



Financial Planning for Biodiversity in Eastern Europe

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Belarus

Belarus' national action plan¹ included a list of most important measures for the implementation of the basic provisions of the national strategy. The section on sources and ways of attraction of capital investments and technical resources provided for:

- Attraction of foreign financial and technical assistance for the development and implementation of priority projects in the sphere of preservation and sustainable use of biological diversity.
- Establishment of a long-term project financing system within the framework of the National Action Plan by creating the Ecological Fund and/or the State Ecological Bank.

An ecological bank may become an organizer of the targeted and well-ordered flows of ecological investments required to solve ecological problems. This bank must be opened under the auspices of the Ministry of Natural Resources and Environmental Protection. The main part of the bank capital should be constituted by ecological taxes and allocations, on the one hand, and by the profits raised as a result of the production of ecologically clean products due to the introduction of environment-friendly technologies, on the other hand.

The basis of the ecological capital in Belarus is the forest, water and mire and wetland systems. Their practical significance goes far beyond Belarus. Our "wood-water-mire" specific attracts attention of the world community to the problems of sustainable development of the European continent. Therefore, the basis for a stable financing of specially protected territories containing unique ecological values should be established at an international level. The international ecological rent may be the basis for this. An extra-government fund for the conservation of the genetic resources of the Earth and wild life could play a decisive role. Belarus should participate actively in international efforts to create such a fund.

National Action Plan for the Conservation and Sustainable Use of Biological Diversity in the Republic of Belarus

Creation of ecological and economic backgrounds for the regulation of conservation and use of biological diversity

Regulation of the use of flora and fauna through introduction of the principle of ecological rent and fees for the use of natural resources.

Tangible incentives for the conservation and sustainable development of biological diversity on the basis of an economic evaluation of biological resources and determination of the true value of the ecological capital.

¹ Belarus (1998). National Strategy for the Conservation and Sustainable Use of Biological Diversity in the Republic of Belarus, Ministry of Natural Resources and Environmental Protection, Minsk, 1998, 46 pp.

Expansion and perfection of the incentives mechanism for the environmentally sound activities (economically justified unit prices for work related to environmental protection, financing and crediting, insurance of ecologically unsafe technologies and products, etc.) for legal entities of all forms of property.

Evaluation of the ecological damage resulting from economic activities and natural calamities.

Ecological examination with due account of projected and planned solutions and approaches to the problem of implementation of biological diversity conservation activities.

Ecological improvement of scientific and technical activities and optimum use of natural resources in various social and economic sectors

Water Management and Land Development

Change in the structure of capital investments for land reclamation so as to reduce the damage and ensure conditions for the conservation of biological diversity.

The second planning document² presented a list of 89 activities, and one of them was on working out proposals on attracting international technical assistance to fulfill the projects aiming at conservation and sustainable utilization of biological diversity by Ministry of natural resources, Ministry of forestry, National Academy of Sciences of the Republic of Belarus. Other relevant provisions are:

4. Developing and approving methods of cost estimate of ecosystems services and cost estimate of biological diversity.
5. Developing suggestions on forming an ecological and economic mechanism of stimulating conservation of biological diversity and ecosystems sustainable functioning based on ecological rent and target budget financing.

² Belarus (2010). Strategy on conservation and sustainable utilization of biological diversity for 2011-2020, Resolution of the Council of Ministers of the Republic of Belarus, dated November 11, 2010, 22 pp.

Bulgaria

Bulgaria's planning document³ presented criteria for selection and priority sites in the conservation and maintenance of key ecosystems, for conservation of plant and animal species, for protection of habitats, for conservation of genetic resources.

3. Criteria for Selection and Priority Sites in the Conservation and Maintenance of Key Eco-Systems:

- International Conservation Significance;
- National Conservation Significance;
- Participation in ecological networks;
- Degree of biodiversity;
- Degree of uniqueness;
- Degree of richness
- Ecosystem age;
- Origin;
- Representativity
- .Existing or future categorization of the sites are/will be:
 - Sites of the world and cultural heritage;
 - Biosphere reserves under the UNESCO Programme "Man and Biosphere";
 - Reserves;
 - Maintained Reserves;
 - National Parks;
 - Nature Parks, Natural Monument and protected Sites;
 - Significant (of conservation value) nature areas, sites of the European and national ecological network;

³ Bulgaria (1999). National Biodiversity Conservation Plan, Council of Ministers, Sofia, June 1999, 44 pp.

- Bulgarian sites included in the list of Important Areas;
- Sites included in the Corine Biotope Programme.
- *Ecosystems rich in diversity of species;*
- *Unique ecosystems;*
- *Ecosystems of advanced age (old);*
- *Natural ecosystems;*
- *Representative ecosystems.*

4. Criteria for Selection and Priority Sites for Conservation of Plant and Animal Species

- Degree of protection by law;
- Degree of threat (vulnerable, endangered);
- Degree of international significance;
- Degree of endemism;
- Degree of rarity;
- Status of the population;
- Economic significance.

The following plant and animal species conservation will be applied:

- Locally extinct species (for restoration of the population and their habitats);
- Species protected under the Bulgarian legislation;
- Endangered species:
 - Listed under Bulgaria's Red Data Book;
 - Listed under the IUCN Red List;
 - Strictly protected under the Bern Convention;
 - Species endangered with becoming extinct in all or part of their area of distribution (Bonn Convention);

- Endangered species which are or may become the object of trade (CITES Convention);
- Species and habitats included in EEC Directive 92/43 on the Conservation of the Natural Habitats and of the Wild Flora and Fauna;
- Species included in the EEC Directive 79/409 on the Conservation of Wild Birds;
- Species included in the practical code of the UN Economic Commission on the Conservation of Endangered Animals, Plants and Other of International Importance;
- Endemic species;
- Other vulnerable and endangered species;
- Rare species;
- Diminishing species;
- Species of economic importance.

5. Criteria for the Selection and Priority Sites for Protection of Habitats

The main criteria, for the selection of the habitats of animal and plant species for protection, restoration and maintenance are:

- Legal protection;
- Degree of international conservation significance;
- Degree of representativeness of the type of habitat for the respective area (country);
- Area of the habitat in comparison with the habitat area in the country;
- Degree of conservation of the characteristics of the habitat;

Specific sites will receive priority attention if they are:

- Part of a protected areas;
- Part of international and national ecological networks and programmes;
- Representativeness;
- Distribution;
- Typicality.

6. Criteria for Selection and Priorities for Conservation of Genetic Resources

Priority attention will be given to:

- Old varieties and populations (vegetable, cereals, legumes and the wild relatives of the cultivated crops having a status of rare, protected species and endemic species) not collected and preserved ex-situ;
- Local varieties of maize, corn, beans, vegetables, orchard species endangered by genetic erosion due to invasion of alien varieties and hybrids;
- Wild relatives of cultivated plants and valuable wild species, endangered by reduction of habitat;
- Endangered breeds, strains and lines of animals;
- Indigenous breeds and strains of animals;
- Species with economic significance;
- Species with high degree of vulnerability;
- Species with high degree of rarity.

The National Biodiversity Conservation Action Plan is a set of activities to be carried out during the 1999-2003 period (five year). A total of 96 separate activities have been identified in the course of the preparation of the NBCP. The total cost of implementation of the NBCP is Lev 44.355 million. Of this amount, Lev. 21.274 million has yet to be secured.

Estimated and Required Financial Resources

The total funding required for the implementation of the NBCP amounts to Lev 44, 355, 000 over five years. As compared with investments in other sectors, this amount is small. It is also comparatively small as compared to the funds planned for other environmental components. For example the funds required to fully implement the NBOP amount to 5.6% of the average funding provided under the National Waste Management Programme.

The total NBCP cost is Lev 44, 355, 000 over five years.

The cost of the programme does not exceed the budgets of the respective institutions. Budgeting procedures used are those of the State Budget of the Republic of Bulgaria Act, and reflect the present estimation of availability of funds. Foreign donors will be approached in an attempt to secure funds required to fully implement the NBCP.

Lev 23, 081, 000 are already secured.

The following table presents Distribution of Funds by source of funding and years. The different between funds required and available for each Ministry is identified.

Sources of financing for the activities by institutions responsible for their implementation	Funds, thousand lv					
	Amount	1999	2000	2001	2002	2003
Ministry of Environment and Waters						
A. NEPF (National Environment Protection Fund)	11754	2142	2713	2528	2323	2048
B. State Budget	1370	-	105	240	415	610
C. External Sources (total):	3062	2099	747	72	72	72
C.1 GEF Project	1335	1335	-	-	-	-
C.2 Bulgarian-Swiss Programme	690	265	425	-	-	-
C.3 Le Balkan Foundation	225	75	75	25	25	25
C.4. PHARE	400	200	200	-	-	-
C.5. UNEP	108	108	-	-	-	-
C.6. BirdLife International	135	27	27	27	27	27
C.7. Ramsar Bureau	36	36	-	-	-	-
C.8. UNESCO	24	24	-	-	-	-
C.9 Monaco Project	9	9	-	-	-	-
C.10. Bulgarian Forest National Fund	100	20	20	20	20	20
Non-secured Funds	8790	247	1782	2092	2172	24977
Necessary Funds	24976	4488	5347	4932	4982	5227
Ministry of Agriculture, Forests and Agrarian Reform (without the National Department of Forests)						
A. State Budget	2724	155	5211	7311	6856	621
National Fund "Bulgarian Forest"	1911	325	323	401	416	446
B. External Sources: Avalon Fund	60	20	20	20	-	-
PHARE Programme	52	26	26	-	-	-
Bulgarian-Swiss programme – forests	1052	376	376	100	100	100
Bulgarian-Swiss Programme	48	24	24	-	-	-
WWF	50	25	25	-	-	-
Non-secured Funds	12374	638	1643	3101	3481	3511
Necessary Funds	18271	1589	2968	4353	4683	4678
Ministry of Education and Science						
A. State Budget	460	-	115	115	115	115
B. External Sources: GEF Project	36	36	-	-	-	-
Secured Funds (A + B)	496	36	115	115	115	115
Non-secured Funds -						
Necessary Funds	496	36	115	115	115	115
Ministry of Trade and Tourism						
B. External Sources:						
Bulgarian Swiss Programme	2	2	-	-	-	-
Non-secured Funds	98	18	20	20	20	20
Necessary Funds	100	20	20	20	20	20
Ministry of Industry						
A. Budget	280	20	50	90	60	60
Secured Funds	280	20	50	90	60	60
Non-secured Funds -						
Necessary Funds	280	20	50	90	60	60
Ministry of Regional Development and Public Works						
Secured Funds -						
Non-secured Funds	12	12	-	-	-	-
Necessary Funds	12	12	-	-	-	-

Committee of Energy						
A. State Budget	220	-	55	55	55	55
Secured Funds	220	-	55	55	55	55
Non-secured Funds -						
Necessary Funds	220	-	55	55	55	55
TOTAL FOR THE NATIONAL PLAN						
A. NEPF	11754	2142	2713	2528	2323	2048
B. Bulgarian Forest National Fund	2011	345	343	421	436	466
D. State Budget	5054	175	856	1231	1331	1461
E. Foreign Sources (total):	4262	2588	1198	172	152	152
E.1. GEF Project	1371	1371	-	-	-	-
E.2. Bulgarian-Swiss Programme	740	291	449	-	-	-
E.3 Le Balkan Foundation	225	75	75	25	25	25
E.4. PHARE	452	226	226	-	-	-
E.5. UNEP	108	108	-	-	-	-
E.6. BirdLife International	135	27	27	27	27	27
E.7. Ramsar Bureau	36	36	-	-	-	-
E.8. UNESCO	24	24	-	-	-	-
E.9. Monaco Project	9	9	-	-	-	-
E.10. Avalon Fund	60	20	20	20	-	-
E.11. Bulgarian Swiss Programme-forests	1052	376	376	100	100	100
E.12. WWF	50	25	25	-	-	-
Non-secured Funds	21274	915	3445	5213	5673	6028
Necessary Funds	44355	6165	8555	9565	9915	10155

Czech Republic

In its national strategy⁴, Czech Republic examined the financial impact on the individual types of public budgets and on the business.

V. The Financial Impact on the Individual Types of Public Budgets and on the Business

The Strategy, in itself, does not encompass any additional financial requirements on public budgets. It will primarily lead to consistent implementation of the applicable legislation and already approved policies. It will also lead to the preparation of new legislation, outlined in the Strategy, in the framework of which the actual quantification of impacts will be carried out in accordance with the legislative rules.

Any financial impact of the individual Strategy's objectives will be taken into consideration during the preparation of the individual Action Plans, which will again have to undergo an approval process according to the Rules of Procedure of the Government.

The Strategy does not encompass direct implementation of instruments in the area of income taxes.

The objectives under various themes are related to financing:

- ensure economic effectiveness of investments in relation to benefits, consisting in the biodiversity conservation or restoration;
- provide financial support to technological interventions leading to an increase in the adaptive capabilities of ecosystems; cooperate in developing limit levels for pollutants and other contaminants and other risk factors in relation to habitats and ecosystems; new load, burden and stress factors on the environment (global climate change, nitrogen deposition, etc.) require new in-situ adaptation measures, which must be monitored in relation to the expected results for society and the environment;
- provide for complete and long-term financing of a narrow selection of well-prepared species survival/recovery programmes for flora and fauna (including research and studies, as well as monitoring their implementation);
- Introduce functioning financial mechanisms for promotion and informing the public of aspects of biodiversity conservation
- Propose modification of the relevant, currently existing, environmental economic methods and instruments so that they lead to the greatest biodiversity conservation and sustainable use of its components.

⁴ Czech Republic (2005). National Biodiversity Strategy of the Czech Republic, Ministry of the Environment of the Czech Republic, Prague 2005, 136 pp.

- Propose a structure and substantive form of new fees supporting conservation of the components and elements of biodiversity. Re-evaluate existing financial instruments and find new economic incentives for management of biodiversity.
- Submit a proposal for financial mechanisms for biodiversity. Further develop cooperation with international financial organizations with the possibility of utilization of their funds for financing programmes for biodiversity conservation.
- Include a wide range of partners in biodiversity conservation and establish partnership of the public, nongovernmental and private sectors.
- Introduce a system of monitoring and indicators of the effectiveness of investments into biodiversity conservation and sustainable use of its components and especially of all programmes implemented in nature conservation and landscape protection under the competence of ME.
- Propose corresponding procedures for evaluation of the direct and indirect benefits following from biodiversity and its use under the conditions in the CR, including application procedures and methods of their use. Create a hierarchical system of indicators and information that would permit the use of all the available economic methods of evaluation of economic-environmental programmes, projects, events and measures.
- Regularly evaluate the implementation of the Strategy through defined indicators and evaluation methods.
- Encourage participation of governmental agencies and non-governmental organizations in suitable international projects, programmes and initiatives, including those that are concerned with bio-informatics, and in projects of communication, training and education.
- Allocate part of the Official Developmental Assistance of the Czech Republic for support for implementation of CBD in beneficiary countries as an integral part of sustainable development, both in the form of specific projects and by means of professional and methodical support in capacity building (e.g. GTI support) in accordance with the 6th EC Research Framework Program.

Hungary

Hungary's planning document⁵ had an objective on introduction of a forest financing system recognising the public services of forests at the level of society. Forests provide much larger social benefits than their economic importance. These social benefits are manifested in the non-material type services of forests. Forest management cannot account positive externalities arising from forests as an expense, and therefore the society does not pay for them, although they represent costs in silviculture and forest management. A financing system needs to be developed for silviculture and forest management, which at least partially recognises and pays for the created public assets, and covers the expenses of production for forest managers. Required measures:

- Development of a new financing system for state forest management, covering the costs of public goods and services from the state budget.
- Development of a Hungarian support system for protection and management purposes in the case of private and community forests, taking also into account EU resources.

⁵ Hungary (2004). Conservation of Biodiversity National Strategy and Action Plan - Objectives, policies and actions, Ministry of Environment and Water, 86 pp.

Poland

Poland's first planning document⁶ provided the following:

In line with the assumptions adopted, the **National Strategy for the Conservation and Sustainable Use of Biological Diversity** is developed in an **Action Programme**. The preparation of such a document is also provided for in Article 35, paragraph 2 of the Nature Conservation Act, as well as in Article 6 of the *Convention on Biological Diversity*. The Action Programme indicates particular steps considered crucial if the objectives of the *Strategy* are to be met, at the same time setting out conditions for their implementation precisely.

An assumption has been made that, to ensure cohesion between the present document and the *Strategy*, the tasks contained in the former will be ordered in the same way as the operational goals of the latter. The same division into sectors and subject areas has been retained, relating as these do to the organization of the governmental administration.

Where justified, the obtainment of one given operational goal in the *Strategy* is foreseen to involve several tasks. Objectives that are not reached through implementation of tasks provided for here are expected to be brought into effect in subsequent years, with the aid of successive programmes, most likely devised every 5 years.

Provided in the case of each task are:

- a detailing of the priority assigned to implementation, assuming that 1) denotes tasks whose implementation is obligatory; 2) those whose implementation is recommended; and 3) those whose implementation is proposed (but in the main left dependent on the available financial, organizational and substantive possibilities and capacities);
- a pinpointing of the organizational units responsible for implementation, in most cases the relevant Ministry or units subordinated thereto (tasks of a regional dimension are taken to be the responsibility of either the provincial or regional administrations in the voivodships);
- an indication of the subjects that might participate in task implementation, where the term "scientific units" is taken to include all those engaged in research and development work, and hence scientific institutes and institutions, R&D units, higher education establishments, consultancies and other service-sector firms, associations, learned societies and other organizations; while the term "planning units" has a similar breadth of meaning and the term "nature conservation services" refers to the relevant employees in Voivodship Offices, National and Landscape Parks;

⁶ Poland (2003). A National Strategy for the Conservation and Sustainable Use of Biological Diversity together with an Action Programme, approved by the Council of Ministers on 25 February 2003, Warsaw, 59 pp.

- a detailing of the desired completion dates (while this Programme was devised for the four-year period 2003-6, certain tasks are of a long-term nature and will continue in later years; others are tasks per-force assigned to later Programmes on account of the limited means available at present);
- an estimate of the costs of task implementation, with these mostly relating to the amounts of time consumed in the work on them (since the majority of undertakings do not actually involve specific developments);
- an indication of potential sources of funding, be these budgetary amounts at the disposal of different government departments or extra-budgetary resources.

The activities given herein are associated with information of a purely indicative, directional, nature. It is clear that each will need to be worked on in a detailed plan to be drawn up by government departments and ministries or other bodies of the central administration with the given remit.

Estimated costs of bringing about all the actions listed for 2003/6 are 110,640,000 PLN, of which means from the central budget are to account for 20,135,000 PLN. The breakdown of costs by year and source are as detailed in the following table. The scope of work and corresponding costs will be set out successively as work on implementing the Action Programme proceeds. Different ministries and subjects indicated in the Programme should seek to ensure that the necessary sums are available for implementation of the Strategy in the different financial years.

Costs of planned actions in the years 2003.2006 (.000 PLN)

Year	Ministry of the Environment	Other ministries	Local authorities	Funds for Environmental protection	State Forests	EU assistance funding	Other sources
2003	240	3 950	500	5 660	700	22 425	250
2004	840	4 855	500	8 030	950	10 600	390
2005	615	4 285	500	7 910	950	10 525	605
2006	590	4 460	500	7 680	825	10 400	605
Total	2 285	17 850	2 000	29 280	3 425	53 950	1 850

The monitoring and supervision of tasks included within the Programme, and the assessment of the degree to which the *Strategy's* objectives are being attained, will require the organization and introduction of a consistent and effective system. This should allow for successive assessments of progress with and results of work undertaken, as well as providing for the quickest possible identification of any possible threats to the timely implementation of tasks and the causes thereof, at the same time making it possible for rapid and constructive responses to be mounted. In all of this the organizational strengthening of the nature conservation services is a must, both at national level (within the Ministry of the Environment or Office of the Chief Nature Conservator therein, if such is established) and in the regions/provinces (via Voivodship Nature Conservators), and at local level. It is planned that

there be a symposium held each year to assess implementation of the Action Programme, as well as - at the end of each successive 5-year period - a fuller periodic assessment of what has or has not been achieved.

Poland's second planning document⁷ indicated that

Instruments for the implementation of the National Strategy

The achievements of the objectives set out in the National Strategy will require the broad use of all the currently available implementation instruments as well the creation, as far as necessary, of new implementation instruments. They include:

- legal instruments;
- market-based instruments, such as economic instruments (charges, subsidies, the creation of markets etc.), fiscal instruments (environmental taxes and tax reliefs) and voluntary agreements between administration authorities and economic entities;
- horizontal supporting instruments, such as scientific research, environmental education and information, sectoral and spatial planning;
- financial supporting instruments, such as Structural Funds, the expansion of the Financial Instrument for the Environment (LIFE), the special programmes to support small and medium-sized enterprises, the programmes to support the development of renewable energy sources and energy efficiency, international financial institutions (e.g. the World Bank), the funds of international organizations etc.

The financing of projects for the conservation and sustainable use of biodiversity is a particularly important instrument which conditions the effective implementation of the National Strategy and the Action Programme. For many years the National Fund for Environmental Protection and Water Management, the Voivodship Funds for Environmental Protection and Water Management, the Foundation EcoFund and others have played and will play a very important role in this process. The priorities for cofinancing from the resources of the National Fund for Environmental Protection and Water Management should be adjusted to the provisions of the National Strategy. Moreover, significant financial opportunities are related to Poland's membership in the European Union, which provides access to a number of Funds from which part of resources are allocated to projects and programmes related to nature conservation. They include, inter alia:

- the European Regional Development Fund;
- the European Social Fund;
- the European Agricultural Guidance and Guarantee Fund (which will cease to operate in 2008);

⁷ Poland (2006). The National Strategy for the Conservation and Sustainable Use of Biodiversity, 33 pp.

- the European Fisheries Fund;
- the European Agricultural Fund for Rural Development.

In the nearest years, Poland will also be able to use the new programmes launched within the framework of the Financial Mechanism of the European Economic Area and the Norwegian Financial Mechanism. The “Financial Instrument for the Environment LIFE+” has also an important role to play, particularly in the financing of projects in the scope of the conservation of biodiversity.

There is no doubt that the enhancement of the rank of the National Strategy and the adoption of the Action Programme as a long-term programme in the meaning of the Act on Public Finance would serve well the implementation of the objectives set out in the Strategy and, primarily, the tasks laid down in the action programmes for the successive programming periods. Under such an assumption, it would become a superior document, pursuant to which the provisions on nature conservation of the Sectoral Operational Programmes (e.g. Infrastructure and Environment) and Regional Operational Programmes should be developed, when the existing ones are updated or new ones are drawn up for the successive programming periods.

Republic of Moldova

Moldova's planning document⁸ had a section on financing of the Action Plan. The implementation of the Action Plan on Biodiversity Conservation which will be implemented during 10 years requires 87 million lei (\$18.7 million, the evaluation has been performed according to the economic situation in 1998). The annual cost is estimated at approximately 12 million lei (\$2.6 million), representing 0.14% of the GDP (see the table).

Table. Necessary funds for Action Plan implementation

Actions	Implementation period	Cost of actions, thousand USD		
		Total	National	International
General actions	2000-2010	1074	741	333
Establishment of the National Ecological Network	2000-2010	1183	816	367
Forest ecosystem protection	2000-2010	5592	3858	1734
Steppe ecosystem protection	2000-2010	3861	2664	1197
Meadow ecosystem protection	2000-2010	1100	760	340
Petrophyte ecosystem protection	2000-2010	763	526	237
Aquatic and paludous ecosystem protection	2000-2010	1214	838	376
BD protection of the agricultural ecosystem	2000-2010	2303	1589	714
BD protection of the urban ecosystem	2000-2010	593	409	184
Species protection	2000-2005	647	446	201
Ex situ conservation of biodiversity	2000-2005	374	258	116
Total	-	18704	12905	5799

The cost of the activities necessary for ecosystem protection considerably varies: from 2.8 million lei (\$0.6 million) for urban ecosystems (3% of the total cost) up to 25.9 million lei (\$5.6 million) – forest ecosystems (30%). The financing amount according to the activity domain will be as follows: for “Territorial planning, programs on biodiversity conservation” —60%; “Research and monitoring” — 29%; “Informational and educational activities” — 9%; “Policy, legislation and institutional framework improvement” — 2%. Priority actions, being designed to change the negative tendencies in the field of biological diversity, require financing of about 16 mm lei (\$3.5 million), whereas, the annual allocations for this purpose will constitute 2 million lei (\$0.4 million) or 0.02 % of the GDP. The possible financial sources for the activities will be stipulated by the state and local budgets. For this aim, ecological funds, sources of the State Forest Service and of landowners, foreign donations will be used as well as the assistance of international financial institutions.

The current expenditures on biodiversity conservation from all financing sources will constitute approximately 29 million lei (\$6.3 million), which represent (except foreign financing) 0.3% of the GDP.

⁸ Moldova (2002). Biological diversity conservation national strategy and action plan, Ministry of Ecology, Construction and Territorial Development, Stiinta, 2002, 96 pp.

The cost rate for these actions from the budget constitutes 27%; ecological funds — 1%; the sources from the State Forest Service and landowners — 59%; foreign financing — 13%.

In the last years the budget sources allocated for environmental protection were considerably reduced. In 1993 the budget funds for environmental protection constituted 29%, while in 1997 — only 19%. This tendency of decrease of budget allocations could persist in the following years due to the difficult economic situation in the country.

The activities in the period of transition to the market economy imply the application of new tools and mechanisms in the area of biodiversity conservation, such as economical and administrative ones, as well as the mobilization of internal sources according to the principle “the beneficiary pays”, “the polluter pays”, and “common responsibility” (ecological taxes and fees in order to obtain an excessive rent from the use of public natural resources, agreements with economic agents for the establishment of special funds, international transfers etc.).

The implementation of the Action Plan requires the increase of the current financial resources in this area by approximately 1.4 times, increasing the rate up to 0.47% of the GDP.

The annual economic benefit only from the direct and recreative use of forests on an average constitutes about 1.2% of the GDP.

Division according to financial sources of the present costs would be further preserved and would be also applied for the activities from the Action Plan.

The budget share for activities on biodiversity conservation will be kept at the level of 12-14% focusing mainly on local budgets. The weight of resources of the State Forest Service and landowners will constitute 48-50%. The support of international financial institutions and foreign donors will be approximately 30-32%, the rest (6-8%) will be completed by the ecological funds. The means for the implementation of the actions on biodiversity conservation will consist of: budgetary sources (state and local budgets) — 10.4-12.2 million lei (\$2.2-2.6 million); resources of the State Forestry Service and landowners — 41.8-43.5 million lei (\$9.0-9.4 million); ecological fund allocations — 5.2-6.9 million lei (\$1.1-1.5 million), and international assistance—26.1-27.8 million lei (\$5.6-5.9 million).

The document also discussed economical mechanisms and tools for the implementation of the Action Plan. The implementation of the Action Plan on biodiversity conservation requires the mobilization of all possible financing forms and sources. An important role in the implementation is played by the economical mechanisms. The state protected territories obviously contribute to biodiversity conservation. Nevertheless, in the case of the Republic of Moldova, their weight is very reduced, and 75.6% of the territory is used in agriculture. The extent of utilizing primary biological products amounts to 57% on the agricultural territories. Therefore it is primarily important to stimulate biodiversity conservation on these territories. Being zones of intensive economic activity, they represent priority sectors for the economic mechanisms implementation. The regime of the protected territories deals mainly with management measures.

The major importance of the mechanisms is the establishment of such conditions which stimulate sustain able use of natural resources, especially, biodiversity conservation. It is necessary to elaborate credit, taxation and financial-budgetary policies stimulating the measures of ecological territorial development, use of proper technologies in agriculture according to ecological requirements, regulate the use of ecologically sensitive territories (e.g. public pastures) etc.

Key-elements of the economic mechanisms in this field are as follows:

- a) Facilitating taxation for the actions of the biodiversity conservation (exemption from taxes for private land used for protection strips plantations, reduction of the income taxes and VAT for waste treatment, tax reduction of ecological credits etc.);
- b) Introducing special taxation for production processes affecting biodiversity (taxation on investments for the creation of roads, power supply lines etc. in the natural areas protected by state):
- c) Implementing obligatory ecological assistance mechanisms for technologies of high ecological danger;
- d) Preferential credit use for actions on biodiversity conservation (guaranteeing the bank percentage by the Ecological Fund);
- e) Quotation of accessory products collected in the natural systems at least by 5% as opposed to the same products obtained in the economy sectors;
- f) Entrance fees (visit, transit) in the natural areas protected by state, for parking in special arranged sectors etc.

International assistance. While taking decisions concerning the use of natural resources it is necessary to consider not only the national interests but also those of the neighboring states, the stipulations of European and global conventions on the conservation of biological resources.

According to the above mentioned, the actions could be classified into 5 major categories according to decision level: global, European, regional, national and local, and their implementation requires the active participation of the interested parts and international financial assistance.

A good example of global interest and management sector is the North-West Basin of the Black Sea; European and regional interest — Danube Delta, Nistru River and Prut River, paludous and lacustrine wetlands in the south of the republic, natural areas protected by state — “Prutul de Jos”, “Codrii”, “Pădurea Domnească”, “Plaiul Fagului” etc.. Common efforts are required to protect intensive bird migration corridors (transboundary waters and inland forests).

At present the major projects which are implemented in the Republic of Moldova are: “Biodiversity Conservation, Phase I and II”, “Prut River Water Management” (with TACIS support), “National Action Plan on Environmental Protection” (World Bank), “Selective Actions of the Danube Protection” (supported by TACIS), “Research of the Forest Biological Diversity” (EUFORGEN). The project

“Management of Water Quality and Biodiversity Protection of the Lower Nistru River” (The World Bank) is under development.

The international financial support is extremely important for various activities, such as establishing the National Ecological Network, developing the action plan on the conservation of rare and vulnerable species and wetlands in the Danube Delta basin, Nistru and Prut river basins, increasing the surface of the scientific reserve “Prutul de Jos” and its connection to the biosphere reserve “Delta Dunrii”, establishing the Lower Danube Green Corridor.

The foreign technical support is also required for various activities, especially for the elaboration of economic regulations stimulating the inhabitants of the neighbour protected areas, compensations for the damages caused by the limitation of economic activities in the protected species habitats, for the observance of protection requirements, compensation for damages produced by wild animals.

The actions from chapter “Territorial planning, programs on biodiversity conservation” require special investments and donations. These are projects for the optimization of management and protection capacities on biodiversity in the existing protected areas, the increase of protected areas in the major biodiversity zones, implementation of specialized monitoring etc. These actions further aim at land redemption from private landowners. Though according to the Law on Normative Prices of Land Buying, the Government has the priority of purchasing land, in fact, it does not have the necessary financial resources. International assistance is necessary for biodiversity inventory at population, species and community levels. The international technical support can be used for educational, informational, legislative and institutional activities, implementation of economical mechanisms in the environmental protection (ecological rent), transfer of new technologies, management improvement etc.

Romania

Romania's planning document⁹ had a paragraph on financial resources for biodiversity conservation. Financial resources for biodiversity conservation (up to the year 2000) will come in part from the budget of the Ministry of Water, Forests, and Environmental Protection and in part from the public and private sector organizations that manage and use natural resources for economic activities. In the second stage, it is hoped to obtain additional funds from the local communities and other parties. Further possibilities include possibly retaining a small percentage of profits from the use of natural resources to be used for conservation activities. Similarly, regulations will be needed to raise additional funds for supporting the actions of conservation from local communities and firms which are willing to participate. Through special regulations a system of economic incentives and penalties for biological diversity conservation will be elaborated.

⁹ Romania (1996). The National Strategy and Action Plan for the Biological Diversity Conservation and Sustainable Use of its Components in Romania, July 1996, 48 pp.

Russian Federation

Russian Federation's planning document¹⁰ contained a section on sources for Funding Nature Conservation Programs, including

- Reform of taxation policy. Collection of adequate rental incomes from exploitation of natural resources. Present day Russia is a country with resource oriented economy, and taxation with an ecological slant may give impetus to the development of high technology production.
- Increased revenue in budgets of various levels may be the main source for funding biodiversity conservation.
- Support by international ecological foundations including compensation for limitations on economic activities in behalf of nature conservation, e.g. in the Lake Baikal area, old aged forests of Karelia, and the Caspian Sea.
- Incomes from privatization of property including objects of biodiversity.
- Ecological insurance funds.
- Selling licenses and similar benefits.
- Funds accumulated from fines and suits for damage to biodiversity.
- The "debts for nature" mechanism for the use of budgetary funds in nature conservation in Russia which must be taken into consideration in settling debt servicing obligations among countries and with international financial organizations.
- Market mechanisms of the Kyoto Protocol related to quotas on discharges of hotbed gases.
- Funds-in-trust investments and incomes from highly profitable economic activities. Multi-purpose private funds arising as an inevitable response to strict ecologic regulations of investment projects.

The national action plan¹¹ contained a section on economic mechanisms of biodiversity conservation in two priorities. The first was on improvement of mechanisms at the macroeconomic level, including:

¹⁰ Russian Federation (2001). National strategy of biodiversity conservation in Russia, Russian Academy of Sciences and Ministry of Natural Resources, Moscow, June 2001. 76 pp.

¹¹ Russian Federation (2001). National action plan for biodiversity conservation in Russia: priority activities, Russian Academy of Sciences and Ministry of Natural Resources, Moscow 2001, 24 pp.

- Formulation of ecologically-oriented national accounts, incorporation of biodiversity into macroeconomic parameters of the country and the system of international mutual payments including the development of the following mechanisms: estimation of the biodiversity increment to loss ratio, changes in the quality of natural objects experiencing anthropogenic pressure, and effectiveness of nature conservation measures; incorporation of ecological characteristics indicative of the trends in the country's development and its stability into macroeconomic parameters; comparison of alternative ways of the country's development taking into account the ecological factor; orientation of the economy towards a rise in the finished product output rather than to the extensive use of resources and extraction of raw materials; estimation of the costs of ecological and natural resources in compliance with the recommendations of the UN Statistical Commission; calculation of the net domestic product taking into account the costs of exhaustible natural resources and degradation of the environment.
- Reform of the taxation system aimed at the transition from the essentially indirect taxation to direct taxation of the use of natural resource and a significant rise in the collection rate of taxes on exploitation of natural resources and damage to biodiversity: raising taxes on the use of natural resources and decreasing them in high-technology sectors orientated towards the finished product output; raising taxes and amortization rates for ecologically abusive industries and technologies, granting tax privileges and "soft" amortization norms for the use of resource-saving and ecologically friendly technologies; estimation of the influence of various technologies on biodiversity; differential taxation of ecologically harmful works with regard for their potential effects on biodiversity; absolute increase of payments for the use of natural resources including biodiversity, permissible and heavier pollution, disposal of waste matter, and other disturbances to the environment taking into account their influence on biodiversity; tax benefits to enterprises and organizations reinvesting incomes in conservation and restoration of biodiversity, producing equipment and developing technologies for nature protection, providing ecological services, and advertising with an ecological slant; assurance of target-oriented distribution and use of revenue brought in by taxation of the exploitation of bio-resources for the purpose of nature conservation;
- Creation of nation-wide system of economic estimation of biodiversity as a part of the national wealth including: large-scale economic estimations based on the general economic value of natural systems taking into account their environment-forming function, costs of alternative methods of nature use and rehabilitation, prevented harm, rent, etc; corresponding improvement of legislative and methodical basis.
- Elaboration and coordination of mechanisms for international cooperation in environmental protection.
- Elaboration of economic mechanisms for the access to genetic resources, development of methods for the assessment of their economic value.

The priority on improvement of special ecological and economic mechanisms included:

- Modification of the system of payments and penalties for an excessive or illegal impact on the environment fines paid not only for the direct harm to biodiversity but also for its potential aftereffects, Elaboration of a system of target-oriented distribution of revenue brought in by penalties and its use to restore those objects of biodiversity which suffered from the damage.
- Introduction of standards of ecologically-sound management of enterprises taking into account the needs of biodiversity conservation.
- Creation of goal-oriented innovation funds for the development of resource-saving and low-waste industrial technologies and agricultural production with an ecological slant.
- Promotion of the market for ecologically pure products, technologies and equipment; extension of ecological safety requirements to the industry as an instrument of market competition including: prohibition of export and import of ecologically dangerous commodities and technologies; advertising ecologically pure products and ecologically safe technologies; introduction of privileged tariffs for advertising products of ecologically friendly enterprises and distribution of advertising with an ecological slant; shaping the ecologically attractive face of Russian business taking advantage of its participation in biodiversity conservation; development of mechanisms for selling quotas on permissible environmental impacts to stimulate the development of ecologically friendly technologies and thus prevent an excessive pressure on the environment.
- Incorporation of the requirements for biodiversity conservation in privatization programs
- Development of the system of ecological insurance with regard for the risks to biodiversity including: maximum compensation for the damage to living nature resulting from catastrophes and other unpredictable consequences of economic activity; implementation of control functions by the insurance system including permanent ecological audit; establishment of special funds of insurance companies for funding nature conservation activities and development of ecologically safe technologies.
- Development of the system of ecological certification and licensing taking into account biodiversity parameters.
- Incorporation of the requirements for biodiversity conservation into the system of basic principles of economic organization and activity in sectors exploiting natural bio-systems (forestry, hunting fishery), creation of an economic system ensuring their sustainable use.
- Support (state protectionism) of Russian producers practicing traditional economic activities adapted to specific natural and socio-economic conditions in different regions of Russia

The document conducted estimation of investment attractability of biodiversity conservation in an addendum, which examined relationships between priority activities and types of investment in biodiversity conservation in Russia, using analysis of rates of return on investment, costs-benefits analysis, and costs-effectiveness analysis.

Slovakia

Slovakia's planning document¹² provided the following:

Goal 23: Strengthen the support of financial mechanisms for the conservation and sustainable use of biodiversity at the national level

The Government operates several financial mechanisms in support of biodiversity conservation, such as the State Environmental Fund of the Ministry of Environment and the State Forest Improvement Fund of the Ministry of Agriculture. Their capacity is, however, insufficient.

Strategic directions:

- facilitate the increase of investments for the conservation and sustainable use of biodiversity and in particular support initiatives for the restoration of biological diversity;
- promote the channeling of investments via private sectors;
- promote the establishment of community-based development and biodiversity funds.

The amount of subsidies from the state budget channelled through the State Forest Improvement Fund dropped respectively from 1,007 million to 515 million SOK between 1990 and 1995. Direct assistance by other sectors is indispensable, e.g. in the rehabilitation projects for large forest areas affected by air pollution.

¹² Slovak Republic (1997). National Biodiversity Strategy of Slovakia, endorsed by the National Council of the Slovak Republic in 1997, 117 pp.

Ukraine

Ukraine's planning document¹³ had the following:

Instruments for Implementation of the Strategy

Financing of biodiversity conservation measures is to be effected at the expense of the funds of enterprises, establishments and organizations, Ukraine's state budget, budget of the Autonomous Republic of Crimea, local budgetary funds and other sources.

Financing of the proposed measures at the expense of Ukraine's state budget is to be carried out taking into account the actual economic possibilities of the state. The main source for covering expenditures on nature conservation is payments for utilization of natural resources.

On the basis of mobilizing financial resources, the Strategy provides for improving the state of biodiversity conservation, including the protection and rational utilization of land, water and forest resources, the animal and plant world. In addition, financial resources will be used for creating an ecological network, carrying out scientific research and monitoring, training and ecological education, implementing concrete projects for biodiversity conservation in regions that are of special national and international conservational importance.

¹³ Ukraine (1997). National Biodiversity Strategy and Action Plan, May 1997, 8 pp.