

Article 18 Technical and scientific cooperation

252. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?

a) High		b) Medium	X	c) Low	
---------	--	-----------	---	--------	--

253. To what extent are the resources available adequate for meeting the obligations and recommendations made?

a) Good		b) Adequate		c) Limiting	X	d) Severely limiting	
---------	--	-------------	--	-------------	---	----------------------	--

Further comments on relative priority and on availability of resources

Questions 252 and 253.

Brazil maintains important partnerships for technical and scientific cooperation. They include Cooperation Agreements with a number of countries and international organizations, for example, Japan, France, the United Nations Development Program – UNDP, and the Organization of American States – OAS. See: www.abc.mre.gov.br.

The *Agência Brasileira de Cooperação* – ABC [Brazilian Cooperation Agency – ABC] is guided by Brazilian foreign policy, established by the Ministry of Foreign Affairs (MRE) and national development priorities, in the various governmental sectoral plans and programmes.

There are cooperative programmes related to biodiversity. CNPq oversees cooperative agreements with over 50 countries (www.cnpq.br). Examples include: Studies on Human Impact on Forests and Floodplains in the Tropics – SHIFT, Germany (see comments on Questions 11 and 12) with the *Empresa Brasileira de Pesquisa Agropecuária - EMBRAPA* [Brazilian Agricultural and Cattle-Breeding Research Company – EMBRAPA] (www.embrapa.gov.br); the Large-Scale Biosphere-Atmosphere Experiment in Amazon - LBA with the *Instituto Nacional de Pesquisas Espaciais – INPE* [National Institute for Space Research – INPE] (www.inpe.gov.br) (see comments on Question 178); and Plants of the Northeast (United Kingdom).

Rede Amazônica de Recursos Fitogenéticos – TROPIGEN, [Amazon Network for Phylogenetic Resources – TROPIGEN]. See comments on Question 129.

Programa Cooperativo para o Desenvolvimento Tecnológico do Cone Sul – PROCISUL [Cooperative Programme for Technological Development of the Southern Cone PROCISUL]. See comments on Question 129.

Programa Piloto para a Proteção às Florestas Tropicais do Brasil PP-G7 [Pilot Program for the Protection of the Tropical Forests of Brazil PP-G7]. See comments on Question 84.

Projeto Jacarandá [Jacarandá Project]. The project "*Pesquisas da Floresta Amazônica Brasileira*" ["Brazilian Amazon Forest Research"] – Phase I (1995-1998) is the result of bilateral technical cooperation between the governments of Brazil and Japan, through the Ministry of Science and Technology (MCT) and the *Agência Brasileira de Cooperação – ABC* [Brazilian Agency for Cooperation – ABC] and the Japan International Cooperation Agency (JICA). It is carried out by the *Instituto Nacional de Pesquisas da Amazônia – INPA* [National Institute for Amazon Research – INPA], Manaus, and the Research Institute on Forests and Forest Products - FFPRI, Tsukuba, Japan. The general objective of the project is the restoration of areas which have been abandoned and/or degraded following different uses of the soils in Amazon, using forestry practices appropriate for the region. Specific objectives include providing INPA with the capacity to use remote sensing to map forest types and areas which have been degraded; to increase our understanding of forest structure and functioning in areas subject to degradation; to evaluate the dynamics of degradation; and to research alternatives for forest cultivation and management for the restoration of abandoned and/or degraded areas. During the first phase, efforts have concentrated on strengthening institutional infrastructure, training personnel, and the implementation of research programmes. Seven researchers from INPA (mainly from the *Coordenação de Pesquisas em Silvicultura Tropical CPST/INPA* [Coordination of Research in Tropical Silviculture - CPST/INPA]) travelled to Japan for training and/or technical visits (average one month each). The project, in turn, has received 14 Japanese researchers (mainly from the FFPRI), 10 for short visits (around three months) and four for longer periods (three years). With funds from JICA and the MCT, the Project has set up a nursery for seedling production, a laboratory for remote sensing and

Chapter 1

geographical information analysis, a forest seeds laboratory (processing, dehydration and storage), and a laboratory for forest seed physiology, and has re-equipped the already-existing laboratory of plant nutrition. It has also resulted in repairs to and the maintenance of the ZF-2 vicinal road, besides the EEST and ZF-2 field camps. Equipment has been acquired for the three research components, including two all-purpose vehicles. The various research projects were presented at a Final Workshop (28th-29th September, 1998), resulting in an edited volume summarizing the activities and scientific results of Phase I. (Higuchi, N., Campos, M.A.A., Sampaio, P.T.B. and Santos, J. dos (eds.). 1998. *Pesquisas Florestais para a Conservação da Floresta e Reabilitação de Áreas Degradadas da Amazônia* [Forest Research for the Conservation of the Forest and the Restoration of Degraded Areas in Amazon]. MCT-INPA/JICA, Manaus, Amazonas. 264pp.). Additional information available at: www.mct.gov.br/prog/ppg7/projetos/projjacaranda.pdf.

Programa *Mangrove Dynamics and Management* - MADAM [MADAM Programme]. This project arose from a cooperative agreement between CNPq/IBAMA/DLR and German and Brazilian institutions: *Zentrum für Marine Tropenökologie* - ZMT [Centre for Tropical Marine Ecology - ZMT], Bremen, Germany; the *Conselho Nacional de Desenvolvimento Científico e Tecnológico* - CNPq [National Council for Scientific and Technological Development - CNPq], through its research institute, the Emilio Goeldi Museum - MPEG, Belém, Pará, and the Federal University of Para - UFPA. It was conceived by Brazilian and German scientists, and is funded by the German government (through the Ministry of Education, Science, Research and Technology - BMBF) and by CNPq. MADAM is a programme of LOICZ (Land-Ocean Interactions in the Coastal Zone), itself a sub-programme of the International Geosphere-Biosphere Program (IGBP), and has also obtained recognition from the Man and Biosphere (MAB) programme of UNESCO. The objectives include strengthening scientific capacity for applied research programmes in northern Brazil, focusing on mangrove ecosystems in order to understand the interactions between biological, anthropogenic and physical factors, to allow for their rationale development. Based on the concept of Integrated Coastal Zone Management (ICZM), the findings will contribute to management strategies for this important coastal ecosystem. See: www.cnpq.br/areas/cooperacaointernacional/convenios/madam.htm, and comments on Question 178.

Programa de Ecossistemas Costeiros e Tropicais - ECOLAB [The Coastal Tropical Ecosystems Program - ECOLAB]. A French-Brazilian cooperation programme resulting from a Workshop held in 1992, in Cayenne, French Guiana. The aim is to carry out research on the dynamics of mangrove ecosystems and map the distribution of mangroves along the northern coast of the South American continent, between Suriname and north-eastern Pará using remote sensing and geoprocessing: information vital for the sustainable use of their natural resources. Amazon ecosystems are considered to extend as far as the bay of São Marcos in Maranhão.

Man and The Biosphere Program - MAB/UNESCO. The *Programa de Consolidação das Reservas de Biosfera Brasileiras* [Programme for the Consolidation of Brazilian Biosphere Reserves] was set up in 1996 through a technical cooperation agreement between UNESCO and the Brazilian government. The Brazilian programme *O Homem e a Biosfera* - BRAMaB has to date resulted in the creation of five Biosphere reserves representing major Brazilian biomes:

- Atlantic Forest Biosphere Reserve (including the São Paulo City Green Belt with an area of 1,540,032 ha, and extending through 14 states), 29,473,484 ha - 1993-2002;
- Cerrado Biosphere Reserve (varied savannah and forest ecosystem of central Brasil), 29,652,514 ha - 1993-2001;
- Pantanal Biosphere Reserve (wetlands of the upper Rio Paraguay) 25,156,905 ha – 2000;
- Caatinga Biosphere Reserve (deciduous forest and desert scrub in the North-east of Brazil), 19,899,000 ha – 2001;
- Central Amazon Corridor Biosphere Reserve (contiguous protected areas from the Rio Tefé (south of the Rio Solimões) and the Juami-Japurá Ecological Station (north of the river), east through the Rio Negro / Rio Japurá-Solimões interfluvium to the Uatumã Biological Reserve and Nhamundá State Park, east of the Rio Negro, 20,859,987 ha – 2001.

The objective of the Project is to consolidate of the Biosphere Reserve system as true instruments for environmental management and sustainable development, promoting an improvement in the quality of life of the populations within them. Specific measures are also implemented to strengthen the management of the Reserves, and pilot-projects have been defined by the Management Councils for each. The UNESCO office in Brazil is responsible for the execution of the project, together with the coordinating institutions for each Reserve and their counterparts. The *Agência Brasileira de Cooperação* - ABC [Brazilian Agency for Cooperation - ABC] and the *Comissão Brasileira para o Programa sobre o Homem e a Biosfera* - COBRAMAB

[Brazilian Commission for the Man and the Biosphere Programme supervise and monitor the execution of the project. The UNESCO office in Brazil has:

- Recruited consultancy services at the national and international level;
- Outsourced services, whenever necessary, to support the Brazilian government's strategy to establish Biosphere Reserves in each of the Brazilian biomes; and
- Secured the administrative, technical and financial management of the agreement, as set out in the project documents.

Implementation of the project includes cooperation with the Division of Ecological Sciences of the UNESCO Headquarters in Paris, as well as with other regional offices. The UNESCO coordinates the Brazilian Programme and provides technical, institutional and scientific expertise for its implementation and the design of new proposals. More information available at: www.unesco.org.br/programas/index.html

Programas Pequenos Projetos - PPP [Small Projects Programme –PPP]. The Small Projects Programme (PPP) of the Global Environment Fund (GEF) and the United Nations Development Programme (UNDP) provides small grants to non-governmental and community-based organizations for projects relevant to the focal areas and operational programmes of the GEF and which result in the improvement of the quality of life of the populations involved. The PPP focuses on the inter-relationship between local communities and their environment and the promotion of sustainable livelihoods. The PPP is implemented in 54 countries worldwide. In Brazil, it is administered by the regional office of the UNDP, supported by the NGO *Instituto Sociedade, População e Natureza – ISPN* [Institute for Society, Population and Nature – ISPN]; coordinated by *Coordenação Técnico-Administrativa – CTA* [Technical-Administrative Coordination – CTA]. The implementation of the programme is regulated by the National Strategy and defined by a Program Committee, which includes representatives from a number of governmental institutions and non-governmental organizations.

International Rubber Research and Development Board – IRRDB. Brazil is a member. For information, see www.irrdb.org.

FAO Genetic Resources Commission. Brazil is a member. For information, see www.fao.org/ag/cgrfa.

International Plant Genetic Resources Institute - IPGRI. Brazil contributes to the IPGRI. For more information, see www.ipgri.cgiar.org.

254. Has your country taken measures to promote international technical and scientific cooperation in the field of conservation and sustainable use of biological diversity (18(1))?

a) no measures	
b) some measures in place	X
c) potential measures under review	
d) comprehensive measures in place	

255. Do the measures taken to promote cooperation with other Contracting Parties in the implementation of the Convention pay special attention to the development and strengthening of national capabilities by means of human resources development and institution building (18(2))?

a) no	
b) yes – limited extent	X
c) yes – significant extent	

256. Has your country encouraged and developed methods of cooperation for the development and use of technologies, including indigenous and traditional technologies, in pursuance of the objectives of this Convention (18(4))?

a) no	
b) early stages of development	
c) advanced stages of development	
d) methods in place	X

Chapter 1

257. Does such cooperation include the training of personnel and exchange of experts (18(4))?	
a) no	
b) yes – limited extent	X
c) yes – significant extent	
258. Has your country promoted the establishment of joint research programmes and joint ventures for the development of technologies relevant to the objectives of the Convention (18(5))?	
a) no	
b) yes – limited extent	X
c) yes – significant extent	

Decision II/3, Decision III/4 and Decision IV/2. Clearing House Mechanism

259. Is your country cooperating in the development and operation of the Clearing House Mechanism?	
a) no	
b) yes	X
260. Is your country helping to develop national capabilities through exchanging and disseminating information on experiences and lessons learned in implementing the Convention?	
a) no	
b) yes - limited extent	X
c) yes – significant extent	
261. Has your country designated a national focal point for the Clearing-House Mechanism?	
a) no	
b) yes	X
262. Is your country providing resources for the development and implementation of the Clearing-House Mechanism?	
a) no	
b) yes, at the national level	X
c) yes, at national and international levels	
263. Is your country facilitating and participating in workshops and other expert meetings to further the development of the CHM at international levels?	
a) no	
b) participation only	
c) supporting some meetings and participating	X
264. Is your CHM operational	
a) no	
b) under development	
c) yes (please give details below)	X
265. Is your CHM linked to the Internet	
a) no	
b) yes	X

266. Has your country established a multi-sectoral and multi-disciplinary CHM steering committee or working group at the national level?

a) no	X
b) yes	

Decision V/14. Scientific and technical co-operation and the clearinghouse mechanisms (Article 18)

267. Has your country reviewed the priorities identified in Annex I to the decision, and sought to implement them?

a) not reviewed	
b) reviewed but not implemented	
c) reviewed and implemented as appropriate	X

Further comments on implementation of these Articles

Question 254.

Brazil has more than 50 scientific cooperation agreements (*Conselho Nacional de Desenvolvimento Científico e Tecnológico* [National Council for Scientific and Technological Development] CNPq / *Ministério de Relações Exteriores* [Ministry of Foreign Affairs] MRE).

Question 255.

Programmes with Bolivia (five environmental and five agricultural).

Experimento de Grande Escala sobre Biosfera e Atmosfera na Amazônia – LBA [The Large-Scale Biosphere/Atmosphere Experiment in Amazon - LBA]. See comments on Question 178.

Plano Nacional de Combate à Desertificação – PNCD [National Plan to Combat Desertification – PNCD]. The elaboration of this plan is the object of a technical cooperation agreement between the United Nations Development Program – UNDP and the Brazilian Government, represented then by the Ministry of Environment, Water, and Renewable Resources and Legal Amazon (MMA). The *Fundação Grupo Esquel Brasil* [Foundation Group Esquel Brazil] was designated the implementing agency of the PNCD, which also has technical and financial support from the FAO. Formulation of the plan includes the identification of precise desertification indicators, the evaluation of successful experiences in combating the process, and specific remedial measures at so-called ‘desertification nuclei’. More information at: www.esquel.org.br.

Question 256.

There are cooperative procedures for technology transfer, for example, of the Ministry of Environment with United States Development Agency (USDA) and the Environmental Protection Agency (EPA). Technology is also being developed by the *Conselho Nacional de Desenvolvimento Científico e Tecnológico – CNPq* [National Council for Scientific and Technological Development- CNPq] and the Ministry of Science and Technology (MCT), the *Empresa Brasileira de Pesquisa Agropecuária – EMBRAPA* [Brazilian Agricultural and Cattle-Breeding Research Company – EMBRAPA], and the *Fundação Instituto Oswaldo Cruz – FIOCRUZ* [Oswaldo Cruz Institute – FIOCRUZ].

Question 258.

Experimento de Grande Escala sobre Biosfera e Atmosfera na Amazônia – LBA [The Large-Scale Biosphere/Atmosphere Experiment in Amazon - LBA]. See comments on Question 178.

Studies on Human Impact on Forest and Floodplains in the Tropics – SHIFT. A German-Brazilian applied research programme for tropical ecosystems. The SHIFT Programme analyses the basic relationships between biotic and abiotic components in tropical ecosystems, anthropogenic impacts and their socio-economic factors. The aim is to develop concepts for the sustainable use of tropical forests and areas of inundation, while preserving their natural characteristics.

Chapter 1

Programa Plantas do Nordeste – PNE [Programme for North-eastern Plants - PNE]. Begun in 1992, this is a multidisciplinary programme to preserve plant biodiversity and promote the rational exploitation of native plants in the Brazilian Northeast, combining basic and applied research, and divulging information on the region's plants and ecosystems to those engaged in improving the living conditions of the populations there. The PNE is the outcome of the collaboration between the *Conselho Nacional de Desenvolvimento Científico e Tecnológico - CNPq* [National Council for Scientific and Technological Development - CNPq], the Royal Botanical Garden of Kew (RBG-Kew), UK, and a number of universities, research institutes and non-governmental organizations in the Brazilian Northeast. A network of Brazilian scientists and research centres has been established, providing information to local communities and strengthening the key institutions in the Northeast.

Question 259.

Support for the Inter-American Biodiversity Information Network - IABIN (regional network). A document was produced which discussed the Clearing House Mechanism (CHM) as a tool for mediating biodiversity information. See: www.mma.gov.br.

Question 260.

Support for the Binbr project, which has produced information on biodiversity, in partnership with the Tropical Databank (www.bdt.org.br), training technicians for the structuring of the database (www.cria.org.br). The Biodiversity Portal (produced by the Binbr project) is being restructured by the Ministry of Environment (MMA).

Question 261.

Bráulio Ferreira de Souza Dias, Director for Biodiversity Conservation at the Ministry of Environment is the focal point of the CHM in Brazil.

Question 263.

Brazil financed and organized an International Meeting of the Inter-American Biodiversity Information Network - IABIN to discuss IABIN concepts in Brasília in 2000. Brazil participates in the biannual meetings.

Question 267.

Brazil supported a meeting and the drafting of documents about the CHM (available at: www.mma.gov.br/port/sbf/chm/relpub.html#chm and www.mma.gov.br) and the IABIN (see: www.mma.gov.br). Sub-regional and thematic focal points have yet to be defined. See also comment on Question 263.