on Biological Diversity by means of a communication dated 22 February 2001.

1. This note was prepared by the Executive Secretary of the Convention on Biological Diversity in response to the request made by the WTO Council for Trade-Related Aspects of Intellectual Property Rights ("TRIPS") at its meeting of 27-30 November 2000. It provides an overview of technology capacity building activities under the Convention on Biological Diversity. The note first introduces briefly the provisions of the Convention relating to technology capacity building and the consideration of this issue by the Conference of the Parties to the Convention. It then presents summary information regarding the relevant activities that have been undertaken by various stakeholders of the Convention, in particular, the Secretariat, the Financial Mechanism and Parties.

A. **TECHNOLOGY CAPACITY BUILDING REQUIREMENTS UNDER THE CONVENTION ON BIOLOGICAL DIVERSITY**

2. The Convention on Biological Diversity, in Article 1, provides that the objectives of the Convention are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, "including by appropriate access to genetic resources and by appropriate transfer of relevant technologies". Technology capacity building has been considered one of the critical instruments to attain the objectives of the Convention.

3. A number of articles of the Convention refer to technology capacity building. According to Article 16 of the Convention, technologies include biotechnology and are those that "are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment". The other provisions of the Convention addressing technology capacity building can be found in Articles 12, 16, 18 and 19. In general, technology capacity building refers to the development and strengthening of national technology capacity by means of human resource development, including scientific and technical education and training, exchange of experts, joint research and joint ventures, and institution building as well as enabling policy improvements.

4. The Convention also addresses the role of various stakeholders in technology capacity building, such as the role of governments in formulating enabling legislative, administrative or policy measures for transfer of technology, in establishing capacity building programmes in measures for the identification, conservation and sustainable use of biological diversity, and in promoting technical and scientific co-operation for capacity building. It calls for the private sector to facilitate access to, joint development and transfer of technology for the benefit of both governmental institutions and the private sector of developing countries. Developed country Parties are committed to provide financial resources through the financial mechanism and other channels to facilitate access to and transfer of technology to developing countries under fair and most favorable terms, including on concessional and preferential terms. Article 18 establishes a clearing-house mechanism for promoting and facilitating technical and scientific co-operation.

5. The Conference of the Parties, the supreme body of the Convention, has considered ways and means to promote and facilitate access to, and transfer and development of technology at its first three meetings, and adopted an approach to integrate consideration of technology capacity building within thematic and cross-cutting themes of the Convention. Measures relating to technology capacity building are included in the programmes of work on forest, marine and coastal, inland waters, dry and sub-humid land and agricultural biological diversity, and in such decisions as sustainable use, access to genetic resources and benefit sharing, traditional knowledge, taxonomy, alien species, ex-situ conservation, public education and awareness. For instance, capacity building for, including acquisition of, remote-sensing technologies has been considered critical for monitoring and assessment of biological diversity in remote areas.

6. Technology capacity building is also required in the Cartagena Protocol on Biosafety to the Convention. Article 22 of the Protocol provides that "[The] Parties shall cooperate in the development and/or strengthening of human resources and institutional capacities in biosafety... including biotechnology to the extent that it is required for biosafety... including through existing global, regional, subregional and national institutions and organizations and, as appropriate, through facilitating private sector involvement." Cooperation in capacity building shall include scientific and technical training in the proper and safe management of biotechnology, and in the use of risk assessment and risk management for biosafety, and the enhancement of technological and institutional capacities in biosafety. " Article 28 requests the financial mechanism of the Convention and other funding institutions to provide financial support to these capacity building needs.

7. The Conference of the Parties noted "[The] need for capacity building for the purposes of the clearing-house mechanism in developing countries, including training on information systems technologies that will allow developing countries to take advantage of the recent developments in electronic communication, including the internet." It also noted that technical and scientific cooperation on all aspects of biological diversity, including taxonomy and transfer of technology plays a crucial part in ensuring the capacity of the clearing-house mechanism to play an important role in the implementation of the Convention. The Conference of the Parties specifically requested the financial mechanism of the Convention to support capacity building activities in the implementation of the clearing-house mechanism, and to provide increased support to establish and strengthen biodiversity information systems such as training, technology and process related to the collection, organization, maintenance and updating of data and information and its communication to users through the clearing-house mechanism.

8. Adequacy, predictability and time flow of funds has been considered essential for all technology capacity building activities. The first meeting of the Conference of the Parties requested the financial mechanism to support projects which promote access to, transfer of and cooperation for joint development of technology. An array of guidance on capacity building has been provided by the Conference of the Parties to the financial mechanism, including in the area of planning, agricultural biodiversity, drylands, forest, inland waters, marine and coastal biological diversity, ecosystem approach, access to genetic resources and benefit sharing, biodiversity planning, alien species,

traditional knowledge, incentive measures, targeted research, public awareness and education, clearing-house mechanism, national reports, etc.. It is generally understood that these capacity building measures encompass technology capacity building as a key element.

B. RESPONSES TO TECHNOLOGY CAPACITY BUILDING REQUIREMENTS

9. The Convention on Biological Diversity is largely a framework instrument, which requires the involvement of a number of economic sectors. A wide range of stakeholders have been involved in the development and implementation of the provisions of the Convention, and thus in the design and implementation of technology capacity building activities and programmes. The following will focus on the technology capacity building activities that have been undertaken thus far pursuant to the relevant provisions of the Convention.

Secretariat of the Convention on Biological Diversity

10. During the pilot phase of the clearing-house mechanism (1996-1998), the Secretariat convened four regional workshops to evaluate national capacities and review experience in scientific and technical cooperation in support of the objectives of the Convention. These workshops were funded through the core budget of the Secretariat.

11. The fifth meeting of the Conference of the Parties, which was held in May 2000, requested the Secretariat to convene regional workshops to support capacity building for clearing-house mechanism activities, training and awareness, with a focus on cooperation in biodiversity information for the implementation and management of the clearing-house mechanism at the national, subregional, bio-geographical and regional levels. The activities are to be funded through voluntary contributions.

Financial mechanism (Global Environment Facility) and other channels of financing

12. In response to the requests from the Conference of the Parties, the Global Environment Facility (GEF) - as the financial mechanism of the Convention - provides financial support to a wide range of technology capacity building activities through enabling activity, regular projects and short-term response measures. The GEF has a specific funding modality for clearing-house mechanism where funds are available for acquisition of information equipments and training of users.

13. Technology capacity building activities have been mainly funded by the GEF through *in-situ* conservation projects, i.e., establishment and management of protected areas. This mainly involves the application of "hard technologies" such as aerial survey equipment, Geographic information Systems (GIS), satellite technologies, fencing equipment, and "soft technologies" in the form of know-how, taxonomy, management routines, policy analysis, and behavioural patterns and attitudes related to biodiversity science and technology. The GEF-funded projects are largely country-driven, but the acquisition of the equipment, knowledge and skills comes mainly from developed countries through international consultancy. Over one billion US dollars have been committed by the GEF to support project activities in the field of biological diversity. The GEF has also approved a capacity building project to support the development of biosafety framework at country level.

14. Given the decentralized and uncoordinated nature of technology capacity building under the Convention, the GEF has undertaken to develop a Strategy and GEF-specific Action Plan for capacity building for the global environment. It has identified the capacity need for assessment, generation of scientific information and knowledge, integration of biodiversity considerations into national science and technology policies, strengthening of science research bodies and institutions, and specialised technology skills related to biodiversity.

15. A number of funding institutions, intergovernmental organizations and non-governmental organizations have also been involved in supporting technology capacity building under the Convention. Technology capacity building in biological diversity has been frequently associated with their regular biodiversity projects or other development cooperation projects of multilateral and regional funding institutions. Such capacity building is often tailored to meet the specific needs of funded projects. Several inter-governmental organizations and non-governmental organizations either have a programme in biodiversity or are specialized in the conservation and sustainable use of biological diversity. They often provide critical scientific advisory services or act as intermediary to implement technology capacity building projects.

Developed country Parties

16. According to the national reports submitted by developed country Parties, technology capacity building activities have been mainly promoted through their bilateral development assistance programmes. Public research or scientific institutions in these countries often play a major role in facilitating international assistance to build the scientific capacities of developing countries, for instance, providing training for research and technologies and for specific conservation and sustainable use operations.

17. A growing number of private sector firms from developed countries are engaging in various forms of technology partnerships with developing countries, for instance by training developing country scientists in the application of new technologies for the conservation and utilisation of genetic resources, by exchanging information on new scientific and technological advances, by providing various technology components to developing country partner institutions and by engaging in joint research and development. Such technology capacity building activities are increasingly found in the field of biosafety and biotechnology.
