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Fundação Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – CAPES (Higher Education Authority). CAPES, like CNPq was created in 1951. It is a foundation of the Ministry of Education that participates in the formulation of policies regarding postgraduate education and the formation of human resources in numerous areas, including scientific and technological development. Among its programmes are: teacher and technician training; academic development, special training programmes, postgraduation *sensu stricto*, postgraduation overseas, visiting professor programme, support for graduation studies *sensu lato*, and training for elementary and high school teachers. In addition to these programmes, CAPES supports scientific events and the participation of university professors, teaching staff and researchers. It also supports the improvement of postgraduate courses and provides grants and scholarships for Master's and Doctoral degree students (see Table 2).

Table 2. Number of postgraduate scholarships granted by CAPES in areas related to biodiversity.

Área	Master's Degree			Doctor's Degree		
	1998	1999	2000	1998	1999	2000
Chemistry	228	334	330	208	382	270
Oceanography	48	57	58	9	36	33
General Biology	185	191	156	90	138	133
Genetics	164	151	182	69	107	142
Botany	140	118	123	69	102	99
Zoology	195	160	186	78	173	181
Ecology	135	131	138	74	136	107
Biochemistry	137	105	112	92	98	111
Pharmacology	62	41	56	42	55	60
Microbiology	110	123	98	40	53	65
Parasitology	72	53	52	45	79	81
Chemical Engineering	190	167	155	32	75	82
Pharmacy	56	87	75	7	36	33
Agronomy	124	675	608	263	423	449
Forest Resources and Forest Engineering	135	112	97	20	44	55
Multidisciplinary	306	264	218	74	94	134
Total	2287	2769	2644	1212	2031	2035

Fundação de Amparo à Pesquisa do Estado de São Paulo - FAPESP: Programa Biota/FAPESP [São Paulo State Research Support Foundation - FAPESP: Biota Programme/FAPESP]. The FAPESP Biota Programme, *Instituto Virtual da Biodiversidade* [Virtual Institute for Biodiversity], was begun in 1999 to provide a structure for systematic data collection, and to organize and disseminate information on the biodiversity of the state of São Paulo. The major aim of Biota/FAPESP is to inventory and characterize the biodiversity of the state, allowing for the definition of measures for its conservation, of its economic potential and for its sustainable use. The programme is supporting 37 research projects on biodiversity in the state of São Paulo. For more information see: www.biota.org.br.

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The Ministry of Science and Technology maintains the following programmes:

- *Programa Antártico Brasileiro - PROANTAR* [Brazilian Antarctic Programme]. Scientific research and associated activities of Brazil on the Antarctic continent. Research projects are related to environmental questions. They take into account the goals and directives of the *Política Nacional para Assuntos Antárticos - POLANTAR* [National Policy for Antarctic Affairs] and the programmes and scientific initiatives proposed by the Scientific Committee for Antarctic Research - SCAR, linked to the International Council of Scientific Unions - ICSU. Logistic support for the PROANTAR research projects is provided by the Ministry of the Navy, and its oceanographic operations vessel "Ary Rongel". The Ministry further maintains the Antarctic Station "Comandante Ferraz", installs and maintains outposts and encampments and, in collaboration with the *Força Aérea Brasileira - FAB-Mmaer* [Brazilian Air Force - FAB/Mmaer], provides transport for the researchers and base personnel.
- *Programa de Capacitação de Recursos Humanos para Atividades Estratégicas - RHAÉ* [Programme for the Capacity-building of Human Resources for Strategic Activities - RHAÉ]. One of the eligibility criteria RHAÉ projects is the development of environmental technology (utilization of Brazilian biodiversity, ecosystems management, treatment of residues, environmental administration and management, and certification norms ISO 14000).
- *Programa Piloto para Proteção das Florestas Tropicais do Brasil (PPG7) / Subprograma Ciência e Tecnologia* [Pilot Programme for the Protection of Brazilian Tropical Forests (PPG7) / Science and Technology Sub-programme]. The Science and Technology sub-programme is coordinated by a Technical Secretariat linked to the *Secretaria de Políticas e Programas de C&T* [Secretariat for Policies and Programmes in Science and Technology] of the Ministry of Science and Technology (MCT). The principal objective is to promote and disseminate scientific knowledge and technology relevant for the conservation and rational use of natural resources in the Amazon. Phase I of the Sub-programme, begun in 1995, has two components: *Centros de Ciência - CC* [Science Centres] and *Projeto de Pesquisa Dirigida - PPD* [Directed Research Projects - PPD]. The Science Centres' component, concluded in 1999, provided institutional strengthening for two traditional research centres in Amazon: the *Museu Paraense Emílio Goeldi - MPEG* [Emílio Goeldi Museum - MPEG], Belém, and the *Instituto Nacional de Pesquisas da Amazônia - INPA* [National Institute for Amazon Research - INPA], Manaus. Twenty-three research projects were carried out within the PPD component from 1996 to 1999, and another 30 are in progress. Phase II of the Sub-programme is currently in preparation and will set up thematic research networks to provide the basis for objective and adequate responses to the major questions affecting the Amazon region today.
- *Programa Ciência e Tecnologia para Gestão de Ecossistemas* [Science and Technology Programme for the Administration and Management of Ecosystems]. See comments on Question 177.

175. Has your country established programmes for scientific and technical education and training in measures for the identification, conservation and sustainable use of biological diversity and its components (12a)?

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

176. Has your country provided support to other Parties for education and training in measures for the identification, conservation and sustainable use of biological diversity and its components (12a)?

a) no	
b) yes	X

177. Does your country promote and encourage research which contributes to the conservation and sustainable use of biological diversity (12b)?

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

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178. Does your country promote and cooperate in the use of scientific advances in biological diversity research in developing methods for conservation and sustainable use of biological resources (12c)?

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

If a develop country Party - Does not apply

179. Does your country's implementation of the above activities take into account the special needs of developing countries?

a) no	
b) yes, where relevant	

Further comments on the implementation of this Article

Question 175.

Projeto de Capacitação Técnica em Manejo Florestal de Impacto Reduzido - ProManejo 012 (Governo do Acre) [Project of Technical Capacity-building in Reduced Impact Forestry Management – Promanejo 012 (Government of the State of Acre)]. The goal of the *Projeto Piloto de Manejo Florestal e Capacitação Técnica no Município de Sena Madureira, Acre - PROMATEC* [Pilot Project of Forest Management and Technical Capacity-building in Sena Madureira, State of Acre] is to promote reduced-impact forest exploitation in the Amazon, guaranteeing specifically the development of the timber industry in the State of Acre. It is managed by the *Fundação de Tecnologia do Estado do Acre- FUNTAC* [Technological Foundation of the State of Acre – FUNTAC] and the *Secretaria Executiva de Florestas e Extrativismo- SEFE* [Executive Secretariat for Forests and Extractivism – SEFE]. Resources are provided by Promanejo (PPG-7/Ministry of Environment/IBAMA) in the area of the A. F. G. Oliveira Company. Institution responsible: FUNTAC. Budget: Resources requested from Pro Manejo - U\$224,192.00; Total - U\$520,307.00.

Programa de Capacitação de Comunidades Extrativistas do Estado do Acre [Programme for the Capacity-building in Extractivist Communities of the State of Acre]. With access to resources provided by the *Fundo de Amparo ao Trabalhador - FAT* [Worker's Support Fund – FAT] in association with the *Empresa de Assistência Técnica e Extensão Rural - EMATER/AC* [Rural Extension and Technical Assistance Company – EMATER/AC], the aim is to benefit rural populations in the State of Acre. Extractivist workers face diverse and complex situations in their livelihood. This programme provides professional training for them, most particularly regarding the adoption of sustainable production models, often in remote areas. Institutions responsible: *Secretaria de Estado da Produção - EPRO* [State Secretariat for Production – EPRO]; *Secretaria Executiva de Floresta e Extrativismo - SEFE* [Executive Secretariat for Forests and Extractivism – SEFE]; FAT and SEFE. Budget: R\$300,000.00.

Question 177.

Programa Ciência e Tecnologia para a Gestão de Ecossistemas [Science and Technology Programme for the Administration and Management of Ecosystems]. This programme was developed by the Ministry of Science and Technology (MCT). It includes the following activities relevant for research and training in areas related to the conservation and sustainable use of biodiversity:

- Research and development on the composition and dynamics of Brazilian ecosystems;
- the application of science and technology within the Pilot Programme for the Protection of Brazilian Tropical forests;
- maintenance and expansion of the library of the *Museu Paraense Emílio Goeldi* [Emilio Goeldi Museum], Belém;
- preservation and expansion of the library of the *Instituto Nacional de Pesquisas da Amazônia - INPA* [National Institute for Amazon Research – INPA]. Coordinated by the INPA *Programa de Coleções e Acervos Científicos* [Scientific Works and Collections Programme];
- development of studies on the dynamics and composition of Amazon ecosystems;
- research and development in the Mamirauá State Sustainable Development Reserve.

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Projeto de Monitoramento de Áreas Desflorestadas na Amazônia Legal – PRODES (Instituto de Pesquisas Espaciais – INPE) [Monitoring Deforestation in the Legal Amazon – PRODES (National Institute for Space Research – INPE)]. Part of the *Programa Ciência e Tecnologia para Gestão de Ecossistemas* [Science and Technology Programme for the Administration and Management of Ecosystems] of the Ministry of Science and Technology (MCT). The project covers an enormous area (a little more than half of the entire country) and is of enormous importance in its impact on discussions regarding social, economic and environmental aspects of the development of the region, providing the technical and scientific basis for the government to monitor and hopefully prevent the devastation of the most diverse and largest remaining tropical forest wilderness in the world. More information available at www.inpe.br.

Projeto de Conservação e Utilização Sustentável da Diversidade Biológica Brasileira - PROBIO [Project for the Conservation and Sustainable Use of Brazilian Biological Diversity – PROBIO]. The goal of PROBIO is to support the Brazilian Government in the development of the *Programa Nacional da Diversidade Biológica - PRONABIO* [National Biodiversity Programme – PRONABIO] by providing incentives for demonstrative subprojects, generating and disseminating information on biodiversity, and by identifying priority actions and facilitating partnerships between the public and private sectors. PROBIO is the result of the Donation Agreement TF 28309, signed 5th June, 1996, between the Brazilian Government and the Global Environmental Facility (GEF) (funds managed by The World Bank). PROBIO began in 1997 with a budget of US\$20 million. US\$10 million was provided by GEF and the World Bank, and a matching fund of US\$10 million was set aside by the Brazilian Government. The *Fundo Brasileiro para a Biodiversidade - FUNBIO* [Brazilian Biodiversity Fund FUNBIO], a private fund, was created at the same time. PROBIO and FUNBIO are considered to be complementary; one a State fund and the other private. PROBIO is coordinated by the Ministry of Environment (MMA) and managed by the *Conselho Nacional de Desenvolvimento Científico e Tecnológico - CNPq* [National Council for Scientific and Technological Development – CNPq], which selects and finances the subprojects.

Fundação O Boticário de Proteção à Natureza [The Boticário Foundation for Nature Protection] provides financial support for conservation projects. To date, 837 projects have been approved. Of the various subprogrammes, 555 were related to "Protected Areas", "Wildlife Protection and Research" and "Green Areas", and 282 were "Other Grants". These projects, totaling US\$4,712,529.61, were distributed amongst the five regions of Brazil according to Table 3.

Table 3. Projects supported by The Boticário Foundation in different regions of Brazil.

Region*	Number	R\$	US\$
Midwest	82	364.094.703,20	524.920,03
Northeast	101	77.336.814,56	752.062,42
North	59	110.047.417,05	387.005,60
Southeast	230	617.596.286,07	1.285.046,58
South	362	1.683.288.158,88	1.763.494,98
TOTAL	834	2.852.363.379,76	4.712.529,61

* Projects by state are listed at www.fundacaoboticario.org.br.

Question 178.

Projeto Genoma [Genome Project]. Developed by the Ministry of Science and Technology (MCT), the budget is R\$355.2 million for the period of 2000-2003. Principal results include:

- *Rede dos Genomas Regionais* [Regional Genome Network]: Seven projects researching the structure and functioning of the genomes of organisms of interest to health and agriculture: Midwest, Minas Gerais, Northeast, *Trypanosoma cruzi*, Paraná, Rio de Janeiro, and Bahia.
- The *Rede Nacional de Sequenciamento de DNA* [National Network of DNA Sequencing] involves 26 laboratories, with bioinformatics support provided by the *Laboratório Nacional de Computação Científica*

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- LNCC [National Laboratory of Scientific Computing – LNCC]. Sequencing of the bacterium *Chromobacterium violaceum* is almost complete.
- Support for the *Laboratório Nacional de Computação Científica – LNCC* [National Laboratory of Scientific Computing – LNCC] and the *Laboratório Nacional de Biologia Molecular Estrutural da Associação Nacional de Luz Síncrotron – ABTLus* [National Laboratory of Structural Molecular Biology of the National Association of Síncrotron Light – ABTLus].
- *Cooperação Brasil-Argentina em Biotecnologia-CBAB* [Brazil-Argentina Cooperation in Biotechnology – CBAB], with the implementation of 12 courses during 2001, and 13 projects approved in the last meeting of the Binational Council.
- Reports on the activities of the International Centre for Genetic Engineering and Biotechnology (ICGEB), and the selection of 15 cooperative project proposals.
- The *Projeto Genoma do Eucalipto* [*Eucalyptus* Genome Project], began in February 2002, focusing on the sequencing of transforming of *Eucalyptus* genomes.
- A meeting on technology was held in May 2002 with the Chinese delegation responsible for the Brazil-China Cooperation Programme.

Programa Piloto para a Proteção às Florestas Tropicais do Brasil PPG7 [Pilot Program for the Protection of the Tropical Forests of Brazil PPG7]. See comments on Question 84.

Experimento de Grande Escala da Biosfera-Atmosfera na Amazônia – LBA [Large-Scale Biosphere-Atmosphere Experiment in Amazon - LBA]. An international research initiative headed by Brazil, LBA aims to increase our understanding of the functioning of the climate, ecology, biogeochemistry and hydrology in Amazon, the impact of land-use change, and the interaction between Amazon and the global biogeophysical system. LBA researches two major questions using a multidisciplinary approach, integrating studies of physical, chemical, biological and human sciences:

- How does the Amazon function, at present, as a regional entity?
- How will the changes in land use and climate affect the biological, chemical and physical functioning of the Amazon, including its sustainability and its influence on global weather?

More information available at: <http://lba.cptec.inpe.br/lba/index.html>.

Projeto do Trópico Úmido – PTU [Humid Tropics Project – PTU]. The Humid Tropics Project promotes programmes that will lead to the creation of thematic networks of research and development groups for the investigation of aspects of economic, social and strategic relevance for the Amazon region. Projects are favoured which are multidisciplinary, involving institutional partnerships and an integrated approach, to facilitate the transfer and appropriate use of the knowledge gained for the sustainable development of the Amazon. No projects were selected for the PTU in 2001, but 11 were financed at the end of 2000 and are in progress. Financing for these projects totaled R\$1,700,000.00 (Capital and Costs). Scholarships are not awarded for these projects. See: www.cnpq.br/areas/terra_meioambiente/ptu/index.htm

Programas Básicos do CNPq [Basic Programmes of CNPq]. Basic Programmes are projects designed to advance competence and capacity in the traditional fields of knowledge. Operationally, they are different from other programmes because they respond directly to the demands of the scientific community based on the criteria of competence and merit along with assessments of priority resulting from evaluations of the status and progress in the diverse areas of scientific research. The Basic Programmes for Botany, Zoology, Ecology/Limnology and Oceanography are included in the *Coordenação Geral do Programa de Pesquisas em Ciências da Terra e Meio Ambiente* [General Coordination for the Research Programme in Earth Sciences and Environment].

Basic Program	Funding (R\$)
Botany	194,927.00
Zoology	184,406.00
Ecology/ Limnology	202,692.78
Oceanography, Fishing Resources and Fishing Engineering	775,089.60

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See:

www.cnpq.br/areas/terra_meioambiente/conhecimento/botanica/index.htm.

www.cnpq.br/areas/terra_meioambiente/conhecimento/zoologia/index.htm.

www.cnpq.br/areas/terra_meioambiente/conhecimento/ecologia_limnologia/index.htm.

www.cnpq.br/areas/terra_meioambiente/conhecimento/oceanografia/index.htm.

Programa WAVES [Water Availability, Vulnerability of Ecosystems and Society in North-eastern Brazil - WAVES Programme]. This programme involves cooperation among a number of German and Brazilian institutions under the auspices of an agreement between CNPq/IBAMA/DLR. It focuses on the development of integrated mathematical models as tools in the search for strategic solutions related to global climate change. The programme is interdisciplinary, including the fields of hydrology, ecology, meteorology, climatology, pedology, agronomy and social and economic sciences. Two regions in the state of Piauí were chosen (Vale de Gurgueia/Projeto Piloto e Picos) and one in the state of Ceará (Tauá). Approximately R\$114,006.35 were spent on this programme in 2001.

Programa MADAM (Mangrove Dynamics and Management Programme - MADAM). A programme conceived jointly by Brazilian and German scientists and financed by the German Government through its Ministry of Education, Science, Research and Technology (BMBF) (www.bmbf.de), and by Brazil through the *Conselho Nacional de Desenvolvimento Científico e Tecnológico - CNPq* [National Council for Scientific and Technological Development - CNPq]. MADAM is a programme of the Land-Ocean Interactions in the Coastal Zone - LOICZ, itself a sub-programme of the International Geosphere-Biosphere Program (IGBP). MADAM is also recognized by UNESCO's Man and Biosphere (MAB) programme. The study area of the MADAM project is about 150 km south of the Amazon estuary; a strip (up to 20 km wide) of 110 km² of mangroves. This area is considered especially appropriate for the interdisciplinary initiatives of MADAM. See: www.cnpq.br/areas/cooperacaointernacional/convenios/madam.htm and comments on Questions 252 and 253.

Programa Antártico Brasileiro - PROANTAR [Brazilian Antarctic Programme]. This programme supports substantial scientific research in the Antarctic. Besides contributing to the consolidation of Brazil's presence there, the main motivation for CNPq's support of scientific research in Antarctica is the increasing recognition that past and present natural phenomena, events and processes in the austral continent have a major influence on the environment of the entire planet. In 2001, PROANTAR granted R\$ 576,142.90 for scholarships and supports. See: www.cnpq.br/areas/terra_meioambiente/proantar/index.htm.

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Article 13 Public education and awareness

180. 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			
181. To what extent are the resources available adequate for meeting the obligations and recommendations made?			
a) Good		b) Adequate	X
c) Limiting			
d) Severely limiting			
Further comments on relative priority and on availability of resources			
<p>Questions 180 and 181.</p> <p>Federal Constitution of 1988, Article 225, Paragraph 1, VI: "<i>promover a educação ambiental em todos os níveis de ensino e a conscientização pública para a preservação do meio ambiente</i>" [to promote environmental education in all levels of education and public awareness for the preservation of the environment].</p> <p><i>Política Nacional de Educação Ambiental</i> [National Policy of Environmental Education]. Law No.9795, 27th April, 1999, established the National Policy for Environmental Education, regulated by Decree No.4281 25th June, 2002.</p> <p><i>Programa Nacional de Educação Ambiental – PNEA</i> [National Program For Environmental Education - PNEA]. Established in February 1999, the budget of this programme is R\$39.5 million for 2000-2003. More information available at: www.mma.gov.br/port/sdi/ea/pnea.cfm.</p>			

182. Does your country promote and encourage understanding of the importance of, and the measures required for, the conservation of biodiversity (13a) through media?	
a) no	
b) yes – limited extent	X
c) yes – significant extent	
183. Does your country promote and encourage understanding of the importance of, and the measures required for, the conservation of biodiversity (13a) through the inclusion of this topic in education programmes?	
a) no	
b) yes – limited extent	X
c) yes – significant extent	
184. Does your country cooperate with other States and international organizations in developing relevant educational and public awareness programmes (13b)?	
a) no	X
b) yes – limited extent	
c) yes – significant extent	

Decision IV/10. Measures for implementing the Convention [part]

185. Are public education and awareness needs covered in the National Strategy and Action Plan?	
a) no	
b) yes – limited extent	X
c) yes – significant extent	

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186. Has your country allocated appropriate resources for the strategic use of education and communication instruments at each phase of policy formulation, implementation and evaluation?	
a) limited resources	X
b) significant but not adequate resources	
c) adequate resources	
187. Does your country support initiatives by major groups that foster stakeholder participation and that integrate biological diversity conservation matters in their practice and education programmes?	
a) no	
b) yes	X
188. Has your country integrated biodiversity concerns into education strategies?	
a) no	
b) early stages of development	X
c) advanced stages of development	
d) yes	
189. Has your country made available any case-studies on public education and awareness and public participation, or otherwise sought to share experiences?	
a) no	
b) yes	X
190. Has your country illustrated and translated the provisions of the Convention into any local languages to promote public education and awareness raising of relevant sectors?	
a) not relevant	
b) still to be done	
c) under development	
d) yes	X
191. Is your country supporting local, national, sub-regional and regional education and awareness programmes?	
a) no	
b) yes – limited extent	X
c) yes – significant extent	
<i>If a developing country Party or Party with economy in transition -</i>	
192. When requesting assistance through the GEF, has your country proposed projects that promote measures for implementing Article 13 of the Convention?	
a) no	X
b) yes	

Decision V/17. Education and public awareness

193. Does your country support capacity building for education and communication in biological diversity as part of the national biodiversity strategy and action plans?	
a) no	
b) limited support	
c) yes (please give details)	X

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Further comments on implementation of this Article

Question 182.

A number of Brazilian television shows deal with biodiversity conservation. The most important are:

- *Globo Ecologia*. Presented by the *TV Globo* in association with the *Fundação Roberto Marinho* [Roberto Marinho Foundation], this programme presents information on Brazilian biomes and endangered species. The language is simple and the images and computer generated graphics make the messages easily understandable for the general public.
- *Tom da Mata*. Presented by *Canal Futura*, the show stimulates the development of activities related to environmental protection - especially in the Atlantic Forest – besides musical education, using different materials, methods and pedagogical innovations. The composer and singer Tom Jobim's work and his passion for the Atlantic Forest are the basis of this project.
- "Um Pé de Quê". This programme shows numerous species of the Brazilian flora. It begins with general botanical aspects such as origins, physical characteristics, and flowering times and then relates them to moments in Brazil's history.
- *Tom do Pantanal*. This project serves 800 schools and about 800,000 students from a number of regions of Brazil. Its goal is to promote interdisciplinary environmental education, showing the students the importance of the preservation and sustainable development of the Pantanal of Mato Grosso. Kits of teaching materials were distributed to the schools. The kits include 13 videos, including a presentation video, one on capacity-building, and one on environmental education, and a further 10 on specific themes); a cassette tape with songs by several local composers and composers from other Brazilian regions; a songbook with sheet music of musical education activities; a game based on the Pantanal to stimulate curiosity and discover the environmental characteristics of each location; a teacher's book; and an experiment kit for performing assessments of local environmental conditions.
- *Globo Reporter*. Biodiversity, research, conservation and environmental problems are among the many documentary themes of this programme, presented by *TV Globo*. More information available at: www.globo.com/globoreporter.

Question 183.

Programa Parâmetros em Ação - Meio Ambiente na Escola [Parameters in Action – Environment in the School]. The strategic goal of this programme, developed by the Ministry of Education, is the institutionalisation of environmental education in the teaching system. It contributes to the development of integrated activities that involve the school staff, students and the community in helping teachers to include environmental education in their curricula, as well as in the development of educational projects by schools. The programme is the result of a partnership among state and municipal education authorities, universities and non-governmental organizations. The material produced is divided into two kits; one helps the group coordinators in training the teachers, and the second contains materials for teachers to set up their class activities.

The programmes *Tom da Mata* and *Tom do Pantanal* are for teacher-training purposes (see comments on Question 182).

Fundação O Boticário de Proteção à Natureza – Coleção Biomas [The Boticário Foundation for Nature Protection – The Biomes Collection]. This educational kit contains seven booklets, a video tape and a user's guide, and provides basic information on Brazilian biomes, using language and a presentation directed to the non-expert public. It can be used in a number of different educational practices. The seven booklets and videotape explain about the diversity and principal natural characteristics of Brazilian biomes (Amazon Forest, Caatinga, Cerrado, Pantanal, southern grasslands and *Araucaria* Forest, Atlantic Forest and Coastal and marine environments). There is also a guide with suggestions as to how to use the material. Distribution is through workshops involving teachers from the Paraná state education network. They will act as multipliers. Schools receive the Collection only after their teachers go through the training session. The distribution of the Collection began in September 2002, with an event in which 60 teachers participated. They were responsible for training about 600 other teachers in 130 schools in the city and metropolitan district of Curitiba. Five hundred and fifty Collections have been distributed and five other teaching workshops are planned for 2003 in order to cover the entire state of Paraná. To date, R\$120,000.00 have been invested in this initiative. More information available at www.fundacaoboticario.org.br/sql/FBPN/Portal/portal_fund_frameset.asp.

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Fundação O Boticário de Proteção à Natureza – Exposições Itinerantes [The Boticário Foundation for Nature Protection - Travelling Exhibits]. Eleven exhibits were created, each with 10 large poster displays. They are lent to schools and other interested institutions. Exhibits: Protected Areas; Water; Salto Morato Natural Reserve; The Boticário Foundation for Nature Protection; Atlantic Forest; Amazon Forest; Brazilian savannah; Pantanal (swamplands); Caatinga; Southern grasslands and *Araucaria* Forest; Brazilian Coast. These exhibits have already been on show in the states of São Paulo (eight institutions), Paraná (32 institutions), Santa Catarina (two institutions), Bahia (five institutions), Minas Gerais (one institution), Espírito Santo (one institution), Rio de Janeiro (two institutions), Piauí (one institution), Rio Grande do Sul (four institutions) and the Federal District (two institutions). Approximately R\$ 120,000.00 has been invested in this initiative.

Fundação O Boticário de Proteção à Natureza – Estação Natureza [The Boticário Foundation for Nature Protection – The Nature Station]. This is a permanent exhibit with complementary elements for audiences of different ages, levels of knowledge and life experiences. Its format combines interaction and information to promote an effective mobilization for the conservation of nature. Learning is self-motivated and involves multiple experiences that stimulate various senses, making it easier to learn and absorb the information. It is housed at the Shopping Estação, one of the biggest shopping centres of the city of Curitiba. Estação Natureza invites visitors to embark in a trip through the Brazilian biomes – Amazon forest, Caatinga, Cerrado, Pantanal, *Araucaria* forest, Atlantic forest, coastal ecosystems and southern grasslands – home to about 20% of the planet's animal and plant life. Open for approximately one year, the exhibit has already been seen by more than 18,000 visitors, from 24 Brazilian states and the Federal District, and from 21 other countries. It has served more than 130 schools, most from the state and Local education network.

Programa de Educação e Sensibilização Pública do Estado do Rio Grande do Sul [Rio Grande do Sul State Education and Public Awareness Programme]. The goal of this programme is to inform and incorporate people in environmental management and biodiversity protection programmes. Initiatives:

- Establishment of interpretative nature trails in protected areas ;
- Development of the educational-informative material for protected areas;
- *3ª Conferência Municipal do Meio Ambiente de Porto Alegre* [III Porto Alegre Municipal Environment Conference].

Question 184.

European Association of Zoos and Aquaria (EAZA) Rainforest Campaign. The EAZA Rainforest Campaign for the Atlantic forest and the four lion tamarin species was a two-year fund-raising effort, targeting especially European zoos which maintain lion tamarins in their collections. Ninety EAZA zoos from 20 different countries participated in the campaign with activities ranging from poster exhibits to a total transformation of the zoo into a South American landscape. The campaign increased awareness about conservation programmes for the Atlantic Forest, using the lion tamarins as flagship species, and informing on other Atlantic Forest threatened species. It officially ended at the Annual EAZA Conference in Barcelona, 17th-22nd September 2002. By 16th September 2002, the campaign had raised Euro 145.876,99, but this only covered contributions from around 60% of the participants, and the expectations were of more than Euro 200,000 by the end of 2002, when most zoos conclude the official part of their campaign. The funds raised will make up a permanent fund for lion tamarin conservation activities *in situ*. The Campaign Planning Group was David Field (Dublin Zoo, Ireland), Bengt Holst (Copenhagen Zoo, Denmark), Kristin Leus (Antwerp Zoo, Belgium), and Jeremy J. C. Mallinson (until recently of the Durrell Wildlife Conservation Trust, Jersey). More information available at www.eaza.net.

Question 185.

Component 6 (Education, Public Awareness, Information and Communication about Biodiversity) of the *Política Nacional da Biodiversidade* [National Biodiversity Policy], established by Decree 4339 22nd August, 2002, defines directives about education and public awareness and for the administration, management and communication of information on biodiversity. It promotes the participation of society, including Indigenous communities, "quilombolas" (descendants of fugitive slave communities), and other local communities, in the conservation of biodiversity, the sustainable use of its components and the fair and equitable distribution of the benefits generated by the use of genetic resources, components of genetic patrimony and the associated traditional knowledge. However, action plans with goals and deadlines have yet to be developed. For more information, see: www.mma.gov.br/biodiversidade/estrateg/politica/decreto2.html#c6.

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Question 186.

Studies have yet to be carried out to determine the resources needed to promote the strategic use of educational and communication tools.

Question 187.

There are environmental education components in the *Fundo Nacional do Meio Ambiente - FNMA* [National Environment Fund – FNMA], the *Programa de Desenvolvimento do Agronegócio - PRODEAGRO* [Development Programme for Agribusiness PRODEAGRO] and the *Plano Agropecuário e Florestal de Rondônia – PLANAFLORO* (Plan for Agriculture, Cattle-breeding and Forests in Rondônia – PLANAFLORO), *Programa Nacional de Educação Ambiental – PNEA* [National Environmental Education Programme – PNEA], *Sociedade Civil Mamirauá*, and Extractivist Reserves (RESEX).

The NGO *IPÊ – Instituto de Pesquisas Ecológicas* [IPÊ – Institute for Ecological Research], based in Nazaré Paulista, São Paulo, works particularly with the *Movimento Sem Terra – MST* [Landless Movement – MST] in promoting reforestation and the establishment of forest corridors between forest fragments in the far west of the state of São Paulo, centred on the Morro do Diabo State Park, Pontal do Paranapanema. This pioneer initiative promotes both environmental education and conservation and economic benefits for the communities involved.

Question 188.

The Ministry of Education coordinates environmental education programmes at the government level. In order to achieve its mission, the *Coordenação-Geral de Educação Ambiental – COEA* [General Coordination for Environmental Education – COEA] has defined two main lines of action, in accordance with the *Política Nacional de Educação Ambiental* [National Policy for Environmental Education] – Law 9795/99. They are:

- Projects for Environmental Education in schools
- Introduction of environmental topics in primary school curricula – *PCN em Ação de Meio Ambiente* [PCN in Environmental Action]

See comments on Question 183.

Question 189.

Brazil, MEC. 1998. *A Implantação da Educação Ambiental no Brasil* [Environmental Education in Brazil]. Ministério de Educação e Cultura (MEC), Secretaria de Educação Infantil e Fundamental - SEF, Brasília. 137pp. This book recounts the evolution of environmental education in Brazil. It provides information to technicians and teachers and those interested in the development and practice of environmental education, on the Brazilian educational system, the relevant authorities responsible for administration of public policies, on what has been achieved and perspectives for the future, besides the implications and strategies for this conservation strategy as a cross-cutting theme in all school curricula.

Question 190.

The text of the Convention on Biological Diversity has been translated and published in Portuguese. It is available at: www.mma.gov.br/biodiversidade/relpub.html. It has not been translated into any Indigenous language.

No efforts have been made to make the CBD language more accessible (for example, to children and the public). No measures have been taken to divulge the text of the CBD to the public. The CBD Handbook has not been translated into Portuguese.

Question 191.

Programa Nacional de Educação Ambiental [National Programme of Environmental Education]. The project *Implantação de Pólos de Educação Ambiental e Difusão de Práticas Sustentáveis* [Establishment of Environmental Education Poles and Diffusion of Sustainable Practices] aims to set up 27 Environmental Education nuclei, one in each state. Each nucleus will promote and manage environmental education

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activities in the state. The project will provide support for 57 projects during 2000-2003. Twenty-two projects had received support by November 2001.

Programa Natureza e Sociedade [Nature and Society Programme]. A programme of the *Instituto Internacional de Educação do Brasil – IIEB* [International Education Institute of Brazil – IIEB] for the training and capacity-building of professionals in environmental issues. Support is provided for researchers, academics, professionals and community leaders for training in environmental conservation. The project was begun in 1991, in collaboration with the International Development Group (IDG) of the State University of New York – SUNY. World Wildlife Fund – Brazil has been a collaborator since 1995. Financial support is provided by the Netherlands Embassy, the United States Agency for International Development – USAID and the Ford Foundation.

Fundo Nacional do Meio Ambiente – FNMA [National Environment Fund]. Public Announcement No. 7/2002. Announced support for institutional networks (or people and institutions) on informal environmental education which promote studies on practices and methodologies and their diffusion, stimulating as such the exchange of experiences and creating partnerships for demonstrative actions among environmental educators. The networks will contribute to the *Sistema Brasileiro de Informação sobre Educação Ambiental e Práticas Sustentáveis – SIBEA* [Brazilian Information System on Environmental Education and Sustainable Practices – SIBEA]. Resources expected for the support of projects are approximately R\$1.5 million. The projects approved were:

- "Strengthening the *Rede Paulista de Educação Ambiental - REPEA* [Paulista Network of Environmental Education - REPEA]" - *Instituto de Educação e Pesquisa Ambiental Cinco Elementos* [Five Elements Educational and Environmental Research Institute];
 - "Weaving Citizenship – *Rede Brasileira de Educação Ambiental* [Brazilian Network of Environmental Education]" – *Instituto ECOAR para a Cidadania* [ECOAR Institute for Citizenship];
 - "Organization of the *Rede Pantanal de Educação Ambiental* [Pantanal Network of Environmental Education]" – *Ecologia e Ação - ECOA* [Ecology and Action – ECOA];
 - "Organization of the *Rede Acreana de Educação Ambiental* [Acreana Network of Environmental Education]" – Federal University of Acre;
 - "Weaving Environmental Education Networks in the South Region" – Vale do Itajaí University Foundation.
- Information at www.mma.gov.br/fnma.

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Article 14 Impact assessment and minimizing adverse impacts

194. 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	
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195. 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	
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Further comments on relative priority and on availability of resources

Questions 194 and 195.

The sectors consulted were in disagreement in their perceptions regarding compliance with this article.

Deforestation, fires, air pollution, and water pollution are given high priority by both government and society but with little effect due to conflicts with political-economic and political-sectoral interests.

Brazilian environmental legislation is well advanced and requires impact studies for environmental licensing. The Environmental Crimes Law provides for punitive measures for environmental degradation.

Programa de Prevenção e Controle de Queimadas e Incêndios Florestais na Amazônia Legal - PROARCO [Prevention and Control Programme for Forest and Savannah Fires in the Legal Amazon - PROARCO]. See comments on Question 140.

Sistema de Proteção da Amazônia - SIPAM [Amazon Protection System - SIPAM] - See comments on Question 30.

Environmental Restoration

Projeto de Gestão Integrada [Integrated Administration and Management Project]. Projects of Integrated Management in the Brazilian states and Legal Amazon of the *Programa Piloto para a Proteção às Florestas Tropicais do Brasil PPG7* [Pilot Program for the Protection of the Tropical Forests of Brazil PPG7].

Programa Nacional de Florestas - PNF [National Program for Forests - PNF]. Monitoring and control of deforestation. See: www.ibama.gov.br.

Ministry of the Environment (MMA). The Ministry of the Environment has concentrated on actions related to desertification in Brazil from 1995 to 1999 through the Technical Cooperation Project UNDP/MMA/FGEB/BRA/93/036. Directives have been established for the *Política Nacional de Controle da Desertificação* [National Policy on the Control of Desertification].

Programa Agricultura de Precisão [Precision Agriculture Programme]. The aim of this programme is to use modern technologies to reduce the use of fertilizers and pesticides and herbicides in order to achieve greater competitiveness to meet the growing demand for healthier environmental technologies. Satellites and other tools can generate information promoting improved soil use. The Precision Agriculture Program will assist rural producers, agroindustries, and cooperatives, by transferring research results and new technologies to the sector, in association with universities, research centres, agribusiness, rural extension services and users. The *Empresa Brasileira de Pesquisa Agropecuária - EMBRAPA* [Brazilian Agricultural and Cattle-Breeding Research Company - EMBRAPA] and the Ministry of Agriculture and Supply are responsible for the programme. Budget for 2000-2003 is R\$89.2 million.

Programa de Avaliação do Potencial Sustentável dos Recursos Vivos da Zona Econômica Exclusiva/MMA - REVIZEE [Programme for Assessing the Sustainable Potential of the Live Resources of the Exclusive Economic Zone/MMA - REVIZEE]. The purpose of this programme is to survey the sustainable potential for the capture of the living resources in our *Zona Econômica Exclusiva - ZEE* [Exclusive Economic Zone - ZEE], which extends from the external limit of the territorial sea, 12 miles wide, to 200 nautical miles from the coast, covering as such about 3.5 million km². The REVIZEE is a result of a commitment assumed by Brazil

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when it ratified the United Nations Convention on the Law of the Sea in 1988 (effective since 16th November, 1994), the concepts of which have been incorporated into our national legislation through the 1988 Federal Constitution and Law No.8617, 4th January, 1993. Goals of the REVIZEE include: to inventory the living resources in the ZEE and the environmental characteristics from the places where they occur, determine their biomass, establish the sustainable capture potentials.

Programa Global de Observação dos Oceanos – GOOS - Brasil [Global Ocean Observing System – GOOS – Brazil]. This programme, created by the *Comissão Oceanográfica Intergovernamental – COI* [Intergovernmental Oceanographic Commission - COI], in cooperation with the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP), and taking into account the dispositions of the United Nations Convention on the Law of the Sea (UNCLOS), and the Agenda 21. The 17th chapter of Agenda 21 states the need to develop a *Sistema Global de Observação* [Global Observation System] to better understand and monitor ocean changes and their effects. This is all the more vital considering the enormous area of sea under Brazil's jurisdiction and national interest in its sustainable development. The *Plano de Implementação do GOOS* [GOOS Implementation Plan] defines five main modules: Evaluation; forecasting and climate monitoring; evaluation and monitoring of marine living resources; monitoring administration and management of the coastal zone; evaluation and forecasting of the ocean's health; and marine meteorological services and operational services in Oceanography.

Programa de Conservação de Solos na Agricultura [Agricultural Soil Conservation Programme]. The purpose of this program is to work with small rural producers and technicians from the agricultural sector and local public organs to divulge practices in soil and water use directed for their conservation, as well as carrying out activities for the recovery of agricultural areas which have been degraded. The work focuses on the hydrographical microbasins through technical cooperative agreements. Principal activities include: financing the use of soil correctives (PRÓ-SOLO); correction, conservation and the preservation of agricultural soils; and research and development on soil and water management and conservation. The institution responsible is the Secretariat of Rural Support and Cooperatives [*Secretaria de apoio Rural e Cooperativismo*] of the Ministry of Agriculture and Supply. The budget in the Pluri-annual Plan (PPA) is R\$581.7 million. The main results obtained to date are: establishment of about 40 demonstration units for the generation, testing and divulgation of management and conservation techniques for agricultural soil and water, which are adapted to the differing social and economical realities of the country; implementation of eight projects in the mid-west and south; creation of 15 new technologies for the recovery of the productive capacity of soils; application of R\$165.1 million to about 1.9 million ha of agricultural land, benefiting about 14,200 producers.

Programa Conservação Ambiental de Regiões Mineradas [Programme for Environmental Conservation in Mining Regions]. The purpose of this programme is to implement measures to avoid or attenuate the environmental impacts of mining, providing for environmental recuperation in the areas exploited. Budget: R\$16.1 million. The main principle activities include: the transfer of technologies for environmental recovery in the Peruvian Amazon; environmental studies in areas reserved for mining; environmental monitoring and protection of areas subject to mining. Decree No.97632, dated from May 10th 1989, regulates the restoration of areas degraded by mining activities. Decree No.99274, dated from June 06th 1990, regulates environmental licensing for mining activities.

Programa Brasil Joga Limpo [Brazil "Plays Clean" Programme]. This programme is designed to stimulate measures such as: recycling and selective waste collection; the establishment of demonstrative projects for the integrated management of residual solids and environmental sanitation; establishment of an environmental information system related to the management of urban waste; and the elaboration of norms on waste treatment. The Ministry of Environment is responsible for the programme. The budget in the Pluri-annual Plan (2000-2003) is R\$76.8 million. Available at www.abrasil.gov.br.

There are environmental restoration initiatives in a number of Brazilian states, including São Paulo (*Programa de Despoluição do Rio Tietê* [Cleaning the Rio Tietê]; and *Programa de Recomposição da Vegetação em Cubatão* [Recovery Programme for Vegetation Cover in Cubatão]) and Rio de Janeiro (*Programa de Despoluição da Baía de Guanabara* [Cleaning the Guanabara Bay]).

Pilot projects have been set up in Northeast of Brazil specifically to combat desertification.

Programa Nacional de Gerenciamento Costeiro – GERCO [National Programme for Coastal Administration and Management – GERCO]. A survey of coastal pollution.

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The *Programa Nacional do Meio Ambiente II – PNMA II* [National Environment Programme II – PNMAII] has an environmental licensing and monitoring component, which includes institutional strengthening and measures for training and capacity-building.

Programa Pantanal [Pantanal Programme]. A programme for the improvement of tourist infrastructure and to stimulate other regionally appropriate economic activities, such as aquaculture. Budget in the Pluri-annual Plan (2000-2003) is R\$261.5 million. Activities include: research in investment opportunities; creation of new tourist itineraries; signs and signposts for travelling tourists, fisheries management and the promotion of aquaculture in the Pantanal of the upper Rio Paraguay Basin. Activities in the upper Rio Paraguay basin (in the initial stages) also include: monitoring environmental quality; creating protected areas, water resources management; basic sanitation (waste, sewers)

The Ecological-Economical Zoning. Foresees the agroecological zoning, see question 70

Projeto de Monitoramento de Áreas Desflorestadas na Amazônia Legal – PRODES [Project for the Monitoring of Deforested Areas in the Amazon Region – PRODES] / *Instituto Nacional de Pesquisas Espaciais -INPE* [National Institute for Space research – INPE]. See comments on Question 33.

Eighty fire brigades were created in protected areas. The following departments are involved: FUNAI, EMBRAPA, Fire Department, Forest Police, *Fundação Nacional de Saúde FUNASA* [National Health Foundation – FUNASA], the *Instituto Nacional de Colonização e Reforma Agrária – INCRA* [National Institute for Colonization and Agrarian Reform- INCRA}, Radio stations, the National Airport Authority – INFRAERO, and the Military Police.

196. Is legislation in place requiring an environmental impact assessment of proposed projects likely to have adverse effects on biological diversity (14 (1a))?	
a) no	
b) early stages of development	
c) advanced stages of development	
d) legislation in place	
e) review of implementation available	X
197. Do such environmental impact assessment procedures allow for public participation (14(1a))?	
a) no	
b) yes – limited extent	
c) yes – significant extent	X
198. Does your country have mechanisms in place to ensure that the environmental consequences of national programmes and policies that are likely to have significant adverse impacts on biological diversity are duly taken into account (14(1b))?	
a) no	
b) early stages of development	
c) advanced stages of development	X
d) fully compliant with current scientific knowledge	
199. Is your country involved in bilateral, regional and/or multilateral discussion on activities likely to significantly affect biological diversity outside your country's jurisdiction (14(1c))?	
a) no	
b) yes – limited extent	X
c) yes – significant extent	