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Foreword

The signatories to the **Convention on Biological Diversity** are obliged to compile periodic reports on the implementation of its provisions. The first such Report was prepared by Poland and presented to the Convention's Executive Secretary in 1997.

The present Report has been prepared on the basis of the detailed guidelines developed for the Fifth Conference of the Parties (COP). Its layout corresponds to successive articles of the CBD, as well as the Decisions of the Conferences of the Parties associated with them, and has therefore come to comprise the following subject-related blocks:

- matters of a formal nature;
- introductory matters concerning the policy priorities of the country (and linking up with the programmes of work devised successively by the Conferences of the Parties);
- matters contained in successive articles of the Convention (Arts. 5-26 inclusive), along with the relevant decisions taken at COPs II-V inclusive.

In the case of each of the blocks, answers are given to the questions set in relation to both general issues and the more detailed ones, along with an appropriate commentary in which an effort is made to touch upon all the matters raised in the given block. The imposition by the Convention Secretariat of such an arrangement of questions combined with the suggested maximum for the size of the supplementary commentary[1] to ensure that a whole series of issues could be little more than signalled, while others are discussed in a much more detailed fashion. Proceeding on the assumption that the commentary sections should be as autonomous as possible, it has not been possible or even desirable to avoid a certain repetition where this increases the comprehensibility of descriptions.

The authors of the Polish Report have considered that the whole range of issues required broader discussion, and have therefore been involved in the preparation of numerous subject-related appendices.

Work on the Report made reference to more than 100 information sources of various kinds - ranging from the bodies and institutions of the public administration, via scientific institutions, to the environmental NGOs. The team of authors would therefore like to extend their sincerest thanks to all those who have enriched the substantive content of the Report with their knowledge.

[1] In a number of cases the comments extend beyond the suggested limit of 1-2 pages of text.

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 preparation of the *Second National Report on implementation of the provisions of the Convention on Biological Diversity* was entrusted by the Ministry of the Environment to the National Foundation for Environmental Protection (NFOŚ), which was also author of the First Report from 1997. The auctorial team to which the task was appointed acted under the leadership of Andrzej Weigle, M.Sc. and comprised employees of the Foundation, as well as persons in steady cooperation with it, representing both bodies within the central administration and scientific research institutions. The compilation of the subject-related report devoted to genetic resources was assigned to a group at the Institute of Plant Breeding and Acclimatisation under the leadership of Dr Wiesław Podyma. The drawing up of the report concerning forests was in turn left in the expert hands of a team from the Forest Research Institute headed by Prof. Kazimierz Rykowski.

In commencing with the work, the assumption adopted was that the document produced should take advantage of the widest possible information base and also represent the outcome of a nationwide discussion devoted to the current policy of the country and the achievements made as regards the protection and sustainable use of biological diversity. The result, as work on the drawing-up of the Report progressed, was the taking of the following steps with a view to obtaining answers to questions contained in the guidelines to the *Report*, as well as presenting Polish achievements in this regard:

- Pattern information sheets were prepared with a view to the tasks undertaken in the country being described. A directly-addressed circular informing of the commencement of work was prepared, with an enjoinder to anyone interested to become involved in the editing process. This was then sent out to the Chief Nature Conservator in each of Poland's 16 voivodships (units of administration with representation of both provincial and regional authorities), to the Boards of the National and Landscape Parks, to the Regional Directorates of the State Forests and to environmental NGOs.
- An Internet site was launched as an element in the Clearing-House Mechanism (CHM) system of information exchange, along with cues directing the browser to other web pages linked to nature conservation. Appropriate information was sent out by e-mail to the recipients of the discussion letters.
- A series of individual consultations were held with experts representing the central and local government administrations, different fields of the sciences, NGOs and the private sector.
- A study of the subject literature and unpublished materials was made, as well as searches of databases, including those published on the Internet.
- Ongoing verification of the Report being compiled at the Ministry of the Environment was carried out.

The draft Report drawn up on the basis of the aforementioned sources was submitted to the

Department of Forestry and Nature and Landscape Conservation of the Ministry of the Environment. Once various accommodations had been reached internally (with other departments at the Ministry), a final version of the document was approved by the Chief Conservator of Nature.

The COP has established programmes of work that respond to a number of Articles. Please identify the relative priority accorded to each theme and the adequacy of resources. This will allow subsequent information on implementation of each Article to be put into context. There are other questions on implementation of the programmes of work at the end of these guidelines.

Inland water ecosystems

1. What is the relative priority for implementation of this work programme in your country?	
a) High	✕
b) Medium	
c) Low	
d) Not relevant	
2. To what extent are the resources available adequate for meeting the obligations and recommendations made?	
a) Good	
b) Adequate	✕
c) Limiting	
d) Severely limiting	

Marine and coastal biological diversity

3. What is the relative priority for implementation of this work programme in your country?	
a) High	✕
b) Medium	
c) Low	
d) Not relevant	
4. To what extent are the resources available adequate for meeting the obligations and recommendations made?	
a) Good	
b) Adequate	✕
c) Limiting	
d) Severely limiting	

Agricultural biological diversity

5. What is the relative priority for implementation of this work programme in your country?	
a) High	✕
b) Medium	
c) Low	
d) Not relevant	
6. To what extent are the resources available adequate for meeting the obligations and recommendations made?	
a) Good	
b) Adequate	✕
c) Limiting	

d) Severely limiting	

Forest biological diversity

7. What is the relative priority for implementation of this work programme in your country?	
a) High	×
b) Medium	
c) Low	
d) Not relevant	
8. To what extent are the resources available adequate for meeting the obligations and recommendations made?	
a) Good	×
b) Adequate	
c) Limiting	
d) Severely limiting	

Biological diversity of dry and sub-humid lands

9. What is the relative priority for implementation of this work programme in your country?	
a) High	
b) Medium	
c) Low	
d) Not relevant	×
10. To what extent are the resources available adequate for meeting the obligations and recommendations made?	
a) Good	
b) Adequate	
c) Limiting	
d) Severely limiting	

Further comments on work programmes and priorities

The Conference of the Parties to the Convention on Biological Diversity are working step by step on programmes referring to: the ecosystems of inland waters, seas and coastal zones; areas of agricultural use and forest areas; and arid or semi-arid areas.

In Polish conditions, all the aforementioned types of ecosystem except the arid or semi-arid areas are counted among major forms of land cover[2] All have been afforded high priority where protection is concerned. These priorities have been detailed in a series of strategic-type

[2] The total area of the country in line with the current administrative division is 312,685 km². In Polish conditions, inland waters are understood more broadly as wetland areas, thereby embracing (with flowing and still waters, marshes and swamps) some 3% of the country. Sea areas - i.e. territorial waters in the Baltic up to 12 nautical miles from the coast and including internal waters (fragments of the Szczecin Lagoon, Bay of Gdańsk, Vistula Lagoon and ports) cover c. 10,000 km², but this total is rarely added to the area of the country. Areas used agriculturally take in arable land, orchards, meadows and pastures - together accounting for 60% of the country. Forests and areas with trees cover c. 29% of the country, and taken together all of these categories (apart from sea waters) account for 92% of Poland.

documents. The most recent of these, which serves as the superior source is *Poland 2025 - a Long-Term Strategy for Sustainable Development* (as adopted by the Council of Ministers on July 26th 2000). Reference is made there to all of the aforementioned four zones, with these being considered important from the point of view of national policy. The *Second National Environmental Policy* (adopted by the Council of Ministers on June 13th 2000) refers in detail to the "ecologisation" of sectoral policies - including those in agriculture and forestry; with emphasis being placed on their influence on biodiversity. In regard to the ecosystems of inland waters and seas, the "Policy" concentrates on the counteraction of pollution, the restoration of waters to their "proper ecological state" and an improvement in the water balance. Indeed, reference is made to the need for all ecosystems to be brought under comprehensive protection, along with the species of fauna and flora associated with them.

Confirmation of the high priority assigned to the aforementioned ecosystem types has come with Poland's ratification and implementation of the international agreements and conventions that appear in the given sphere of interest (e.g. as regulations binding across the EU, to which Polish legislation is now being approximated in the course of the accession process). The most important of the instruments in international law are those concerning biological diversity as a whole, such as the *Berne Convention on the Conservation of European Widllife and Natural Habitats* - which Poland ratified in 1995; the *Bonn Convention on the Conservation of Migratory Species of Wild Animals* - ratified in 1996, and the *Convention on Biological Diversity* - also ratified in 1996. Leading pieces of community law in this sphere are in turn the *Habitats Directive* (i.e. Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora) and the *Wild Birds Directive* (Council Directive 79/409/EEC on the conservation of wild birds).

More specifically, the set of legal instruments includes:

- as regards aquatic ecosystems: the 1971 *Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat*, which Poland ratified in 1978; and the *Framework Water Directive* of the EU (2000/60/EEC);
- as regards sea areas and the coast: the 1973 *Gdańsk Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and Belts*, which was ratified in 1973; the "Old" (1974) and "New" (1992) *Helsinki Conventions on the Protection of the Marine Environment of the Baltic Sea Area*, ratified by Poland in 1980 and 1999 respectively; and the 1992 *Agreement on the Conservation of Small Cetaceans in the Baltic and North Seas* ratified in 1996;
- as regards areas used in agriculture: the *Agri-environment Regulation* of the Council (1257/99/EEC).

Within each of the aforementioned types of ecosystem it is possible to distinguish elements of biological diversity that are worthy of special attention, mainly on account of their rarity of occurrence or endangerment[3] including *inter alia*:

- wetland areas: oligotrophic and dystrophic lakes, as well as other mid-forest and mid-field bodies of water, raised bogs and transitional peatlands;
- the Baltic and its coast: coastal dunes, cliffs, sandy shelf habitats, coastal heather and crowberry heaths;
- agricultural areas: wet meadows with purple moor grass *Molinia caerulea*, riparian meadows;
- forest areas: acid and fertile beechwoods, thermophilous oakwoods, riparian woodlands and willow scrub, Central European oak-lime-hornbeam forest.

The above facts notwithstanding, Poland attaches a high protective priority to non-forest ecosystems (unutilised meadows, including within forests and in the high mountains; heathlands; xerothermic grasslands; saline habitats and areas with trees and shrubs in the middle of fields), as well as to those transformed anthropogenically but nevertheless characterised by high diversity (of which there are c. 500,000 ha in Poland). A specific element worthy of protection from the point of view of biodiversity (albeit not always native) are the parks established historically around manors, churches and cemeteries.

At the species level, the highest conservation priorities are assigned to species that are threatened or endangered. These are defined by way of *Red Lists* and *Red Books of Endangered Species*. The *Red Book of Plants* includes 643 species among the fungi and plants, while the animal counterpart includes 130 species of various degrees of endangerment in its first volume devoted to vertebrates. Work is currently ongoing on volume II, which will be concerned with invertebrate groups.

Confirmation of the conferment of high priority status in the policy to protect endangered species is their entry on the lists of species enjoying protection. At the present time the list for animals has 609 entries and that for plants 230, while the volume dealing with fungi and lichens includes 265 species.

Thanks to specific conditions underpinning its development, Poland has managed to retain a high diversity of old plant varieties and breeds of livestock. The preservation of these must thus be considered among the priority tasks.

[3] Devised for EU member states within the framework of the **Habitats Directive** is a list of habitats (ecosystem types) deserving protection. Polish conditions most likely support 67 of the 197 types on the list. Within the framework of preparations for the introduction of the NATURA 2000 Programme into Poland, some proposals for the augmentation of the list with ecosystems specific to Poland have been drawn up. 28 additional entries have so far been proposed and the elements appearing on these lists should be treated as of priority status from the point of view of biodiversity conservation.

Article 5 Cooperation

11. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High	×	b) Medium		c) Low	

12. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate	×	c) Limiting		d) Severely limiting	

Further comments on relative priority and on availability of resources
Cooperation with other Parties to the Convention is among the high priority issues. Of particular importance are contacts with neighbouring countries, as well as with other member states of the European Union, to which Poland hopes to accede in the next few years. It is to this aim that the resources of the state are first and foremost directed. However, on account of the difficulties associated with a period of transformation, the availability of resources for other spheres of cooperation is very much restricted.

13. Is your country actively cooperating with other Parties in respect of areas beyond national jurisdiction for the conservation and sustainable use of biological diversity?	
a) bilateral cooperation (please give details below)	×
b) international programmes (please give details below)	×
c) international agreements (please give details below)	×

Decision IV/4. Status and trends of the biological diversity of inland water ecosystems and options for conservation and sustainable use

14. Has your country developed effective cooperation for the sustainable management of transboundary watersheds, catchments, river basins and migratory species through bilateral and multilateral agreements?	
a) no	
b) yes - limited extent (please give details below)	×
c) yes - significant extent (please give details below)	
d) not applicable	

Decision IV/15. The relationship of the CBD with the CSD and biodiversity-related conventions, other international agreements, institutions and processes or relevance

15. Has your country developed management practices for transboundary protected areas?	
a) no	
b) yes - limited extent (please give details below)	
c) yes - significant extent (please give details below)	×
d) not relevant	

Decision V/21. Co-operation with other bodies

16. Has your country collaborated with the International Biodiversity Observation Year of DIVERSITAS, and ensured complementarity with the initiative foreseen to be undertaken by the United Nations Educational, Scientific and Cultural Organization and the Secretariat of the Convention on Biological Diversity to increase scientific knowledge and public awareness of the crucial role of biodiversity for sustainable development?	
a) no	
b) to a limited extent	×
c) to a significant extent	

Decision V/27. Contribution of the Convention on Biological Diversity to the ten-year review of progress achieved since the United Nations Conference on Environment and Development

17. Is your country planning to highlight and emphasize biological diversity considerations in its contribution to the ten-year review of progress since the Earth Summit?	
a) no	
b) yes	×

Further comments on implementation of this Article

International cooperation

The development of international cooperation, including in the sphere of biodiversity conservation, is one of the priorities of national environmental policy. Such action is taken at both the official level, e.g. within the framework of international agreements and conventions to which Poland is party, and via cooperation between particular scientific institutions, NGOs, informal groups and individual people. Depending on the objective, this may be continuous in nature (e.g. where joint actions under a convention are concerned) or concentrated over a shorter period (as with the implementation of a given programme).

Bilateral cooperation is engaged in with both neighbour countries (e.g. in the management of transboundary areas), and those lying at greater distances (as for example in the joint implementation of projects and/or the grateful acceptance of the assistance offered Poland by these countries). General bilateral agreements concerning cooperation in the field of environmental protection have been entered into with all the countries bordering with Poland, i.e. the Federal Republic of Germany, the Russian Federation, Slovakia, Ukraine, Lithuania, Belarus and Tcheck Republic. As an example, cooperation with Germany involves *i.a.* the creation of a transboundary protected area within the Lower Oder Valley (as an important ecological corridor for migrating birds). Work is now underway on the establishment of a Warta Mouth National Park on the Polish side. In turn, cooperation with Ukraine involves the protection of cross-border wetland ecosystems in Poland's Poleski (Polesie) National Park and the Šac'kyj pryrodnyj National Park over the border. Bilateral agreements on cooperation in the field of environmental protection have also been entered into between Poland and a great many other European countries (namely Denmark, Finland, The Netherlands, Norway, Sweden, France, Austria, Bulgaria, Hungary, Latvia and Estonia), as well as with the United States,

Canada, Kazakhstan and China. Implemented within the framework of this cooperation are development projects, training programmes and research work, with a considerable part dealing with the protection of regions of high natural value or the restoration of degraded areas. An example of cooperation at local level might in turn by the sittings of the scientific councils of transboundary protected areas, as well as the cooperation between National Parks within the framework of the Europarc Federation. A further interesting case is the Polish-German "Green Ribbon of the Nysa and Oder" - a project being implemented under the patronage of the WWF.

Poland's international cooperation in the name of sustainable development (including biodiversity conservation) is manifested in active participation to implement the programme tasks of the international organisations of which Poland is a member. Involved here first and foremost are the organisations and agencies within the UN system – notably UNEP and the UN Economic Commission for Europe - as well as a series of other organisations and institutions of significance in the international arena (the Council of Europe, Central European Initiative of the OECD, INTEROCEANMETAL, the European Union and such international financial institutions as the World Bank and European Bank for Reconstruction and Development).

Poland also plays an active part in the work of the UN Commission on Sustainable Development, of which it has been a member since the time of establishment, and the UNEP. Representative of the country take part in the work of the Governing Council of UNEP, and the Committee of Permanent Representatives in Nairobi. In 1999 Poland was re-elected to the High-Level Committee of Ministers and Higher Personages of the UNEP Governing Council for the 1999-2001 term of office. The weight Poland attaches to UNEP activity is emphasised by the personal participation of the Minister of the Environment at sessions of the Governing Council and consultations organised by the Executive Director of UNEP.

Poland is also a member of the Council of the GEF, while prior to the Second General Assembly of the Facility a Polish representative headed one of the two constituencies for the countries of East-Central Europe. Polish representatives also participate in the work of the executive bodies to international agreements to which it is party, as well as in negotiations leading to the establishment of new multilateral agreements. A role in these undertakings allows for a certain influence to be exerted on the course of events and the shape of legal documents that may come to contain content of importance to Polish interests. At the same time, changes in the Polish legislation or preparation of new legal instruments in line with world trends are facilitated. Among other things, the last few years have seen representatives of the Ministry of the Environment participate in the negotiation of the Biosafety Protocol to the Convention on Biological Diversity.

Poland is signatory to the International Undertaking on Plant Genetic Resources (FAO 8/83). Polish representatives are participating in the negotiations over a new international agreement on the protection of genetic resources that are being held under the aegis of the FAO Commission on Genetic Resources for Food and Agriculture.

Polish Ministers of the Environment participated in person at the *consecutive Environment for Europe* Pan-European Ministerial Conferences in Lucerne 1993, Sofia 1995 and Aarhus 1998.

This was accompanied by active Polish roles in the work of Council of Europe expert groups on nature conservation (*inter alia* in the devising of the *Pan-European Biological and Landscape Diversity Strategy* at the Second Conference in Sofia in 1995). The Polish Minister of the Environment also played a personal part in activity regarding the so-called European Forest Initiative and conferences devoted to the protection of European forests. Poland is one of four members of the Central Coordinating Committee of the European Conferences on the protection of forests. It also contributes to the costs of maintaining the Secretariat thereto.

Polish representatives also play a part in implementing the regional Agenda 21 programme for the Baltic Sea basin. This was initiated by the signing of the so-called Salzjoboden Declaration in Sweden in November 1996, by the Environment Ministers of the region's countries. This document is to serve as a guide to directions of development and regional cooperation embodying the AGENDA 21 principles as adopted in Rio in the seven economic sectors of key importance to the region, i.e. power supply, forestry, industry, agriculture, fisheries, transport and tourism. Poland has taken it upon itself to lead sustainable development in the agricultural sector. Thus, actions in the Baltic Sea area are assigned high-priority status in Poland, something that was further attested to by the June 1999 completion of the process ratifying the 1992 *Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area*. This entered into force in September 1999. Poland is active in the work of the Convention's Helsinki Commission, as well as that of ICES (the International Council for the Exploration of the Sea) seeking to devise concepts by which to indicate the quality of the marine environment and carry out actions within the framework of the international BIOMARE project seeking to develop such indices, as well as principles of monitoring.

Other multilateral programmes that may be mentioned are the Green Lungs of Poland and Green Ring of the Baltic initiatives, while regional cooperation is currently being manifested in the preparation of an *Agreement on Cooperation between Poland, Slovakia and Ukraine in the Eastern Carpathians International Biosphere Reserve*. A further example of a regional-level initiative is the Pan-European Forest Protection Process, in which Poland has been a participant for 10 years.

A particular kind of international agreement is the Association Agreement between Poland and the European Union. The tasks inherent in approximating domestic legislation (including that in biodiversity conservation) to standards in force in the Community have lately come to represent some of the highest-priority issues in national policy.

Poland has also been working actively in the name of the protection and sustainable use of the biological diversity of Polar areas, by way of its participation in the international programmes initiated by SCAR (the Scientific Committee on Antarctic Research) and the IASC (International Arctic Sciences Committee), such as the programme entitled *The Variability of Polar Ecosystems.*

The Polish Academy of Sciences maintains a permanent research station in the Antarctic (the H. Arctowski Antarctic Station, King George Island, South Shetlands). Three of the research programmes being run there as part of international cooperation are concerned with biological

diversity: a) the monitoring of selected groups of flora and fauna (phytoplankton, fish, birds and pinnipeds) with regard to their trophic interrelationships, b) interactions in the coastal zone of Admiralty Bay on King George Island, and c) settlement and the succession process in the aquatic environment.

In turn, a permanent research presence in the Arctic is based around the station on Spitsbergen. Work carried out within the framework of international programmes focuses *inter alia* on succession in the terrestrial vegetation and on trophic linkages among the invertebrates colonising fjords.

Expeditions into the North Atlantic provide opportunities for research on the food base of fish, with a views to the resources of fish populations being utilised in a sustainable manner.

A specific form of international cooperation is that concerning institutions and individuals from Poland participating in such scientific programmes of the EU as LIFE, NICOLAS, etc. These are directed *i.a.* at the subject of biodiversity.

In addition, bilateral agreements or direct inter-personal contacts involve Polish academics in reconnaissances involving the taxonomic richness of fungi, bryophytes, orchids, etc., as well as such invertebrate groups as *Arachnida* and *Insecta: Heteroptera, Homoptera, Coleoptera, Diptera, Lepidoptera* and *Orthoptera* in many countries of Europe, Africa (Ethiopia, Ivory Coast), Asia (the Mediterranean and South Korea), Australia and Oceania and South America (the area of the Guianas and Brazil).

The management of transboundary divide areas, basins and migratory species

These matters are taken account of in three international agreements and conventions to which Poland is party, namely:

- the 1992 *Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes* (ratified by Poland in 2000);
- the 1979 *Bonn Convention on the Conservation of Migratory Species of Wild Animals* (ratified in 2000)
- the Agreement on the International Commission for the Protection of the Oder against Pollution (ratified by Poland in 1999).

The management of transboundary waters is also the subject of bilateral agreements entered into between Poland and neighbouring states. These agreements are first and foremost concerned with water management, though they also relate to some extent to issues of biological diversity. Established under these agreements are subject-related groups, such as the Polish-German and Polish-Ukrainian Commissions for Border Waters and the International Commission for Transboundary Cooperation, as well as the International Commission for the Protection of the Oder against Pollution and the Polish-Brandenburg Working Group "Odra 2006". One of the forms of action here is the preparation of programmes, for example through the inventorying of obstacles to the movements of migratory fish, the maintenance and reinstatement of the valuable natural features of valleys (e.g. that of the Oder) and the monitoring of the status of terrestrial

ecosystems in river valleys.

The management of transboundary protected areas

Cooperation in this sphere is first and foremost pursued within the Transboundary Biosphere Reserves (of the Białowieza/Belovezskaya Forest, the Eastern Carpathians, the Tatra Mountains and the Karkonosze/Krkonose range), as well as along the Lower Oder. The nature of the joint undertakings includes agreement on long-term plans of protection - with particular account taken of migratory species, information exchange on the state of nature and threats thereto, protective measures taken and the implementation of research programmes. The scientific advisory bodies supporting those tasked with the above areas' management include representatives of both parties who report back annually on the results of joint actions, as well as planning those of the coming year.

An example of good cooperation in the sphere of the management of transboundary areas might be that concerning the Polish and Czech parts of the Karkonosze/Karkonose Mountains. Among the joint action taken for the National Parks adjoining each other on the border is a programme for the conservation of biological diversity that pays particular attention to the creation of the European Ecological Network (NATURA 2000). This is a task set out in European Union law and requiring implementation prior to the accession of the CEECs.

Further exemplary cooperation is that with Germany along the Lower Oder (with a National Park on the German side and a Landscape Park on the Polish). The services in the two areas are in close cooperation, and this has borne fruit in the joint devising of a programme of protective actions.

A particular form of transboundary cooperation with neighbouring countries is involved when it comes to the designation of areas of high natural value, and their designation in relation to development for nature-related international tourism. Polish specialists have recently been drawing up a natural inventory for these areas, as well as detailing the types of tourism that might be permitted, and guidelines for their management.

Article 6 General measures for conservation and sustainable use

18. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High	×	b) Medium		c) Low	
19. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate	×	c) Limiting	
d) Severely limiting					
Further comments on relative priority and on availability of resources					
The creation of the legal and strategic bases for the conservation and sustainable use of biological diversity has been one of the priority objectives of national policy in recent years. It represents a task that has been implemented in full, with the availability of resources having been adequate, in part thanks to UNEP/GEF co-financing of a national strategy and plan of action.					

20. What is the status of your national biodiversity strategy (6a)?	
a) none	
b) early stages of development	
c) advanced stages of development	×
d) completed[4]	
e) completed and adopted2	
f) reports on implementation available	
21. What is the status of your national biodiversity action plan (6a)?	
a) none	
b) early stages of development	
c) advanced stages of development	×
d) completed2	
e) completed and adopted2	
f) reports on implementation available	
22. Do your national strategies and action plans cover all articles of the Convention (6a)?	
a) some articles only	
b) most articles	×
c) all articles	
23. Do your national strategies and action plans cover integration of other sectoral activities (6b)?	
a) no	
b) some sectors	
c) all major sectors	×
d) all sectors	

[4]/ Please provide information requested at the end of these guidelines.

Decision II/7 and Decision III/9 Consideration of Articles 6 and 8

24. Is action being taken to exchange information and share experience on the national action planning process with other Contracting Parties?	
a) little or no action	
b) sharing of strategies, plans and/or case-studies	×
c) regional meetings	×
25. Do all of your country's strategies and action plans include an international cooperation component?	
a) no	
b) yes	×
26. Are your country's strategies and action plans coordinated with those of neighbouring countries?	
a) no	
b) bilateral/multilateral discussions under way	×
c) coordinated in some areas/themes	
d) fully coordinated	
e) not applicable	
27. Has your country set measurable targets within its strategies and action plans?	
a) no	
b) early stages of development	
c) advanced stages of development	×
d) programme in place	
e) reports on implementation available	
If a developing country Party or a Party with economy in transition - 28. Has your country received support from the financial mechanism for the preparation of its national strategy and action plan?	
a) no	
b) yes	×
If yes, which was the Implementing Agency (UNDP/UNEP/World Bank)?	UNEP

Decisions III/21. Relationship of the Convention with the CSD and biodiversity-related conventions

29. Are the national focal points for the CBD and the competent authorities of the Ramsar Convention, Bonn Convention and CITES cooperating in the implementation of these conventions to avoid duplication?	
a) no	
b) yes – limited extent	
c) yes – significant extent	×

Further comments on implementation of this Article

Means for the implementation of tasks linked with the conservation and sustainable use of the resources of biological diversity have been designated in the central budget. Beyond the national

budget, financial support for action to protect environmental resources is also afforded by the National Fund for Environmental Protection and Water Management and the Ecofund Foundation, which have introduced the topic of action to support the conservation and sustainable use of biodiversity resources into their range of priority directions.

With a view to tasks in biodiversity conservation and the sustainable use of resources being implemented effectively, Polish law has been amended in recent years, in particular in regard to:

- the devising of a new Environmental Protection Act (in the process of being adopted by Parliament);
- the amendment and updating of the Nature Conservation Act and Hunting Law Act (adopted in 2000).

The amendment of the law has in particular involved the provisions seeking the protection of biodiversity in its entirety, both by way of inclusion under areal forms of protection and in areas that are put to economic use. The conservation of biological diversity has also been incorporated as a task of spatial planning and physical development. In contrast, the Environmental Protection Act has sought to regulate *inter alia* the procedures involved in the drawing up of assessments of the impact of plans, programmes and developments on biological diversity. In parallel, work ongoing in recent years has sought to devise the relevant delegated legislation to the above Acts. Of particular significance to biodiversity conservation are the draft Regulations on the species protection of animals and plants and the protection of habitats, which are now in preparation, as well as the Regulations on the devising of protection plans for protected areas. These new legal solutions are fully congruent with EU law.

A number of strategic decisions have been taken in regard to biological diversity in the agricultural sector. The basic assumptions of an agricultural policy founded on the principle of the continuous transformation of rural areas and agriculture are as formulated in the *Medium-Term Strategy for Agriculture and Rural Areas*. The *Cohesive Structural Policy for the Development of Rural Areas and Agriculture* is in turn a detailed development of the Strategy focusing on the structural changes in rural areas and agriculture for the period 2000-2006. The policy will be brought into effect through a series of operational programmes, including SAPARD. The main aims of the latter include the restructuring of the agricultural sector and the sustainable development of rural areas, as well as the protection of the environment and cultural heritage. These will all have a direct influence on the conservation of biological diversity in rural areas.

1998 saw the end of a two-year cycle of work associated with the preparation of a draft *National Strategy and Action Plan for the Conservation and Sustainable Use of Biological Diversity*. The preparation process for the Strategy and Action Plan also drew upon the national strategies devised in neighbouring countries. The work, financed by UNEP-GEF resources to the tune of 191 000 USD, was carried out by way of workshops in which the wide participation of representatives of scientific institutions, local government organisations and environmental movements was possible.

In line with the assumptions adopted, the draft Strategy has made reference to all of the Convention articles and has been drawn up in a multi-layered formation. It discusses the issues of successive layers of biological diversity - i.e. those of the genome, species and landscape; takes account of conservatorial actions *in situ* and *ex situ* and sets out tasks for particular sectors of the economy. The action project sets out precise implementational conditioning for different undertakings, detailing the unit responsible for task implementation, as well as time frames, estimated implementation costs and potential sources of funding.

The course of work on the Strategy and Action Plan is under the supervision of a Steering Committee called into being by decision of the Minister of Environmental Protection, Natural Resources and Forestry and comprising, *inter alia*, representatives of different government departments like the Ministry of Agriculture and the Food Economy, the Ministry of the Economy, the Ministry of Transport and the Maritime Economy, the Ministry of National Education, the Committee for Scientific Research, the Government Centre for Strategic Studies and the Office of Housing and Urban Development.

In the second half of 2000, as a consequence of the entry into force of new legal regulations, a series of changes and augmentations were made to the draft version in order to adjust the different provisions to the newly-binding legislative measures. The content of the draft was also integrated with other documents in the sphere of planning and programming, notably the *Second National Environmental Policy* adopted by the Council of Ministers on June 30th 2000, the *Long-Term Strategy for Sustainable Development - Poland 2025* adopted by the Council of Ministers on July 26th 2000, the *National Environmental Protection Strategy* adopted by the Council of Ministers' Regional Policy and Sustainable Development Committee on July 27th 2000, the *National Policy on Forests* adopted by the Council of Ministers on April 22nd 1997, the *Concept for a National Spatial Planning Policy* adopted by the Council of Ministers on October 5th 1999 and the *National Strategy for Environmental Education* adopted by the Ministers of the Environment and National Education on September 21st 2000.

At the end of 2000, a new version of the *National Strategy and Action Plan for the Conservation and Sustainable Use of Biological Diversity* was directed for intra-departmental agreement within the Ministry of the Environment. It is now at the stage of being agreed between government departments.

Cooperation with other Parties to the Convention in the spheres of the exchange of information and experiences in the devising of policies, strategies and action plans is manifested through the activity of bilateral government commissions established on the basis of cooperation agreements in environmental protection entered into between Poland and neighbour countries. The bilateral commissions have in turn set up task groups concerning different issues of nature conservation.

The role of National Focal Point (Secretariat) for the different nature-related conventions and agreements is being played by the Department of Forestry and Nature and Landscape Conservation at the Ministry of the Environment. The organisational structure therein includes operational contact points for all of the other nature-related conventions to which Poland is a party (i.e. the *Ramsar Convention, CITES, the Bonn and Berne Conventions and the Helsinki*

Convention). Guaranteed in this way is coherence of action when it comes to the fulfilment of their various provisions.

Article 7 Identification and monitoring

30. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	×	c) Low	

31. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting	×	d) Severely limiting	

Further comments on relative priority and on availability of resources

The identification and monitoring of biological diversity is without doubt an important task. However, a limitation on available resources - which mainly derive from the central budget and the Environmental Funds - ensures that it cannot be (and is not) treated as one of the utmost priority

32. Does your country have an ongoing inventory programme at species level (7a)?	
a) minimal activity	
b) for key groups (such as threatened or endemic species) or indicators	×
c) for a range of major groups	
d) for a comprehensive range of species	
33. Does your country have an ongoing inventory programme at ecosystem level (7a)?	
a) minimal activity	
b) for ecosystems of particular interest only	
c) for major ecosystems	×
d) for a comprehensive range of ecosystems	
34. Does your country have an ongoing inventory programme at genetic level (7a)?	
a) minimal activity	
b) minor programme in some sectors	
c) major programme in some sectors	×
d) major programme in all relevant sectors	
35. Does your country have ongoing monitoring programmes at species level (7a)?	
a) minimal activity	
b) for key groups (such as threatened or endemic species) or indicators	×
c) for a range of major groups	
d) for a comprehensive range of species	

36. Does your country have ongoing monitoring programmes at ecosystem level (7b)?	
a) minimal activity	
b) for ecosystems of particular interest only	
c) for major ecosystems	✕
d) for a comprehensive range of ecosystems	
37. Does your country have ongoing monitoring programmes at genetic level (7b)?	
a) minimal activity	✕
b) minor programme in some sectors	
c) major programme in some sectors	
d) major programme in all relevant sectors	
38. Has your country identified activities with adverse affects on biodiversity (7c)?	
a) limited understanding	
b) threats well known in some areas, not in others	
c) most threats known, some gaps in knowledge	✕
d) comprehensive understanding	
e) reports available	✕
39. Is your country monitoring these activities and their effects (7c)?	
a) no	
b) early stages of programme development	
c) advanced stages of programme development	✕
d) programme in place	
e) reports on implementation available	✕
40. Does your country coordinate information collection and management at the national level (7d)?	
a) no	
b) early stages of programme development	
c) advanced stages of programme development	✕
d) programme in place	
e) reports on implementation available	✕

Decision III/10 Identification, monitoring and assessment

41. Has your country identified national indicators of biodiversity?	
a) no	
b) assessment of potential indicators underway	✕
c) indicators identified (if so, please describe below)	
42. Is your country using rapid assessment and remote sensing techniques?	
a) no	
b) assessing opportunities	
c) yes, to a limited extent	✕
d) yes, to a major extent	

e) reports on implementation available	
43. Has your country adopted a “step-by-step” approach to implementing Article 7 with initial emphasis on identification of biodiversity components (7a) and activities having adverse effects on them (7c)?	
a) no	
b) not appropriate to national circumstances	
c) yes	×
44. Is your country cooperating with other Contracting Parties on pilot projects to demonstrate the use of assessment and indicator methodologies?	
a) no	×
b) yes (if so give details below)	
45. Has your country prepared any reports of experience with application of assessment methodologies and made these available to other Contracting Parties?	
a) no	
b) yes	×
46. Is your country seeking to make taxonomic information held in its collections more widely available?	
a) no relevant collections	
b) no action	
c) yes (if so, please give details below)	×

Decision V/7. Identification, monitoring and assessment, and indicators

47. Is your country actively involved in co-operating with other countries in your region in the field of indicators, monitoring and assessment?	
a) no	
b) limited co-operation	×
c) extensive co-operation on some issues	
d) extensive co-operation on a wide range of issues	
48. Has your country made available case studies concerning the development and implementation of assessment, monitoring and indicator programmes?	
a) no	
b) yes - sent to the Secretariat	×
c) yes – through the national CHM	
d) yes – other means (please specify)	
49. Is your country assisting other Parties to increase their capacity to develop indicator and monitoring programmes?	
a) no	
b) providing training	
c) providing direct support	
d) sharing experience	×
e) other (please describe)	

Decisions on Taxonomy

Decision IV/1 Report and recommendations of the third meeting of SBSTTA [part]

50. Has your country carried out a national taxonomic needs assessment, and/or held workshops to determine national taxonomic priorities?	
a) no	
b) early stages of assessment	×
c) advanced stages of assessment	
d) assessment completed	
51. Has your country developed a national taxonomic action plan?	
a) no	
b) early stages of development	×
c) advanced stages of development	
d) action plan in place	
e) reports on implementation available	
52. Is your country making available appropriate resources to enhance the availability of taxonomic information?	
a) no	
b) yes, but this does not cover all known needs adequately	×
c) yes, covering all known needs	
53. Is your country encouraging bilateral and multilateral training and employment opportunities for taxonomists, particularly those dealing with poorly known organisms?	
a) no	×
b) some opportunities	
c) significant opportunities	
54. Is your country investing on a long-term basis in the development of appropriate infrastructure for your national taxonomic collections?	
a) no	
b) some investment	×
c) significant investment	
55. Is your country encouraging partnerships between taxonomic institutions in developed and developing countries?	
a) no	×
b) yes – stated policy	
c) yes – systematic national programme	
56. Has your country adopted any international agreed levels of collection housing?	
a) no	×
b) under review	
c) being implemented by some collections	
d) being implemented by all major collections	
57. Has your country provided training programmes in taxonomy?	
a) no	×
b) some	

c) many	
58. Has your country reported on measures adopted to strengthen national capacity in taxonomy, to designate national reference centres, and to make information housed in collections available to countries of origin?	
a) no	✕
b) yes – in the previous national report	
c) yes – via the clearing-house mechanism	
d) yes - other means (please give details below)	
59. Has your country taken steps to ensure that institutions responsible for biological diversity inventories and taxonomic activities are financially and administratively stable?	
a) no	✕
b) under review	
c) yes for some institutions	
d) yes for all major institutions	
60. Has your country assisted taxonomic institutions to establish consortia to conduct regional projects?	
a) no	✕
b) under review	
c) yes – limited extent	
d) yes – significant extent	
61. Has your country given special attention to international funding of fellowships for specialist training abroad or for attracting international experts to national or regional courses?	
a) no	✕
b) under review	
c) yes – limited extent	
c) yes – significant extent	
62. Has your country provided programmes for re-training of qualified professionals moving into taxonomy-related fields?	
a) no	✕
b) some	
c) many	

Decision V/9. Global Taxonomy Initiative: Implementation and further advance of the Suggestions for Action

63. Has your country identified its information requirements in the area of taxonomy, and assessed its national capacity to meet these requirements?	
a) no	✕
b) basic assessment	
c) thorough assessment	
64. Has your country established or consolidated taxonomic reference centres?	
a) no	✕
b) yes	
65. Has your country worked to increase its capacity in the area of taxonomic research?	

a) no	×
b) yes	
66. Has your country communicated information on programmes, projects and initiatives for consideration as pilot projects under the Global Taxonomy Initiative to the Executive Secretary?	
a) no	×
b) yes	
67. Has your country designated a national Global Taxonomy Initiative focal point linked to other national focal points?	
a) no	×
b) yes	
68. Has your country participated in the development of regional networks to facilitate information-sharing for the Global Taxonomy Initiative?	
a) no	×
b) yes	
If a developing country Party or Party with economy in transition - 69. Has your country sought resources through the financial mechanism for the priority actions identified in the decision?	
a) no	×
b) applied for unsuccessfully	
c) applied for successfully	

Further comments on implementation of these decisions

The Convention requires signatories thereto "to identify components of biological diversity", and to monitor ongoing changes within them. The full inventorying and permanent observation of all the ecological systems, plant communities and animal assemblages present in the country (let alone of the species) is a virtually-inviable task on account of the high diversity involved, and would not in any case be justified. To date, however, even the species-poor ecosystems are yet to be fully described.

Nevertheless, work on the identification of biological diversity has been in progress in Poland for a great many years, having been undertaken by a range of scientific centres including higher education establishments, scientific units of the Polish Academy of Sciences, and the research and development units subordinated to various government departments (most especially those of the environment and agriculture). However, the scope of the research carried out has been very much confined by the availability of funding from the central budget transferred to the Committee for Scientific Research (as the central unit coordinating and financing research work, including in regard to nature-related issues). At the same time, there is a fairly high degree of freedom to the research undertaken - as connected with the scientific specialisations of the different centres. There are also difficulties with the creation of a central database on the state of biological diversity.

To date, therefore, Poland has not run a comprehensive research programme directed at a full reconnaissance of national biodiversity. This is not to say that a considerable part of it has not

nevertheless been identified in the course of a host of projects concentrating either on particular taxonomic groups or on certain regions of the country. There is thus a relatively good knowledge of the species and above-species (i.e. ecological system) levels, while the intraspecific (genetic) level is by far the most poorly known.

Research programmes at the genetic level are primarily engaged in by the larger higher education establishments, specialist research units of the Polish Academy of Sciences and sectoral research-and-development units. Studies make the fullest use of molecular methods allowing for the obtainment of so-called "markers". Methods devised somewhat earlier on the basis of isoenzymatic characters have now been superseded by DNA analyses. The rapid development of techniques making use of DNA polymorphisms allows for the application of molecular markers in the characterisation of the structures of populations, the search for samples with appropriate genes, the revealing of duplicates and the testing of samples for purity. The methods applied most often are restriction fragment length polymorphism, those involving random amplified polymorphic DNA, as well as amplified fragment length polymorphism or microsatellites or simple sequence repeats. Methods of DNA and isoenzymatic analysis are used in studying the variability of most species of crop plant, including rye *Secale cereale*, peas *Pisum*, beans *Phaseolus*, beets *Beta* and carrots *Daucus carota*. At the National Centre for Plant Genetic Resources, work has now begun on a characterisation of local populations of crop plants with the aid of AFLP methodology.

A classical direction of study which is of wide practical application is the assessment of the variability of the morphological and biological features of varieties and local populations of crop plants. Preliminary assessment of the materials is done as these join a collection, with results being made available to anyone interested. These studies are often augmented by chemical characterisations of particular forms (e.g. herbs, hops *Humuls lupulus* and *Allium* species).

Studies are also being made of the structure, expression and transfer of genes in domestic animals. The work involves genetic markers and restriction fragment length polymorphism.

Inventories at the genetic level are very much confined. To be mentioned among the most important projects is the running of the *European Bison Stud Book*, which analyses the genetic variability of this species (*Bison bonasus*). Forestry also has its genetic-level programme with inventorying of both phenotypes and genotypes of the main forest tree species. It was on this basis that a division of Poland into seed regions was carried out, and principles for the trade in genetic material devised. There has also been a systematic study to identify the genotypes of the oldest trees in Poland (aged 200-250 years, depending on species).

Where hydrobionts are concerned, there is local-level knowledge of the genetic diversity of some economically-important fish species. The work involved has either fallen within the scope of the statutory activity of scientific institutes and the departments of higher education establishments, or else been done via projects financed by the Committee for Scientific Research.

In relation to the species level, almost all of the taxa of Polish fauna are well-known in terms of species composition. A total of more than 11,000 "plant" species have been recorded on Polish

territory, along with more than 5000 species of fungi and 33,000 of animal. Nevertheless, the level of familiarity varies in relation to both the group of organisms and the area of the country.

The classic source of information on the vascular flora is the 15-part *Flora Polski* (1919-1995), whose successive volumes are updated or even recompiled. The *Checklist of Vascular Plants of Poland* appeared in 1995 and a second, amended, version is now in preparation. A very important source of information where threatened and endangered species are concerned is the *Polish Red Book of Plants* published in 1993. Work on a second edition has recently begun, while an extensive *Atlas of Protected Plants in Poland* is due to have come out by the end of this year. Work is also reported to have started on a second edition of *The Plant Cover of Poland* - an invaluable source of knowledge on flora and vegetation whose updating (following a first edition from 1972) is needed very urgently. Also foreseen is a new edition of W. Matuszkiewicz's *Guide to the Designation of Poland's Plant Communities* (first published in 1982).

The main source of information on the invertebrate fauna of the country is a series of monographs such as *The Fauna of Poland, Monographs of the Polish Fauna* and the *Catalogue of Poland's Fauna* and *Identification Key*. Synthetic works referring to different taxa, areas or environments have appeared in the last decade. For example, appearing in the years 1991-2000 were 6 volumes encompassing the entire beetle fauna of Poland within the large family *Chrysomelidae*, as well as one volume devoted to the *Mordelidae*. In addition, within the series "Catalogues of the Polish Fauna", 8 more volumes have recently appeared, dealing with different families of beetle, as well as a volume concerning *Orthoptera*, one for *Acari-Oribatida* and one for *Malacostraca*. This decade also saw different characterisations of the fauna of particular areas, for example the Bieszczady and Pieniny Mountains and Roztocze region, or such habitats as pine woods with crowberry *Empetrum nigrum*.

The state of knowledge on vertebrates in Poland is also well-advanced. Recent years have seen particular emphasis put on the assessment of the status of particular taxonomic groups or even individual species. The greatest amount of study has been addressed to birds, followed by mammals. The year 2000 also saw the appearance of a work on the reptiles and amphibians of Poland which represented a summary of our entire knowledge on these groups. Information on the state of the avifauna has since 1972 been gathered by the Faunistic Commission - Ornithological Section, of the Polish Zoological Society. Since 1984, the quarterly journal *Notatki Ornitologiczne* has produced substantive reports each year. A fledgling NGO, the Polish Society for the Protection of Birds (OTOP), was in turn supported by Birdlife International in the compiling of a work entitled *Ostoje ptaków w Polsce* ("Refuges for Birds in Poland"). In addition, in 2000, material drawn up by the OTOP for Birdlife was published in the study entitled *Important Bird Areas*. In parallel, work is ongoing on the preparation of a second updated Internet version of the book *Ptaki Polski ("Birds of Poland" - a listing of the species and their dsitribution*). The main aims of these have been to supply basic information on those areas within Poland that are of key significance in the protection of birds Europewide. As regards mammals, recent years have brought much research on their biology and ecology. For example, assessments have been made of the condition of various deer populations (of red deer *Cervus elaphus*, fallow deer *Dama dama* and roe deer *Capreolus capreolus*), as well as those of the

wild boar *Sus scrofa* year-round, and the predatory wolf *Canis lupus* in the midst of hoofed mammals. The spread of the moose *Alces alces* in Poland has been determined - along with its influence on forest renewal, while the environmental and intraspecific conditioning of the feeding behaviour of roe deer was studied. Considerable attention was also paid to synthetic works assessing the statuses and condition of different mammal species on Polish territory, or even on the scale of the whole continent. Syntheses and mongraphs appearing have included those on the predatory mammals of Europe, the lynx *Lynx lynx*, fox *Vulpes vulpes*, beech and pine martens (*Martes martes* and *M. foina*) and the wolf *Canis lupus*. Also in preparation is a monograph on the otter *Lutra lutra*. Since 1990, volumes of the *Checklist of Animals of Poland* have appeared successively, with the aim of fully listing the country's animals as recorded anywhere within Poland. The last volume was published in 1997. The year 2000 saw the appearance of a work concerning Poland's reptiles and amphibians and representing a summary of knowledge on these groups. Work is also ongoing on the preparation and publication of a volume entitled *Vertebrates - A Polish Red Book of Animals*. In contrast, there is much less information on the places and habitats in which animal species in Poland occur. Equally, the level of understanding of the vertebrate fauna is much higher than that concerning invertebrates.

An example of a reconnaissance of biological diversity at the supraspecific level could take the form of the analyses carried out to determine the typological diversity of plant communities in Poland. It is worth stressing here that Poland is one of only a few countries in which the vegetation is exhaustively known, described in a modern way and documented reliably. Current (2001) data indicate 482 plant associations in Poland, within 146 alliances, 60 orders and 41 classes. Among the associations, c. 10% are alpine or subalpine in character, with more than 95% being natural, Montane and submontane associations in turn represent 16% of the total number, and 75% of these are natural communities. Upland and lowland communities account for 69% of the total, and among these some 49% are natural, while 30% are semi-natural and the remainder markedly synanthropic. This leaves about 5% of communities which are associated with the Baltic coast. Among these some 95% are natural. Altogether, natural communities represent almost 61% of associations, while 25% are semi-natural and only c. 14% synanthropic. The structure in terms of area is of course markedly different, with synanthropic (mainly segetal and ruderal) communities accounting for 55% of the country's area, as compared with the 10% that is occupied by fully-natural associations.

An attempt at the bringing-together of available data at the supraspecific level - as well as their augmentation by extra studies - is to be found in the *Red List of Marine and Coastal Biotopes of the Polish Zone of the Baltic Sea*, compiled in 1997. This includes a listing of biotopes and main grops of flora characteristic of them, as well as an assessment of the most important factors of threat. The information contained therein was also used in describing the Polish Sea Areas for the *Red Book of Baltic Sea Biotopes* published by HELCOM. However, there is no programme that would take account of the inventorying of species and ecosystems with the widest possible range of flora and fauna, or of the identification and assessment of the influence exerted by the main factors of threat, with account taken of variability of a short-term or long-term nature.

Where lacustrine ecosystems are concerned there has not so far been a national system of

inventory subject to ongoing modification. However, there is a requirement that lakes put to economic use be the subjects of management reports detailing, *inter alia*, their morphometry and hydrology, as well as a characterisation of the main assemblages of organisms and an assessment of the trophic status of the ecosystem. Also subject to periodic review are the lake ecosystems enjoying legal protection, for example in Nature Reserves. Other lakes are studied to the extent that they are of some academic interest. In fact, a subject of special interest are the lakes of international significance listed under the *Ramsar Convention*.

Published periodically - usually at intervals of between ten and several tens of years - are catalogues of Polish lakes containing up-to-date data on numbers, morphometry and general state. The last full catalogue of Polish lakes was published in the years 1991-2.

An example of a summary of inventorying work might be such cartographic compilations as: The *Polish Ornithological Atlas* containing information on the spatial distribution of birds, the *Atlas of the Distribution of Mammals in Poland*, the *Atlas of the Distribution of Trees and Shrubs in Poland*, the *Large-Scale Forest Inventory*, the *Atlas of the Distribution of Cryptogamous Plants in Poland* (with newer volumes on bryophytes and lichens), or the *Atlas of the Distribution of Vascular Plants in Poland*, worked on for more than 20 years, whose publication in the second half of 2001 is foreseen. Also of great importance are the newer publications of this type that are of a local nature, foremost among which being *The Geobotanical Atlas of the Lower Bug* (2000) or the *Ecological Atlas of the Cryptogams of Białowieski National Park* (1997). Further works of particular importance include the valuations such as *A characterisation and valuation of wetlands and grasslands in Poland as regards environmental protection*. produced under the guidance of the Institute of Melioration and Grasslans in Falenty; the *Map of nature refuges of international significance* devised within the framework of the international CORINE-Biotopes Programme by the Institute for Nature Conservation of the PAS in Kraków; and the natural valuation of the country carried out in the course of the delimitation of the National Ecological Network ECONET-POLSKA. On the regional scale there are also protection plans for protected areas, natural valuations, studies of the conditioning and directions of development in gminas, etc.

The first attempt to bring together information on the natural riches of Poland at the given time was the *Polish Biological Diversity Study* prepared in 1991 to meet the needs of UNEP. The systematic (10-yearly) compilation of such a report should constitute a particularly valuable source of assistance in the assessment of human influences on nature, as well as the effectiveness of protective actions taken. Such cyclical reporting is one of the assumptions underpinning the monitoring of nature.

The introduction of the monitoring of nature in Poland, as a subsystem of the State Monitoring of the Environment (SME) coordinated by the Central Environmental Protection Insepctorate, began in the second half of 1998. In line with the adopted assumptions, it concentrates on the biocoenotic, ecosystemic and species levels and seeks to encompass all the important components of nature (be they valuable, rare or threatened; of "flagship" or "keystone" significance or in some way problematical).

Phase I of the work (1998-9) therefore sought to monitor 59 species of vascular plant threatened with extinction, 132 species of macrofungi, 35 species of lichen, 7 species of raptor (birds of prey), 5 species of game animal, 12 species of bat, carabid beetles and 7 species of harmful forest insect. In addition, the monitoring of terrestrial ecosystems took in 19 plant communities, while that concerning aquatic ecosystems was concentrated on 164 of the so-called "lobelia lakes", as well as Lakes Mikołajskie and Wigry, and selected sections of the Rivers Gwda and Pilica. Phase II, which began in 2000, will concentrate on the monitoring of further species of special concern, as well as further ecosystems reflecting Poland's biological diversity.

A particular kind of subject-related approach is the monitoring of the effectiveness of conservatorial action (actually in SME) taken since the mid 1990s. As part of this, a review of more than 500 reserves was carried out in the course of 5 years, with assessments made of the current state of the elements of nature the sites were designated to protect, as well as the existing or potential threats to them.

In parallel with the monitoring of nature, the State Monitoring of the Environment also encompasses monitoring of forests, with account being taken of soil and habitat conditions, climate, air pollution, stand characteristics and those of the forest-floor vegetation and damage to the assimilatory apparatus. Entomological monitoring (of 8 species) is also carried out within the framework of this subsystem, as is phytopathological monitoring (of fungal diseases).

The background to this now-developing natural monitoring of waters to characterise their biodiversity, is the monitoring of rivers, lakes and the Polish zone of the Baltic undertaken as part of State Environmental Monitoring and detailing the influence economic activity exerts on the quality of surface waters. The integration of the two types of monitoring will, it is assumed, supply the necessary data on the above impacts.

Independently of the State Monitoring of the Environment, a series of scientific centres and even individual specialists are engaged in studies or observations of a monitoring character. However, there is no organised system for the registration of such work, let alone for the compilation of results.

The course of work to diagnose the state of selected elements of biological diversity has usually been associated with an evaluation of the threats to it. It is very clear that each human activity brings certain particular consequences for the environment in which we live. As an element of biological diversity itself, the human individual impacts upon it in ways that are both direct and indirect. Unfortunately, the balance of these impacts is overall very much unfavourable. Pressure on nature intensifies with civilisational development, and each year brings further negative changes at almost every level of diversity: intraspecific (genetic), interspecific and above the species (at the ecosystemic and supraecosystemic levels). In Poland, these threats reflect the maintenance for a number of decades of a totalitarian system, as well as the failure of the then authorities to reckon on the costs to the environment of the policies they pursued. On top of this historical conditioning we have an economy in a far from ideal condition, a low national income and the difficulties of the transition period to contend with.

It should be mentioned that owing to diffrent to other European countries influences exerted by human managemanet (eneven industrialisation and urbanisation, traditional extensive agriculture retained over large and extensive and durable forest cover) Poland's biological diversity is among the richest in Europe.

The threats to biodiveristy in Poland are typical of modern civilisation, in that they include:

- changes in the features of natural habitats, biotopes and ecosystems brought about by such factors as eutrophication, drainage, acidification of soils, contamination with toxic chemical compounds or thermal changes, and succession changing valuable natural features;
- the transformation of the structure of the landscape and the liquidation or fragmentation of habitats and ecosystems as a result of changes in land use and succession phenomena;
- negative anthropopressure on species perceived as conflict-generating (undesirable), including those causing economic damage;
- excessive exploitation of the populations of selected wild-living species (e.g. fungi, herbs, snails, certain game animals);
- the confinement or abandonment of traditional methods of agricultural production;
- synanthropisation;
- the invasion of non-native species or their planned introduction[5];
- the genetic modification of species and their subsequent release into the environment.

A range of information about negative influence on biological diversity may be obtained within the framework of State Environmental Monitoring. The system has a "quality of the environment" block within which data are gathered and analysed in relation to indices and parameters characterising such components of the environment as air, water and soil quality; an "emissions" block focused on the assessment of pollution from point sources and an "assessments and prognoses" block allowing not only for diagnosis of the current situation, but also for the implication of certain causal factors underpinning the state of affairs, or even certain sectors and branches of the economy responsible for them. The effectiveness of actions taken is also assessed. Actions linking up with a negative influence on biological diversity were identified in the *Polish Biological Diversity Study*, the *Strategy for the Protection of Living Natural Resources*, the draft *National Strategy for the Conservation and Sustainable Use of Biological Diversity*, and other works.

An example of the subject-related monitoring of potential threats (leaded out of SME) might be that concerning the impact of motorways on the natural environment, for which the assumptions have been in the course of drafting since 2000.Another example of monitoring in this sphere is the assessment of certain agents threatening the coastline and Vistula Lagoon (done in cooperation with the Russian Federation). The results of this are presented in a book entitled

[5] in spite of a formal statutory prohibition of the introduction of non-native species into the environment

Ecosystem Modelling of Coastal Lagoons for Sustainable Management, which has now been prepared for publication. Studies have also been made of the potential influence on marine organisms of the electricity transmission line between Poland and Sweden. An identification of threats (on the basis of available information) in the Polish zone was also carried out as part of the contribution of Polish representatives to the work of the Council of Europe expert group preparing a *Code of Conduct for the Coastal Zone.*

Much is now known about the negative influence of different forms of economic activity in a basin, as well as of the use of inland waters, on the biological diversity of their ecosystems. Work is continuing to extend our knowledge in this sphere and to provide information on new phenomena, such as the influence of invasive and introduced species on the populations of autochthonous organisms.

Indicative methods are a good way of assessing the state of biological diversity. Examples might be the index of the mean individual biomass of carabid beetles used in tracing the changes ongoing in the forest environment under the influence of human activity, as well as the short- and long-term oscillations in natural conditions. This method is currently being used in State Environmental Monitoring.

The indices proposed for monitoring the biodiversity of surface waters are based on primary features (species structure, estimated abundance) of characteristic groups of lake organisms (the littoral vegetation, zooplankton, molluscs, large near-bottom crustaceans and fish) and those of rivers (amphipods, insect larvae, molluscs and fish). Their indicative role is tested in the stage of natural monitoring foreseen for the years 2000-2001.

However, there remains a need for the further seeking-out of indicator organisms, as well as means by which to make rapid, simplified, assessments of the state of biodiversity and monitor the changes therein. Teledetection is one such instrument, which allows for the mapping of land use, and in consequence real vegetation (following field checks). Providing a basis for this kind of work in Polish conditions are panchromatic, colour air photographs taken over most of the country in the years 1996-8 at a scale of 1:26 000. Photographs on other scales are produced for selected regions according to need. Registration of the state of four trial areas is also being carried out as part of the implementation phase of the nature-monitoring subsystem of State Environmental Monitoring.

Poland plays its part in the work of those international organisations (like HELCOM and ICES) working to devise a concept for bioindication of the quality of the marine environment. This requires much further work, however. One of the attempts made lies within the framework of the international BIOMARE project involving Polish institutions and working to devise indicators of biological diversity and principles for monitoring. A submission to the EU for co-financing of the project is currently being worked upon, and the matter has also been announced within the Fourth *Baltic Sea Regional Project* of the Global Environmental Facility.

Poland is a signatory to the *International Undertaking on Plant Genetic Resources for Food and Agriculture* of the FAO (8/83). In accordance with its provisions, plant genetic resources are considered a common good of humankind and should be the subject of unrestricted access.

Poland is thus consistent in meeting its obligations of ensuring free and unpaid access to the genetic resources gathered in gene banks, for the needs of scientific research and the breeding and preservation of genetic resources. Representatives of Poland are also participating in negotiations over a new international agreement on genetic resources that are being held under the aegis of the FAO's Commission on Genetic Resources in Food Production and Agriculture.

Since 1982, Poland has been active in regional undertakings seeking to conserve, document and utilise genetic resources. These include the *European Cooperative Programme for Crop Genetic Resources Networks* (ECP/GR), or ESCORENA. ECP/GR is a basic system for the protection of genetic resources in Europe whose aim is to ensure the long-term preservation and enhanced use of the genetic resources of plants in Europe. The programme is coordinated by the International Plant Genetic Resources Institute (IPGRI), financed by member states and headed by a Committee comprising representatives of those states. The Programme for the Conservation of Plant Genetic Resources is financed from the Fund for Biological Progress in Agriculture, on the basis of a Regulation of Poland's Minister of Agriculture issued annually.

Polish academics also participate, on the basis of bilateral agreements or direct inter-personal contacts, in reconnaissance studies concerning the taxonomic diversity of elements of the flora (fungi, bryophytes and orchids) and invertebrate fauna (*Arachnida* and *Insecta: Heteroptera, Homoptera, Coleoptera, Diptera, Lepidoptera* and *Orthoptera* in Europe, Africa (Ethiopia, Ivory Coast, South Africa), Asia (the Mediterranean and South Korea), Australia and Oceania and South America (the area of the Guianas and Brazil).

Taxonomy

Issues of taxonomy, including the Global Taxonomy Initiative, are among the scientific issues not accorded high-priority status in Poland at present, on account of the shortfalls in available funding. The work so far carried out in this field has not been incorporated within a single national programme seeking to offer a better understanding of taxonomic diversity.

There is no national action coordinated, supported or initiated by the national authorities that is directed towards the development of taxonomy, the dissemination of the existing databases, the creation of conditions for the preservation of collections, the training of specialists in this field, international cooperation, etc. Nevertheless, a number of scientific centres or individual specialists are working in the direction of the organisation of taxonomic data on the one hand, or its dissemination and propagation on the other. For example, work is being done on the organisation of a local-level, diffuse network of archives of phytosociological documentation in line with a uniform model based on the TURBOWEG system allowing for the mutual exchange of materials. Taxonomic information on the species diversity of the flora and fauna is disseminated by way of the specialist publications (e.g. *Flora Polski, Fauna Polski*) considered in the first part of the chapter.

The taxonomic reconnaissance of the national biodiversity is relatively well-advanced in relation to both the specific and supraspecific levels (e.g. the syntaxonomic knowledge of plant communities). At the same time, scientific circles are aware of the groups of species, communities, regions or dynamic topics that should come to be understood in a more profound

manner. An unofficial list of such subjects is discussed at conferences, symposia or sittings of scientific societies.

Training in taxonomy comes within the teaching programmes of all the higher education establishments. In addition, one-off courses are organised according to need for employees of the forest services or those of the National Parks. Efforts to raise qualifications, international exchanges and other activities in this sphere are all engaged in individually by those interested.

Article 8 In situ conservation [excluding Articles 8h and 8j]

70. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High	×	b) Medium		c) Low	
71. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate	×	c) Limiting		d) Severely limiting	
Further comments on relative priority and on availability of resources					
Actions for the sake of the *in situ* conservation of biological diversity have been taken in Poland since historical times. Different degrees of priority have of course been attached to these measures in different periods, though they have certainly been regarded as of the highest rank in the last decade. Equally, however, as with other fields documented in the report, so here too the availability of resources is insufficient to meet needs.					

72. Has your country established a system of protected areas which aims to conserve biological diversity (8a)?	
a) system under development	
b) national review of protected areas coverage available	
c) national protected area systems plan in place	×
d) relatively complete system in place	
73. Are there nationally adopted guidelines for the selection, establishment and management of protected areas (8b)?	
a) no	
b) no, under development	
c) yes	
d) yes, undergoing review and extension	×
74. Does your country regulate or manage biological resources important for the conservation of biological diversity with a view to ensuring their conservation and sustainable use (8c)?	
a) no	
b) early stages of development	
c) advanced stages of development	
d) programme or policy in place	×
e) reports on implementation available	
75. Has your country undertaken measures that promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings (8d)?	
a) no measures	
b) some measures in place	
c) potential measures under review	
d) reasonably comprehensive measures in place	×
76. Has your country undertaken measures that promote environmentally sound and sustainable development in areas adjacent to protected areas (8e)?	
a) no measures	

b) some measures in place	
c) potential measures under review	×
d) reasonably comprehensive measures in place	
77. Has your country undertaken measures to rehabilitate and restore degraded ecosystems (8f)?	
a) no measures	
b) some measures in place	×
c) potential measures under review	
d) comprehensive measures in place	
78. Has your country undertaken measures to promote the recovery of threatened species (8f)?	
a) no measures	
b) some measures in place	×
c) potential measures under review	
d) comprehensive measures in place	
79. Has your country undertaken measures to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology (8g)?	
a) no measures	
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	×
80. Has your country made attempts to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and sustainable use of its components (8i)?	
a) no	
b) early stages of development	
c) advanced stages of development	×
d) programme or policy in place	
e) reports on implementation available	
81. Has your country developed and maintained the necessary legislation and/or other regulatory provisions for the protection of threatened species and populations (8k)?	
a) no	
b) early stages of development	
c) advanced stages of development	
d) legislation or other measures in place	×
82. Does your country regulate or manage processes and categories of activities identified under Article 7 as having significant adverse effects on biological diversity (8l)?	
a) no	
b) under review	
c) yes, to a limited extent	×
d) yes, to a significant extent	

If a developed country Party -	
83. Does your country cooperate in providing financial and other support for *in- situ* conservation particularly to developing countries (8m)?	
If a developing country Party or Party with economy in transition -	
84. Does your country receive financial and other support for *in situ* conservation (8m)?	
a) no	
b) yes (if so, please give details below)	×

Decision II/7 Consideration of Articles 6 and 8 of the Convention

85. Is action being taken to share information and experience on implementation of this Article with other Contracting Parties?	
a) little or no action	
b) sharing of written materials and/or case-studies	×
c) regional meetings	×

Further comments on implementation of this Article

Actions taken for *in situ* conservation

The conservation of biological diversity *in situ* (at the place of occurrence) is pursued passively (through the bringing under legal protection of areas or species), as well as actively (via programmes of renaturalisation, reinstatement, etc.). The legal bases for protection are as set out in the Nature Conservation Act of 16.10.1991 with later amendments (most recently in late 2000).

It is on the strength of the above Act that the majority of the most-valuable natural areas in Poland have been brought under protection. As of late 1999 the country had: 22 National Parks (covering a total of 307,015 ha); 1269 Nature Reserves (144,087 ha); 120 Landscape Parks (2,450,816 ha) and 403 Areas of Protected Landscape (7,152,557 ha). Other forms of areal nature protection are the Areas of Ecological Utility, now numbering 5308 (and covering 38,135 ha), Documentation Sites (70: 887 ha), Nature and Landscape Complexes (155: 65,311 ha) and Monuments of Nature (33,243 including 30,630 trees and groups of trees). The total area under one or other of these different forms of protection represents 32.5% of the country's area.

Although a decided majority of Poland's worthwhile natural land is now under protection within the National System of Protected Areas, this by no means rules out the necessity for further work to extend it being carried out. Equally, the process is now very much osbtructed by a general hostility on the part of the (rural) public to nature conservation seen as an element limiting regional development. The marine ecosystems are also ones still in need of protection. Thus, within the framework of HELCOM (*Helsinki Convention*) cooperation on the Baltic System of Protected Areas (BSPA), a project for such areas within the Polish zone has been prepared[6]. The protection advocated would encompass five near-shore sea areas contiguous with existing terrestrial protected areas, namely the Woliński National Park (whose marine protected area was approved in 1996), the Słowiński NP, the Nadmorski Landscape Park and the Kępa Redłowska and Mierzeja Wiślana (Vistula Spit) areas. Two areas further out from the coast were also listed, in the areas of the Odrzana and Słupsk Shelves. A project for the first of these has been devised in close cooperation with the German Party.

A number of protected areas have gained statuses of international importance. Thus the Białowieski (Białowieża) National Park is on the list of World Heritage Sites, while 8 objects are World Man and Biosphere Reserves (the Babia Góra, Białowieża, Bieszczady Mountains, Kampinos, Karkonosze Mountains, Słowiński and Tatra Mountains National Parks and the Lake Łuknajno Reserve). The 8 wetland sites listed under the Ramsar Convention are the Lakes Łuknajno, Karaś, Oświn and Świdwie Nature Reserves, the Słońsk and Milicz Fishponds NRs and the Biebrza and Słowiński National Parks). Finally, four of the aforementioned objects form parts of Transboundary Biosphere Reserves (the Polish-Belarussian IBR of the Białowieża/Belovezskaya Forest; the tripartite Polish-Slovakian-Ukrainian Eastern Carpathians IBR, the Polish-Slovakian Reserve in the Tatra Mountains and the Polish-Czech IBR in the Karkonosze/Krkonose Mountains).

The Minister of the Environment has designated c. 50% of the area run by the State Forests (over 3.5 million ha) as protective forest (which may be soil-protecting or water-protecting; constitute a valuable fragment of native nature; be of scientific significance; or constitute a protective zone around a large city, health resort or place of recreation). In addition, eleven Promotional Forest Complexes with a total area of 446,000 ha have been established in order that they might serve as areas of particular ecological, educational and social significance.

[6] Part of the near-shore zone of the sea (such as in the Bay of Puck) is under protection within the framework of the system of Landscape Parks.

A further important element to measures in the name of *in situ* conservation has been the designation of 138 bird refuges in Poland, in line with provisions set out in *the Bern Convention*[7].

The Nature Conservation Act also provides for species protection, which is introduced with a view to safeguarding wild-living plants and animals of species that are rare or endangered, as well as preserving species and genetic diversity. Protection is extended to species by the Minister of the Environment, in agreement with the Minister of Agriculture and Rural Development. The legislation in this matter contains a list of species enjoying protection, the way in which this is to be implemented and the relevant restrictions, orders and bans set out in the Nature Conservation Act. Derogations from bans on the taking of protected plants and animals - and permits for other activities subject to restrictions, bans or orders - are issued by the Minister of the Environment. Species not brought under protection by the Minister may nevertheless have protection extended over them by voivodes (governors of provinces) or by local councils at *gmina* level. Currently in force in this regard are:

- the Regulation of the Minister of the Environment of January 1st 1995 on the Species Protection of Animals;
- the Regulation of the Minister of the Environment of April 6th 1995 on the Species Protection of Plants.

In accordance with these Regulations, 213 species of plant (or less than 10% of the Polish flora) enjoy strict protection, while a further 17 are under partial protection (in that they can be harvested, but only with the agreement of the Minister). 25 species of fungi and 240 species of lichen enjoy strict protection; while 609 species of animal are also protected. Irrespective of the above Regulation, a group of several tens of game animal species enjoy protection under the regulations of the Hunting Law Act, while fish and crayfish are protected under the Fishing Law Act. Decisions on species protection may also be taken by way of a Regulation of a voivod or a resolution of a gmina council.

Important where animals are concerned are provisions dealing with the conservation of the habitats of protected species, as well as those concerning the designation and protection of sites of the breeding and regular occurrence of certain protected species. The protection of breeding places entails, *inter alia*, the designation by the voivod of protective zones: a closer zone of stricter protection and a more distant zone of partial protection around the nests of birds of prey, as well as the places of occurrence of several other species. Designated on State Forests land are some 2605 protective zones for the nesting of birds, including 761 sites for the black stork *Ciconia nigra*, 40 for the osprey *Pandion haliaeetus* and 43 for the eagle owl *Bubo bubo*. Together the protective zones around the nests of protected birds cover 54,161 ha.

A concept for the NATURA 2000 network in Poland was devised in the year 2000, entailing as it does the protection of the most naturally-valuable habitats and places of occurrence of

[7] This was at the same time in accordance with the provisions of the Bern Convention

certain species. The need to implement the programme follows from provisions in the *Wild Birds Directive* and *Habitat Directive* of the EU. A special place in the protection of forest biological diversity is that held by the protection of genetic diversity through a special programme entitled *The Programme for the Preservation of Forest Genetic Resources and the Selective Cultivation of Forest Trees in Poland for the years 1991-2010*. Developed actions within the programme take in both *in situ* and *ex situ* means. *in situ* forms implemented up to the year 2000 included the identification and bringing under protection of 6664 plus trees; the establishment of 899 ha of seed orchards and 481 ha of seedling seed orchards; the establishment of 28,883 ha of progeny plantations and the bringing under protection and special management of 499 ha of permanent seed stands and 1737 ha of preservational stands.

Active forms of *in situ* protection are most often programmes for the restoration of degraded ecosystems and the reinstatement or reintroduction of endangered or threatened species. Projects of special significance in Polish conditions are those directed at:

- the management of industrial areas, especially mine spoil heaps and workings (as in the Upper Silesian Coalfield, the Lower Silesian Copperfield, the open-cast brown coal workings in Bełchatów, Turoszów and Konin, the sulphur fields in Tarnobrzeg, etc.);
- the restocking of forest stands (especially in cases of Scots pine *Pinus silvestris* onocultures), with a view to their being better suited in their species composition to local soil and habitat conditions;
- the restoration of forest ecosystems degraded by impacts that may be biotic (insect pests, fungal diseases) or abiotic (the drying-out of habitats, air pollution and fire);
- the restoration or improvement of water relations degraded by direct human activity (e.g. drainage, the destruction of wetlands) or the climatic changes observed in recent years;
- the optimisation of the spatial structure of the landscape, including the afforestation of fallow land with the lowest soil quality, the creation of ecological corridors and the shaping of ecotonal zones.

The most recent period has also seen a series of programmes undertaken for the active protection of species threatened with extinction. These include the reintroduction of the lynx *Lynx lynx* to Kampinos National Park, the reintroduction of the eagle owl *Bubo bubo* to Woliński NP and the reintroduction of the apollo butterfly *Parnassius mnemosyne* into the Pieniny Mountains NP. Work on the national scale has in turn included continued efforts to protect the European bison *Bison bonasus;* reinstate the peregrine falcon *Falco peregrinus*, the sturgeon *Acipenser sturio* and the vimba *Vimba vimba*; protect and reintroduce the

European pond terrapin *Emys orbicularis* and the beaver *Castor fiber;* conserve bats *Chiroptera;* protect seals *Phocidae* in the Polish zone of the Baltic Sea, etc. A good example of public involvement in this process are the projects implemented by the Polish Angling Union with a view to restocking local populations of fish, especially salmonids. To date, however, there has been no success with programmes to reintroduce the black grouse and capercaillie (*Tetrao tetrix, T. urogallus*), or the great bustard *Otis tarda*.

Active conservation is obtained when the negative influences of civilisational development are counteracted. An example might be the human-assisted crossing of roads by amphibians returning to their breeding grounds, the fencing-off of roads and the introduction of crossings for animals, the marking of power lines, etc. However, such action is as yet carried out on far too narrow a scale in relation to need.

The great part of this work in active conservation is undertaken thanks to the commitment of NGOs. The objectives and results are popularised throughout society, with some evoking widespread interest that even extends abroad. Cases in point here are the campaign to protect the Białowieża Primaeval Forest and the wolf *Canis lupus*.

When it comes to promoting the protection of ecosystems, habitats and species, there is broad activity undertaken by way of formal education (in schools at all levels), as well as the informal kind engaged in mainly by the nature conservation, National Park, Landscape Park and State Forests services, as well as the NGOs. The mass media also play a major role in the process, and when all is combined it has often proved possible to interest the private sector in these projects, and to encourage it to co-finance them.

A particular form of *in situ* conservation is the very use of the resources of biological diversity, albeit done in such a way as to comply with the principles for its protection and sustainable use. At the general level this is guaranteed by Acts of law in force, notably: The Nature Conservation Act 1991, the Environmental Protection and Management Act 1980, the Forests Act 1991, the Act on the Protection of Agricultural and Forest Land of 1995 and a series of others. The objective is also detailed in Government-adopted strategic documents, such as *Poland 2025 - A Long-Term Strategy for Sustainable Development* and the *National Strategy for Regional Development 2001-2006* (adopted in 2000); as well as in sectoral policies like the *National Policy on Forests* (adopted 1997), the *Cohesive Structural Policy for the Development of Rural Areas and Agriculture* (adopted 1999), the *Concept for a National Spatial Planning Policy* (also adopted 1999) and *the Second National Environmental Policy* (adopted in 2000). A *National Fisheries Strategy* is also being devised at present. In turn, implementation at the local level is ensured by the instruments in force for the management of biological resources.

A further example of actions to harmonise the present utilisation of biological diversity with principles for its protection is the agro-environmental programme of which the draft version appeared in 2000 with a view to implementation within the framework of the EU's pilot SAPARD Programme for the support of development in agriculture and rural areas. SAPARD assumes three basic direction of policy, i.e. a) the conservation of biological diversity in agricultural areas, b) the protection of the agricultural landscape and environment, and c) the development of environmentally-friendly agriculture. However, *in situ* protection is not confined to wild-living species, since it also takes in livestock and crop plants. 1999 saw a start made to work on a National Programme for the Protection of Genetic Resources, wherein objectives and priorities for protection were accompanied by precisely-defined methods and organisational frameworks for the planned actions.

An integral part of the Programme has been the breeding programmes designed to ensure the protection of the genetic resources of different populations of livestock animals - which was accepted for implementation by the Minister of Agriculture and Rural Development in May 2000. These programmes contain information on the history behind the emergence of given breeds of livestock, as well as justifications for their protection, detailed objectives and a timetable for action and a defined scope of measures for *in situ* and *ex situ* protection. The programmes also define the methods of breeding work and the organisations responsible for carrying them out. A total of 32 programmes for the protection of genetic resources are detailed, in relation to 75 breeds, varieties and lines of livestock animals:

Cattle - the Polish red;

Horses - the Polish pony and *hucul*;

Swine - the Puławska, *złotnicka pstra* and *złotnicka biała* breeds:

Sheep - the *wrzosówka, świniarka* and *olkuska* breeds, the coloured variant of the Polish mountain sheep, the Wielkpolska sheep, the *żelaźnieńska* and *uhruska* varieties of the Polish lowland sheep, the corriedale, the Pomeranian, the *kamieniecka*, the coloured variant of the merino, the *leine* and the booroola merino;

Hens - the programme includes 10 breeds and types: the *zielononóżka kuropatwiana* ZK and Z11, the *żółtonóżka; kuropatwiana,* the polbar, the Rhode Island Red R11 and K22, the Rhode Island White A33, the Sussex S66 and the leghorns G99 and H22;

Geese - the programme includes 16 breeds and varieties: those named after their places of development in Zator, Biłgoraj, Lublin, Kielce, the Podkarpackie region, Kartuzy, Rypin and Suwalki, as well as the *garbonos*, the Pomeranian, the roman, the Landes SD-01, the White Italian WD-02 and ND-12, the Slovakian and the *gorkowska* variety;

Ducks - the programme takes in 13 breeds and types: the Polish Peking P33, P22 and P11, the miniduck K2, the Khaki Campbell Kh1, the Danish Peking P8, the English ducks A1,A2 and A3, the French Peking P9, the Orpingtons 01 and KhO1, and the synthetic group A;

Fur-bearing animals - the ferret, beige chinchilla, white *popełniański* rabbit, Polish pastel fox and Polish white-necked fox.

bees of the Central European race - of the northern, Asta, Kampinowska and Augustowska lines.

fish - rainbow trout of the spring and autumn spawning strains and carp of the Gołysz, Knyszyn, Ukrainian, Lithuanian, Starzawa and Zator lines.

<u>The system and instruments for the management of biological resources</u>

Poland has a cohesive and well-developed system for the management of biological resources. In accordance with the binding Act on the Divisions of the Governmental Administration dated 4.09.1997 (with later amendments), the remit of the Minister of the Environment extends to the administration of nature conservation and the protection of forest and water

resources. The protection of the natural resources of the Baltic Sea also come under the Minister, within the framework of the ratified *Helsinki Convention*. Tasks in the conservation of biological diversity are completed with the assistance of the Chief Nature Conservator. In accordance with provisions set out in the *Second National Environmental Policy*, it is planned to call into being a distinct Office of the Chief Nature Conservator, which will serve as an agency under the supervision of the Minister of the Environment. At regional (in fact provincial) level, the management of natural resources is within the purview of the voivod, i.e. the field representative of the central administration. The voivod is assisted in the discharge of his or her duties by the Voivodship Nature Conservator. A whole host of tasks linked with both the management and monitoring of the environment is also in the hands of local government.

The tools used in this process are the protection plans of protected areas, management plans and protection programmes of Forestry Districts, permits and consents issued under Water Law, geological documentation and concessions, environmental impact assessments, studies of the conditioning and directions of development in *gminas*, regional and local development strategies (including especially those for sustainable development), local Agenda 21s, etc. These documents are at the same time instruments by which to promote the sustainable development of naturally-valuable areas, including those within or adjacent to legally-protected sites.

The introduction of sustainable development principles (including those concerning biodiversity) is first and foremost achieved in areas enjoying legal protection (mainly Landscape Parks and Areas of Protected Landscape), as well as in the buffer zones of National Parks, Landscape Parks and Nature Reserves. A principle whereby managers of these areas should give their consent to the local physical development plans of *gminas* makes it possible for actions threatening nature to be checked upon and as necessary controlled.

Actions in the name of *in situ* conservation are financed from both national resources and those deriving from foreign aid. These are discussed in detail in Chapter 20.

Biological safety associated with genetically-modified organisms

Article 37a of the Environmental Protection and Management Act is concerned with the release of genetically-modified organisms (GMOs) into the environment. It defines GMOs and sets out the procedures whereby their release into the environment may take place. The *Act on the Principles for the Detailed Control of Foreign Trade in Goods and Technologies* makes reference to international agreements and obligations in detailing the goods subject to control. Among these are GMOs of nucleic acid sequences with pathogenic properties as listed by the Minister of the Economy in agreement with the Minister of Foreign Affairs. The Act covers the export, import and transit of goods and technologies.

Poland is signatory to the White Book, and as such has worked on a draft Act to regulate matters of GMOs. The Bill is an entirely new regulation which fills loopholes in the Polish legal system. It provides a legal basis for the contained use of GMOs, their introduction into the environment and the inclusion for trade of products comprising or containing GMOs. The

Bill offers full adjustment of Polish law to the regulations in force in the EU. In scope it also extends to issues of the modification of human cells, food products and pharmaceuticals. There is also separate regulation of matters concerning intellectual property rights in relation to GMOs.

The Bill proposes provisions that would call into being the units authorised to carry out research and issue opinions as regards GMOs. These units will be designated and established by way of a Regulation of the Minister with responsibility for the environment.

Further provisions set out an obligation that users of GMOs obtain the appropriate consent for the contained use of GMOs or their intentional release into the environment for purposes other than introduction for trade, as well as permits for the introduction into trade of GMO products, for their export or transit.

The obtainment of a consent or permit for the aforementioned processes is without prejudice to the obligation to obtain a permit or be in receipt of other decisions as may be required under separate regulations. A necessary condition in the obtainment of agreement is the carrying-out of an assessment regarding the threats posed to the environment and human health. A new, more important, element of the Act is the assurance of public participation in the decision-making process.

Under the Act, the Minister of the Environment will exercise supervision over compliance with the regulations. Monitoring in regard to GMOs will be carried out by employees of the Ministry of the Environment authorised by the Minister, as well as by organisational units subordinated to the Minister and the already-existing inspection services - each within the sphere of their own remits. Since appropriate control services already exist, the Bill anticipates the conferment upon them of an additional duty to check on matters connected with GMOs. This is justified by both economic and administrative considerations.

In accordance with the *Nature Conservation Act*, GMOs may not be introduced into National Parks or Nature Reserves.

Article 8h Alien species

86. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	×	c) Low	
87. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	×
d) Severely limiting					
Further comments on relative priority and on availability of resources					
Matters of the infilitration of Polish territory by alien species are considered important, though they have not so far constituted a major problem, except in one or two cases. The counteraction of invasions of such species is a very difficult task, while the means designated for such actions are limited					

88. Has your country identified alien species introduced?	
a) no	
b) only major species of concern	
c) only new or recent introductions	
d) a comprehensive system tracks new introductions	
e) a comprehensive system tracks all known introductions	×
89. Has your country assessed the risks posed to ecosystems, habitats or species by the introduction of these alien species?	
a) no	
b) only some alien species of concern have been assessed	×
c) most alien species have been assessed	
90. Has your country undertaken measures to prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species?	
a) no measures	
b) some measures in place	×
c) potential measures under review	×
d) comprehensive measures in place	

Decision IV/1 Report and recommendations of the third meeting of SBSTTA

91. Is your country collaborating in the development of projects at national, regional, sub-regional and international levels to address the issue of alien species?	
a) little or no action	×
b) discussion on potential projects under way	×
c) active development of new projects	
92. Does your national strategy and action plan address the issue of alien species?	
a) no	
b) yes – limited extent	×
c) yes – significant extent	

Decision V/8. Alien species that threaten ecosystems, habitats or species

93. Is your country applying the interim guiding principles for prevention, introduction and mitigation of impacts of alien species in the context of activities aimed at implementing article 8(h) of the Convention, and in the various sectors?	
a) no	
b) under consideration	
c) limited implementation in some sectors	
d) extensive implementation in some sectors	×
e) extensive implementation in most sectors	
94. Has your country submitted case-studies to the Executive Secretary focusing on thematic assessments?	
a) no	×
b) in preparation	
c) yes	
95. Has your country submitted written comments on the interim guiding principles to the Executive Secretary?	
a) no	×
b) yes	
96. Has your country given priority to the development and implementation of alien invasive species strategies and action plans?	
a) no	
b) yes	×
97. In dealing with the issue of invasive species, has your country developed or involved itself in mechanisms for international co-operation, including the exchange of best practices?	
a) no	
b) trans-boundary co-operation	×
c) regional co-operation	
d) multilateral co-operation	
98. Is your country giving priority attention to geographically and evolutionarily isolated ecosystems in its work on alien invasive species?	
a) no	×
b) yes	
99. Is your country using the ecosystem approach and precautionary and bio-geographical approaches as appropriate in its work on alien invasive species?	
a) no	
b) yes	×
100. Has your country developed effective education, training and public-awareness measures concerning the issue of alien species?	
a) no	
b) some initiatives	×
c) many initiatives	
101. Is your country making available the information which it holds on alien species through the CHM?	
a) no	

b) some information	×
c) all available information	
d) information available through other channels (please specify)	
102. Is your country providing support to enable the Global Invasive Species Programme to fulfil the tasks outlined in the decision and its annexes?	
a) no	
b) limited support	×
c) substantial support	

Further comments on implementation of this Article

A subject report on alien and invasive species was submitted to the Convention Secretariat in 2000. This is now available on the Internet at www.biodiv.org in the section on national reports.

A database on alien and invasive species has been prepared in Poland. It describes c. 300 species of vascular plant, vertebrate and invertebrate. The work is being done at the Institute of Nature Conservation of the Polish Academy of Sciences in Cracow. Poland also participates in the work of the intergovernmental group involved in matters of alien species.

Where the aquatic environment is concerned, our understanding of the phenomenon of incursions by alien species differs markedly from one systematic group to another. This despite the fact that the appearance of hydrobiont species new to Poland has been observed for many decades now. In general we known more about the occurrence of alien animals in our waters, than about plants. However, the greater part of the information on animals is concerned with groups that are utilised economically, such as fish; or else with organisms that develop en masse and can thus exert a major influence on the structure and functioning of aquatic ecosystems.

In the case of the aforementioned species of economic importance - among which the origins of species are better known - the share of aliens is surprisingly (shockingly) high. The present freshwater fauna of fish and cyclostomes extends to 75 species, of which only 54 are native to Poland, leaving 21 that are alien and have been introduced deliberately or else by accident. Among the four species of crayfish recorded in Poland, only *Astacus astacus* is native.

Of course, the appearance of new species in Polish waters may reflect natural factors as well as human activity. The former might include the carriage of individuals or resting stages by incoming migrants (birds, fish or mammals), as well as the expansion of ranges, as is being noted in the case of many representatives of the Pontic-Caspian fauna. Human agency in turn includes deliberate introduction of economically-valuable species (especially in fish stocking), or else accidental introductions via ballast-water discharges from ships, etc.

In connection with the intensification of the carriage of cargo by sea in recent decades, the coastal marine fauna of Poland has undergone significant change. The species brought in (of which an example might be the American polychaete *Marenzelleria viridis*) are capable of forming large populations in their new environment, even coming to dominate the communities they have invaded.

The specific character of the Baltic Sea ensures that the appearance of new species is a

permanent element to the development of the flora and fauna. To date it has been possible to note 100 species which have moved, or been brought by human agency, into the Baltic (as taken to include the Kattegat). The alien species in the Polish zone are known about, being the subject matter for the Baltic Marine Biologists (BMB) Working Group and ICES, both of which have their representation of Polish scientists. It is therefore reasonably certain that the Baltic has not yet been penetrated by a species which could bring about changes of a catastrophic nature.

Assessments of the impact of alien species on the local faunas and ecosystems in which they appear are the subject matter of research and analysis at specialised scientific institutions and the departments or faculties of higher education establishments. The work is showing that a series of colonising and invasive species are capable of exerting a negative impact. For example, the aforementioned worm *M. viridis* does now account for up to 10% of the benthos in Poland's brackish marine waters, while the similarity of its ecological niche to that of native polychaetes (primarily the ragworm *Nereis diversicolor*) suggest the likelihood of a negative influence thereupon, as well as on amphipod crustaceans. Similar phenomena involving competition between invasive and local species are to be noted among the fish of Poland's coastal waters. The Bay of Gdańsk has recently seen the mass development of *Neogobius melanostomus*, which was probably brought in from the Caspian Sea area. This fish may provide competition for other species, all the more so since it is not exploited for consumption purposes. Research is underway on the development of the population, and the potential impact of the species on the environment.

Phenomena entailing the ousting of native species by aliens are also to be noted in freshwater habitats, as with the native crayfish *Astacus astacus*, whose place in most habitats has been taken by the American *Orconectes limosus*.

Poland has in place a statutory ban on the introduction of alien species into wild nature. Furthermore, the species spreading by natural means are well-known, especially where a threat to the native fauna is recognised. The appropriate research is being carried out, and attempts made to counteract, for example, the spread of the American mink *Mustela vison*, which poses a particular threat to waterfowl in Polish conditions.

A list of 251 species of xenophytes (i.e. plants of alien origin brought into and naturalised in Poland) was published in 1998. The aforementioned number represents a marked increase as compared with the situation in the 1960s and 1970s, though this very largely results from an intensification of research in more recent years. Within the group there are 135 taxa which remain at the epecophyte stage (which is to say that they have colonised anthropogenic habitats only). The remaining 116 species have penetrated semi-natural or natural communities (being agriophytes), and are thus a particular threat to the native flora. It is obvious that not all xenophytes have the same rank throughout the country. 23 species are "local" epecophytes, while some 31 are "local" agriophytes. Among the xenophytes, the European species are joined by taxa from analogous climatic and vegetational zones, mainly in North America and Asia. The share of annuals and tree and shrub species is also proportionally higher than is typical for our native flora.

Rules on the trade in alien species have been observed for several years now, with amendments having been made to the relevant Acts. The relevant services (especially the Customs Service) are being trained with a view to practical checks on compliance with the regulations being carried out.

It is not basically feasible to combat the spread of species whose incursions into Poland reflect a natural process of range expansion. However, species introduced deliberately or transported by mistake are the subject of a range of measures to limit their free transferral into the environment. In the case of hydrobionts, the measures to be referred to include:

- (where possible introductions are concerned), painstaking research into the biology and ecology of species prior to the taking of decisions, and the showing of a preference for species that do not breed naturally in Polish climatic conditions;
- sanitary studies of individuals to be introduced into the environment, with the rejection of those that are ill or parasite-infested;
- the introduction of new reared species into waters that are as isolated as possible from open surface waters (lakes and ponds without outflow);
- the bringing into force of detailed regulations on procedures with the bilge and ballast waters of vessels within the Polish zone of the Baltic or in port.

Where procedures with alien species are concerned, Polish academics are mainly involved in the exchange of information and person-to-person contacts with their counterparts abroad. An example here might be the role played by Polish scientists in the compiling of a monograph on the spreading zebra mussel *Dreissena polymorpha*. Originally an element of the Pontic-Caspian fauna, this species has been spreading for c. 200 years across Central and Western Europe (where its biology and ecology are now very well understood), and has also come to dominate in many North American basins in recent decades.

Perceiving the serious threats posed by alien species, Poland has amended *the Nature Conservation Act* accordingly (in December 2000). In addition, changes have been made to regulations on hunting, such that the open seasons for species like the American mink are extended.

Article 8j Traditional knowledge and related provisions

103. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium		c) Low	×		
104. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting	×	d) Severely limiting	
Further comments on relative priority and on availability of resources							
The rank assigned to this issue reflects the country's lack of traditional customs and practices of importance from the point of view of the conservation and sustainable use of biological diversity							

105. Has your country undertaken measures to ensure that the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity are respected, preserved and maintained?	
a) no measures	×
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	
106. Is your country working to encourage the equitable sharing of benefits arising from the utilization of such knowledge, innovations and practices?	
a) no	×
b) early stages of development	
c) advanced stages of development	
d) programme or policy in place	

Decision III/4 and Decision IV/9. Implementation of Article 8(j)

107. Has your country developed national legislation and corresponding strategies for the implementation of Article 8(j)?	
a) no	×
b) early stages of development	
c) advanced stages of development	
d) legislation or other measures in place	
108. Has your country supplied information on the implementation of Article 8(j) to other Contracting Parties through media such as the national report?	
a) no	
b) yes - previous national report	×
c) yes - CHM	
d) yes - other means (please give details below)	
109. Has your country submitted case-studies to the Executive Secretary on measures taken to develop and implement the Convention’s provisions relating to indigenous and local communities?	
a) no	×
b) yes	

110. Is your country participating in appropriate working groups and meetings?	
a) none	×
b) some	
c) all	
111. Is your country facilitating the active participation of representatives of indigenous and local communities in these working groups and meetings?	
a) no	
b) yes	×

Decision V/16. Article 8(j) and related provisions

112. Has your country reviewed the programme of work specified in the annex to the decision, and identified how to implement those tasks appropriate to national circumstances?	
a) no	×
b) under review	
c) yes (please provide details)	
113. Is your country integrating such tasks into its ongoing programmes, taking into account the identified collaboration opportunities?	
a) no	
b) not appropriate to national circumstances	×
c) yes – to a limited extent	
d) yes – to a significant extent	
114. Is your country taking full account of existing instruments, guidelines, codes and other relevant activities in the implementation of the programme of work?	
a) no	
b) not appropriate to national circumstances	×
c) yes – to a limited extent	
d) yes – to a significant extent	
115. Has your country provided appropriate financial support for the implementation of the programme of work?	
a) no	
b) not appropriate to national circumstances	×
c) yes – to a limited extent	
d) yes – to a significant extent	
116. Has your country fully incorporated women and women’s organizations in the activities undertaken to implement the programme of work contained in the annex to the decision and other relevant activities under the Convention?	
a) no	
b) yes	×
117. Has your country taken measures to facilitate the full and effective participation of indigenous and local communities in the implementation of the Convention?	
a) no	
b) not appropriate to national circumstances	×
c) yes – to a limited extent	

d) yes – to a significant extent	
118. Has your country provided case studies on methods and approaches concerning the preservation and sharing of traditional knowledge, and the control of that information by indigenous and local communities?	
a) no	
b) not relevant	✕
c) yes – sent to the Secretariat	
d) yes – through the national CHM	
e) yes – available through other means (please specify)	
119. Does your country exchange information and share experiences regarding national legislation and other measures for the protection of the knowledge, innovations and practices of indigenous and local communities?	
a) no	
b) not relevant	✕
c) yes – through the CHM	
d) yes – with specific countries	
e) yes – available through other means (please specify)	
120. Has your country taken measures to promote the conservation and maintenance of knowledge, innovations, and practices of indigenous and local communities?	
a) no	
b) not relevant	✕
c) some measures	
d) extensive measures	
121. Has your country supported the development of registers of traditional knowledge, innovations and practices of indigenous and local communities, in collaboration with these communities?	
a) no	
b) not relevant	✕
c) development in progress	
d) register fully developed	
122. Have representatives of indigenous and local community organizations participated in your official delegation to meetings held under the Convention on Biological Diversity?	
a) not relevant	✕
b) not appropriate	
c) yes	
123. Is your country assisting the Secretariat to fully utilize the clearing-house mechanism to co-operate closely with indigenous and local communities to explore ways that enable them to make informed decisions concerning release of their traditional knowledge?	
a) no	✕
b) awaiting information on how to proceed	
c) yes	
124. Has your country identified resources for funding the activities identified in the decision?	
a) no	

b) not relevant	×
c) partly	
d) fully	

Further comments on implementation of this Article

Matters of the knowledge and practices employed by indigenous peoples and the communities native to the country are of very limited application in Polish conditions. A good example of some that do exist might be such traditional agricultural practices influencing the conservation of biological diversity as the mowing of meadows in wetland areas, the maintenance of pastoralism and sheep grazing, the breeding and use of traditional breeds like the hucul horse used in forestry in place of machinery and traditional methods of regulating rivers using fascines. The issue of the safeguarding of local practices and knowledge is visible in actions to protect the landscape, as well as to reinstate or maintain traditional forms of the use of biological resources (e.g. support for traditional crafts and such professions as wickerworking).

Nevertheless, the series of questions do not apply to our country and answers have not been detailed in the tables.

Ethnic groups and communities in Poland participate in all spheres of life with the same rights as any citizen of Poland may expect. The Constitution guarantees such equality under the law, irrespective of nation, race or faith. Ethnic groups and communities enjoy the right of free association and establishment, and are free to pursue their own traditions and religious practices. They have the right to be represented, but are subject to the same obligations and duties as any citizen, including in regard to the protection of the natural environment and its resources. The state supports the development of local (indigenous) communities through the enfranchisement of local authorities at the gmina, poviat, voivodship and regional levels, allowing in this way for direct participation in the formulation and implementation of plans and strategies for areas in which people live. Regional social movements are to an ever greater degree becoming true guardians of regions' valuable cultural heritage, and are seeking out solutions by which to ensure its protection. The conferment of powers upon the local authorities is also ensuring a particular emphasis on the cultivation of tradition as a "selling point" attracting people to an area. However, there are no acts of law which would regulate concepts of traditional knowledge as intellectual property, or the benefits flowing from it.

Article 9 Ex situ conservation

125. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High	×	b) Medium		c) Low	

126. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting	×	d) Severely limiting	

Further comments on relative priority and on availability of resources

ex situ conservation resembles that *in situ* in having a long tradition in Poland. High priority is assigned to in national policy. However, as in the aforementioned case, the difficulties in a period of transformation have not allowed for the designation of funding in line with needs or implementational possibilities.

127. Has your country adopted measures for the *ex situ* conservation of components of biological diversity *native* to your country (9a)?	
a) no measures	
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	×

128. Has your country adopted measures for the *ex situ* conservation of components of biological diversity *originating outside* your country (9a)?	
a) no measures	
b) some measures in place	×
c) potential measures under review	
d) comprehensive measures in place	

129. If the answer to the previous question was yes, is this being done in active collaboration with organizations in the other countries (9a)?	
a) no	
b) yes	×

130. Has your country established and maintained facilities for the *ex situ* conservation of and research on plants, animals and micro-organisms that represent genetic resources *native* to your country (9b)?	
a) no	
b) yes – limited extent	
c) yes – significant extent	×

131. Has your country established and maintained facilities for the *ex situ* conservation of and research on plants, animals and micro-organisms that represent genetic resources *originating elsewhere* (9b)?	
a) no	
b) yes – limited extent	
c) yes – significant extent	×

132. If the answer to the previous question was yes, is this being done in active collaboration with organizations in the other countries (9a)?	
a) no	

b) yes	×
133. Has your country adopted measures for the reintroduction of threatened species into their natural habitats under appropriate conditions (9c)?	
a) no measures	
b) some measures in place	×
c) potential measures under review	
d) comprehensive measures in place	
134. Has your country taken measures to regulate and manage the collection of biological resources from natural habitats for *ex situ* conservation purposes so as not to threaten ecosystems and *in situ* populations of species (9d)?	
a) no measures	
b) some measures in place	×
c) potential measures under review	
d) comprehensive measures in place	
If a developed country Party - 135. Has your country cooperated in providing financial and other support for ex situ conservation and in the establishment and maintenance of ex situ conservation facilities in developing countries (9e)? ***If a developing country Party or Party with economy in transition -*** 136. Has your country received financial and other support for ex situ conservation and in the establishment and maintenance of ex situ conservation facilities (9e)?	
a) no	
b) yes	×

Further comments on implementation of this Article

Poland has 21 botanical gardens and arboreta, as well as 11 zoological gardens, numerous seed stands for forest trees and a centre for the breeding of game animals. There are also gene and seed banks for crop plants, banks with livestock semen, seed stores for forest trees and the Forest Gene Bank.

In Poland, the *ex situ* conservation of plants is pursued by botanical gardens and arboreta, and to a lesser extent also by plantations of medicinal plants. To date, there is a lack of private gardens which could serve similar functions.

The botanical gardens are institutions maintaining collections of herbs, trees and shrubs. Their collections are mainly founded with a view to their being used in science and for didactic purposes. Arboreta bring together collections of trees and shrubs, serving similar functions to the above, with particular emphasis being placed on scientific research into systematics, the acclimatisation of alien species and their practical application in forestry, and the creation of sets of plants which can be introduced in different parts of the country. Botanical gardens and arboreta play a part in the conservation of biological diversity through:

- the creation and maintenance of collections of plants brought directly from natural sites or bred from seeds obtained in nature;

- the breeding of plants and the preparation of material for the possible reintroduction of a given taxon or population thereof, or for their transferral to a substitute locality (it was in this way that the Botanical Gardens of the Polish Academy of Sciences were able to save the Polish scurvy-grass *Cochlearia polonica* from extinction, as well as to transfer from an endangered site to the Botanical Gardens in Zakopane a population of the marsh saxifrage *Saxifraga hirculus* which is entered on the European Red List of Endangered Animals and Plants) - it was also only through *ex situ* conservation in the arboretum in Bolestraszyce that it was possible to maintain a population of *Marsilea quadrifolia* whose only natural site in Poland had ceased to exist;
- the collection from natural sites of seeds that are then offered for exchange within the *Index Seminum* framework;
- the running of a bank of genetic resources.

Data from 1991 contained in the *Polish Biological Diversity Study* suggest that the country's botanical and dendrological gardens and arboreta include representatives of some 14,000 plant species.

The following are particularly noteworthy among the many activities and programmes the botanical gardens involve themselves in:

- the search for new sites for such endangered, threatened and protected species as Siberian iris *Iris sibirica*, royal fern *Osmunda regalis*, globeflower *Trollius europaeus* and ROZNIK POSPOLITY (Lublin botanical gardens);
- the inventorying of sites for *Corydalis pumila*, an endangered species in the Polish flora (the PAS Botanical Gardens in Warsaw);
- the assessment of variability in the threatened Polish scurvy-grass *Cochlearia polonica* (the PAS Botanical Gardens in Warsaw);
- the collection of the rare and endangered species of Poland's mountains - 145 taxa, including 40 that are protected, 17 endangered, 14 endemic and 3 relict (the PAS Botanical Gardens in Warsaw);
- the reinstatement of endangered species of plant from the Tatra Mountains National Park, namely the milk-vetch *Astragalus penduliflorus*, Villar's buckler-fern *Dryopteris villarii* and the Slovakian pasqueflower *Pulsatilla slavica* (the PAS Botanical Gardens in Warsaw);
- the running of a bank for the seeds of protected and endangered species within the Polish flora (23 species collected from 42 populations in natural sites by the PAS Botanical Gardens in Warsaw);
- the establishment of a database on collections of protected, endangered, relict and endemic species brought together at the 16 botanical gardens in Poland (the PAS Botanical Gardens in Warsaw);

- the collection and assessment of selected grass species running to 1130 seed samples (464 items from 422 species in 103 genera); 675 seed samples were transferred to the gene bank in Radzikowo (Botanical Gardens of the Institute for the Cultivation and Acclimatisation of Plants (IHAR) in Bydgoszcz);
- the collection and evaluation of selected dicotyledonous species of utilised plant (985 seed samples representing c. 30% of the Polish flora; 218 samples to the gene bank in Radzikowo; leaving the state of the collection at 1633 taxa, of which 177 are medicinal, 156 honey-supplying, 33 supplying spices, 8 serving as dyes, 7 providing fibres, 1430 ornamental and 70 protected and endangered - the IHAR Botanical Gardens in Bydgoszcz);
- the collection of plants used in reclamation, now running to 196 items of 152 species - 30 seed samples transferred to Radzikowo (the Botanical Gardens of the IHAR in Bydgoszcz);
- population monitoring, *ex-situ* cultivation and the determination of categories of endangerment in the genus *Aconitum* (the Botanical Gardens of the Jagiellonian University in Kraków);
- a preservational collection of 80 rare and endangered species, from around 116 populations, with particular attention paid to sites in north-western Poland (the Botanical Gardens in Poznań).

The database founded for collections of protected, endangered, relict and endemic species in the 16 surveyed botanical gardens in Poland reveals the presence in cultivation of 177 protected species (i.e. 76% of the 232 species enjoying legal protection). 192 (45%) of the 422 taxa regarded as endangered are also present, along with 39 endemic species and 15 relicts.

Poland does not as yet possess a comprehensive plan for *ex situ* conservation. Rather, the different institutions have established their own collections, collecting data on endangered, rare and threatened species in their own way. The research work at the different institutions mostly concentrates on selected regions (such that the Warsaw University botanical gardens focuses on the Mazurian Lakeland, the PAS botanical gardens on the Mazowsze Plain, the Botanical Gardens of Wrocław University on Lower Silesia, etc.). This tends to hinder the free flow of information, as well as the coordination of research activity.

The *ex-situ* conservation of the free-living fauna is a matter for Poland's zoological gardens, aquaria, breeding centres and private collections.

Eleven zoological gardens are officially registered in Poland. Ten of these (excluding Bydgoszcz Zoo) are members of the European Association of Zoos and Aquaria. These are mostly units funded by city boards and/or other institutions, or else self-financing - often on the basis of foundations established for the purpose. An interesting form of sponsorship which has developed quite markedly in recent years is the adoption of selected individual animals by private persons or businesses. The gardens engage in their own business activity, drawing income from leases, ticket sales, the sale of quarantine services, sale of animals, etcAll the Polish zoos participate in the European Breeding Programmes, also collecting data for stud books in the case of

endangered species. They also participate in ISIS, the International System of Information on Species. The species kept include those extinct in the wild (EW), critically-endangered (C) or endangered (E). Examples of this form of action include those involving: Leadbeater's possum *Gymnobelideus leadbeateri* at Poznań Zoo; the varied lemur *Varecia variegata* at Katowice, Opole and Poznań Zoos; the black macaque *Macaca nigra* at Łódź and Wrocław Zoos; the African wild dog *Lycaon pictus* at Kraków, Łódź, Warsaw and Wrocław Zoos; the Somali wild ass *Equus africanus somalicus* at Kraków, Płock and Warsaw Zoos; the sika deer *Cervus nippon* at Poznań Zoo; the bald ibis *Geronticus eremita* at Opole Zoo; the northern helmeted curassow *Crax pauxi* and loggerhead turtle *Caretta caretta* at Poznań Zoo; the Egyptian tortoise *Testudo kleinmanii* at Katowice, Kraków and Warsaw Zoos; the Chinese alligator *Alligator sinensis* at Gdańsk and Płock Zoos; and the partula snail *Partula hebe bella* at Poznań Zoo.

The EAZA's European Breeding Programmes for animals in the collections of zoological gardens are coordinated breeding programmes based on the running and analysis of stud books. Zoos in Europe participate in 124 such programmes (for 84 species of mammal, 32 of bird, 3 of reptile and 1 of invertebrate). Polish zoos are in turn involved in 64 Programmes, of which 4 involve species present in the country (the European bison *Bison bonasus*, the European mink *Mustela lutreola*, the otter *Lutra lutra* and the white-tailed eagle *Haliaeetus albicilla*). Stud books are run for 18 species (including 2 natives, the brown bear *Ursus arctos* and black stork *Ciconia nigra*. Zoos also participate in national programmes for the protection and reintroduction of species.

Polish zoos hold 144 species of vertebrate native to Poland, among which 49 are in some degree endangered.

A basic aim of zoos is to play an active part in the species protection of animals. Coordinated programmes of *ex situ* conservation run on the basis of zoo collections are often linked with *in situ* programmes. However, there remains a lack of a comprehensive programme for the *ex situ* conservation of native species.

Away from zoos there are programmes of *ex situ* conservation run by other bodies. These include programmes for the Polish pony and European beaver *Castor fiber* at the Popielno Research Station of the PAS, work on the breeding of European bison *Bison bonasus* at several specially-created centres (and above all at Białowieża), and breeding of red deer *Cervus elaphus* by the Institute of Parasitology PAS, of grey seals *Halichoerus grypus* at the Station of the Sea Fisheries Institute on the Hel Peninsula, of birds of prey at centres for the breeding and rehabilitation, and of endangered species of fish at the Institute of Inland Fisheries in Olsztyn. In addition, programmes for the preservational breeding of animals are run at some of the National Parks.

Domestic cooperation between zoos is mediated by the Council of Directors (where management is concerned) and by the Zoological Gardens Section of the Polish Zoological Society (in regard to breeding).

International cooperation involves participation in EAZA (wherein Poland has its representatives on the board and 4-person executive). The maintenance of contacts with the EAZA and the

transfer of information to other zoos and centres at home and abroad is the work of the Warsaw-based ZOO Info Centre (ZIC). Four zoos are members of the International Union of D.... Zoological Gardens (IUDZG). Polish zoos have also contributed to the work of the Conservation Breeding Specialist Group where taxonomy and the application of modern breeding methods are concerned.

Private collections and zoos and "safari parks" have also appeared in Poland, though no reliable data on them has yet been obtained.

Recent years have seen a number of programmes for the reinstatement of disappearing species in Poland. These have involved the peregrine falcon *Falco peregrinus*, the lynx *Lynx lynx* in Kampinoski National Park, the eagle owl *Bubo bubo* in Woliński NP, the reintroduction of the apollo butterfly *Parnassius apollo* in the Pieniny Mountains, the protection of the European bison *Bison bonasus*, the protection and reintroduction of the European pond terrapin *Emys orbicularis* and work on certain species of fish (notably the Atlantic sturgeon *Acipenser husio* and the vimba *Vimba vimba*). Work is also ongoing where the protection of seals (*Phocidae*) in the Polish zone of the Baltic is concerned.

The systematic collection of the country's genetic resources has been engaged in since 1971. The national collections are first and foremost tasked with the gathering of genetic resources from Poland, including those of wild species and ecotypes, local varieties and peculiarly-Polish cultivated forms, registered varieties and those that have been deregistered and worthwhile material generated in scientific institutions. In Poland, 73,000 genotypes of plants of utilitarian significance enjoy one or other of the different forms of preservation. The gene banks currently retain c. 400 plant species, among them not only crop plants, but also wild-living relatives or those collected abroad from their places of natural occurrence. The number of items increases by something like 3500-4000 per year. Intensive work is also being carried on with a view to the inventorying and collection of old local varieties of crop plants. 2-3 field trips are organised each year.

Collecting trips have the following objectives:

- the collection of old varieties and local variants of agricultural and garden plants, as well as their wild progenitors;
- the collection of ecotypes of grasses;
- the collection of plant materials for research work;
- the assessment of genetic erosion among crop plants.

The tasks of the organised collecting trips change over time. Expeditions in the years 1976-9 were mainly geared towards the collection of old varieties and local forms of agricultural crop. However, new groups of plants have been incorporated among the expedition tasks in connection with the disappearance of local varieties. The systematic collection of vegetables began in the 1990s, while collections from fruit trees, herbs and ornamental plants began with the most recent visits. The 1976-1998 field expeditions saw some 2447 samples collected in

Poland from among utilitarian plants.

The collections of the gene bank preserve all the plant materials collected in the course of its activity, irrespective of their origin. All are freely available to users both at home and abroad. In the years 1996-1998, in agreement with the gene banks of neighbouring countries and in accordance with international standards, a number of expeditions were launched to inventory and collect local populations of crop plants in these countries. 2208 samples of plants were taken, and are now kept in the countries of origin, as well as in gene banks in Poland.

All the activities ensuring that components of biological diversity from beyond Poland are conserved *ex situ* are pursued in agreement with, and with the cooperation of, the relevant institutions in other countries.

The Centre for Plant Genetic Resources of the IHAR possesses the installations allowing the gene bank to function. These include seven chambers for the long-term preservation of seeds. Two coolers are maintained at -15°C, five at +1°C. Some cooperating institutions also have equipment for the long-term preservation of samples of seeds. The long-term stores serve all the collections of crop genetic resources. Collections of orchard plants and of hops *Humulus lupulus*, potatoes *Solanum tuberosum* and garlic *Allium sativum* are preserved vegetatively by way of plantations. Varieties of potato are preserved *in vitro*. New technologies for the long-term preservation of plant genetic resources are being developed, including the cryopreservation of the tissues of plant species reproducing vegetatively.

A Bank of Pathogen Genes was established at the Institute of Plant Protection in Poznań in 1995. Its task is the preservation and provision of crop pathogens. Collections of the symbiotic bacteria of leguminous plants are also subject to protection.

The seeds of protected and endangered plants are preserved in liquid nitrogen in the Botanical Gardens and Centre for the Preservation of Biological Diversity of the Polish Academy of Sciences.

Agreements are reached within the framework of the European Conservation Programme for Genetic Resources, as regards the division of responsibilities between European gene banks when it comes to the *ex situ* preservation of genetic resources as well as the safe preservation of duplicates of the most valuable objects originating in national collections.

The obtainment of species for the needs of *ex situ* (non-wild state) conservation is the subject of appropriate regulations contained *inter alia* in:

- the Nature Conservation Act;
- the Inland Fisheries Act;
- the Marine Fisheries Act;
- the Hunting Law Act.

Legal regulations detail the protective periods, permitted means and sizes of harvests in the cases of given species and requirements as regards permission for harvests from the appropriate body.

The forms of *ex situ* protection of forest genetic resources involve a nation-wide network supplying the needs for reproductive material of native origin, including in years where fresh supplies of seed are inadequate. The network includes:

- 21 seed extraction plants;
- 43 seed stores;
- 7 seed testing stations;
- 4 seed quality monitoring stations.

A particular place within the strategy for the conservation of forest genetic diversity *ex situ* is that played by the Forest Gene Bank in Kostrzyca (LBG). This preserves genotypes in the form of tissue cultures and generative organs of threatened and endangered populations of tree and shrub species, mainly those from the region of catastrophic forest dieback in the Sudetic Mountains; as well as genotypes from the oldest (200-250 year-old) trees in Poland. The Bank also preserves threatened plants of the forest floor. The LBG has an arboretum and container nursery which produce seedlings and saplings of trees of local origin preserved in the bank and serving in the reinstatement of species lost thanks to the ecological catastrophe in the Sudetic Mountains. The SUDETY I and SUDETY II Programmes involve the reinstatement of the forests in the above region. Forest has thus been returned over 15,000 ha of severe dieback from the years 1984-1987, all on the basis of a species composition best suited to local conditions.

The Forest Research Institute carries out work on forms of the *ex situ* conservation of forest genetic resources that are then developed and applied at the Forest Gene Bank. These include cryogenic, embryogenetic and tissue-culture techniques.

The commencement of the above programmes - as well as a significant input into the establishment of the Forest Gene Bank – was made possible by a grant from the GEF in 1992. This was designated for the running of special programmes of biodiversity conservation in the Białowieża Forest and Sudetic Mountains.

The inventorying of the phenotypes of the main species of forest tree, and of their genotypes, provided a basis for the division of Poland into seed regions and the introduction of principles by which to manage the exchange of genetic materials. There is also systematic identification of the genotypes of Poland's oldest trees (in excess of 200-250 years depending on species), as well as work to establish an archive of clones as forms of the *ex situ* conservation of disappearing genotypes.

Actions in the name of *ex situ* conservation are financed from both domestic sources and foreign assistance. These are discussed in detail in Chapter 20.

Article 10 Sustainable use of components of biological diversity

137. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High	×	b) Medium		c) Low	
138. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate	×	c) Limiting		d) Severely limiting	
Further comments on relative priority and on availability of resources					
The principle of sustainable development - ensuring *inter alia* the conservation and sustainable use of biological diversity - has been enshrined in the most senior documents of the Polish state, including the Constitution of the Republic of Poland. This offers confirmation of the fact that highest priority has been assigned to the issue. The funding assigned to making sectoral policies more "environment-friendly" is gradually increasing, though it is not equal to the needs.					

139. Has your country integrated consideration of the conservation and sustainable use of biological resources into national decision making (10a)?	
a) no	
b) early stages of development	
c) advanced stages of development	×
d) programme or policy in place	
e) review of implementation available	
140. Has your country adopted measures relating to the use of biological resources that avoid or minimize adverse impacts on biological diversity (10b)?	
a) no measures	
b) some measures in place	×
c) potential measures under review	
d) comprehensive measures in place	
141. Has your country put in place measures that protect and encourage customary use of biological resources that is compatible with conservation or sustainable use requirements (10c)?	
a) no measures	
b) some measures in place	×
c) potential measures under review	
d) comprehensive measures in place	
142. Has your country put in place measures that help local populations develop and implement remedial action in degraded areas where biological diversity has been reduced (10d)?	
a) no measures	
b) some measures in place	×
c) potential measures under review	
d) comprehensive measures in place	
143. Does your country actively encourage cooperation between government authorities and the private sector in developing methods for sustainable use of biological diversity (10e)?	

a) no	
b) early stages of development	×
c) advanced stages of development	
d) programme or policy in place	
e) review of implementation available	

Decisions IV/15. Relationship of the Convention with the Commission on Sustainable Development and biodiversity-related conventions

144. Has your country submitted to the Secretariat information on tourism and its impacts on biological diversity, and efforts to effectively plan and manage tourism?	
a) no	×
b) yes – previous national report	
c) yes – case-studies	
d) yes – other means (please give details below)	
145. Has your country submitted to the Secretariat information on biodiversity-related activities of the CSD (such as SIDS, oceans, seas and freshwater resources, consumption and production patterns)?	
a) no	×
b) yes - previous national report	
c) yes – correspondence	
d) yes - other means (please give details below)	

Decision V/24. Sustainable use as a cross-cutting issue

146. Has your country identified indicators and incentive measures for sectors relevant to the conservation and sustainable use of biodiversity?	
a) no	
b) assessment of potential indicators underway	×
c) indicators identified (if so, please describe below)	
147. Has your country assisted other Parties to increase their capacity to implement sustainable-use practices, programmes and policies at regional, national and local levels, especially in pursuit of poverty alleviation?	
a) no	×
b) not relevant	
c) to a limited extent	
d) to a significant extent (please provide details)	
148. Has your country developed mechanisms to involve the private sector and indigenous and local communities in initiatives on sustainable use, and in mechanisms to ensure that indigenous and local communities benefit from such sustainable use?	
a) no	×
b) mechanisms under development	
c) mechanisms in place (please describe)	
149. Has your country identified areas for conservation that would benefit through the sustainable use of biological diversity and communicated this information to the Executive Secretary?	
a) no	×

b) yes	

Decision V/25. Biological diversity and tourism

150. Has your country based its policies, programmes and activities in the field of sustainable tourism on an assessment of the inter-linkages between tourism and biological diversity?	
a) no	
b) to a limited extent	
c) to a significant extent	×
151. Has your country submitted case-studies on tourism as an example of the sustainable use of biological diversity to the Executive Secretary?	
a) no	×
b) yes	
152. Has your country undertaken activities relevant to biodiversity and tourism in support of the International Year of Ecotourism?	
a) no	×
b) yes	
153. Has your country undertaken activities relevant to biodiversity and tourism in support of the International Year of Mountains?	
a) no	×
b) yes	
154. Has your country undertaken activities relevant to biodiversity and tourism in support of the International Coral Reef Initiative?	
a) no	×
b) yes	
155. Has your country established enabling policies and legal frameworks to complement voluntary efforts for the effective implementation of sustainable tourism?	
a) no	
b) to a limited extent	×
c) to a significant extent (please describe)	

Further comments on implementation of this Article

The last few years have seen matters of the conservation and sustainable use of the resources of biological diversity assume ever greater importance across the whole gamut of state activity. An expression of this is the new *Constitution of the Republic of Poland* adopted in 1997, wherein Article 5 provides that the state ensures protection of the environment, being directed by the principle of sustainable development which also denotes the rational use and regeneration of natural resources and the taking into account of the needs of future generations.

The same year saw the adoption by the Council of Ministers of the *National Policy on Forests* - a document which went a great way towards changing the approach applied previously in forestry. The Policy recognises that the national forest holding should be an object in which to apply the principle of sustainable development, thereby linking the need for economic growth with the requirements that biological diversity be protected and subject to sustainable use.

In 1999, the Council of Ministers adopted *the Cohesive Structural Policy for the Development of Rural Areas and Agriculture*, wherein the shaping of the conditions for the sustainable development of rural areas was recognised as one of the most important directions of action. Achievement of this aim is to be worked towards through *inter alia* the intensive promotion of environmentally-friendly technologies, the pro-environmental guiding of agricultural production and the development of environmental education; all by way of the application of economic instruments that allow for the funding of pro-ecological methods of agricultural production, the afforestation of agricultural land and the development of training and demonstration activities.

The issues of the conservation and sustainable use of components of biological diversity are also referred to in the *Concept for a National Spatial Planning Policy* adopted by the Council of Ministers in 1999. Recognised as one of the main directions of planning policy therein is the conservation and ecologically-conditioned shaping of natural space to allow for the preservation of biological diversity.

The broadest issues of the natural environment were addressed in the *Second National Environmental Policy* adopted by the Council of Ministers in 2000. This holds, *inter alia*, that the tasks of the state include the creation of conditions allowing for:

- an improvement in the state of the environment, including through the removal or limitation of threats to the preservation of biological and landscape diversity;
- the preservation, regeneration and augmentation of natural resources;
- the obtainment of widespread acceptance for the preservation of the sum total of Poland's natural and cultural heritage.

Also contained in the document were detailed part-actions to be put into effect over three different time frames: the short term to 2002, the medium term to 2010 and the long term to 2025.

The theses set out in the aforementioned governmental documents are finding reflection in successively-amended Acts of Parliament or other legal regulations. Of particular importance here are the *Nature Conservation Act, the Environmental Protection and Management Act* and the *Forests Act.*

In parallel, there is increased state activity as regards checks on the use of biological resources. A particular role in this is played by the obligation that environmental impact assessments be carried out for new developments and investments; as well as by an effectively-functioning system for the detailing - by way of administrative decisions - of conditions for the use of the resources of the natural environment. An important element of control over the level of use made of certain elements of biodiversity is the obligation that this be described precisely by users, e.g. in forest management plans, fisheries plans or plans for the harvesting of game animals. Supervision over the proper implementation of this use is exercised by the bodies denoted in the relevant Acts. A further important supervisory element is the activity of the control and monitoring bodies, notably the State Environmental Protection Inspectorate, the Supreme

Chamber of Audit (NIK), the Plant Protection Inspectorate, the Sanitary Inspectorates, the Inspectorate of the Purchase and Processing of Agricultural Articles and the Veterinary Inspectorate.

Irrespective of all this, ever greater weight is being attached to the promotion of traditional means of using biological resources, *i.a.* in some of the National Parks (in the Biebrza and Narew Valleys and Tatra Mountains), wherein conditions for the natural grazing of livestock to prevent undesirable succession are put in place.

Considerable emphasis is also being put on the implementation of programmes for the conservation and reinstatement of traditional, native breeds of livestock - as in the cases of the Polish pony or Wrzosówka sheep. These are generally implemented from budgetary means, though the maintenance of preservational herds and flocks is in many cases co-financed by their owners, including by scientific institutions and academies of agriculture.

In addition, the physical development plans of voivodships, the studies on the conditioning and directions of planning in *gminas* and the protection plans of National and Landscape Parks all take ever greater account of the need for traditional forms of management to be retained and regional styles of architecture upheld.

More and more importance is also being attached to the taking of remedial action in highly-degraded environments. Local communities obtain funding for this purpose, mainly from Voivodships Funds for Environmental Protection and Water Management. In the last 3 years it has thus proved possible to reclaim several hundred landfill sites, excavations and spoil heaps, though this has in no way made an impression on the still enormous needs for the effects of environmental degradation to be liquidated.

Poland perceives the threats to biological diversity that the uncontrolled development of tourism may pose to naturally-valuable areas. A manifestation of this is the 1997 signing by the Minister of Environmental Protection, Natural Resources and Forestry of the Berlin Declaration on *Biological Diversity and Sustainable Tourism.* In April 2001, the Council of Ministers adopted the *Strategy for the Development of Tourism 2001-2006*. This document formulates a strategy for the development of tourism understood as part of the strategy for the socio-economic development of the country. Its main aim will be to raise the competitiveness of what Poland can offer to tourists on the international and domestic markets, while at the same time accepting that the development of tourism may only take place if the principle of sustainable development is adhered to and the law on nature conservation and the environment respected. The regional programmes for the development of tourism must take account of the touristic absorbency of an environment, the need for sustainable use and the preference for forms of tourism favouring the conservation of biological diversity.

Currently subject to the interdepartmental consent procedure is the *National Strategy for the Conservation and Sustainable Use of Biological Diversity*. This assumes that the most urgent tasks to be implemented if an optimal relationship between the development of tourism and biodiversity conservation is to be obtained are:

- the introduction at all levels to the planning of tourism development of an obligation that a study of tourist absorbency be drawn up, along with a definition of the preferred forms of tourist activity from the points of view of the conservation and sustainable use of biological diversity;
- the drawing-up of a national programme for the protection of sensitive areas subject to enhanced pressure from the development of tourism, most especially mountain areas;
- the devising of an information and education programme in biodiversity for both tourists and those rendering services to them.

At the same time, the *National Strategy for Regional Development 2001-2006*, adopted by the Council of Ministers in 2000, has signalled that the sustainable-development-based establishment of tourist complexes (especially in the north and east) should be an important element in the restructuring of naturally- and culturally-valuable areas.

Some protected areas (including National Parks) have now shown themselves able to bring about an optimal configuration of the development of tourism and the conservation of nature. Equally, there are still many valuable areas showing all the signs of collision between these two functions. This is particularly true of the Tatra Mountains, Karkonosze Mountains and Słowiński National Parks. Away from the protected areas, the problem is particularly observable in the coastal belt, the Mazurian Lakeland, the Carpathians and the Sudetic Mountains, as well as around the larger urban agglomerations.

Article 11 Incentive measures

156. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	×	c) Low	

157. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting	×	d) Severely limiting	

Further comments on relative priority and on availability of resources

Decision-makers are aware of the great significance to biodiversity conservation that economic and social incentives may play. The system of same is gradually developing, though the application (especially of economic stimuli) is very limited, in connection with the stringencies of the period of transition.

158. Are programmes in place to identify and ensure the adoption of economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity?	
a) no	
b) early stages of development	
c) advanced stages of development	
d) programmes in place	×
e) review of implementation available	

159. Do these incentives, and the programmes to identify them and ensure their adoption, cover the full range of sectoral activities?	
a) no	
b) some sectors	×
c) all major sectors	
d) all sectors	

Decision III/18. Incentive measures

160. Has your country reviewed legislation and economic policies to identify and promote incentives for the conservation and sustainable use of components of biological diversity?	
a) no	
b) reviews in progress	×
c) some reviews complete	
d) as far as practically possible	

161. Has your country ensured the development of mechanisms or approaches to ensure adequate incorporation of both market and non-market values of biological diversity into plans, policies and programmes and other relevant areas, *inter alia*, national accounting systems and investment strategies?	
a) no	
b) early stages of identifying mechanisms	×
c) advanced stages of identifying mechanisms	
d) mechanisms in place	

e) review of impact of mechanisms available	
162. Has your country developed training and capacity building programmes to implement incentive measures and promote private-sector initiatives?	
a) no	
b) planned	×
c) some	
d) many	
163. Has your country incorporated biological diversity considerations into impact assessments as a step in the design and implementation of incentive measures?	
a) no	
b) yes	×
164. Has your country shared experience on incentive measures with other Contracting Parties, including making relevant case-studies available to the Secretariat?	
a) no	
b) yes - previous national report	
c) yes – case-studies	×
d) yes - other means (please give details below)	

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

165. Is your country actively designing and implementing incentive measures?	
a) no	
b) early stages of development	×
c) advanced stages of development	
d) measures in place	
e) review of implementation available	
166. Has your country identified threats to biological diversity and underlying causes of biodiversity loss, including the relevant actors, as a stage in designing incentive measures?	
a) no	
b) partially reviewed	×
c) thoroughly reviewed	
d) measures designed based on the reviews	
e) review of implementation available	
167. Do the existing incentive measures take account of economic, social, cultural and ethical valuation of biological diversity?	
a) no	
b) yes – limited extent	×
c) yes – significant extent	
168. Has your country developed legal and policy frameworks for the design and implementation of incentive measures?	
a) no	
b) early stages of development	×
c) advanced stages of development	

d) frameworks in place	
e) review of implementation available	
169. Does your country carry out consultative processes to define clear target-oriented incentive measures to address the underlying causes of biodiversity loss?	
a) no	×
b) processes being identified	
c) processes identified but not implemented	
d) processes in place	
170. Has your country identified and considered neutralizing perverse incentives?	
a) no	×
b) identification programme under way	
c) identified but not all neutralized	
d) identified and neutralized	

Decision V/15. Incentive measures

171. Has your country reviewed the incentive measures promoted through the Kyoto Protocol to the UN Framework Convention on Climate Change?	
a) no	
b) yes	×
172. Has your country explored possible ways and means by which these incentive measures can support the objectives of the Convention on Biological Diversity in your country?	
a) no	
b) under consideration	×
c) early stages of development	
d) advanced stages of development	
e) further information available	

Further comments on implementation of this Article

In accordance with the *Constitution of the Republic of Poland*, which was adopted in 1997, Poland ensures the protection of the environment and in so doing is directed by the principle of sustainable development. With a view to implementing provisions set out in the Constitution, the *Long-term Strategy for Sustainable Development - Poland 2025* was devised in 2000. This document is founded upon the concept of sustainable development, which assumes the integration and cohesion of economic, social and ecological aspects. The essence of sustainable development is the linking-up of rapid economic development with an increase in the quality of life for people, an improvement in the state of the environment and a commitment to its preservation in a good state for future generations. One of the elements to which the document calls particular attention is the conservation of the biological diversity and valuable natural features of the country. Proposed as a basis for the development of Poland is the adoption of the principle of the protection and sustainable use of the wealth of natural resources. Other documents prepared in 2000 (like the *Second National Environmental Policy* and the *National*

Strategy for the Protection of the Environment in the years 2000-2006) accept as priorities action in the sphere of the conservation of biological and landscape diversity, especially the removal or confinement of threats to the preservation of this diversity. Earlier years also saw the devising of the *National Strategy and Action Plan for the Conservation of Polish Biological Diversity* - the basic document where biodiversity issues are concerned.

The point of entry in drawing up the aforementioned documents has usually been an analysis and assessment of the economic, social and environmental policies implemented previously. The content of these works was the subject of wide-ranging consultations with different organisations and experts.

The estimatory valuations of Poland's biodiversity and landscape diversity resources encompassed a series of studies based on contingent valuation methodology and concerned *inter alia* with the halting of eutrophication in the Baltic Sea and improving the state of its ecosystems, as well as with the protection of the Biebrza Marshes.

Local strategies have also been devised by way of attempts to analyse the costs and benefits of conserving biological diversity. However, a major problem in this regard has been the lack of a widely-applied and accepted methodology for putting a value on the benefits. The process has been further hindered by the difficulties inherent in a nation-wide-reach estimate of the financial requirements linked with comprehensive protection of diversity on all its levels.

Issues of biological diversity are also contained within the legal regulations in force in Poland as regards environmental impact assessment. Forecasts of impacts on the environment made for draft policies, strategies, plans and programmes should contain *inter alia* an analysis and assessment of the major issues where environmental protection - in particular in protected areas - is concerned. On the other hand, EIAs for planned undertakings should also entail an analysis and assessment of the direct and indirect influences of the given development on the environment, and in particular the fauna, flora, soil, water and landscape therein; as well as the mutual impacts among them.

The implementation of policy on environmental protection is supported by a well-developed system of economic incentives which also act directly in the case of the conservation of biological and landscape diversity. Social incentives currently play a rather more limited role.

The following economic incentives and stimuli are applied in environmental protection management:

- fees for the economic use of the environment and the introduction of changes therein; including first and foremost for the emission of pollutants to the air, the abstraction of water and discharge of wastewater, the dumping of wastes and the pursuit of mining activities;
- fines for non-compliance with environmental protection requirements and the provisions of the Geological and Mining Law Act;
- tax and excise relief;
- grants and loans for investments serving in the protection of the environment - as provided

by the Funds for Environmental Protection and Water Management, the Ecofund Foundation and other national and foreign financing institutions;

- preferential credits extended by banks, notably the Environmental Protection Bank S.A.

The direct incentives applied in the protection of biological diversity include compensation paid to those individuals or businesses losing part or all of their income as a result of actions taken in the name of nature conservation (for example those connected with the bringing of certain objects or areas under legal protection), or of the impacts exerted by protected species, e.g. damage done by wolves *Canis lupus*, European bison *Bison bonasus* and beavers *Castor fiber*.

All of these incentives have a direct or indirect effect in encouraging the conservation of biological diversity and the sustainable use of its components.

Among the economic instruments applied, the fees for the economic use of the environment play a particularly important role. Income from them constitutes one of the basic sources swelling the coffers of the Funds for Environmental Protection and Water Management. The construction of the system of fees in Poland has corresponded with the general recommendations set out for OECD countries. The fees encompass emissions of those pollutants that are most burdensome to the environment, as well as other forms of use. The "polluter pays" principle is very much enforced in respect of those who seek to use the environment. Where fees for this use and for the introduction of changes in the environment are concerned, unitary rates have been established for pollutant emissions to the atmosphere, the discharge of wastewaters, the abstraction of water and the dumping of wastes.

In addition, special fees have been established for the removal of trees and shrubs outside forest areas, for the use of water management installations, for the pursuit of mining activity and for the designation of afforested areas for purposes not linked with forestry or of agricultural areas for purposes not linked with agriculture. Where the fees for the removal of trees and shrubs are concerned, the rates vary in relation to the species involved and their girth. The calculation and collection of fees for this is in the hands of local authorities, who issue permits therefor. The relevant organ of the local authority, be this the *wójt*, mayor or city president, is entitled to defer payment of these fees or even quash them, if a permit anticipates the planting of trees or shrubs on the new site which have remained alive after two years.

Income from these fees and fines for the removal of trees and shrubs amounted to 204,500,000 PLN in 1998, and 108,200,000 PLN in 1999. It passed in its entirety to the *Gmina* Funds for Environmental Protection and Water Management.

Also included among economic incentives are the local (climatic) fees which are applied. These are collected from natural persons who are temporarily present for recreational, health or touristic purposes in places enjoying favourable climatic properties and valuable landscape features. The level of these fees is set by gmina authorities, though it must lie within ranges laid down by statute. These fees are levied for each day of stay in the given locality.

Separately from the system of fees is the system of financial penalties (fines) for failure to heed conditions set out for the use of the environment. Fines differ from fees in being deducted from

income after tax, being in this way an instrument of stronger incentive (punitive) impact than fees. To a great extent, fines are in place for the same types of pollution as fees, and are also levied in the cases of tree and shrub removal engaged in without the necessary permit from the local authorities.

Means accruing from fees for the economic use of the environment and fines for non-compliance with environmental protection requirements pass to the Funds for Environmental Protection and Water Management at various levels, and thereby offer the possibility of the independent (non-budgetary) financing of undertakings in environmental protection, including in the conservation of biological diversity.

Further financial instruments applied are differences in levels of tax or excise duty -whose influence is much more limited where undertakings are of a pro-environmental nature, or seek to change consumer behaviour.

The social incentives applied in Poland and directed at biodiversity conservation extend to formal education (which entails teaching at all levels of schooling), as well as informal education mainly engaged in by the mass media (television, radio and the press) and NGOs. To be mentioned among the traditional methods and tools of informal education are the publication of leaflets, brochures and periodicals; the convening of meetings and seminars and the staging of exhibitions, displays and demonstrations. In addition, different kinds of courses and training sessions are also run, and conferences on matters of biodiversity conservation in Poland organised. The more modern forms of education in turn include tourist rallies, mass actions and campaigns and activity on the Internet.

Negotiation procedures are applied ever more often, with negotiations being regarded as one of the more important instruments by which to democratise daily life. These are usually held in situations of dispute where a conflict of interests has arisen. The use of natural resources and naturally-valuable areas often provokes such situations. Negotiations are resorted to in the case of proposals that different forms of protection of natural objects be applied, e.g. where the establishment of new National Parks is foreseen. The negotiation process will normally culminate in an agreement being entered into by the parties. A very important example of such an agreement entered into with a view to naturally-valuable areas (and particularly biodiversity) being protected is that concerning the functional area in the north-east known as the "Green Lungs of Poland".

Work is continuing in connection with Poland's fulfilment of its obligations as regards the UN Framework Convention on Climate Change, as well as its preparations for ratifying the Kyoto Protocol. An Executive Bureau for the Climate Convention was established within the framework of the National Fund for Environmental Protection and Water Management, and this is the body which carries out work to draw up national governmental reports for the Conference of the Parties, as well as the report required by the Kyoto Protocol; to create a national inventorying system in accordance with the Protocol's guidelines and to prepare a climate protection strategy. This work also encompasses the application in Poland of the support mechanisms allowed by the Convention and Protocol where the reduction of emissions is

concerned, e.g. emissions trading, the joint implementation mechanism (in which a given country is credited with emission reductions obtained as a result of investments in another country) and the Clean Development Mechanism. Where actions leading to reduced emissions of greenhouse gases are concerned, the emphasis is being placed on sustainable forestry and sustainable forms of agriculture. In connection with the fact that forests play a very important role in the process of the absorption and retention of greenhouse gases, Poland has recognised the reafforestation of unused agricultural land or land withdrawn from agricultural production as a priority action. The implementation of afforestation programmes will lead to a rise in the sequestration of carbon in the soils of forest ecosystems established on formerly agricultural land.

The Convention Bureau issues an information bulletin entitled *Zmiany Klimatu* ("Climate Changes"), which promotes the UNFCC and Kyoto Protocol, as well as bringing issues of climate change under the spotlight in Poland.

Article 12 Research and training

173. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium	×	c) Low			
174. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting		d) Severely limiting	×
Further comments on relative priority and on availability of resources							
The need to develop the sciences, including the natural sciences, is understood, but the problems of the period of transformation ensure that this issue does not enjoy high-priority status in Poland at present, while expenditure on it is very severely limited (and much below that incurred in the developed countries).							

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	
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	
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	
c) yes – significant extent	×
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	×
c) yes – significant extent	
If a developed country Party -	
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 implementation of this Article

The present status of biological diversity in Poland may be assessed very favourably. The country, and most particularly its eastern half, retains terrestrial or aquatic ecosystems in a primeval or near-primeval state unique on the European scale. More or less well-known examples that may be cited here are those of the Białowieża Forest, the ecosystems of the young post-glacial landscape of the Suwałki region, the Biebrza Marshes and a number of others. These afford conditions for the secure existence and reproduction of plants and animals that are either absent from or endangered in other parts of Europe. An example here might be the white stork *Ciconia ciconia*, for which Poland is the main breeding stronghold allowing for the maintenance of a population on a safe level. However, on account of the civilisational threats now affecting the whole country, a high priority will be to study the status of and ongoing changes in biodiversity, as well as to disseminate the knowledge so obtained.

Poland has a long tradition (and human potential capable) of investigating biological diversity at the different levels of organisation of life and in its different manifestations (aspects). It also has at its disposal an organisational structure allowing for the pursuit of research and educational activity with a view to biodiversity being protected and made sustainable use of. Though admittedly regional in nature, Polish scientific research in this sphere has learnt itself a good reputation. Undoubted achievements by any standards are the contributions in establishing a scientific basis for the conservation and reinstatement of the European bison *Bison bonasus*, the understanding gained of the ecology of the white stork *Ciconia ciconia* and the work done on the effects of pollution on nature (especially that of air pollution on forests). All the fundamental directions of research are being followed in Poland, including in population genetics, the study of ecosystems and landscapes, documentation and monitoring and work on the reintroduction of species as well as the economics, ethics and philosophy of nature conservation.

A more or less well-developed interest in the issues of biological diversity is professed by c.150 Polish scientific institutions, including about one-quarter of the institutes and departments of the Polish Academy of Sciences, 5% of the departmental research-and-development units, nearly 20% of the Faculties of the higher education establishments (universities, technical universities, and higher schools of engineering, agriculture, medicine, economics and teacher training). These units have modern technical and laboratory backup at their disposal and they enter research and activities connected with biodiversity into their annual plans of action. In addition, scientific research and expert studies linked to biological diversity are pursued with success in institutions acting beyond the state academic structure, as for example in the laboratories of National Parks, in regional natural history museums, or under the aegis of scientific societies, foundations and numerous other private or public legally-constituted entities.

The scope of the cognitive and educational work undertaken by the above establishments is very much limited by shortfalls in funding: as of the end of the 1990s, budgetary means assigned to the whole sphere of science accounted for just 0.46% of GDP. Support from outside the budget (mostly industry itself) was as weak, if not weaker. In spite of this, the level of scientific research and education in this sphere in Poland is not that low, and is thus far from being a

simple reflection of the level of funding assigned to it.

To date, Poland has not had a national programme of scientific research into biological diversity. For several years now, work has been done by teams of scientists and managers on draft programmes of research having as their aim the understanding, conservation and sustainable use of biological diversity and taking in the whole country. However, these have not been implemented on account of the tightness of the budgets assigned by the state for science, as well as the limited interest shown in the subject by enterprises. As a result, the main work actually done is that (often of local reach) on species or ecological systems of particular interest, e.g. for economic reasons or in reflection of their uniqueness.

Formal (school) education now embraces issues of biological diversity as an integrated part of the programme at all levels of teaching. It is also a permanent component of the teaching programmes outside schools engaged in by, for example, the mass media. The taking of action is often directed towards the presentation of local issues. Thus, for example, the environmental workshops run by Educational Television at Gdańsk University present school pupils in the Tri-City (Gdańsk, Gdynia and Sopot) region with theoretical and applied aspects of the different Baltic coast ecosystems. The workshops gain part financing from the Voivodship Fund for Environmental Protection and Water Management in Gdańsk. Pupils themselves cover the costs of field activities.

Training sessions broadening knowledge and improving skills where the identification of species and habitat types and the sustainable use of biological diversity are concerned are only in the preliminary stages of being introduced. At present they are geared mainly towards young scientists, employees of the environmental protection services and environmental managers. These most often take the form of single-subject workshops, with their organisers being scientific institutions or societies, foundations or NGOs. An example relating to aquatic ecosystems are those workshops organised by the Polish Hydrobiological Society devoted to the improved identification of species and communities of hydrobionts. In relation to their programme and organisational character, these training sessions receive grants from (or are paid for in full by) the Committee for Scientific Research - from the overall pool of resources for science, or else the targeted funds like the National Fund for Environmental Protection and Water Management.

Assistance to other countries as regards the improvement of skills in the identification, conservation and sustainable use of biodiversity is extended by way of exchanges of experience and the presentation of attainments resulting from joint research undertakings; as well as more obviously in the course of international conferences, symposia and workshops, or via person-to-person contacts among Polish academics assembling floristic and faunistic collections from different regions of the world, including the developing countries.

The development of scientific research into environmental protection (including that concerning the identification, conservation and sustainable use of elements of biodiversity) is one of the priorities of the national science policy adopted by the Government. The resourcing of individual research projects by the state in the years 1998-9 following competitions included 2.7% of

expenditure on different aspects of biological diversity as such, as well as 11-13% of the total going on the fields of biology and the agricultural sciences.

International cooperation in the utilisation of scientific progress as regards biodiversity research, and in the development of methods for the conservation and sustainable use of biodiversity, is limited in scope in relation to the resources available. It takes on a more permanent aspect in the transboundary National Parks and Biosphere Reserves. Elsewhere (e.g. in regard to hydrobionts) it is mainly concerned with groups of organisms or phenomena that have some kind of economic significance.

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		c) Low	

181. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting	×	d) Severely limiting	

Further comments on relative priority and on availability of resources

The priority assigned in Poland to action to raise public awareness of the environment is varied, depending on the recipients. The education of children and young people is a high-ranking matter, while that of adults is on a more intermediate level. The resources assigned to these goals are in any case inadequate in relation to implementational possibilities and needs.

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	×
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	
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	
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	
c) yes – significant extent	×

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	
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	×
188. Has your country integrated biodiversity concerns into education strategies?	
a) no	
b) early stages of development	
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	×
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	×
191. Is your country supporting local, national, sub-regional and regional education and awareness programmes?	
a) no	
b) yes – limited extent	×
c) yes – significant extent	
If a developing country Party or Party with economy in transition -	
192. When requesting assistance through the GEF, has your country proposed projects that promote measures for implementing Article 13 of the Convention?	
a) no	
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)	

Further comments on implementation of this Article

Recognising the need for a rapid raising of ecological awareness in Polish society, the Ministries of the Environment and of National Education joined together in 1995 in signing an agreement under which work began on the joint preparation of a *National Strategy for Environmental Education*. 1996 saw the draft document on this submitted for public consultations whose participants included representatives of primary, secondary and higher schools, NGOs, the

media, local authorities and the central offices. Once account had been taken of the remarks, proposals and comments made, a final version of the Strategy was adopted by the Ministers of Environmental Protection, Natural Resources and Forestry and of Education in 1997. This was accepted by the Environmental Protection Committees of both the *Sejm* and *Senat* in 1998. The document was in turn updated in 2000 to take account of the structural reform of the state that had been commenced with, as well as to achieve congruence with directions of educational activity detailed in the simultaneously-verified *National Strategy for the Conservation and Sustainable Use of Biological Diversity*. At the same time, preparations for *a National Programme of Environmental Education* began. These are expected to be completed in the second half of 2001.

The implementation of the *National Strategy for Environmental Education* has allowed for the proper direction of educational activity already engaged in previously, as well as for the development of new didactic forms, especially where issues connected with the conservation and sustainable use of biodiversity are concerned.

In school education (on account of the far-reaching reform in the system coming into effect on September 1st 1999), the formal commentary setting out the scope of education in primary schools, junior high schools and high schools has become the document entitled *The Programme Basis for General Education*. The subject matter therein, which is to be followed by those devising teaching programmes and handbooks, refers to the issues of the conservation and sustainable use of biological diversity to the following extents:

- in primary school: examples of the diversity of plants, fungi and animals, as well as the environments in which they live; natural landscapes and those modified by humankind; examples of positive and negative spatial planning; the significance of selected species of plant, fungi and animal for humankind; the influence of humankind on the natural environment; protected areas and their importance in the preservation of biological diversity and principles of behaviour in protected areas;
- in junior high school: intraspecific and interspecific relationships in nature; the cycling of matter and flow of energy in different natural systems; analysis of the structure of selected ecosystems; the management of the Earth's natural resources; examples of landscape protection in Poland and worldwide; the causes and effects of undesirable changes in the biosphere; and biological diversity at the genetic, species and ecosystem levels and the importance of its protection;
- in high school: the significance of biological diversity for humankind; the value of biodiversity; means of protecting biodiversity and problems of biological safety.

Poland's higher education establishments enjoy very considerable autonomy when it comes to their programmes and teaching content. New directions of study associated with environmental protection are now being introduced, and an example here might be the inter-faculty studies at Warsaw University and Warsaw Agricultural University (SGGW). For several years now, attempts have been made to set out so-called minimal programme requirements for studies

leading to master's degrees, *inter alia* as this concerns environmental and ecological issues. However, to date the Central Council on Higher Education has only brought in these minimum requirements for the topic of study known as "environmental protection". In this regard, the following subject themes have come to be regarded as compulsory:

- in biology: the biological species concept; evolutionary processes and the emergence and extinction of species; a systematic review and biological characterisation of the more important taxonomic groups of plants and animals, with particular account being taken of species that are endangered and under protection;
- in ecology: the organisation of ecological systems; relationships between organisms and their environment; the diversity and typology of ecosystems;
- in nature conservation: biological and landscape diversity as the main aim of protection; methods of protecting nature as resources are being utilised; the system of nature conservation in Poland; IUCN categories of endangerment; the international classifications and functions of protected areas; methods of active conservation; strict and partial species protection; EU nature conservation strategy;
- civilisational threats and sustainable development: natural resources; the works of nature; the natural environment; global environmental problems, including those which concern biological diversity.

The media play an important educational role where the conservation and sustainable use of biological diversity are concerned. Cooperation entered into between public television and the Office of Education and Public Communication of the Ministry of the Environment has ensured that Channels 1 and 2 regularly broadcast programmes which have as their aim the popularisation and promotion of nature-related issues. Also of particular significance in the development of environmental education by the media is the National Fund for Environmental Protection and Water Management, which makes wide use of grants-in-aid for television programmes and nature films. The National Fund also extends financial support to several tens of publications of both national and regional reach, on the understanding that there will be regular reference made on their pages to matters of an environment-related or ecological content, including those concerned with the major issues of biodiversity conservation and use. The high substantive level of articles published in the press owes much to the work of the "Ekos" Association of Environmental Journalists, which cooperates actively with the Office of Education and Public Communication of the Ministry of the Environment.

Recent years have witnessed the intensive development of environmental education in National Parks and most of the Landscape Parks. Financial support from the National Fund for Environmental Protection and Water Management has again made it possible for all the National Parks to maintain a good didactic base at their disposal, developing diverse forms of educational activity based on the valuable natural features at local level. The protected areas achieving most in this regard include the Kampinos, Białowieża, Wolin, Ojców, Lake Wigry and Roztocze National Parks, as well as the Górzno-Lidzbark Landscape Park and the Słońsk and Lake

Świdwie Nature Reserves.

Also assuming ever greater significance in recent years is the educational activity engaged in by the NGOs. Again taking advantage of financial support from the Voivodship Funds for Environmental Protection and Water Management; the National Fund and other extra-budgetary sources, the environmental organisations in society run more than 1000 different educational activities annually (field lessons, conferences, seminars, talk-ins, lectures, awareness-raising actions, competitions, campaigns, publications, etc.) - in which the issues of the conservation and sustainable use of the resources of biological diversity are the leading theme.

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	×	c) Low	

195. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting	×	d) Severely limiting	

Further comments on relative priority and on availability of resources

While the assessment of the consequences of developments for the abiotic environment (waters and the air) and humankind are among the priority issues, the problem of their influence on biological diversity is among the matters only now coming to be understood. Limitation of the negative impacts is a particularly costly task, in the face of which the means actually assigned to it are inadequate.

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	

197. Do such environmental impact assessment procedures allow for public participation (14(1a))?	
a) no	
b) yes – limited extent	
c) yes – significant extent	×

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	
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	×
c) yes – significant extent	

200. Is your country implementing bilateral, regional and/or multilateral agreements on activities likely to significantly affect biological diversity outside your country’s jurisdiction (14(1c))?	
a) no	
b) no, assessment of options in progress	

c) some completed, others in progress	
d) yes	×
201. Has your country mechanisms in place to notify other States of cases of imminent or grave danger or damage to biological diversity originating in your country and potentially affecting those States (14(1d))?	
a) no	
b) early stages of development	
c) advanced stages of development	×
d) mechanisms in place	
e) no need identified	
202. Has your country mechanisms in place to prevent or minimize danger or damage originating in your State to biological diversity in other States or in areas beyond the limits of national jurisdiction (14(1d))?	
a) no	
b) early stages of development	×
c) advanced stages of development	
d) fully compliant with current scientific knowledge	
e) no need identified	
203. Has your country national mechanisms in place for emergency response to activities or events which present a grave and imminent danger to biological diversity (14(1e))?	
a) no	
b) early stages of development	
c) advanced stages of development	×
d) mechanisms in place	
204. Has your country encouraged international cooperation to establish joint contingency plans for emergency responses to activities or events which present a grave and imminent danger to biological diversity (14(1e))?	
a) no	
b) yes	×
c) no need identified	

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

205. Has your country exchanged with other Contracting Parties information and experience relating to environmental impact assessment and resulting mitigating measures and incentive schemes?	
a) no	
b) information provided to the Secretariat	
c) information provided to other Parties	×
d) information provided on the national CHM	
206. Has your country exchanged with other Contracting Parties information on measures and agreements on liability and redress applicable to damage to biological diversity?	
a) no	
b) information provided to the Secretariat	
c) information provided to other Parties	×

d) information provided on the national CHM	

Decision V/18. Impact assessment, liability and redress

207. Has your country integrated environmental impact assessment into programmes on thematic areas and on alien species and tourism?	
a) no	
b) partly integrated	×
c) fully integrated	
208. When carrying out environmental impact assessments does your country address loss of biological diversity and the interrelated socio-economic, cultural and human-health aspects relevant to biological diversity?	
a) no	
b) partly	×
c) fully	
209. When developing new legislative and regulatory frameworks, does your country have in place mechanisms to ensure the consideration of biological diversity concerns from the early stages of the drafting process?	
a) no	
b) in some circumstances	
c) in all circumstances	×
210. Does your country ensure the involvement of all interested and affected stakeholders in a participatory approach to all stages of the assessment process?	
a) no	
b) yes - in certain circumstances	
c) yes - in all cases	×
211. Has your country organised expert meetings, workshops and seminars, and/or training, educational and public awareness programmes and exchange programmes in order to promote the development of local expertise in methodologies, techniques and procedures for impact assessment?	
a) no	
b) some programmes in place	
c) many programmes in place	
d) integrated approach to building expertise	×
212. Has your country carried out pilot environmental impact assessment projects, in order to promote the development of local expertise in methodologies, techniques and procedures?	
a) no	×
b) yes (please provide further details)	
213. Does your country use strategic environmental assessments to assess not only the impact of individual projects, but also their cumulative and global effects, and ensure the results are applied in the decision making and planning processes?	
a) no	
b) to a limited extent	×
c) to a significant extent	
214. Does your country require the inclusion of development of alternatives, mitigation measures and consideration of the elaboration of compensation measures in environmental impact assessment?	

a) no	
b) to a limited extent	
c) to a significant extent	×
215. Is national information available on the practices, systems, mechanisms and experiences in the area of strategic environmental assessment and impact assessment?	
a) no	
b) yes (please append or summarise)	×

Further comments on implementation of this Article

The strengthening of the mechanisms that minimise the negative impacts of the economy on the status of biological diversity is one of the most important tasks in the policy for the country's sustainable development.

Of particular significance in this is the system of environmental impact assessments first introduced in the late 1980s and modified successively since. The system relates to:

- proposed investments and developments capable of worsening the state of the environment;
- proposed investments and developments particularly harmful to the environment;
- existing building complexes and structures and other developed areas;
- proposed changes to aquatic systems;
- motorways and expressways;
- works requiring the issue of a concession under the Geological and Mining Law Act;
- local physical development plans;
- the introduction of genetically modified organisms.

In addition, the *Act on Access to Information on the Environment and its Protection and on Environmental Impact Assessments* (enacted by Parliament on November 9th 2000) *inter alia* provides that the policies and strategies of development and implementation programmes anticipated in statutes shall also be subject to environmental impact assessment.

The procedures accepted for the carrying-out of such assessments require that these be multidirectional and comprehensive analyses of the state of, and anticipated changes in, the environment (including its biotic elements). They also require that the development and dimensions of environmental (including biodiversity) losses be evaluated and possibilities for them to be avoided, minimised or compensated for described. Equally, a very important new element to the Polish EIA system is the requirement that physiographic studies be drawn up as a prelude to work on local plans. These are *inter alia* to indicate ultimate spatial configurations that would be optimal from the point of biodiversity and landscape conservation in a given area.

The process of opinion-giving on environmental impact assessments assigns a leading role to the voivodship EIA Committees, or the national-level Committee working out of the Ministry of the Environment in the case of particularly important developments. The Commissions include, not

only specialists representative of different scientific centres, but also representatives of environmental NGOs who are found to be particularly active where matters of biodiversity conservation are concerned. The extensive possibilities for the public to have their say on matters of the impacts of economic undertakings on the state of nature are also guaranteed under the aforementioned *Act on Access to Information on the Environment and its Protection and on Environmental Impact Assessments.*

Overall, the years 1998-2000 saw some 12,000 EIAs carried out for different types of undertaking. c. 10% of these were the subject of administrative hearings, in the course of which matters of the protection of the biosphere were the subject of particularly penetrating analysis.

Existing legislation also requires the performing of an EIA in the case of undertakings entered into in the Polish zone of the Baltic. An example of such a development has been the building of the power transmission line between Poland and Sweden. The expert opinions concerning its potential influence were presented at meetings with residents and published. The result came with major changes to both the technology applied (entailing a reduction in emissions of chlorine) and the course of the line (with the avoidance of highly naturally-valuable areas).

In the case of the siting of developments having significant transboundary impacts, Poland, as a party to *the Espoo Convention on Environmental Impact Assessment in a Transboundary Context*, plays an active part in the exchange of information and in consultations with other countries (especially its neighbours) wherein matters of the status and conservation of biological diversity are an important element of what is agreed.

An important mechanism in the limitation and minimisation of negative impacts on biological diversity is the functioning of a rapid-response system in the case of activities or events posing a serious threat to nature. The system, which has now been working effectively for many years, is run by the National Fire Brigade, as the unit responsible for rescue work, and the Environmental Protection Inspectorate (including in particular the Team for the Counteraction of Extraordinary Threats to the Environment), where the monitoring, analysis of effects and supervision of environmental aspects of cleanups are concerned. In the case of a great threat and range of impact, there may be a mobilisation of all the other forces and means at the disposal of the National Rescue and Fire Extinguishing System (i.e. the armed forces, municipal services, factory emergency services, etc.).

Article 15 Access to genetic resources

216. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High		b) Medium	×	c) Low	
217. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	×
d) Severely limiting					
Further comments on relative priority and on availability of resources					
The issue of access to genetic resources is a relatively new one for Poland and has not thus far assumed highest-priority status among decision-makers. The resources allocated to it are concomitantly limited.					

218. Has your country endeavoured to create conditions to facilitate access to genetic resources for environmentally sound uses by other Contracting Parties (15(2))?	
a) no	
b) yes – limited extent	
c) yes – significant extent	×
219. Is there any mutual understanding or agreement in place between different interest groups and the State on access to genetic resources (15(4))?	
a) no	
b) yes – limited extent	
c) yes – significant extent	×
220. Has your country an open participation planning process, or any other process in place, to ensure that access to resources is subject to prior informed consent (15(5))?	
a) no	×
b) early stages of development	
c) advanced stages of development	
d) processes in place	
221. Has your country taken measures to ensure that any scientific research based on genetic resources provided by other Contracting Parties is developed and carried out with the full participation of such Contracting Parties (15(6))?	
a) no measures	×
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	
222. Has your country taken measures to ensure the fair and equitable sharing of the results of research and development and the benefits arising from the commercial and other use of genetic resources with any Contracting Party providing such resources (15(7))?	
a) no measures	×
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	
If so, are these measures	
a) Legislation	
b) Statutory policy or subsidiary legislation	

c) Policy and administrative measures	

Decision II/11 and Decision III/15. Access to genetic resources

223. Has your country provided the secretariat with information on relevant legislation, administrative and policy measures, participatory processes and research programmes?	
a) no	×
b) yes, within the previous national report	
c) yes, through case-studies	
d) yes, through other means (please give details below)	
224. Has your country implemented capacity-building programmes to promote successful development and implementation of legislative, administrative and policy measures and guidelines on access, including scientific, technical, business, legal and management skills and capacities?	
a) no	
b) some programmes covering some needs	×
c) many programmes covering some needs	
d) programmes cover all perceived needs	
e) no perceived need	
225. Has your country analysed experiences of legislative, administrative and policy measures and guidelines on access, including regional efforts and initiatives, for use in further development and implementation of measures and guidelines?	
a) no	×
b) analysis in progress	
c) analysis completed	
226. Is your country collaborating with all relevant stakeholders to explore, develop and implement guidelines and practices that ensure mutual benefits to providers and users of access measures?	
a) no	
b) yes – limited extent	
c) yes – significant extent	×
227. Has your country identified national authorities responsible for granting access to genetic resources?	
a) no	
b) yes	×
228. Is your country taking an active role in negotiations associated with the adaptation of the International Undertaking on Plant Genetic Resources for Food and Agriculture?	
a) no	
b) yes	×

Decision V/26. Access to genetic resources

229. Has your country designated a national focal point and one or more competent national authorities to be responsible for access and benefit-sharing arrangements or to provide information on such arrangements?	
a) no	×

b) yes	
c) yes, and Executive Secretary notified	
230. Do your country's national biodiversity strategy, and legislative, administrative or policy measures on access and benefit-sharing, contribute to conservation and sustainable use objectives?	
a) no	
b) to a limited extent	×
c) to a significant extent	
Parties that are recipients of genetic resources 231. Has your country adopted administrative or policy measures that are supportive of efforts made by provider countries to ensure that access to their genetic resources is subject to Articles 15, 16 and 19 of the Convention?	
a) no	
b) other arrangements made	×
c) yes	
232. Does your country co-operate with other Parties in order to find practical and equitable solutions supportive of efforts made by provider countries to ensure that access to their genetic resources is subject to Articles 15, 16 and 19 of the Convention, recognizing the complexity of the issue, with particular consideration of the multiplicity of prior informed consent considerations?	
a) no	
b) yes (please provide details)	×
233. In developing its legislation on access, has your country taken into account and allowed for the development of a multilateral system to facilitate access and benefit-sharing in the context of the International Undertaking on Plant Genetic Resources?	
a) no	
b) legislation under development	×
c) yes	
234. Is your country co-ordinating its positions in both the Convention on Biological Diversity and the International Undertaking on Plant Genetic Resources?	
a) no	
b) taking steps to do so	×
c) yes	
235. Has your country provided information to the Executive Secretary on user institutions, the market for genetic resources, non-monetary benefits, new and emerging mechanisms for benefit sharing, incentive measures, clarification of definitions, *sui generis* systems and "intermediaries"?	
a) no	×
b) some information provided	
c) substantial information provided	
236. Has your country submitted information on specific issues related to the role of intellectual property rights in the implementation of access and benefit-sharing arrangements to the Executive Secretary?	
a) no	×
b) yes	
237. Has your country provided capacity-building and technology development and transfer for the maintenance and utilization of ex situ collections?	

a) no	
b) yes to a limited extent	×
c) yes to a significant extent	

Further comments on implementation of this Article

Poland is a signatory to the *International Undertaking on Plant Genetic Resources for Food and Agriculture* of the FAO (8/83). In accordance with the Undertaking (whose coordination is the responsibility of the Ministry of Agriculture and Rural Development), genetic resources are a common good of humankind and should be the subject of unlimited access. Poland is consistent in meeting its obligations thereto through its ensuring unhindered and unpaid access to the genetic resources assembled in gene banks, for the purposes of scientific research and the culturing and preservation of genetic resources. At the same time, representatives of Poland are participating in negotiations over a new international agreement on the protection of genetic resources that are taking place under the aegis of the FAO's Commission on Genetic Resources for Food Production and Agriculture. The standpoint of Poland, supporting the emergence of a multilateral system of access to genetic resources, was presented at the Fifth Conference of the Parties to the Convention on Biological Diversity. However, no more major action at national level has been taken with a view to establishing the legal framework that would set out principles of access to genetic resources.

Thus far, these matters have therefore been regulated to only a limited extent by *the Nature Conservation Act*. This mainly relates to the obtainment from the natural state of biological material (individuals) of species enjoying legal protection. In such cases, a permit for the harvesting of protected plants and animals is issued by the Minister of the Environment. However, the taking of species of plant which occur beyond protected areas and are not the subject of protection does not require a permit. That said, it is usual for organisations or private individuals seeking to make collections of genetic resources in Poland to also seek the consent of the Minister for the undertaking.

The rights of breeders in Poland are protected by the *Seed Production Act* and the *UPOV Conventions*. There is, however, a need for the entry into force of codified principles for the collection and transfer of genetic resources which should base themselves on the FAO's *International Code of Conduct for Plant Germplasm Collecting and Transfer*" (1994); as well as for the introduction in gene banks of the *Material Transfer Agreements* (agreements concerning the ways in which materials may be used by a user). The latter detail whether the material being transferred is designated for research or breeding purposes.

Work is ongoing on new methods (or the optimising of existing methods) for the long-term preservation of genetic resources *ex situ*. This in particular concerns the preservation in liquid nitrogen of species that reproduce vegetatively or seeds that rapidly lose their viability.

Poland is playing an active part in work on the aforementioned new international agreement under the aegis of the FAO Commission on Genetic Resources for Food Production and Agriculture. The contact point responsible for supplying information on the country's genetic

resources was designated for the implementation of the FAO Global Plan of Action as well as the World Information and Early-Warning System for Plant Genetic Resources. The exchange of information is engaged in very intensively via the European Conservation Programme for Genetic Resources, which has established a system of Central Databases for different species of crop plant. Poland is responsible for the European databases on the genera *Secale, Dactylis*, *Festuca* and *Lupinus*. Work has also now been commenced on the project for a European Plant Genetic Resources Information Infrastructure (EPGRIS). This is financed by the European Commission as part of the Fifth Framework Programme.

Genetic use restriction technologies

These relate to so-called terminator technology, i.e. that involving gene sequences which prevent the germination of seeds in the second generation.

The issue of GURT terminator technology is well-known in Poland's scientific circles, and also to some extent by the public thanks to articles in the press, Work in this sphere is not being undertaken in Poland at present, however. The release into the environment or importation of varieties possessing such terminator genes requires the consent of the Minister of the Environment in accordance with Article 37a of the Environmental Protection and Management Act. A condition where the obtainment of such consent is concerned is the carrying-out of a detailed assessment of the threats to the environment and human health. The carrying-out of laboratory studies will also require such consent following the entry into force of the Genetically Modified Organisms Act.

Article 16 Access to and transfer of technology

238. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High	×	b) Medium		c) Low	
239. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	×
d) Severely limiting					
Further comments on relative priority and on availability of resources					
Awareness is growing as regards the increasing importance of cutting-edge technology (including biotechnology). However, the means assigned to creating bases for their development are limited.					

240. Has your country taken measures to provide or facilitate access for and transfer to other Contracting Parties of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment (16(1))?	
a) no measures	
b) some measures in place	×
c) potential measures under review	
d) comprehensive measures in place	
241. Is your country aware of any initiatives under which relevant technology is transferred to your country on concessional or preferential terms (16(2))?	
a) no	×
b) yes (please give brief details below)	
242. Has your country taken measures so that Contracting Parties which provide genetic resources are provided access to and transfer of technology which make use of those resources, on mutually agreed terms (16(3))?	
a) not relevant	
b) relevant, but no measures	×
c) some measures in place	
d) potential measures under review	
e) comprehensive measures in place	
If so, are these measures	
a) Legislation	
b) Statutory policy or subsidiary legislation	
c) Policy and administrative arrangements	
243. Has your country taken measures so that the private sector facilitates access to joint development and transfer of relevant technology for the benefit of government institutions and the private sector of developing countries (16(4))?	
a) no measures	×
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	
If so, are these measures	

a) Legislation?	
b) Statutory policy and subsidiary legislation?	
c) Policy and administrative arrangements?	
244. Does your country have a national system for intellectual property right protection (16(5))?	
a) no	
b) yes	×
245. If yes, does it cover biological resources (for example, plant species) in any way?	
a) no	
b) yes – limited extent	×
c) yes – significant extent	

Decision III/17. Intellectual property rights

246. Has your country conducted and provided to the secretariat case-studies of the impacts of intellectual property rights on the achievement of the Conventions objectives?	
a) no	×
b) some	
c) many	

Further comments on implementation of this Article

The trade in technologies

Matters of the trade in and transfer of technologies are only regulated to a limited extent in Poland. The Ministry of the Economy is interested in selected aspects of the international trade in this sphere, including that in biotechnologies. Principles for engagement in commerce and trade are as provided for in the *Act on Principles for the Detailed Control of Foreign Trade in Goods and Technologies in Connection with International Agreements and Obligations* (which controls the trade in hazardous technologies and goods) and the *Act on Foreign Trade in Goods and Technologies of Strategic Importance for the Security of the State* (which regulates the principles in this sphere, as well as ensuring the upholding of international peace and security, the principles for the monitoring and registration of the aforementioned trade and responsibility for non-compliance with the law on trade in these goods, technologies and services).

At the same time, there is a lack of unequivocal legal regulations on access to technology and its transfer, so work is ongoing on an Act which would regulate this matter.

Coordination, as well as the stimulation of scientific research on biotechnologies (including on the associated threats), are in the hands of the Committee for Scientific Research, which also supports international cooperation in this sphere.

The protection of intellectual property

In Poland, the system safeguarding intellectual property rights is based on the *Acts on Author's*

Rights and Related Rights; the Inventiveness Act, the Trade Marks Act and the Seed Production Act.

Article 1 of the *Act on Author's Rights and Related Rights* provides that the subject of author's rights shall be any manifestation of creative activity of an individual nature, configured in whatever form and irrespective of value, designation and means of expression. Items not subject to author's rights include published patent descriptions or protective descriptions. Article 9 further states that co-authors are jointly entitled to author's rights.

Patent rights are provided for in the *Inventiveness Act*, wherein Section II, Chapter 1, Article 10 states that *an invention or discovery subject to patenting is a new solution of a technological nature that does not result in an obvious way from the situation in technology and may be suitable for application.* Patents are not granted for *inter alia* new varieties of plant and breeds of livestock, as well as biological means of plant or livestock breeding, means of treating diseases in the fields of human or veterinary medicine and means of plant protection (Article 12). Poland's *Inventiveness Act* does not exclude the possibility of patents being granted for either genes obtained thanks to genetic engineering (a patent for an object), or the means by which they are isolated and introduced into plant tissue. The current practice of the Polish Patents Office is to work towards the unified protection of biotechnological discoveries with the scope of protection existing under the European Patent Convention. Patent law safeguards a whole range of biotechnological products, though the sources of genetic diversity (microorganisms, plants, animals and humans) are not patentable.

In Poland, it is currently possible to patent techniques for the isolation and identification of genetic material, modified genes, technologies in the transfer of genes and modification of organisms and new biological configurations including human genes. It is also possible to deposit microorganisms.

In accordance with the *UPOV Convention*, the *Seed Production Act* protects the intellectual property rights resulting from the registration of new varieties obtained by breeders using classical methods. The breeders of new varieties avail themselves of special exclusiveness protection. The Act confers property entitlements upon both the breeders and the authors of original national varieties.

Article 17 Exchange of information

247. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High	×	b) Medium		c) Low	
248. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	×
d) Severely limiting					
Further comments on relative priority and on availability of resources					
There is a marked awareness of the increasing significance of matters of the exchange of and access to information, although the means assigned to their development are very much inadequate in relation to needs					

249. Has your country taken measures to facilitate the exchange of information from publicly available sources (17(1))?	
a) no measures	
b) restricted by lack of resources	
c) some measures in place	×
d) potential measures under review	
e) comprehensive measures in place	
If a developed country Party -	
250. Do these measures take into account the special needs of developing countries (17(1))?	
a) no	
b) yes – limited extent	
c) yes – significant extent	
251. If so, do these measures include all the categories of information listed in Article 17(2), including technical, scientific and socio-economic research, training and surveying programmes, specialized knowledge, repatriation of information and so on?	
a) no	
b) yes – limited extent	
c) yes – significant extent	

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		c) Low	
253. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate		c) Limiting	×
d) Severely limiting					
Further comments on relative priority and on availability of resources					
There is full awareness of the increasing significance of issues of scientific and technical cooperation, though the means assigned to their development are very much inadequate in relation to needs.					

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	×
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	×
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	
257. Does such cooperation include the training of personnel and exchange of experts (18(4))?	
a) no	
b) yes – limited extent	×
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	×
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	×
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	×
c) yes – significant extent	
261. Has your country designated a national focal point for the Clearing-House Mechanism?	
a) no	
b) yes	×
262. Is your country providing resources for the development and implementation of the Clearing-House Mechanism?	
a) no	
b) yes, at the national level	×
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	
264. Is your CHM operational?	
a) no	
b) under development	
c) yes (please give details below)	×
265. Is your CHM linked to the Internet?	
a) no	
b) yes	×
266. Has your country established a multi-sectoral and multi-disciplinary CHM steering committee or working group at the national level?	
a) no	×
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	

Further comments on implementation of these Articles

Scientific and technical cooperation and the exchange of information

International cooperation in science and technology related to the conservation and sustainable use of biological diversity has mainly developed at the level of bilateral contacts between higher education establishments, branch scientific research institutes and NGOs.

Recent years have seen several tens of conferences, seminars and workshops organised each year in Poland with the participation of foreign institutions and organisations. These provide a forum for the discussion of the results of research work. Often under the patronage or with the participation of the Chief Nature Conservator (or representatives of the Department of Forestry and Nature and Landscape Conservation of the Ministry of the Environment), these meetings have among their objectives the multilateral exchange of experiences between domestic and foreign centres, especially in regard to:

- the methodologies applied in studying the state or status of different components of biological diversity;
- new technical and technological solutions that may be applied in studies on biological diversity;
- means of gathering, processing and distributing information on the conservation and sustainable use of biological diversity;
- the obtained results of implementing particular projects;
- research programmes.

Leaving aside the international conferences and seminars organised in Poland, there is also ever more active participation of Polish scientists in the corresponding meetings organised by centres abroad.

Also of great significance in the international exchange of scientific and technical experience are the personal contacts between representatives of different research centres. Each year, several tens of Polish specialists visit centres abroad, have internships, or otherwise participate directly in the implementation of particular programmes and projects. At the same time, there is a steady increase in the number of foreign specialists present for periods of time at Polish centres.

Publications are an important element in scientific and technical cooperation and the exchange of information. In the years 1998-2000 some 670 titles of foreign scientific journals came to Poland, along with a similar number of books devoted in whole or in part to the publication of diverse materials (material studies, discussion articles, papers, synthetic works, etc.) providing information on the current state of knowledge as regards the recognition, conservation and sustainable use of biological diversity.

The results obtained by Polish academics involved with issues of biological diversity were published in almost 90 scientific or popular science journals, including around 40 in English. This activity was financed from the budget assigned to science.

The information-exchange mechanism in the promotion and facilitation of scientific and technical cooperation

Where the exchange of scientific and technical experience on biodiversity is concerned, great importance may be attached to the conditions the Internet offers for universal access to the informational resources of both Polish and foreign centres.

The Internet service entitled the *Clearing-House Mechanism - a System for the Exchange of Information on Biological Diversity in Poland* was established in 1996 (at http://www.ciuw.warman.net.pl/alf/biodiversity). In turn, 1997 saw the start-up of a "biodiversity" service, i.e. a web page of the Polish CHM augmented by entry into the Internet (prototype) database on protected areas. The following year, the renewed collection of data for the BDM (Biodiversity Data Management) System allowed for the updating and devising of an Internet version still in operation today. The years 1998/9 brought further improvements to the CHM service, with more links added and a new version of the Internet database on protected areas being devised. Finally, international action associated with the SBSTTA in Montreal and the Conference of the Parties in Nairobi was taken (e.g. through the placing of the CHM service at the head of the Polish national web page at EXPO'2000).

Informational resources under the CHM comprise several elements. The most important is the main www service located at the Information Technology Centre of Warsaw University (CIUW). This contains the following 10 major chapters on:

- the Convention on Biological Diversity;
- the state of biological diversity in Poland;
- threats to biological diversity;
- the conservation of biological diversity;
- education;
- biodiversity data management;
- definitions and abbreviations used;
- bibliography;
- databases on biological diversity in Poland;
- comments and latest news.

The chapters are divided into many sub-chapters extending to several hundred pages of standard text and augmented by diagrams, etc. A particularly valuable feature of the main service are the numerous references to source documents and subject-related web pages which can be accessed directly via the CHM service. In addition, a special segment has been created to group together Internet references to websites at home and abroad that are linked with the different issues of direct or indirect relevance to biodiversity. An important element of the CHM service is Chapter 9 on *Biological Diversity Databases in Poland,* which at present contains bases on:

- protected areas in Poland;
- the distribution in Poland of legally-protected vascular plant species;
- institutions and informational resources concerned with Poland's biodiversity;
- the genetic resources of crop plants in Poland;
- the phytopathological monitoring of Poland's forests;
- the genetic resources of livestock animals;
- wetlands and grasslands in Poland (only a description of the stationary base);
- the ECONET-POLSKA National Ecological Network (only a description of the base);
- nature refuges of Europe-wide significance in Poland;
- botanical gardens in Poland;
- an index of acts of law concerned with environmental protection in Poland.

The databases function independently of the main CHM service and are run by the various institutions that have established them. Wherever possible the informational resources of the CHM are being augmented by new bases.

One of the great virtues of the CHM service is the fact that all its resources are available in both Polish and English. This is of great significance to both the Polish user and those worldwide, since information on biodiversity in Poland is widely available, in line with the philosophy of the CHM and recommendations of the Conferences of the Parties. The CHM service is "hit" by more than 100,000 users annually, as well as by a similar number who use the database on protected areas, and c. 30,000 users of the metadatabases on institutions and their informational resources (BDM). This means that the potential scope of impact of the CHM may be very wide, hence the application of the CHM as an instrument implementing the Convention.

The metadatabase on *Institutions and informational resources concerned with Poland's biodiversity* (http://www.ihar.edu.pl/gene_bank/BDM/) was established as part of the implementation of the *Biodiversity Data Management* (BDM) project. Poland's c. 800 institutions and divisions thereof involving themselves with biological diversity were identified in 1996. These are higher education establishments and scientific institutes; botanical and zoological gardens; the boards of protected areas; the parts of the administration connected with nature conservation, forestry management, agriculture, etc.; and foundations and NGOs. All of these were sent exhaustive questionnaires and free examples of the text of the CBD. Information obtained from the questionnaires served in the creation in 1996 of the aforementioned national metadatabase on *Institutions and informational resources concerned with Poland's biodiversity.* This identified c. 780 Polish institutions (or divisions thereof) involving themselves with issues of biological diversity. The BDM metadatabase has been accessible on the Internet since 1998.

Besides the aforementioned System for the Exchange of Information on Biological Diversity in Poland, there are also a number of other Internet services that present information on these

matters. To be mentioned here are "MOST", the Polish Computer Network for NGOs (at most.org.pl), which was established in 1996 on the initiative of the International Ecological Lobby, thanks to a grant from *Milieukontakt Oost-Europa*. This is run by the Foundation for the Support of Ecological Initiatives. Its basic aim is to improve the flow of information between NGOs in Poland, by facilitating their use of Internet services (e-mail accounts, websites and discussion pages). At present the service extends to 250 e-mail accounts, 150 WWW sites and several discussion pages. The other services include an information service on nature conservation containing a discussion forum run by "Salamandra" (at salamandra.org.pl), and regional information service from GREEN and *Zielona Brama* ("Green Gate"), the guide to environmental information run by *Niezależna Grupa Informacyjna* (the "Independent Information Group") and the information service of *Biuro Wspierania Lobbyingu Ekologicznego* (the "Bureau for the Support of Environmental Lobbying").

Article 19 Handling of biotechnology and distribution of its benefits

268. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High	×	b) Medium		c) Low	

269. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting	×	d) Severely limiting	

Further comments on relative priority and on availability of resources
There is a steady raising of the level of awareness that matters involving new technology (including biotechnology) are of significance. However, the funding assigned to the creation of bases for their development are limited.

270. Has your country taken measures to provide for the effective participation in biotechnological research activities by those Contracting Parties which provide the genetic resources for such research (19(1))?	
a) no measures	×
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	
If so, are these measures:	
a) Legislation	
b) Statutory policy and subsidiary legislation	
c) Policy and administrative measures	

271. Has your country taken all practicable measures to promote and advance priority access on a fair and equitable basis by Contracting Parties to the results and benefits arising from biotechnologies based upon genetic resources provided by those Contracting Parties (19(2))?	
a) no measures	×
b) some measures in place	
c) potential measures under review	
d) comprehensive measures in place	

Decision IV/3. Issues related to biosafety and Decision V/1. Work Plan of the Intergovernmental Committee for the Cartagena Protocol on Biosafety

272. Is your country a Contracting Party to the Cartagena Protocol on Biosafety?	
a) not a signatory	
b) signed, ratification in progress	×
c) instrument of ratification deposited	

Further comments on implementation of this Article

Put before Parliament at the end of 2000, the draft *Genetically Modified Organisms Act* sets out bases for the contained use of GMOs, their introduction into the environment and their inclusion for trade, as well as for the protection of those who are in contact with these kinds of organism. The Act also details principles of good laboratory practice and the running of biotechnological work in relation to the level of threat; as well as requirements where the experimental release of biotechnological products into the environment is concerned.

Under the Europe Agreement, Poland is obliged to accede to the *Convention on the Granting of European Patents*. The membership date has been set at July 1st 2002. As Poland's legal system is adjusted, consideration is also given to the detailed principles for the patenting of biotechnological discoveries as set out in Directives 98/44/EC and 98/71/EC, as well in the *Regulation of the Administrative Council of the European Patent Organisation*. Parliament is also now working on a new *Industrial Property Rights Act*, again taking the aforementioned provisions into account. There are also proposals regarding the preparation of a *Biotechnologies Act* that would *i.a.* regulate principles for the transfer of genetic resources for biotechnological research to other countries, as well as participation in such research carried out abroad.

Since May 26th 2000, Poland has been a signatory to the international document drawn up within the CBD framework and entitled the *Cartagena Protocol on Biological Safety*. This is concerned with the transboundary transport of living genetically-modified organisms (LMOs). The Genetically Modified Organisms Act now in preparation pays full heed to the provisions of the Cartagena Protocol, especially as regards:

- conditions for the issuing of permits for the transfer of GMO products abroad;
- conditions for the issuing of permits for the transit of GMO products across Polish territory.

The provisions proposed in the draft Act would empower the Minister of Finance (in agreement with the Minister of the Economy) to detail by way of a Regulation the customs offices proper in the cases of the import and export of GMO products.

At the same time, the Minister of the Environment shall - in agreement with the Minister of Health and the Minister responsible for matters of science - set out by way of a Regulation an example of an application for a permit to export or engage in the transit of GMO products.

In cases concerning the contained use of GMOs or their deliberate release into the environment (including by way of the introduction for trade of GMO products and their import or export), the Minister of the Environment is charged with the keeping of the necessary registers. These will be in the public domain and their contents the subject of free unpaid access. In addition, with a view to informing the public of activities involving GMOs, the Minister of the Environment will issue an Official Journal containing information on these activities, including on his or her own work and that of his/her opinion-giving and advisory body.

Article 20 Financial resources

273. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?							
a) High		b) Medium	×	c) Low			
274. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting	×	d) Severely limiting	
Further comments on relative priority and on availability of resources							
The discussion of work to implement different Articles of the Convention has by the way made it clear that the difficulties of Poland's transition period do not allow for the adequate funding and resourcing of measures to conserve and make sustainable use of biological diversity. This is particularly the case when the scale of the needs is recalled.							

275. Has your country provided financial support and incentives in respect of those national activities which are intended to achieve the objectives of the Convention (20(1))?	
a) no	
b) yes – incentives only	
c) yes – financial support only	
d) yes – financial support and incentives	×
If a developed country Party -	
276. Has your country provided new and additional financial resources to enable developing country Parties to meet the agreed incremental costs to them of implementing measures which fulfil the obligations of the Convention, as agreed between you and the interim financial mechanism (20(2))?	
a) no	
b) yes	
If a developing country Party or Party with economy in transition –	
277. Has your country received new and additional financial resources to enable you to meet the agreed full incremental costs of implementing measures which fulfil the obligations of the Convention (20(2))?	
a) no	×
b) yes	
If a developed country Party -	
278. Has your country provided financial resources related to implementation of the Convention through bilateral, regional and other multilateral channels (20(3))?	
If a developing country Party or Party with economy in transition -	
279. Has your country used financial resources related to implementation of the Convention from bilateral, regional and other multilateral channels (20(3))?	
a) no	
b) yes	×

Decision III/6. Additional financial resources

280. Is your country working to ensure that all funding institutions (including bilateral assistance agencies) are striving to make their activities more supportive of the Convention?	
a) no	
b) yes – limited extent	×
c) yes – significant extent	
281. Is your country cooperating in any efforts to develop standardized information on financial support for the objectives of the Convention?	
a) no	
b) yes (please attach information)	×

Decision V/11. Additional financial resources

282. Has your country established a process to monitor financial support to biodiversity?	
a) no	
b) procedures being established	
c) yes (please provide details)	×
283. Are details available of your country's financial support to national biodiversity activities?	
a) no	
b) not in a standardized format	
c) yes (please provide details)	×
284. Are details available of your country's financial support to biodiversity activities in other countries?	
a) not applicable	
b) no	×
c) not in a standardized format	
d) yes (please provide details)	
Developed country Parties - 285. Does your country promote support for the implementation of the objectives of the Convention in the funding policy of its bilateral funding institutions and those of regional and multilateral funding institutions?	
a) no	
b) yes	
Developing country Parties - 286. Does your country discuss ways and means to support implementation of the objectives of the Convention in its dialogue with funding institutions?	
a) no	
b) yes	
287. Has your country compiled information on the additional financial support provided by the private sector?	
a) no	×
b) yes (please provide details)	

288. Has your country considered tax exemptions in national taxation systems for biodiversity-related donations?	
a) no	
b) not appropriate to national conditions	×
c) exemptions under development	
d) exemptions in place	

Further comments on implementation of this Article

Poland's system of funding biodiversity and landscape conservation resembles that in the realm of environmental protection in being very well-developed. It is public funding that plays the primary role.

Means assigned directly or indirectly to biodiversity conservation embrace budget lines designated for the protection of habitats, environmental education, tourist infrastructure, *in situ* and *ex situ* species protection and the purchase of land with a view to its being subject to a particular form of protection.

Table 1. Investment outlays on the conservation of biological diversity and the landscape by budget lines (in '000 PLN)

No.	Budget line	1997	1998	1999
I	The conservation of biological and landscape diversity – overall	2563,2	8240,5	6814,1
1	Species protection	-	-	56,2
2	The protection of the landscape and habitats	2563,2	8240,5	1820,8
2.1	The protection of forests, including - stand reconstruction in zones of damage to forests	10,3 10,3	102,6 102,6	299,3 18,9
2.2	The creation and functioning of areas of specially-valuable natural and landscape features	2450,4	8083,0	1512,5
2.3	The monitoring of biological and landscape diversity; research, development and implementation work; training, etc.	102,5	54,9	9,0
3	The reinstatement of species and renaturalisation of the landscape	-	-	3121,3
4	The renewal and treatment of water resources	-	-	710,7
5	Other types of activity	-	-	1105,1

The central budget finances part of the ongoing costs of the operations of National and Landscape Parks as well as the nature conservation services, and in addition the costs of different types of expert opinion, research and documentation, publications, conferences, etc.

Pursuant to the provisions of Budget Acts, the sums assigned to the functioning of National Parks were of c. 43 million PLN in 1997, c. 47 million PLN in 1998 and c, 45 million PLN in 1999.

The Funds for Environmental Protection and Water Management also assign funding to nature conservation. These act at the national level (via the NFEPWM), the level of the voivodships, and now at two local levels, i.e. those of the *poviat* ("county") and *gmina*. The basic formula for their activity is the co-financing of undertakings, first and foremost by way of grants and loans offered on preferential terms.

The loans extended by the Funds for Environmental Protection and Water Management are characterised not only by their low attendant rates of interest, but also by the longer-than-usual repayment periods, as well as by a possibility that part of the repayment be amortized in the case of timely completion of an undertaking that is in line with the original intentions. The means gathered by the Funds are also used to make supplementary payments (lowering the rate of interest for those taking out loans) in regard to preferential credit extended by the Environmental Protection Bank S.A. This considerably extends the opportunities for the co-financing of pro-environmental investment in Poland.

Within the overall funding of environmental protection by the National Fund for Environmental Protection and Water Management, the projects and programmes concerned with biodiversity conservation accounted for 3.3% of the total in 1997, 3.8% in 1998 and only 2.4% in 1999.

Table 2. Expenditure by the Funds for Environmental Protection and Water Management on the protection of biological diversity and the landscape (in million PLN)

Source	**1997**	**1998**	**1999**
National Fund for Environmental Protection and Water Management	38,4	40,5	38,7
Voivodship Funds for Environmental Protection and Water Management	17,7	20,2	20,5
Gmina Funds for Environmental Protection and Water Management	39,8	42,5	33,2
TOTAL	**95,9**	**103,2**	**92,4**

A further important source financing undertakings in environmental protection (and in particular biodiversity conservation) is the Ecofund Foundation *Ekofundusz* established in 1992 to manage resources from the so-called debt-for-environment swaps, i.e. the conversion of part of Poland's foreign debt in return for the supporting of undertakings in environmental protection. The countries opting for this form of action are the USA, France, Switzerland, Sweden, Italy and Norway. In the years 1992-1998, the Ecofund expenditure on projects in

the field of nature conservation represented 18% of the total going on environmental protection (which was 475 million zl). In 1999, the proportion reached 20.9%, being associated with the co-financing of no fewer than 50 small projects.

The grants conferred by the Ecofund in the sphere of the conservation of biodiversity are designated *i.a.* for:

- the restoration of natural habitat conditions (renaturalisation, habitat protection) in National Parks, Nature Reserves and Landscape Parks;
- the building-up of tourist infrastructure;
- the enchanced small-scale retention of water in forests, through the restoration of watercourses and small bodies of water within forests;
- the implementation and completion of long-term programmes for the active conservation of endangered species of plant and animal (through increases in their populations);
- the active protection of forest ecosystems (through the reinstatement and revitalisation of forests and stand conversion).

Table 3. Ecofund expenditure on the conservation of biological diversity (in million PLN)

	1997	**1998**	**1999**	**2000**
The conservation of biological diversity	10,2	19,2	21,7	24,5

Units involved in the different forms of nature conservation (National and Landscape Parks, botanical and zoological gardens, natural history museums, etc.) also obtain funding from their own economic activity, e.g. the sale of tickets for entry into Parks, Reserves and museums; publications; and the products and services they provide.

In addition, the conservation of biological diversity is funded by non-commercial financing institutions (e.g. various kinds of foundation), as well as by private firms and individuals.

There are fragmentary data on the funding of biodiversity-related activity by the private sector. These make clear the limited engagement of the sector in such work - something that very likely reflects the failure of the current Polish tax system to provide for relief in cases of the support of such undertakings. Indeed, recent years have seen tax policy in Poland move towards the limitation of reliefs and exemptions, including those resulting from expenditure on environmental protection. It is true that there remains the opportunity to deduct covenants or gifts for environmental protection (which may include biodiversity conservation) from taxable income, but there is no basis for believing that the scope of the tax concessions available will be expanded in the coming years. It is rather their abandonment that can be anticipated.

Poland is more or less uninvolved in the financing of actions in the name of biological diversity beyond its own borders. If this happens at all it is very occasional in character.

Scientific research and other activity concerning biodiversity is included in the annual plans of nearly 150 scientific institutions, including a quarter of all the institutes and departments of the Polish Academy of Sciences, 5% of the departmental (ministerial) research-and-development units, nearly 20% of the faculties in the higher education establishments (i.e. universities, technical universities and higher schools of engineering, agriculture, medicine, economics and teacher training). Their statutory activity is funded by the Committee for Scientific Research (KBN), which administers the sums designated for science in the national budget. Beyond the statutory activity of the scientific institutions, the KBN finances a range of research projects by way of grants awarded following competitions. These may be submitted by scientists individually, commissioned by units of the central and territorial administrations, or be so-called targeted projects directed for implementation. However, outlays from the budget on the whole science sphere accounted for only 0.46% of GDP in 1999, i.e. for c. 2.406 billion zl. This is much less than in the developed countries. The situation of the biological sciences in Poland is worsened by the fact that the input of enterprises in funding science - itself limited to the point where it represents less than 40% of the sum from the central budget - is in any case very largely directed towards the technical sciences.

Overall, taking account of the sums allocated to the statutory activities of scientific institutions and the financing of research projects, libraries and other forms of activity supporting research, the share taken by research to better understand, protect and make sustainable use of biodiversity is at something like 2.5-3.0% of the total outlays on science. Some tasks linked with the conservation of biological diversity are also financed from abroad by way of government grants within the framework of bilateral agreements, financial support from international organisations or private firms, and credit extended by the international financing institutions.

A particular role here is that played by the specialist agencies of the UN, namely UNEP and the UNDP, as well as the specially-founded Global Environmental Facility (GEF).

Since the time co-operation with the GEF was first entered into in the early 1990s, financial support has been obtained for 74 projects concerning biodiversity conservation, to which a total of more than 6.7 million USD has been assigned. Among the 74 projects, there are 3 included within the large grant category (with assistance of more than a million USD being granted), 4 of medium size (not exceeding 1 million USD) and 67 involving small grants (not exceeding 50,000 USD). All the projects run with GEF assistance had as their aim the facilitated implementation of provisions of the Convention on Biological Diversity concerning inventorying, strategic studies and the effective management of data.

Among the international NGOs concerning themselves with nature conservation, it is the Worldwide Fund for Nature (WWF) that has shown the greatest commitment to the funding

of projects in Poland. Cooperation with the World Conservation Union (IUCN) is also developing well.

The EU's SAPARD (Support for Pre-Accession Measures for Agriculture and Rural Development) instrument is an assistance programme for candidate countries. Within the framework of it, some 168.68 million EUR have been assigned to Poland (or 32.5% of all resources assigned to the programme in the EU's 2000-2006 budget). Pilot agroenvironmental programmes have been drawn up within the SAPARD framework, to include the Narew, Biebrza and Warta Valley areas; the Varmia-Mazury and Podkarpackie voivodships and a programme for the reafforestation of agricultural land in the Świętokrzyskie and Podlaskie voivodships. Implementation of the first projects was expected to have started at the beginning of 2001.

One of the actions taken by Poland to present information on financial support in standardised form is the computerised database on GEF projects in Poland which was established in 2000 and will be discussed in more detail in the chapter concerning Article 21.

The process by which financial assistance for biodiversity conservation is monitored is run to only a limited extent in Poland. One of the forms of such monitoring may be taken to be the system of reporting of the Central Statistical Office (GUS). Within this system it is possible to obtain information on the effects of actions taken to protect biological diversity, as well as on the means assigned to these actions. However, the system is limited in scope and the Office is certainly not in possession of exhaustive data.

Article 21 Financial mechanism

289. What is the relative priority afforded to implementation of this Article and the associated decisions by your country?					
a) High	×	b) Medium		c) Low	

290. To what extent are the resources available adequate for meeting the obligations and recommendations made?							
a) Good		b) Adequate		c) Limiting	×	d) Severely limiting	

Further comments on relative priority and on availability of resources
Poland attaches great importance to the establishment and proper functioning of effective mechanisms financing actions in biodiversity conservation. Nevertheless, the means assigned to this objective are inadequate in relation to need.

291. Has your country worked to strengthen existing financial institutions to provide financial resources for the conservation and sustainable use of biological diversity?	
a) no	
b) yes	×

Decision III/7. Guidelines for the review of the effectiveness of the financial mechanism

292. Has your country provided information on experiences gained through activities funded by the financial mechanism?	
a) no activities	
b) no, although there are activities	
c) yes, within the previous national report	
d) yes, through case-studies	
e) yes, through other means (please give details below)	×

Further comments on implementation of this Article

Financial mechanisms

Article 21 of the Convention on Biological Diversity refers to a financial mechanism created by the Conference of the Parties, i.e. founded on the initiative of the group of highly-developed countries, on the strength of agreements entered into between the UNDP, UNEP and the International Bank for Reconstruction and Development, known as the World Bank. This is the Global Environmental Facility and it finances projects associated with biodiversity conservation, among other things.

In Poland, national financial mechanisms (institutions) have been established in recent years to support actions in environmental protection. The role of these institutions has expanded steadily. The Funds for Environmental Protection and Water Management now operate on four levels, i.e. those of the country as a whole, the voivodship (province and region), the *poviat* ("county") and the *gmina*. In addition, the National and Voivodship Funds have assumed legal personality, something that allows them to manage the funds at their disposal more effectively. The scope of

activities which may be financed by these institutions has also widened.

Means obtained by the Funds derive from fees for the use of natural resources and fines for non-compliance, *inter alia* with permissible norms for emissions.

The importance of the Ecofund Foundation in supporting undertakings leading to the conservation of biological diversity is also increasing - on account of the steady growth in its pool of resources which can be assigned to nature-related projects and programmes.

The details of the mechanisms operating in Poland have been discussed in relation to Article 20.

Dissemination of experiences with the functioning of the GEF

One of the Polish activities supplying information on the experiences gained with the implementation of GEF-backed projects in Poland is the computerised database founded in the year 2000. Its task is:

- to facilitate access to information on the GEF projects implemented in Poland;
- to allow advantage to be taken of experiences gained in cooperation with the GEF, as regards both the formal and procedural aspects and those of a substantive or organisational nature;
- to raise the efficiency of the coordination and supervision process;
- to provide permanent monitoring of overall cooperation with the GEF;
- to promote modern, effective and environmentally-friendly technical and organisational solutions.

The database contains information on GEF projects in Poland, organised in such a way that these can be reviewed from the most general (synthetic) points of view down to the detailed level concerning the individual projects. The basic information on GEF activity in Poland has been grouped in tables of synthetic data, which take into account:

- the number of projects in different phases of implementation;
- the number of projects in different stages of GEF funding;
- the amounts assigned by the GEF and spent;
- the share taken by domestic sources in projects co-financed by the GEF;
- the environmental benefits obtained.

The possession of information on the number of projects in different phases of implementation makes it possible to proceed to the details on the different projects. At this level of the database the key features arranging the further information are:

- the phase of implementation in which a given project is found (a feature determining a project's assignment to the catalogues concerning the preparatory, implementation or completion phases);
- the category of grant (large, medium-sized or small - according to the criteria adopted by the

GEF);

- the subject area to which the given project belongs.

The selection of particular features (e.g. projects in the implementation phase, medium-sized grant and subject like biodiversity) allows the user of the base to choose from the list of projects indicated as corresponding with the set criteria the one or more about which he/she would like to obtain full information.

The year 2000 also saw the publication of a brochure entitled *The results of and experiences with the implementation of GEF projects in Poland in the years 1992-1999*. Among other things, this contains information on GEF activity in the world and in Poland, the projects being implemented or completed in the country and information concerning the possibilities for obtaining a GEF grant, the relevant procedures and the experiences gained in the course of project implementation.

Article 23 Conference of the Parties

293. How many people from your country participated in each of the meetings of the Conference of the Parties?	
a) COP 1 (Nassau)	1
b) COP 2 (Jakarta)	2
c) COP 3 (Buenos Aires)	5
d) COP 4 (Bratislava)	7
e) COP 5 (Nairobi)	7

Decision I/6, Decision II/10, Decision III/24 and Decision IV/17. Finance and budget

294. Has your country paid all of its contributions to the Trust Fund?	
a) no	×
b) yes	

Decision IV/16 (part) Preparation for meetings of the Conference of the Parties

295. Has your country participated in regional meetings focused on discussing implementation of the Convention before any meetings of the Conference of the Parties?	
a) no	×
b) yes (please specify which)	
If a developed country Party – 296. Has your country funded regional and sub-regional meetings to prepare for the COP, and facilitated the participation of developing countries in such meetings?	
a) no	
b) yes (please provide details below)	

Decision V/22. Budget for the programme of work for the biennium 2001-2002

297. Did your country pay its contribution to the core budget (BY Trust Fund) for 2001 by 1st January 2001?	
a) yes in advance	
b) yes on time	
c) no but subsequently paid	×
d) not yet paid	
298. Has your country made additional voluntary contributions to the trust funds of the Convention?	
a) yes in the 1999-2000 biennium	
b) yes for the 2001-2002 biennium	
c) expect to do so for the 2001-2002 biennium	
d) no	×

Further comments on implementation of this Article

Poland's ratification of the Convention on Biological Diversity has found appropriate reflection in Parliament's enactment of the *Act on the Ratification of the Convention.* The period 1996-2000 witnessed several national-level conferences devoted to the conservation and sustainable use of biological diversity. The sum total of the activities in this sphere has influenced the decision that a relatively high rank be attached to these issues within the central administration and scientific circles, as well as among NGOs. Ratification also helped to foster cooperation between the Ministry of the Environment and other Ministries, notably the Ministry of Agriculture and Rural Development as well as the head of the Committee for Scientific Research. One of the results of this cooperation has been the delegation by the Ministries of representatives to attend Conferences of the Parties. The composition of the Polish delegation attending COPs post 1996 can be seen to have been particularly rich and funded willingly by the interested seats of government.

Article 24 Secretariat

299. Has your country provided direct support to the Secretariat in terms of seconded staff, financial contribution for Secretariat activities, etc?	
a) no	×
b) yes	

Further comments on implementation of this Article

Since 1996, Poland has been engaged in the ratification of a large number of nature-related conventions and agreements. The *Bonn Convention, Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas, Agreement on the Conservation of Bats* and *Bern Convention* are among them. Other so-called environmental conventions have also been acceded to. In consequence, the payment of dues for these conventions and the costs of the establishment of a national secretariat for nature-related conventions ensure that the taking-on of further obligations in support of the Convention Secretariat is not possible at present.

Article 25 Subsidiary body on scientific, technical and technological advice

300. How many people from your country participated in each of the meetings of SBSTTA?	
a) SBSTTA I (Paris)	0
b) SBSTTA II (Montreal)	1
c) SBSTTA III (Montreal)	1
d) SBSTTA IV (Montreal)	1
e) SBSTTA V (Montreal)	3

Further comments on implementation of this Article

The ratification of the Convention on Biological Diversity has also raised the level of interest in Poland in SBSTTA-mediated cooperation.

Article 26 Reports

301. What is the status of your first national report?	
a) Not submitted	
b) Summary report submitted	
c) Interim/draft report submitted	
d) Final report submitted	×
If b), c) or d), was your report submitted:	
by the original deadline of 1.1.98 (Decision III/9)?	×
by the extended deadline of 31.12.98 (Decision IV/14)?	
Later (please specify date)	

Decision IV/14 National reports

302. Did all relevant stakeholders participate in the preparation of this national report, or in the compilation of information used in the report?	
a) no	
b) yes	×
303. Has your country taken steps to ensure that its first and/or second national report(s) is/are available for use by relevant stakeholders?	
a) no	
b) yes	×
If yes, was this by:	
a) informal distribution?	
b) publishing the report?	
c) making the report available on request?	×
d) posting the report on the Internet?	

Decision V/19. National reporting

304. Has your country prepared voluntary detailed thematic reports on one or more of the items for in-depth consideration at an ordinary meeting of the parties, following the guidelines provided?	
a) no	
b) yes – forest ecosystems	×
c) yes – alien species	×
d) yes – benefit sharing	×

Further comments on implementation of this Article

Both the first report and the second (present) report from Poland were submitted within the appropriate time frame. Their preparation was preceded by an extensive national debate on the introduction of Convention provisions. The preparatory work also involved representatives of the governmental and local governmental administrations, scientific circles and the NGOs.

The national reports are meeting with broad interest and are made available on request. The current report is to be accessible on the Internet page of the Ministry of the Environment. Subject-related reports on forest ecosystems and access to genetic resources have been appended to the present report, as has the associated breakdown of benefits.

Decision V/6. Ecosystem approach

305. Is your country applying the ecosystem approach, taking into account the principles and guidance contained in the annex to decision V/6?	
a) no	
b) under consideration	
c) some aspects are being applied	×
d) substantially implemented	
306. Is your country developing practical expressions of the ecosystem approach for national policies and legislation and for implementation activities, with adaptation to local, national, and regional conditions, in particular in the context of activities developed within the thematic areas of the Convention?	
a) no	
b) under consideration	
c) some aspects are being applied	×
d) substantially implemented	
307. Is your country identifying case studies and implementing pilot projects that demonstrate the ecosystem approach, and using workshops and other mechanisms to enhance awareness and share experience?	
a) no	×
b) case-studies identified	
c) pilot projects underway	
d) workshops planned/held	
e) information available through CHM	
308. Is your country strengthening capacities for implementation of the ecosystem approach, and providing technical and financial support for capacity-building to implement the ecosystem approach?	
a) no	
b) yes within the country	×
c) yes including support to other Parties	
309. Has your country promoted regional co-operation in applying the ecosystem approach across national borders?	
a) no	×
b) informal co-operation	
c) formal co-operation (please give details)	

Inland water ecosystems

Decision IV/4. Status and trends of the biological diversity of inland water ecosystems and options for conservation and sustainable use

310. Has your country included information on biological diversity in wetlands when providing information and reports to the CSD, and considered including inland water biological diversity issues at meetings to further the recommendations of the CSD?	
a) no	
b) yes	×
311. Has your country included inland water biological diversity considerations in its work with organisations, institutions and conventions affecting or working with inland water?	
a) no	
b) yes	×
If a developing country Party or Party with economy in transition –	
312. When requesting support for projects relating to inland water ecosystems from the GEF, has your country given priority to identifying important areas for conservation, preparing and implementing integrated watershed, catchment and river basin management plans, and investigating processes contributing to biodiversity loss?	
a) no	
b) yes	×
313. Has your country reviewed the programme of work specified in annex 1 to the decision, and identified priorities for national action in implementing the programme?	
a) no	
b) under review	×
c) yes	

Decision V/2. Progress report on the implementation of the programme of work on the biological diversity of inland water ecosystems (implementation of decision IV/4)

314. Is your country supporting and/or participating in the River Basin Initiative?	
a) no	
b) yes	×
315. Is your country gathering information on the status of inland water biological diversity?	
a) no	
b) assessments ongoing	×
c) assessments completed	
316. Is this information available to other Parties?	
a) no	×
b) yes - national report	
c) yes – through the CHM	
d) yes – other means (please give details below)	
317. Has your country developed national and/or sectoral plans for the conservation and sustainable use of inland water ecosystems?	
a) no	

b) yes – national plans only	×
c) yes – national plans and major sectors	
d) yes – national plans and all sectors	
318. Has your country implemented capacity-building measures for developing and implementing these plans?	
a) no	
b) yes	×

Decision III/21. Relationship of the Convention with the CSD and biodiversity-related conventions

319. Is the conservation and sustainable use of wetlands, and of migratory species and their habitats, fully incorporated into your national strategies, plans and programmes for conserving biological diversity?	
a) no	
b) yes	×

Further comments on implementation of these decisions and the associated programme of work

Matters concerning the protection of wetland areas (including the ecosystems of inland waters) are among the spheres gaining priority status in national policy. Data on their biological diversity are collected both in the course of the devising of protection plans for protected areas that include them, and in numerous scientific and monitoring studies on particular lakes, rivers, etc. A *National Plan for the Protection of Wetland Areas* was drawn up for Poland's wetlands in 1995, while the matter is also considered in the *National Strategy for the Conservation and Sustainable Use of Biological Diversity.*

Marine and coastal biological diversity

Decision II/10 and Decision IV/5. Conservation and sustainable use of marine and coastal biological diversity

320. Does your national strategy and action plan promote the conservation and sustainable use of marine and coastal biological diversity?	
a) no	
b) yes – limited extent	×
c) yes – significant extent	
321. Has your country established and/or strengthened institutional, administrative and legislative arrangements for the development of integrated management of marine and coastal ecosystems?	
a) no	
b) early stages of development	×
c) advanced stages of development	
d) arrangements in place	
322. Has your country provided the Executive Secretary with advice and information on future options concerning the conservation and sustainable use of marine and coastal biological diversity?	
a) no	×
b) yes	
323. Has your country undertaken and/or exchanged information on demonstration projects as practical examples of integrated marine and coastal area management?	
a) no	×
b) yes – previous national report	
c) yes - case-studies	
d) yes - other means (please give details below)	
324. Has your country programmes in place to enhance and improve knowledge on the genetic structure of local populations of marine species subjected to stock enhancement and/or sea-ranching activities?	
a) no	
b) programmes are being developed	×
c) programmes are being implemented for some species	
d) programmes are being implemented for many species	
e) not a perceived problem	
325. Has your country reviewed the programme of work specified in an annex to the decision, and identified priorities for national action in implementing the programme?	
a) no	
b) under review	×
c) yes	

Decision V/3. Progress report on the implementation of the programme of work on marine and coastal biological diversity (implementation of decision IV/5)

326. Is your country contributing to the implementation of the work plan on coral bleaching?	
a) no	
b) yes	
c) not relevant	✕
327. Is your country implementing other measures in response to coral bleaching?	
a) no	
b) yes (please provide details below)	
c) not relevant	✕
328. Has your country submitted case-studies on the coral bleaching phenomenon to the Executive Secretary?	
a) no	
b) yes	
c) not relevant	✕

Further comments on implementation of these decisions and the associated programme of work

The strategies and action plans for the conservation of biological diversity also deal with the coastal and marine areas. Particular places for the integrated management of these ecosystems are the protected areas (which do embrace both land and sea habitats). Protection plans are drawn up for these, while their boards engage in activity of an educational nature seeking to highlight the issue of the conservation of biodiversity in the Baltic. A particular place in all this is that held by the Sea Fisheries Institute Station, which runs a programme for the protection of marine mammals.

Decision V/3 does not concern Poland.

Agricultural biological diversity

Decision III/11 and Decision IV/6. Conservation and sustainable use of agricultural biological diversity

329. Has your country identified and assessed relevant ongoing activities and existing instruments at the national level?	
a) no	
b) early stages of review and assessment	
c) advanced stages of review and assessment	×
d) assessment completed	
330. Has your country identified issues and priorities that need to be addressed at the national level?	
a) no	
b) in progress	×
c) yes	
331. Is your country using any methods and indicators to monitor the impacts of agricultural development projects, including the intensification and extensification of production systems, on biological diversity?	
a) no	
b) early stages of development	×
c) advanced stages of development	
d) mechanisms in place	
332. Is your country taking steps to share experiences addressing the conservation and sustainable use of agricultural biological diversity?	
a) no	
b) yes – case-studies	
c) yes – other mechanisms (please specify)	×
333. Has your country conducted case-studies on the issues identified by SBSTTA: i) pollinators, ii) soil biota, and iii) integrated landscape management and farming systems?	
a) no	×
b) yes – pollinators	
c) yes – soil biota	
d) yes – integrated landscape management and farming systems	
334. Is your country establishing or enhancing mechanisms for increasing public awareness and understanding of the importance of the sustainable use of agrobiodiversity components?	
a) no	
b) early stages of development	×
c) advanced stages of development	
d) mechanisms in place	

335. Does your country have national strategies, programmes and plans which ensure the development and successful implementation of policies and actions that lead to sustainable use of agrobiodiversity components?	
a) no	
b) early stages of development	
c) advanced stages of development	×
d) mechanisms in place	
336. Is your country promoting the transformation of unsustainable agricultural practices into sustainable production practices adapted to local biotic and abiotic conditions?	
a) no	
b) yes – limited extent	×
c) yes – significant extent	
337. Is your country promoting the use of farming practices that not only increase productivity, but also arrest degradation as well as reclaim, rehabilitate, restore and enhance biological diversity?	
a) no	
b) yes – limited extent	×
c) yes – significant extent	
338. Is your country promoting mobilisation of farming communities for the development, maintenance and use of their knowledge and practices in the conservation and sustainable use of biological diversity?	
a) no	
b) yes - limited extent	×
c) yes - significant extent	
339. Is your country helping to implement the Global Plan of Action for the Conservation and Sustainable Utilisation of Plant Genetic Resources?	
a) no	
b) yes	×
340. Is your country collaborating with other Contracting Parties to identify and promote sustainable agricultural practices and integrated landscape management?	
a) no	×
b) yes	

Decision V/5. Agricultural biological diversity: review of phase I of the programme of work and adoption of a multi-year work programme

341. Has your country reviewed the programme of work annexed to the decision and identified how you can collaborate in its implementation?	
a) no	×
b) yes	

342. Is your country promoting regional and thematic co-operation within this framework of the programme of work on agricultural biological diversity?	
a) no	
b) some co-operation	×
c) widespread co-operation	
d) full co-operation in all areas	
343. Has your country provided financial support for implementation of the programme of work on agricultural biological diversity?	
a) no	
b) limited additional funds	×
c) significant additional funds	
If a developed country Party –	
344. Has your country provided financial support for implementation of the programme of work on agricultural biological diversity, in particular for capacity building and case-studies, in developing countries and countries with economies in transition?	
a) no	
b) yes within existing cooperation programme(s)	
b) yes, including limited additional funds	
c) yes, with significant additional funds	
345. Has your country supported actions to raise public awareness in support of sustainable farming and food production systems that maintain agricultural biological diversity?	
a) no	
b) yes, to a limited extent	×
c) yes, to a significant extent	
346. Is your country co-ordinating its position in both the Convention on Biological Diversity and the International Undertaking on Plant Genetic Resources?	
a) no	
b) taking steps to do so	×
c) yes	
347. Is your country a Contracting Party to the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade?	
a) not a signatory	×
b) signed – ratification in process	
c) instrument of ratification deposited	
348. Is your country supporting the application of the Executive Secretary for observer status in the Committee on Agriculture of the World Trade Organisation?	
a) no	
b) yes	×

349. Is your country collaborating with other Parties on the conservation and sustainable use of pollinators?	
a) no	×
b) yes	
350. Is your country compiling case-studies and implementing pilot projects relevant to the conservation and sustainable use of pollinators?	
a) no	×
b) yes (please provide details)	
351. Has information on scientific assessments relevant to genetic use restriction technologies been supplied to other Contracting Parties through media such as the Clearing-House Mechanism?	
a) not applicable	
b) no	
c) yes - national report	
d) yes – through the CHM	×
e) yes – other means (please give details below)	
352. Has your country considered how to address generic concerns regarding such technologies as genetic use restriction technologies under international and national approaches to the safe and sustainable use of germplasm?	
a) no	
b) yes – under consideration	×
c) yes – measures under development	
353. Has your country carried out scientific assessments on inter alia ecological, social and economic effects of genetic use restriction technologies?	
a) no	×
b) some assessments	
c) major programme of assessments	
354. Has your country disseminated the results of scientific assessments on inter alia ecological, social and economic effects of genetic use restriction technologies?	
a) no	×
b) yes – through the CHM	
c) yes – other means (please give details below)	
355. Has your country identified the ways and means to address the potential impacts of genetic use restriction technologies on the in situ and ex situ conservation and sustainable use, including food security, of agricultural biological diversity?	
a) no	×
b) some measures identified	
c) potential measures under review	
d) comprehensive review completed	

356. Has your country assessed whether there is a need for effective regulations at the national level with respect to genetic use restriction technologies to ensure the safety of human health, the environment, food security and the conservation and sustainable use of biological diversity?	
a) no	
b) yes – regulation needed	
c) yes – regulation not needed (please give more details)	×
357. Has your country developed and applied such regulations taking into account, inter alia, the specific nature of variety-specific and trait-specific genetic use restriction technologies?	
a) no	×
b) yes – developed but not yet applied	
c) yes – developed and applied	
358. Has information about these regulations been made available to other Contracting Parties?	
a) no	×
b) yes – through the CHM	
c) yes – other means (please give details below)	

Further comments on implementation of these decisions and the associated programme of work

Poland does not yet possess an operational organisational system which would assume responsibility for the implementation of long-term agroenvironmental programmes. Organic farming is in receipt of grants, as are the genetic resources of native breeds and forms of livestock animals and the study of soil fertility for the needs of plans of fertiliser use. With a view to preparing the targeted agroenvironmental programmes that will take on their full scope of implementation on Poland's accession to the EU, a programme of this kind is to be tested in the pre-accession period by way of pilot projects within the framework of the SAPARD Programme. An Agroenvironmental Programmes Act is also in preparation.

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Agroenvironmental programmes are an instrument of state policy enjoying financing within the framework of operational programmes. The primary tasks of agricultural policy were formulated in the *Medium-Term Strategy for the Development of Agriculture and Rural Areas*. The

Cohesive National Policy for Agricultural and Rural Areas represents a development of the Medium-Term Strategy which concentrates on structural changes in rural areas and agriculture in the period 2000-2006. The Cohesive Policy will be brought into effect through operational programmes that include the SAPARD Programme (*Community Support for Pre-Accession Measures for Agriculture and Rural Development in the Applicant Countries of Central and Eastern Europe in the Pre-Accession Period*). The objectives of SAPARD formulated as "the restructuring of the agriculture sector" and "the sustainable development of rural areas, the protection of the natural environment and culture heritage" have a direct influence on biological diversity.

The environmental protection sector has seen a number of initiatives taken that also have a bearing on areas used agriculturally. Strategic documents have been devised in relation to the social and economic development of the country and management of the environment. The most important document relating directly to biological diversity is the *Second National Environmental Policy* of 2000. The bringing into effect of this Policy is creating suitable legal, institutional and organisational conditioning for the commencement with the National Strategy for the Conservation and Sustainable Use of Biological Diversity.

Matters of the exchange of experiences in the conservation and sustainable use of agrobiodiversity (a priority task for Poland) have been and are the subject of a large number of domestic and international seminars and scientific conferences, as well as specialist and popular-science publications.

Polish honeybees represent significant animal genetic resources, not only on account of the productive functions of the species, but also above all from the ecological point of view. The last 10 years have seen a dramatic fall in the number of bee swarms kept - from 2 million to 1 million. The book registering Polish bees includes 28 lines of native honeybee, 8 of the Caucasian honeybee and 5 lines of the Central European honeybee. It is planned for the breeding programme to take in lines originating from the Italian honeybee as well as synthetic lines.

The mass importation of alien races of honeybee into Poland (especially in the 1960s) resulted in the near total extirpation of the Central European honeybee from its natural area of occurrence. These populations, though of lower productivity, are very well adapted to difficult environmental conditions, manifesting a series of valuable features like very good winter survivorship, cautious reddening in case of cold springs and the rapid development of families following the stabilisation of weather conditions. In Poland, four local lines of the Central European honeybee have persisted and been brought under protection (the Augustowska, Kampinoska, Northern and Asta lines).

Poland is not carrying out case studies and pilot projects in the field of the conservation and sustainable use of pollinating insects, though it is pursuing a programme for the *in-situ* conservation of honeybees.

The genetic use restriction technologies (GURT) involve terminator gene sequences that prevent the germination of seeds in the second generation. The technology is well known in Poland's

scientific circles, as well as to the public thanks to information in the press. However, work of this kind is not being carried out in the country at present. The release into the environment or importation of varieties possessing such terminator genes requires the consent of the Minister of the Environment in accordance with Article 37a of the Environmental Protection and Management Act. A condition where the obtainment of this consent is concerned is the carrying-out of an in-depth assessment of the threat posed to the environment and human health. On the entry into force of the Genetically Modified Organisms Act, the conducting of laboratory research in this domain will also require ministerial consent.

Forest biological diversity

Decision II/9 and Decision IV/7. Forest biological diversity

359. Has your country included expertise on forest biodiversity in its delegations to the Intergovernmental Panel on Forests?	
a) no	
b) yes	×
c) not relevant	
360. Has your country reviewed the programme of work annexed to the decision and identified how you can collaborate in its implementation?	
a) no	
b) under review	×
c) yes	
361. Has your country integrated forest biological diversity considerations in its participation and collaboration with organizations, institutions and conventions affecting or working with forest biological diversity?	
a) no	
b) yes – limited extent	×
c) yes – significant extent	
362. Does your country give high priority to allocation of resources to activities that advance the objectives of the Convention in respect of forest biological diversity?	
a) no	
b) yes	×
For developing country Parties and Parties with economies in transition - 363. When requesting assistance through the GEF, Is your country proposing projects which promote the implementation of the programme of work?	
a) no	×
b) yes	

Decision V/4. Progress report on the implementation of the programme of work for forest biological diversity

364. Do the actions that your country is taking to address the conservation and sustainable use of forest biological diversity conform with the ecosystem approach?	
a) no	
b) yes	×
365. Do the actions that your country is taking to address the conservation and sustainable use of forest biological diversity take into consideration the outcome of the fourth session of the Intergovernmental Forum on Forests?	
a) no	
b) yes	×

366. Will your country contribute to the future work of the UN Forum on Forests?	
a) no	
b) yes	×
367. Has your country provided relevant information on the implementation of this work programme?	
a) no	
b) yes – submission of case-studies	×
c) yes – thematic national report submitted	×
d) yes – other means (please give details below)	
368. Has your country integrated national forest programmes into its national biodiversity strategies and action plans applying the ecosystem approach and sustainable forest management?	
a) no	
b) yes – limited extent	
c) yes – significant extent	×
369. Has your country undertaken measures to ensure participation by the forest sector, private sector, indigenous and local communities and non-governmental organisations in the implementation of the programme of work?	
a) no	
b) yes – some stakeholders	
c) yes – all stakeholders	×
370. Has your country taken measures to strengthen national capacities including local capacities, to enhance the effectiveness and functions of forest protected area networks, as well as national and local capacities for implementation of sustainable forest management, including restoration?	
a) no	
b) some programmes covering some needs	
c) many programmes covering some needs	×
d) programmes cover all perceived needs	
e) no perceived need	
371. Has your country taken measures to implement the proposals for action of the Intergovernmental Forum on Forests and the Intergovernmental Panel on Forests on valuation of forest goods and services?	
a) no	
b) under consideration	×
c) measures taken	

Biological diversity of dry and sub-humid lands

Decision V/23. Consideration of options for conservation and sustainable use of biological diversity in dryland, Mediterranean, arid, semi-arid, grassland and savannah ecosystems

372. Has your country reviewed the programme of work annexed to the decision and identified how you will implement it?	
a) no	
b) under review	
c) yes	
373. Is your country supporting scientifically, technically and financially, at the national and regional levels, the activities identified in the programme of work?	
a) no	
b) to a limited extent	
c) to a significant extent	
374. Is your country fostering cooperation for the regional or subregional implementation of the programme among countries sharing similar biomes?	
a) no	
b) to a limited extent	
c) to a significant extent	

Further comments on implementation of these Decisions and the associated programme of work

The Decision does not concern Poland.

Decision V/20 Operations of the Convention

375. Does your country take into consideration gender balance, involvement of indigenous people and members of local communities, and the range of relevant disciplines and expertise, when nominating experts for inclusion in the roster?	
a) no	
b) yes	×
376. Has you country actively participated in subregional and regional activities in order to prepare for Convention meetings and enhance implementation of the Convention?	
a) no	
b) to a limited extent	×
c) to a significant extent	
377. Has your country undertaken a review of national programmes and needs related to the implementation of the Convention and, if appropriate, informed the Executive Secretary?	
a) no	
b) under way	×
c) yes	

Further comments on implementation of these Decisions and the associated programme of work

In December 2000, an individual serving the function of National Secretary was employed within the organisational structure of the Department of Forestry and Nature and Landscape Conservation at the Ministry of the Environment. One of the tasks of this post is to review decisions and promote actions connected with the implementation of the Convention.

Please use this box to identify what specific activities your country has carried out as a DIRECT RESULT of becoming a Contracting Party to the Convention, referring back to previous questions as appropriate:

Poland has a long and distinguished tradition of actions taken in the name of the conservation and sustainable use of biodiversity. The ratification of the Convention was thus an expression of the rank our country has chosen to assign to this matter. All actions presented in the reform - except for those of a formal nature - would have been taken whether or not the Convention had been signed and ratified. On the other hand, it is thanks to the provisions of the Convention and the decisions of the Conferences of the Parties that the actions taken assumed an appropriate level of priority. An example of a direct effect of Convention provisions is the devising of the *National Strategy and Action Plan for the Conservation of Biological Diversity*.

Please use this box to identify joint initiatives with other Parties, referring back to previous questions as appropriate:

Detailed information on the initiatives taken by Poland with other Parties to the Convention was given in the course of discussion concerning Article 5.

If your country has completed its national biodiversity strategy and action plan (NBSAP), please give the following information:

Date of completion:			
If the NBSAP has been adopted by the Government			
By which authority?			
On what date?			
If the NBSAP has been published please give			
Title:			
Name and address of publisher:			
ISBN:			
Price (if applicable):			
Other information on ordering:			
If the NBSAP has not been published			
Please give full details of how copies can be obtained:			
If the NBSAP has been posted on a national website			
Please give full URL:			
If the NBSAP has been lodged with an Implementing Agency of the GEF			
Please indicate which agency:			
Has a copy of the NBSAP been lodged with the Convention Secretariat?			
Yes		No	

Please provide similar details if you have completed a Biodiversity Country Study or another report or action plan relevant to the objectives of this Convention

1992 saw the drawing up of the *National Biological Diversity Study*, with the participation of numerous scientific centres and in line with the UNEP guidelines. The material was published in Polish and English and was widely disseminated.

Please provide details of any national body (e.g. national audit office) that has or will review the implementation of the Convention in your country

The National Secretariat of the Convention on Biological Diversity is using the second report as a means of assessing implementation. This will in turn provide a basis for the drafting of a detailed action plan that will be presented to the National Nature Conservation Council so that an assessment of the implementation of the Convention can be made.