

Thematic Report on Transfer of Technology and Technology Cooperation

Please provide the following details on the origin of this report.

Contracting Party:	Japan
National Focal Point	
Full name of the institution:	Ministry of Foreign Affairs
Name and title of contact officer:	Administrative Official of Foreign Affairs Hanako Shuda
Mailing address:	Shiba Koen 2-11-1, Minato-ku, Tokyo 105-8519, Japan
Telephone:	+81-3-3580-4022
Fax:	+81-3-6402-2538
E-mail:	hanako.shuda@mofa.go.jp
Contact officer for national report (if different)	
Full name of the institution:	Ministry of the Environment
Name and title of contact officer:	Technical Official of Environment Saori Hirai
Mailing address:	1-2-2 Kasumigaseki, Chiyoda-ku, Tokyo,100-8975, Japan
Telephone:	+81-3-5521-8272
Fax:	+81-3-3592-3228
E-mail:	SAORI_HIRAI@env.go.jp
Submission	
Signature of officer responsible for submitting national report:	(外務省)
Date of submission:	

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.

The draft was drawn out by the government consisting of nine Ministries involved with the Convention on Biological Diversity. And after taking procedure for public comments to the draft, this report was decided by the Inter-Ministerial Coordinating Committee.

Transfer of Technology and Technology Cooperation

Inventory and assessment

1. Has your country developed an inventory of existing technologies or category of technologies, including from indigenous and local communities, for the conservation and sustainable use of biological diversity and its components, in all the thematic areas and cross-cutting issues addressed by the Convention?	
a) no	X
b) an inventory under development	
c) an inventory of some technologies available (please provide some details)	
d) yes, a comprehensive inventory available (please provide details)	
2. Has your country assessed the potential impacts of relevant technologies on biological diversity and their requirements for successful application?	
a) no	X
b) yes, please give some examples	
3. Has your country carried out an assessment of the needs for relevant technologies?	
a) no (please specify the reasons)	X
b) yes, and please specify the needs met and the needs not met for existing technologies and for new technologies	

Implementation of some relevant articles of the Convention, relevant decisions adopted at the previous meetings of the Conference of the Parties and recommendations of SBSTTA

4. In implementing the thematic programmes of work adopted by previous meetings of COP, has your country achieved the outcomes identified in these programmes of work through technology transfer and technology cooperation? (Decisions II/10, III/11, IV/6, IV/7 and V/4)	
a) no	
b) yes, but only a few activities in some programmes	
c) yes, and a wide range of activities in many programmes of work	X - See "further comments"
d) if yes, please specify these activities and programmes of work	
5. Has your country undertaken technology cooperation with other Contracting Parties that lack the expertise and resources to assess the risks and minimize the negative impacts of introducing alien species? (Decision V/8)	
a) no	X
b) yes – please give details below (including types of technology transferred, actors involved, terms for transfer and means of access to technology)	

6. Has your country taken any steps or measures to facilitate transfer of technology to and technology cooperation with other Parties to develop and/or strengthen their capacity to implement the policy, program and practice for sustainable use of biological diversity? (Decision V/24)	
a) no	
b) yes, please specify detailed measures and steps	X - See “further comments”
7. Could you provide examples or illustrations of benefit-sharing contractual agreements which have included technology cooperation and technology transfer as benefits to be shared? (Article 15)	
a) no	X
b) yes	
8. Has your Government taken measures, as appropriate, to ensure, as set out in the Article 16(3) that Contracting Parties providing genetic resources are provided access to and transfer of technology which makes use of those genetic resources? (Article 16)	
a) no	
b) yes, please provide some details	X - See “further comments”
9. Have the taxonomic institutions in your country taken any initiatives in developing national priorities, both individually and regionally, in new technology? (Decision IV/1)	
a) no	
b) yes, in early stages of development	
c) yes, in advanced stages of development	
d) yes, some initiatives in place and some priorities identified	X
e) yes, comprehensive priorities identified	
10. Has your country been involved in technology development and/or transfer for the maintenance and utilization of ex situ collections? (Decision V/26)	
a) no	
b) yes – please give details below (including types of technology transferred, actors involved, terms for transfer and means of access to technology)	X - See “further comments”
11. Has the clearing-house mechanism in your country been further developed in order to assist in obtaining access to information concerning access to and transfer of technologies? (Decision V/14)	
a) no	X
b) yes, please provide some examples	

Role of public and private sectors in technology transfer and technology

12. Do you know of any examples of technology partnerships between public R&D institutions from developing countries and private-sector firms from industrialized countries? If so, to what extent have these partnerships involved	
a) the training of developing country scientists in the application of new technologies for the conservation and utilization of genetic resources	
b) information exchange on new scientific exchange and technological advances	
c) providing various technology components to developing country partner institutions	
d) engaging in joint R&D	
Information is not available.	
13. Has your country taken any measures or developed any programmes to encourage the private sector or the public-private partnership to develop and transfer technologies for the benefit of governments and institutions of developing countries, including South-South cooperation?	
a) no	
b) yes, please give details	X - See "further comments"
14. Have any type of incentives been established in your country to encourage the participation of the private sector in conservation and sustainable use activities as sources of new technologies and potential financiers of conservation programmes?	
a) no	
b) yes, please give details	X - See "further comments"

Impact of intellectual property rights on technology transfer and technology cooperation

15. Are the technologies your country has accessed or wishes to access in the public domain or covered by intellectual property rights?	
a) public domain	X
b) intellectual property rights	
c) both	
16. Have intellectual property rights been a limiting factor in acquiring technologies for the conservation and sustainable use of biological diversity?	
a) no	X
b) yes, please provide an example and specify the following: the type of technology sought (hard or soft technology); the area to which it is to be applied (e.g. forest, marine, inland waters, agriculture, etc.)	

Capacity-building for technology transfer and technology cooperation

17. Have adequate institutional structures been established and/or is adequate human capacity available to access relevant technologies, in your country?	
a) no	
b) yes	X
18. What, if any, have been the limiting factors in implementing relevant technologies?	
a) institutional capacity	
b) human capacity	
c) others – please specify	X - Financial restriction
19. Does your country consider that access to information and training or lack thereof has been a limiting factor in access to and transfer of technology?	
a) no	
b) yes, please provide some examples	X - See “further comments”
20. Has your country been able to identify relevant technologies in specific areas for the conservation and sustainable use of biological diversity in your country?	
a) no	
b) yes, please give details	X - See “further comments”
21. Has your country developed national policy and established international and national institutions to promote technology cooperation, including through the development and strengthening of technical, human and institutional capabilities?	
a) no (please specify the reasons)	
b) yes, please give some details or examples	X - See “further comments”
22. Has your country established joint research programmes and joint ventures for the development of technologies relevant to the objectives of the Convention?	
a) no	
b) yes, please give some details or examples	X - See “further comments”

Measures for facilitating access to and transfer of technology

23. Has your country established the mechanisms and/or measures to encourage and facilitate the transfer of technology to and technology cooperation with other Contracting Parties?	
a) no	
b) yes, please provide some details	X - See "further comments"
24. Has your country established channels for access to the technologies developed and applied for attaining the objectives of the Convention?	
a) no	X
b) yes, please provide detailed information	

Success stories of and constraints to technology transfer and technology cooperation

25. Has your country identified any success stories and opportunities of and constraints to transfer of technology and technology cooperation?	
a) no	
b) yes, please provide detailed information	X - See "further comments"

Further comments

A4: There are technical cooperation projects in a wide range of areas, such as forestry, agriculture, coastal area, through JICA. Some activities are given below.

Decisions II/10

- **Coastal Resources and Environment Conservation Project, Mauritius**

From December 1995, experts from Japan under the "Coastal Fisheries Resources and Environment Conservation Project" were attached to the Albion Fisheries Research Centre that carries out the research, development and management functions of the Ministry of Fisheries in Mauritius for the implementation of the following projects under the project type co-operation for a period of seven years:

(1) Coastal Ecosystem Research, (2) Coastal Environment Monitoring, and (3) Aquaculture Resource Propagation.

Decisions III/11 and IV/6

- **Plant Genetic Resources Centre in Sri Lanka**

In the light of the understanding that productivity enhancement through plant improvement is the top priority issue for agricultural development, the Government of Sri Lanka has recognized the necessity of collecting and conserving useful genetic resources of basic food crops such as rice. A request was made for grant aid and technical cooperation for improving facilities for enhancing collection, conservation, evaluation and utilization of plant genetic resources.

Based on the review of the background and content of the request as well as the propriety of cooperation investigated by the preliminary study team dispatched in July 1986, the Record of Discussion was executed by the Implementation Discussion Team in March 1988. Then on April 1 1988, a project-type technical cooperation was inaugurated.

As an institution for collecting, conserving, evaluating and utilizing plant genetic resources, to improve farm products of the country, the Plant Genetic Resources Centre (PGRC) was established in Peradenia, Kandy State with a grant aid of Japan.

PGRC was intended to establish a genetic resources management and research system where collected and introduced plant genetic resources and their data can be managed. It was also intended to enhance capacity levels of Sri Lankan counterparts so that the institution can be operated independently by the local staff once the project is completed.

Of the 39 themes specified in the tentative schedule for implementation, 28 themes accomplished intended technical levels.

Such result demonstrates improved technical levels of the counterparts operating the key elements of management for plant genetic resources; namely, exploration/ collection / classification, propagation, evaluation, conservation and data management.

Through the seven-year project-type technical cooperation, the technical competence of the counterparts have been enhanced to such levels that enable them to operate PGRC and carry out genetic resources management basically independently, thus marking successful achievement of the initial objectives of this project.

- **Seed Bank Project in Myanmar**

The Seed Bank was created inside the Central Agriculture Research Institute (CARI) at Yezin in 1990, and a technical cooperation project was implemented from June 1, 1997 and was completed on May 31, 2002. The Project was assigned to develop the Seed Bank into a self-reliant national gene bank. The project is comprised of five categories: (1) exploration and collection, (2) classification and evaluation, (3) multiplication and preservation, (4) data management, and (5) exchanges of plant genetic resources and information.

In this project, Japanese experts provided technical guidance to the staff in order to upgrade the level of techniques and knowledge on the management of plant genetic resources of the Seed Bank.

Myanmar is located at one of the centers of genetic diversity of rice and its relatives. Rice is also the most important agricultural crop in this country. Therefore, the major activities of the Seed Bank have been focused on rice and its relatives since its inauguration in the late eighties. More than 4,000

accessions of rice are now stored.

In fact, Myanmar Seed Bank is unique among gene-banks in Southern countries in that it maintains a sizable number of wild species of *Oryza*. Currently more than 90 accessions of wild rice species are preserved in its base collection. It is to be noted that many of wild *Oryza* species are maintained vegetatively. Due to difficulties in handling seeds and the fact that it is rather easy to maintain stocks by cutting-back the canopy, wild *Oryza* species are suited for vegetative preservation.

Decisions IV/7 and V/4

- **Technical Cooperation Program for Bornean Biodiversity and Ecosystems Conservation in Sabah, Malaysia**

Bornean Biodiversity and Ecosystems Conservation (BBEC) is a program to establish sustainable approaches for the conservation of the endangered and precious biodiversity and ecosystems of Sabah. The overall goal of the Program is to conserve the endangered and precious biodiversity and ecosystem of Sabah.

BBEC is a five year program implemented by the Sabah State Government agencies and Universiti Malaysia Sabah and assisted through JICA (Japan International Cooperation Agency).

BBEC applies integrated approach by comprehensively covering four essentials of conservation which are (1) Research and Education, (2) Park management, (3) Habitat Management, and (4) Public Awareness.

- **Biodiversity Conservation Project, Indonesia**

Biodiversity Conservation Project (BCP) has been launched since July 1995 as a technical cooperation between Indonesia and Japan. The project is managed by the Japan International Cooperation Agency (JICA) in Japanese side and the Research and Development Center for Biology (RDCB) of the Indonesian Institute of Sciences (LIPI) and the Directorate General of Nature Protection and Conservation (PKA) - formerly the Directorate General of Forestry Protection and Nature Conservation (PHPA) - of Ministry of Forestry and Estate Crops (MOFEC) are the counterparts in Indonesia side.

The overall goal of the project is to support the achievement of BCP which has been prepared as a national guidance to conserving biodiversity. The project also aims to strengthen the institutional capacity for biodiversity conservation in both RDCB-LIPI and PKA-MOFEC through the cooperation.

The BCP is planned as an eight years term project and divided in two phases. The phase I of the project is started on July 1995 and finished on June 1998 (for three years), and phase II of the project is conducted from July 1998 until June 2003 (for five years).

In accordance with activities and output, the BCP has three main components as an implementation framework of the projects, such as (1) Research Component, (2) Information System Component, and (3) Gunung Halimun National Park (GHNP) Management Component.

Through this planned program, tight cooperation among various public sectors, will foster and strengthen the national capacity for biodiversity conservation. Especially, the public sectors under the umbrella of the Indonesian Initiative of Sciences and the Protection and Nature Conservation, Ministry of Forestry and Plantation will be in cooperation to promote the undertakings.

A6

All of JICA's activities contribute to technical transfer and technical assistance to developing countries. Regarding case examples, see further comments for the question 4.

A8

Regarding Gene Bank projects for collaborative research with a developing country, National Institute of Agrobiological Sciences invites researchers from the country to give training course and to research for evaluation of properties of genetic resources collected in co-operation with each other.

Examples;

- Vietnam: Two researchers were invited every year between 1999 and 2001, for DNA polymorphic analysis of native rice, which were conserved by farmers
- Indonesia: Researchers were invited (2 researchers in 2001 and 1 in 2002) for DNA diversification analysis of cane sugars, which were conserved by farmers.

A10

Transferred technique: Techniques for conservation, management, taxonomy, evaluation and data processing on genetic resources

Parties involved: Independent Administrative Institute governed by Ministry of Agriculture, Forestry and Fisheries (National Institute of Agrobiological Sciences, National Agricultural Research Organization, Japan International Research Center for Agricultural Science and related institutions), universities and JICA

Period of Transfer: since 1983 to date

Way of transfer

- JICA gives training courses to those individually accepted.
- JICA gives group-training courses on Plant Genetic Resources (6 trainees, half year per year) about techniques above.

Contents

- Researchers of genetic resources, mainly from National Institute of Agrobiological Sciences, have implemented individual training courses, co-operated researches in the countries, in areas related to collection, conservation, evaluation and information management and so on, under co-operation with JICA's conservation projects of plant genetic resources (till now, technical co-operation projects or grant aids have been done in Sri Lanka, Chile, Pakistan, Myanmar etc.)
- In group training course schemes, courses related to collection, conservation, evaluation, information management have been implemented. Heretofore, more than 30 countries, more than 180 researchers and engineers have taken them.

A13

In areas concerning forestry, agriculture and coastal resources, JICA conducted third country training in the below projects in the fiscal year of 2001.

Trainee Country	Third Country	Number of trainees	Training Course
East Timor	Thailand	2	Coastal Resources Management
Several countries in Central and South America	Chile	16	Integral Management of Watershed with Emphasis on Soil and Water Conservation
Several countries in Central and South America	Colombia	19	Irrigated Cultivation Technology for Sloping Land
Kenya	Philippines	1	Farmer-Led Extension, Study Program in Food Security and Forestry, Community-Based and Irrigated Watershed Management
Several African countries	Kenya	20	Regional Training Course for the Promotion of Social Forestry in Africa

Sri Lanka	Philippines	1	Plant Genetic Resources (Wild rice)
Several Asian countries	Sri Lanka	10	Plant Genetic Resources Conservation & Management
<p>A14 Japan supports International greening cooperation activities, such as activities for the restoration of tropical forests and combating desertification, by Green Fund, which was established to grow public interests to greening,. In addition, Japan promotes international exchange for afforestation within the National-Fund for Forest Greenery and Waters, which was established to promote National Land Afforestation Campaign,</p> <p>A19 Institutions, like JICA, have invited engineers from the countries to implement training courses and sent experts to the countries.</p> <p>A20 National Institute for Environmental Studies and National Institute of Agrobiological Sciences etc. have developed techniques for biodiversity conservation.</p> <p>A21: The law of Japan International Cooperation Agency is established.</p> <p>A22 A project, “ International collaborative research related to a guideline for sustainable forest management based on international criteria”, has been executed from 2000 to 2004, related to the Montreal Process.</p> <p>A23: Japan International Cooperation Agency is established.</p> <p>A25 There are some projects successfully implemented by JICA (see A4) and National Institute of Agrobiological Sciences (see A8 and A10).</p>			