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Synopsis



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## **NOTE**

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## *Preface*

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A first Environmental Performance Review of Bulgaria had been undertaken in 1995 as a joint project between UNECE and OECD. In September 1999, the UNECE Committee on Environmental Policy agreed to the Bulgarian request for a second review by UNECE. The project was the first second-round review of the EPR programme in a country in transition. The conceptual framework for such second reviews had been discussed by the EPR Expert Group and agreed by the Committee on an earlier occasion.

The structure as well as the organizational details of the project were decided towards the end of 1999, taking the results of the first EPR project as well as the considerable changes that had occurred in Bulgaria in the meantime into account. The review team included national experts from Denmark, France, Germany, Italy and Ukraine, together with the UNECE secretariat. Part of the review expenses were covered by extrabudgetary funds that had been made available by Germany and Italy. These contributions were essential to the implementation of the project.

The review mission to Bulgaria took place in April 2000. The draft of the EPR report was then finalized and submitted to a Peer Review by the UNECE Committee on Environmental Policy at its annual session in Geneva on 27 September 2000, at which the Committee approved the recommendations as they are set out in this report. A delegation from Bulgaria, led by the Minister of Environment and Waters, assisted the Committee in its deliberations.

The review of Bulgaria, being a second exercise, follows a different approach than other environmental performance review projects. A broad overview of the developments since the first review is followed by assessments of the problems encountered – and solutions sought – with regard to five more narrowly defined priorities for Bulgarian environmental management. The reviewing experts presented a large number of practical suggestions to the national experts working in the respective fields, which, it is hoped, will be of value to them when seeking improvements in their management practices.

The UNECE Committee on Environmental Policy and the UNECE review team wish the Bulgarian Government success in their important future tasks, including the implementation of the recommendations contained in the present report.

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## *Conclusions and recommendations*

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### **Chapter 1: legal, political and institutional frameworks**

Since the first Environmental Performance Review, Bulgaria has considerably clarified its general political perspectives. Integration into the European Union has become its principal objective and it has set in motion a comprehensive adaptation process. Environmental policy and management have undoubtedly benefited from this extensive renewal of social orientation. But over and above achieving improvement of its status in this general reconsideration of social values and mechanisms, the Ministry of Environment and Waters has clearly applied considerable energy to upgrading its role in the country. As a result, despite the economic crisis, environmental policy objectives seem to have gained recognition in the society at large. The Ministry also appears to be playing a more significant role in the national administration, as can be seen from its presence in the industrial privatization process.

Of course, such dynamic developments cannot produce only successes at all levels. They also render obsolete certain management practices, which will require adaptation to new ones. The MEW seems to be conscious of the major areas requiring increased effort, sometimes urgently. It is therefore important not so much to dwell on the identification of the related problems, but to design instruments that are capable of solving them. At the level of political priorities, it seems to be of great importance to strengthen the formulation of comprehensive strategic environmental policy objectives, including objectives related to the development of economic sectors. If at all, such strategies exist only with regard to particular aspects of environmental management (such as the water sector), but are neither always complete nor generally accepted. The environmental strategy of 1992 was the last comprehensive strategy to be approved by the Government at large, that of 1994 was the strategy only of the MEW. It is important that such a strategy be endorsed by a broad social consensus, which should pose no substantive problem, since public opinion in this regard has been well prepared. It is also important that such a strategy be fully understood and supported by all staff in the MEW, which suggests that broad in-house discussion should be envisaged and perhaps training courses. The strategy should be fully harmonized with regional development plans, and it should not be difficult to obtain support for its development from UNDP or other funding sources.

#### *Recommendation 1.1:*

*The Ministry of Environment and Waters should promote, after its completion, the revised national environmental strategy as an absolute priority within the Ministry, the Government at large and the public. Sectoral and regional development plans should be coordinated with it. The strategy should incorporate the international commitments already made, should retain the cooperation of Bulgaria with its neighbours, and should reflect a broad social consensus, i.e. it should be developed with the full participation of the public at large and of economic actors.*

A large number of assessments of management practices in Bulgaria appear to have underlined the need for more pronounced horizontal cooperation between the MEW and other ministries and institutions. It is therefore not necessary to dwell at length on this point, although progress appears to be slow. The most promising starting point for the required attitudinal changes can be seen in the efforts being made in anticipation of the negotiations for EU accession. It can be assumed that the EU integration process will become an even more powerful tool for improved coordination at all administrative levels, as it gains momentum. However, additional measures, if successful, would

also strengthen Bulgaria's position in the process and should be considered. The concept of sustainable development has shown its capacity to integrate a number of sectoral initiatives with environmental management. A National Commission on Sustainable Development was established in 1999, pursuant to the law on regional development but although the MEW is to chair the commission, it has not yet met. The activities of the "Capacity 21 Task Force" that was established after the Rio Summit with UNDP support could perhaps be integrated into the work of the Commission. The Commission could probably also make use of the Project Management Unit that was established in the Ministry of Regional Development and Public Works with UNDP funding and should, among other tasks, help to integrate the various initiatives under way for the development of local agendas 21.

Recommendation 1.2:

*The National Commission on Sustainable Development should be convened without delay. The Commission should have a broad membership from national, regional and local administrations, as well as from industry and other partners of the NGO community. It should not restrict itself to dealing only with issues that are relevant to the integration of Bulgaria into the European Union, but should also concentrate on designing a strategy for the consistent and integrated development of sustainable sectoral activities.*

The formulation of widely accepted social, economic and environmental objectives is certainly a substantial asset in the transition process, but realistic implementation and enforcement plans have to complement them, if unpleasant surprises are to be avoided. It seems that, in general, realistic policies can be more easily achieved with regard to measures that concern the different levels of public environmental management, but many of the required measures primarily affect industrial enterprises. In such cases involving environmental management, contact with the business community is essential. It should have two purposes. On the one hand, the emerging private sector, in the early phases of the EU integration process, is clearly in need of a long-term perspective for its future activities in Europe. On the other, environmental managers would have to develop flexibility of judgement to decide what could or could not be asked of particular companies at a particular time, so that their preparatory efforts for European integration could follow an acceptable time schedule.

The acquisition of such realism in both the business sector and environmental management is a very complex process and cannot be achieved overnight. It is possible that the introduction of cleaner technologies could provide a theme around which a realistic attitude could most easily develop, if it is approached in an appropriate manner. It would be essential to conceive an activity that would unite the private business sector with the MEW. The activity should not only focus on the demonstration of projects that are economically viable and environmentally sustainable, it should also embrace research into enforcement of and compliance with advanced environmental management schemes in accordance with EU practices. Such research should consist of applied investigations into the implications of EU practices in the different industrial sectors. The investigations would benefit from experiences obtained in EU countries or other accession candidates. It is likely that the explicit development of a policy for the introduction of cleaner technologies, as well as the creation of a cleaner technology centre or centres would advance these objectives. Cleaner technology centres would best be jointly financed between the business community and the government and need not wait for the formulation of a specific policy for the introduction of cleaner technologies before being initiated.

Recommendation 1.3:

*“Cleaner Production Centres” should be envisaged as undertakings in which the Government and the private business community cooperate, also financing them jointly. Research into the technological adaptation of sectoral industrial production to European practices and promotion of cleaner production in different economic sectors, including demonstration and training programmes, should be considered urgent tasks, which would also be pursued by the “Cleaner Production Centres”.*

Horizontal cooperation between ministries develops only slowly. Cooperation between the MEW and the Ministry of Health is perhaps the most important of a number of examples. As, in recent years, the readiness to cooperate advantageous, but appear also to be possible. The ongoing revision of the NEHAP provides an opportunity to reconsider cooperation between the two ministries at high level. It might be possible to prepare a decision by the Council of Ministers that would establish an integrated environmental health management system between the ministries, while assigning primary responsibility to one of them. The first product of such cooperation could perhaps be a joint development of those parts of the NEHAP that require joint implementation. The problem of ensuring the flow of monitoring information from the MEW to the Ministry of Health requires an urgent practical solution as the Ministry requires such information for the pursuit of its mandatory functions. It would be a pity, if the advantages of an integrated monitoring system were to be lost, because the problem would remain unresolved. It seems that the envisaged regulation in this area points in the right direction, but practical solutions perhaps need to be found before its adoption. A lasting solution should also clearly specify the integrated monitoring system's source of funding.

Recommendation 1.4:

*Regular meetings at an appropriate level should be held between the Ministry of Environment and Waters and the Ministry of Health. They should enable a coordinated implementation of the NEAP and NEHAP, and ensure the flow of environmental monitoring data for the needs of the Ministry of Health.*

## **Chapter 2: Environmental conditions and management of pollution and natural resources**

### *Air management*

Since the first Environmental Performance Review in 1995, the main parameters characterizing air quality have been steadily improving. The reasons are varied: from the relative drop in industrial and energy production to the implementation of modern and optimized monitoring and the enforcement of legal measures adopted in the country.

The economic, social and other problems associated with the transition period make the practical and immediate implementation of the newly adopted norms and standards difficult. Many initiatives suffer from a lack of adequate financial support. This is especially true of the adaptation of the institutional framework that predetermines, for most of the normative acts, the introduction of transitional provisions, shifting to a later date their full application. For instance, it has not been possible to set up a system to warn the public in real time when air emission concentrations overshoot certain limits because of a lack of funding. A better evaluation and analysis of the mechanisms of domestic and international financing for air protection management in the country would certainly be needed.

*Water management*

While there is no evidence that the situation of waters in Bulgaria has improved much since the previous EPR, many projects are currently going on that will profoundly modify the managerial structures and infrastructure in water protection. With the implementation of the new legal framework and the introduction of EU directives into water management, modern concepts of water management are introduced. Also the infrastructure in water distribution and waste-water treatment will much improve in the near future as important investments are foreseen. Nevertheless, managing water in a sustainable way will still necessitate a few other actions that are assessed and proposed in Chapter 5.

*Waste management and soil rehabilitation*

The new waste management programme foresees the necessary infrastructure for a successful management of waste, applying the relevant principles and practices of the EU. However, the acceptance by the local administration and the public, be they citizens or enterprises, is a criterion that should not be underestimated. In particular, because the new waste strategy will necessitate many changes in behaviour and certainly a large financial effort from everyone. Awareness campaigns about the upcoming waste management practices might be able to ensure individual participation and acceptance. NGOs should be actively involved in such campaigns. Discussions about ways to optimize waste management at municipal and regional level should be held to consider opportunities for cost reduction by developing schemes regrouping several municipalities.

*Nature management*

Regarding the conservation of biodiversity, the current delays could be overcome if the Ministry of Environment and Waters clearly and promptly formulated the priorities in an action plan. The programme suggests a large number of well-prepared projects, and foreign assistance can be expected for their implementation, once the priorities are clear.

*Management of mineral resources*

The relatively recent inclusion of mineral resource management into the Ministry of Environment and Waters does not appear to have led to the full integration of the various new functions of the MEW. The opportunities offered by this institutional rearrangement should not be lost. They include the potential for integrating environmental policy objectives into the actual exploitation of mineral resources, as well as the integration of such resource use into the sustainable development of the country. The MEW might have to show that it is willing to take on the corresponding challenge by developing a comprehensive management scheme for all mineral resources, in cooperation with the various institutions that are at present involved in related tasks.

**Chapter 3: Development of sources of finance for environmental protection investments**

The Bulgarian Ministry of Environment and Waters is making admirable and energetic efforts to swiftly improve the conditions for successful environmental management in the country, primarily through forceful transposition of the requirements for EU accession. Much has been achieved, but much also remains to be done. The aim of the present chapter was to look at the mechanisms for financing environmental protection investments, which are badly needed, if the country's environmental conditions are to improve.



The overall conclusion from the EPR project is that two categories of problems exist for the mobilization of funding sources. The first relates to the increase in the number of sources available (including possibilities for their extension with the help of new financing mechanisms) and their more systematic use. The future environmental investments will indeed require an increasing amount of financing, and new sources are clearly important. However, the potentially available new sources – or new financing instruments - are known to the Government and the MEW, and their use is more a political rather than a practical issue. Furthermore, problems of a more general nature also influence the current ‘investment climate and possibilities’ negatively. The message therefore is that the development of more financing sources in the short and medium term needs to be considered in a broader context, and not only as a purely monetary issue.

The major problems for the short and medium term - likely to grow unless tackled – appear to be located in the second problem area. They can be described as institutional limitations preventing the full and adequate use of existing funds, as well as the submission of qualified projects for funding. It is therefore suggested to concentrate in the very near future on improving existing project handling mechanisms. The most important general deficiencies of the existing system results in the following unfavourable situation:

- The present system of submitting, receiving, processing and managing project proposals - eventually approved projects - is insufficient and creates delays, bottlenecks, a lack of transparency, delays in spending of available funds and in the release of new funds.
- The many institutions involved in the overall process tend to focus only on themselves with little regard for communication, providing and sharing information at the operational levels in Bulgaria, and with foreign donors. The change towards a ‘public service culture’ needs to be accelerated.
- Project management and implementation require professional skills in general, and in specific project management in particular, notably in the areas of economics, financing, organization, informatics, communication and (especially) English. Such qualifications are needed even in technical ministries.
- The concentration of all decision-making in the involved State institutions at the highest hierarchical levels creates delays and unnecessarily leads to crisis management. It promotes the general perception that applications need personal support at high level to be successful.

By far the biggest problem today is that (apart from NEPF and NETF) there is no standard format for project applications. Further, in many cases, the applicant does not know the potential source of finance for his specific project. Therefore, the applicant is on the one hand unable to prepare an application, meeting (the possible) donor’s requirements. On the other hand, the potential donor is unable to process the application (if received by him at all), due to the non-conformance with the donor’s requirements. The only way to solve this dual issue is to develop a standard format for the initial stage of a project application, i.e. for the project fiche. When a project fiche has been accepted in principle by a source of finance, the full application can be elaborated, according to the donor’s requirements, which are then known. According to reactions both from bilateral donors, UNDP, REC and others during the EPR review mission, an agreement on such a standard fiche format appears very possible, and all expressed interest in participating.

Once the above is achieved, further improvements in the overall process should be sought, including procedural ones. Such improvements would require a prior relevant study, to which NGOs should be associated, as many investment projects originate from them, and their representation in the present decision processes does not seem to be optimal.

Recommendation 3.1:

*There should be a standard format for project descriptions for submission to the Ministry of Environment and Waters when financing of an environmental investment is sought. This format should be prepared by the Ministry of Environment and Waters in cooperation with potential bilateral and multilateral donors. A study should be undertaken on the need for further improvements in the various application processes.*

The exchanges between Bulgarian institutions and donors at the yearly donor meetings are very valuable. However, they are insufficient, because donors still lack full, updated information on viable projects after the meetings. The provision of such information on an ongoing basis is important for donors looking for projects to finance, as well as for applicants looking for potential donors. It is in particular proposed (a) to use the Internet to publish project applications (i.e. project fiches), including their principal characteristics, and (b) to establish both more formal and more informal communication between the project recipients and the project managers.

Recommendation 3.2:

*Measures that complement the annual donor meetings should be taken. They should ensure efficient and continuous information of donors and applicants about both project and funding opportunities. A detailed study should be undertaken of the current project management routines in the Ministry of Environment and Waters. Any improvement of practices resulting from such a study should be published.*

The capacity at MEW to handle the increasing number of projects - latest developments have added ISPA projects to the spectrum - needs to be upgraded in terms of quantity of staff, skill profiles and equipment. The MEW technical sections have all the technical expertise required. The project department staff skills should primarily concentrate on general management, specific project management, financial/economic skills, project organization, project monitoring techniques, contract management, etc. New staff should be selected for such skills, and existing staff should be given relevant training.

Regarding equipment, suitable informatics services need to be available. Efficient computer hardware, databases and software including financial models, project planning tools, etc. would increase capabilities. All standard routines should be computerized, ensuring speed, accuracy, transparency in operations, enabling efficient reporting for different stakeholders, etc. A hotline service via the Internet should be made available to applicants. This should also include distribution of application forms, guidelines for applications, relevant information regarding bilateral donors (e.g. their calls for proposals), etc.

Recommendation 3.3:

*The resources of the Ministry of Environment and Waters for project management should be increased, and its staff trained where necessary so that they can acquire the skills needed. They should also be equipped with sufficient information technology to optimize their work.*

The routines of project management followed by the MEW should be revised. Especially the following improvements should be made:

- Establishment of written procedures for submission of applications, their receipt and registration at the MEW

- Establishment of a procedure for mandatory acknowledgement to the applicant of the receipt of his application, within two weeks after receipt, including the name of the handling officer and a reference number for the application
- Preparation of clear procedures - in the form of written manuals - for all activities and processes, corresponding to the 'DIS manual' and the 'Manual for procurements and contracting', which are applicable to all EU funded projects.

Regarding the identification of prospective, insufficiently used sources of funding, three directions should be further explored. The first is with bilateral donors. In this respect the implementation of the above recommendations would probably make donors much more forthcoming. Secondly, the debt-for-environment swaps are of course very advantageous for Bulgaria, and it can be expected that initiatives will be taken to increase the number of such agreements in the future.

Thirdly, there is also a local source of funding, which does not yet seem to be fully used and which could be encouraged. The source concerned is that of municipal funds.

Today the bulk of municipal income - being taxes and service fees - is collected by the Government and (partly) re-disbursed to the municipalities. The general opinion in municipalities and the public (as regards investments) appears to be that environmental improvements in the environment are the responsibility of the central Government, not of the municipality. Efforts should therefore be made to improve the attitude of municipalities and the public in this regard. One of the possible measures could be to increase the municipal share in the mentioned taxes or fees – notwithstanding the current change in revenue flows as a result of privatization of utilities - if the municipalities are willing to finance more environmental investments themselves.

The law requires disclosure of municipal assets and their independent valuation prior to their sale. However, this procedure does not appear to be publicly trusted. It is recommended, therefore, to draw up an inventory of all municipal assets (hard or soft assets) that are not specifically required for performing the municipal services. The assets should be evaluated at optional cost, when sold under competitive conditions. The inventory should assist the municipalities in proposing an investment plan for the capital which may be realized. This plan should, of course, cover all sectors of municipal responsibilities, not only the environment. The details of the inventory should be made public.

An alternative to the sale of such assets would be their use as bank security for commercial loans. This option could further facilitate co-financing arrangements of environmental investments in municipalities owning such assets. Also, the new possibilities for municipalities (at least the larger among them) to issue bonds may have a positive effect on funding possibilities for environmental investments.

Recommendation 3.4:

*Efforts should be made to increase both the willingness and the possibilities of municipalities or regions to finance environmental investments, by:*

- *Including financing strategies and means explicitly in the national environmental strategy*
- *Revising the State/municipal ratio for municipal income from environmental payments*
- *Increasing the privatization or sale of municipal assets not required for municipal services*
- *Increasing the use of municipal assets as security for loans contracted by the municipality, particularly as part of co-financing of environmental investments*
- *Further studying the possibilities of issuing municipal bonds.*

See also Recommendation 4.2.

#### **Chapter 4: Management of air pollution from stationary industrial sources**

With the adoption, in January 2000, of the Amendments to the Clean Air Act, the process of transposition of EU Directives in the air quality sector into Bulgarian national legislation is practically complete. At the present time, both the European and the Bulgarian environmental legislation systems are thus harmonized, which represents a considerable achievement on the part of the Bulgarian Ministry, accomplished over the past three years.

The significant changes brought about by the ongoing harmonization of the country's legislation in various fields - not only environmental protection - engenders some implementation and enforcement problems. In practice, it can be difficult to ensure the necessary coordination between the corresponding institutions involved in the process of transposition of EU requirements. As a result, most of the legislation adopted during the past year will also have to be adapted to the country's specific conditions, so as to ensure its effective implementation and enforcement and an adequate degree of synchronization between the different legislative sectors. These adaptations and developmental changes require substantial resources in both the number of staff dealing with the environmental legislation and the upgrading of their qualifications.

##### Recommendation 4.1:

*The number of staff responsible for the implementation and enforcement of the recently adopted legislation, and the programme for their further qualification in relevant new fields through training programmes, as well as the continuation of the institutional capacity-building process should be reassessed and, if necessary, augmented.*

There is an ongoing decrease of air pollution levels, primarily owing to a continuing diminution of industrial and power production, and to the implementation of measures aimed at industrial pollution abatement (including investment in abatement equipment and improvement in the system of collection of taxes and charges). Nevertheless, problems persist in several areas of relevance to air management. Regarding air emissions, the ongoing economic difficulties of the industrial sector cause severe shortages of funds for the purchase and installation of new abatement equipment, or for the rehabilitation and maintenance of existing abatement facilities. Under these circumstances, even the introduction of the best available abatement technologies cannot be expected to achieve particularly dynamic progress. Added problems can easily arise in the strategic policy and social sectors when the use of local fuels, unfortunately of high sulphur content (lignite), is favoured.

The lack of financial resources, together with the need to develop in addition an adequate institutional framework, necessitates the introduction of different transitional provisions (e.g. "gratis periods"), designed to postpone certain specific enforcement requirements of most of the regulatory documents. The main component of this process, however, is still external funding, mainly during the period of implementation of the new legislation. In this situation, the country is increasing efforts to attract more foreign investment funds, but these efforts should be complemented by the elaboration of better domestic financing mechanisms to attract the desired investments. At present, 90 per cent of the financing in this field is covered by the National Environmental Protection Fund (NEPF). This high percentage may in one respect reflect the generally poor economic situation, but it also indicates a relative paucity of domestic funding schemes. It should therefore be envisaged to develop funding schemes that involve foreign and domestic sources of finance at the same time (see also Chapter 3). In addition, the structure of expenditures of the NEPF may have to be reviewed, with a view to finding a better balance between the expenditures for the priorities in all areas of environmental management, including air management.

*Recommendation 4.2:*

*The existing financing mechanisms for air protection investments should be diversified. Co-financing schemes should play a larger role. See also Recommendation 3.4.*

The existing national air quality monitoring network is well organized, but because of funding difficulties with the maintenance of the monitoring sites, the information available is sometimes only partial. The reason for this is the predominance, in terms of number, of the manual monitoring sites over automatic stations. The manual working stations are generally in operation from Monday to Friday from 9 a.m. to 5 p.m., the quality of the air during the remaining periods of the week not being controlled. However, some industrial activities are operated in a continuous production cycle, partly in response to the differentiation of the price of electricity into peak (morning), normal (afternoon) and night tariffs. The night (including weekend) tariff is the lowest, thereby favouring the maintenance or intensification of some industrial activities during this period, generating emissions that are not well monitored.

The operational and maintenance costs of the monitoring equipment, as well as the continuous training of the air quality specialists require additional funds. Furthermore, funds are also needed for the gradual increase in the share of automatic monitoring.

*Recommendation 4.3:*

*A study should be made of (a) the possibilities to increase industrial self-monitoring, and (b) the measures necessary for future development of the National Air Quality Network. Continuous self-monitoring of large industrial enterprises should be expanded. The study should also identify requirements for new measuring, data transfer and processing equipment in view of the recently adopted new air quality parameters (PAH, benzene, heavy metals and arsenic), and should gradually lead to increased automated air monitoring.*

Problems exist with regard to the availability of the meteorological data required to prepare programmes to improve air quality, identification and prioritization of remedial measures, etc. At present, most of these data are owned by the National Institute on Hydrology and Meteorology, which is not in a position to cover the expenses connected with their processing and formatting in a way suitable for air quality modelling. The on-going negotiations between the institutions involved in meteorological data collection, however, are a positive development that should lead to the establishment of a National Meteorological Network. This network would ensure more effective use of the presently available meteorological data for the country's territory.

*Recommendation 4.4:*

*The existing plans for the creation of a National Meteorological Network should be approved and urgently implemented. Such a network should be coordinated with the National Air Quality Network.*

**Chapter 5: Development of sustainable water management**

Despite the fact that there has been no sign of improvement in river water quality since the mid-nineties, a very positive development is the growing consciousness and understanding of the unsatisfactory situation and the building of a suitable institutional framework to overcome the difficulties. The EU accession goal gives a strong impulse to Bulgarian water policy. But in some respect this policy appears imperfectly grounded in reality and needs. A clear strategy with the financial and human capability to implement it has still to be set.

The 1999 Water Act of Bulgaria is an excellent framework for the development of sustainable water management. Its implementation will be long, difficult and expensive, more than is usually expected in the country, and the actual building of this solid foundation for sustainable water management should be the highest priority. Building up the monitoring network and the basin institutions call for detailed action plans, funded and controlled by the Water Directorate of the MEW, and should be implemented by the future River Basin Directorates.

*Recommendation 5.1:*

*Based on the Water Act of 1999, detailed action plans should be drafted and implemented for the installation of a related monitoring network and the creation of the necessary basin institutions. The implementation of such plans should be designated a priority for international funding. The monitoring system should become part of a modern system of data collection, analysis and dissemination to all user groups.*

Substantial time, effort and financing are required to improve the monitoring, as well as the knowledge and understanding of water ecosystems. The MEW should rapidly draft short- and long-term plans of action and allocate a substantial share of available public finances to their implementation. It is suggested that the implementation of such plans should also become a priority for international financing.

The national water monitoring system should be extended. Particularly required are more frequent bio-index measurements, monitoring of toxic elements in sediments and biological integrators, and measurement of the geomorphology and ecology of water systems. The constitution of a few independent laboratories for analysis of monitoring samples should be planned and facilitated. Such labs should be allowed to work for any public or private organization. Large sized laboratories, the prescription of common sampling and analysis protocols, and a certification procedure could induce efficiency and quality.

The data production function of the National Institute of Meteorology and Hydrology should be integrated into the national water monitoring system and achieve some independence from the Academy of Science. The main users of such data (academia; administrations dealing with the environment, agriculture, energy, and regional development; NGOs and others) should be associated with the development of the objectives for the network.

The Executive Environmental Agency should develop more standard data analysis and presentations using raw data from monitoring. This is necessary to nourish the decision, planning and control processes effectively. A number of such quality assessment tools are available in the EU, defining quality classes for the main uses of water, its sites, and the way to compute the actual quality class from the raw data.

The practical implementation of most monitoring, data management and analysis, quality assessment, public data and information dissemination should be done by the Basin Directorates, under the authority of and following protocols issued by the Executive Environmental Agency. The Agency should be in charge of national aggregation, synthesis, and information. It is a general recommendation that more value can be expected from monitored data nationwide when they are publicly and easily available at low cost. Such diffusion has now been facilitated by Internet technologies.

River surveys are urgently needed in Bulgaria for relevant river basin planning, enabling the identification of issues as well as their analysis. They should be managed by the Basin Directorates

under the authority and guidelines of the MEW. Sufficient funding should be allocated as soon as possible. As in the case of monitoring, the surveys should become a priority for domestic and international financing. The carrying out of the surveys, following an appropriate process of tendering, can provide an opportunity to strengthen the ability to conduct such studies among Basin Directorates, NGOs, academic institutions and private engineering companies. It is also recommended that over the next five to ten years mixed Bulgarian/EU member-country teams be favoured as a vector for technological transfer.

More attention should be given to the physical and hydrobiological aspects of water systems, which are currently only considered as a natural infrastructure and major producer of quantitatively regulated water of good quality. Training, communication, testing for river basin management plans, and the permit process in both the Basin Councils and Basin Directorates will progressively build efficient processes.

*Recommendation 5.2:*

*The future River Basin Directorates should, as a matter of priority, undertake river basin surveys and identify and analyse issues for corresponding basin planning. Furthermore, in their work, they should give special attention to the physical and hydrobiological aspects of water systems. The task necessitates the presence of adequate expertise in the future Councils and Directorates.*

The perspective for privatization of hydro-power generation, and the need for extensive restructuring, repair and maintenance of the irrigation system should provide a real opportunity for a better integration of those major impacts on the hydrosystem. Extensive Environmental Impact Assessment of the facilities and their operations are needed. They should, among other effects, cover the ecological consequences of modified runoff regimes and water quality, and the pollution of ground and surface water by intensive irrigated agriculture. Long-term schedules for remedial action should be included in the privatization deals and in the restructuring of irrigation facilities.

The renaturation of some important drained wetlands along the Danube river is a priority of the national plan for restoring and protecting wetlands. Further, irrigation restructuring is an opportunity to study and organize a real protection of groundwater resources by inducing permanent vegetation, low yield high quality agricultural practices on large areas, feeding the groundwater abstraction stations. It is also an opportunity to create “green corridors” some 50 to 100 metres wide along rivers in irrigated plains and to restore some natural functions of surface and underground aquatic ecosystems.

*Recommendation 5.3:*

*The generation of hydro-electricity, as well as irrigation schemes, should be better integrated into hydrosystem management efforts. The tool of Environmental Impact Assessment should be used extensively in this regard. Long-term remediation programmes should be part of privatization contracts, particularly for irrigation schemes. Needs derived from the declared objectives of wetland restoration and of general nature management should be taken into account.*

The integrity of regional water companies is a powerful advantage, which should be strengthened through comprehensive long-term integrated planning of action and investment. In all respects, regional water companies have opportunities for economic and technical economies of scale and efficient cooperation between neighbouring municipalities. It is therefore recommended that disaggregation of regional water companies be avoided. This would call for some regulatory and legislative adjustments:

- The association of municipalities and the State within legal authorities for the purpose of organizing drinking-water supply and waste-water sewerage and treatment should be introduced into the legal system. Corresponding institutional bodies should have the right to delegate and control these functions after their possible privatization or concession.
- Subsidization of private companies in charge of delegated management of a regional water company should become a legal possibility.

The Ministry of Regional Development and Public Works and the MEW should develop guidelines for the urban water management delegation process and respective contracts, by agreeing on accounting rules, economic and quality auditing, price evolution, negotiation rules, investments programmes, required public financing, and other relevant conditions. Some transfer of experience could be obtained from EU countries, particularly the United Kingdom, where an elaborate control scheme is operated for regional companies.

Recommendation 5.4:

*Modifications should be made in regulatory and legislative rules in order to maintain the operation of regional water companies. The Ministries of Regional Development and Public Works and of Environment and Waters could enhance the delegation of urban water management to regional companies through the joint development of appropriate guidelines. The necessary control scheme could be based on relevant practices in European Union member countries.*

Sound integrated long-term plans are necessary to underlie and circumscribe proper investment or delegation. Complete and precise pre-engineering studies for all water companies, undertaken by independent engineering firms, could help to fill this gap. It could be a priority for international funding. Financing, tender and supervision of such studies should be managed by the regional water companies, under close control by the municipalities, the MRDPW and the MEW. The studies would contain:

- An assessment and analysis of the actual state of facilities
- A schedule for reaching goals for adequate drinking water supply, for quality of water discharges, for availability and protection of water objects, for storm water and for sludge management
- A long-term global investment plan (including broad technical specifications, costs, revenues, and funding of facilities)

Recommendation 5.5:

*Pre-engineering studies by independent engineering firms should be undertaken for all water companies, under the joint control of the Ministry of Regional Development and Public Works, the Ministry of Environment and Waters, and the Municipalities concerned, possibly financed from international sources.*

More focus on all components of aquatic ecosystems (river beds and embankments, wetlands and riversides) is needed. The institutional framework in Bulgaria focuses on water quantity, quality and economic uses, but does not clearly support an integrated apprehension of water systems in the broad sense (quantity and quality of water *as well as* the aquatic ecosystems and the physical milieu where water runs). In this sense, the water systems are, among other benefits, the most effective infrastructure for water quality and quantity and should be known, protected and managed as such.



The privatization policy and various planning processes can be a real opportunity for better sustainable management of water systems, but this is not fully recognized and accounted for.

The consistency of water plans with the national or regional user plans calls for explicit guidelines, including assessment and arbitration procedures. Such general hydrosystem protection guidelines for water usage plans should be prepared under the responsibility of the ministries responsible for regional development, agriculture, and energy. They should be drafted in agreement with the MEW and the Ministry of Health and then be approved by the Council of Ministers. They should stipulate the inclusion of explicit measures for hydrosystem protection in the national and local plans by the aforementioned ministries, when using or impacting water and aquatic ecosystems. The measures should be subject to approval by the MEW.

*Recommendation 5.6:*

*The necessary guidelines ensuring consistency between water plans and water use requirements at national and regional level should be developed in cooperation between the ministries concerned and should include explicit measures for aquatic ecosystem protection.*

*Recommendation 5.7:*

*The reduction of excessive water use, as well as of losses of water in distribution, should remain priorities for water management. A policy regarding the long-term development of water prices should become an instrument for the achievement of these goals.*

## **Chapter 6: Development of reliable waste statistics**

In general, the conditions for developing good waste statistics in Bulgaria are favourable, as the recent changes and specifications point into the direction of modern solutions. The general orientation for future work should therefore be to enlarge the existing system in a substantive direction, progressively providing a growing share of the information needed for purposes of waste policy and management. The statistical instruments for an advanced analysis regarding both the type of indicators needed and the rules for calculation of waste indices should be left to the time, when larger amounts of statistical data are available in this field.

The necessary knowledge and experience in techniques of advanced data collection and processing are available. They can be trusted to solve the many serious methodological questions that are encountered in the transition process, which reside primarily in the data collection process, applying sound statistical theory, and in the processing of data, needing modern information technology. The revision of data collection methods should also cover the elimination of redundancies, as they occur for example in relation to water data, which are collected from enterprises in similar form, but independently, by the NSI and the EEA (see Chapter 5). However, specific recommendations with regard to methodological issues do not seem to be necessary at this stage, except that it should not be overlooked that the solutions to methodological problems demand the commitment of substantial financial and staff resources.

### *Generation of waste*

A complete picture of the generation of primary wastes can be obtained, but the calculation would require some changes in the data sources. They should permit a breakdown into a more limited number of waste categories. It is proposed to compile the quantity of industrial waste in 40 waste categories. This level of detail will meet most of the information needs of the public and

policy-makers, as it would enable to indicate the main structure of wastes at the point of generation, i.e. at the beginning of the waste flow.

Household and similar waste. According to the definition given in the LIHWEA (Additional Provision, Art. 1, item 2), household waste includes waste from private households, small industry and the tertiary sector of the economy. The information will be provided by the operators of landfill sites providing the yearly household waste reports according to Art. 13 of Regulation No. 10 (on the Filling out of the Report and the Waste Management Information Documents, dated 6 November 1998). The form of this report asks for a further breakdown of the respective waste volume by origin: household, offices, commerce and industrial activity. For practical reasons – common use of dust-bins by households, offices and commerce, lack of differentiation in waste disposal fees for the various groups of generators – these details cannot be expected from the operators of landfill sites, nor from waste collectors.

The figures obtained will therefore be very rough estimates, and the information concerned could be obtained in a more reliable manner by using information from industry. The volume of waste similar to household waste which is generated by industry and delivered to municipal landfills should be deducted from the aggregate reported by industry and shown separately on their reporting forms. This figure should be supplemented by the volume of wasted paper and cardboard, glass, plastic and textile waste which is collected separately (for details see below).

Recommendation 6.1:

*The annual statistical reporting by landfills should be simplified by eliminating the question on the origin of household or similar wastes.*

Non-hazardous industrial waste. Article 7 of Regulation No. 10 imposes on industrial units a yearly report of generation, treatment and disposal of waste. It covers the industrial sectors mining and quarrying, manufacturing and energy. The reporting obligation starts at a waste generation of 100 kg per day. Types of waste have to be shown using the official waste list, and a distinction has to be made between generation inside the unit, and waste received from outside the unit.

These data allow to present the generation of industrial wastes in great detail. In the case of the energy sector, figures on the generation of cinder and ashes should be taken from another source, because these waste categories are not covered by the report form.

For statistical presentation, it is inappropriate to use the waste list at the detailed 6-digit level. Instead, a condensed version of 30 to 40 items should be elaborated. Solid and liquid wastes and sludges originating from pollution abatement facilities will have to be shown separately.

Recommendation 6.2:

*A source of statistical information for the generation of cinder and ashes in energy transformation industries should be determined. A reduced classification of non-hazardous industrial wastes should be developed for statistical presentation of both generation and disposal of such wastes, including not more than 30 to 40 types of waste.*

Hazardous industrial waste. Hazardous wastes from industrial processes are well documented, as are other industrial wastes. According to the requirements of Bulgarian legislation, hazardous wastes are fully controlled as all sources of generation are controlled regardless of the quantities produced.

An aggregation of the hazardous waste list is recommended similar to the proposal for industrial wastes.

*Recommendation 6.3:*

*Statistical collection of data on the generation of hazardous waste should include provisions that enable satisfactory coverage of generation of waste oils in small repair shops. A reduced classification of hazardous industrial wastes should be developed for statistical presentation of both generation and disposal of such waste, including approximately 30 to 40 types of hazardous waste.*

Construction waste. The source of information about generation of construction waste is the yearly report of landfill sites accepting this waste for disposal. In this case, the quantity of waste disposed must be considered as the total generated. The term 'construction waste' comprises a 2-digit-group of the waste list, and probably also soil and stones from construction sites. The respondents are not requested to provide a further breakdown.

Sludge from waste-water treatment. The information form filled in by industrial units includes data on sludge from on-site waste-water treatment facilities as a sub-category of primary waste. This picture will be completed by the amount of sludge generated in public waste-water treatment plants. Assuming that the household waste report mentioned above will not permit the compilation of reliable data on this waste, the figures on sludge should be derived from a statistical survey of public waste-water treatment installations.

*Recommendation 6.4:*

*A special statistical survey should be undertaken in order to obtain reliable information on generation of sludge from waste-water treatment.*

### *Recycling*

Recycling is a main item of waste management and a new topic for waste statistics. Recycling activities are concentrated in Bulgarian industries operating recycling facilities on-site. The reporting form for industrial waste contains information about quantities and type of waste for recycling, and the type of the recycling process installed. If the recovery activities are executed in another plant, the identification of this operator is also possible, so that double-counting may be avoided. In short, recycling activities in industry are well documented and the data make the calculation of recycling rates possible.

The information is limited to the input of recycling installations whereas the result of the process and the substitution of secondary for new materials remain unknown. This target of recycling should also be subject to statistical reporting.

After the collapse of the Sero-system, which was a State-owned recycling company, collecting metals, textiles, paper, plastics and glass for recycling, some collection of waste material has been established in the recent past by private companies. They are dealing with waste paper and cardboard, glass, textile and plastic waste, scrap metals and used automobile tyres, acting as wholesalers. Except for intermediate storage, the material collected is sold to domestic recovery facilities or exported. As these companies will also import waste material of that type, the balancing of the waste flow for recycling will become complicated without further information. According to the requirements of regulation N 10, those companies that recycle or reuse waste also need to report regularly on industrial and hazardous wastes (information cards).

It is doubtful whether manufacturing companies buying waste paper, glass or used tyres in the market as secondary raw material or fuel consider them as waste. Consequently, they might not report them on the waste form. Moreover, data on the input of imported secondary material are missing. It is recommended to study this field carefully and to design a special statistical survey when the result is negative.

*Recommendation 6.5:*

*A special statistical survey should be envisaged for the recycling of waste. The use of recycled material may also require special data collection efforts.*

*Treatment*

The treatment of waste prior to final disposal is considered a segment of waste management of growing importance. The technical processes applied to change the composition and quality of waste that may be considered here are: Incineration to reduce the content of pollutants, separation of emulsions, filtering, distillation, evaporation and de-watering, sedimentation and flocculation, oxidation, neutralization. At the present state of waste management, the equipment for these processes is installed mostly at the waste generator, who treats the own waste and, in some cases, is prepared to take over waste from other producers.

It is suggested to restrict the collection of such statistics to the input side of the installations. Obviously, this will limit the content of the final information, in so far as the effectiveness of the treatment measure is not shown. This objective cannot be achieved by statistical means, because the great variety of the chemical composition of the individual waste before and after treatment would make the standardization impossible, which is needed for statistical purposes.

The reports for production waste and for hazardous waste will comprise data on the treatment inside and outside the industrial unit. In order to avoid double-counting, the statistic should be confined to treatment on site. The input figures would thus cover waste volumes generated in the reporting unit and received from others.

*Recommendation 6.6:*

*Statistics on waste treatment by type of treatment should be collected from the treatment installations only. The treatment types distinguished should be incineration, separation of emulsions, filtering, distillation, evaporation and de-watering, sedimentation and flocculation, oxidation, and neutralization.*

*Final disposal*

The municipal landfill sites are the ‘backbone’ of final disposal. The operators hold data on the quantities of waste deposited, subdivided into the types “household waste”, “construction waste”, “industrial waste” and “hazardous waste”, in accordance with their respective permits. The classification is quoted from the reporting book and must be assessed as an insufficient description of the waste items.

To be consistent with the set of data on waste generation, a similar grouping should be realized at the final disposal of wastes. The sources for such data are the information forms for production and for hazardous waste. Respondents have to indicate, among other things, the municipal landfill which they used for depositing each type of waste. Applying adequate data processing techniques, the figures of wastes collected from industry can be combined with the relevant data of municipal

landfills. The result will be a breakdown of industrial wastes deposited in municipal landfills, by type. See Recommendation 6.1.

The second group of landfill operators are industrial units. The data provided by them comprise the quantities of waste by type at the 6-digit-level. The facilities should be classified as "landfill for industrial waste", "hazardous waste", "tailing pond", "pond for sludge" and "others".

Concerning the level of management in both the municipal and industrial landfills, the characteristics "barrier towards groundwater", "drainage of leachate" and "gas recovery" are sufficient. For municipal sites, the existence of "scales", a "control check-point" and a "fence" should be added.

Estimates say that, besides the 620 municipal landfill sites, approximately 800 dumping places are used, which are uncontrolled and lack any legal basis. Observing Regulation No. 10, the municipalities tolerating these sites will also have to fill in the information form on household waste. It is expected that, by this means, some information on these dumping grounds can be obtained.

#### Recommendation 6.7:

*Statistics on waste disposal by industrial units acting as landfill operators should distinguish between the different types of disposal operations: landfill for industrial waste, landfill for hazardous waste, tailing pond, pond for sludge, and other. Concerning the management of both municipal and industrial landfills, they should be classified as being equipped by barrier against groundwater, drainage of leachate, equipped for gas recovery. For municipal sites, the existence of scales, of a control check-point and of a fence should be additionally distinguished.*

#### *Transboundary movement of waste*

The by-laws to the LIHWEA regulate licensing and movement of waste across the border, including reporting. The statistical figures will be provided by the MEW and should be added to the waste balance in an adequate way.

#### *Organization of statistical work*

The yearly information reports, ordered by Regulation No. 10, will cover the majority of data needed for waste statistics. Therefore it is obvious to use these administrative sources in order to reduce the response burden of the economic units involved. However, in the long term, growing concerns with response burden by industry to all types of administrative enquiries may require statistical surveys for an increasing number of information requirements.

The reports must be delivered to the responsible Regional Environmental Inspectorate (REI) and will form one part of their records for carrying out their supervisory activity. This raises the organizational question whether the REI or the NSI should elaborate the statistics on waste generation, recycling, treatment and disposal. Undoubtedly the staff of REI have the expertise to assess the validity of the declarations in the reports. On the other hand, the NSI has long experience in dealing with large data masses and can provide the hard- and software for data processing. It is hoped that the Executive Environmental Agency and the NSI will find an understanding on how to share the work load of establishing the new set of waste statistics in the most efficient way.

**Chapter 7: Management of the revision of protected areas**

Bulgaria has succeeded in developing a convincing model for the modernization of its nature conservation policy framework and biodiversity protection practices. Starting from a biodiversity conservation strategy, an action plan was developed compatible with the Pan-European Strategy for Landscape and Biodiversity Conservation that will find its continuation in the Pan-European Ecological Network.

The above fundamental policy and management scheme is fully in line with the country's European Union accession plans. During the accession process, many of the problems in the implementation of the policy plan will be solved. At the same time, others will require particular attention. For example, the speed of implementation of those PEBLDS steps which are already implemented in most European countries will probably have to be increased, in particular those relating to the establishment of the Pan-European Ecological network (PEEN). In accordance with PEBLDS, the Bulgarian segment of the PEEN should be in place by 2005.

In general, the Bulgarian intention to reach the planned percentage of protected areas within three years is probably optimistic. In accordance with 79/409/EEC policy, SPAs will have to be designated officially as an input to the SPA network of the EU. The Directive 92/43/EEC sets out an implementation procedure that comprises an initial six-year period ending in 1998 (national draft input period). By May 1998 none of the Member States had submitted complete lists. At the end of the next six-year period, i.e. in 2004, the Member States should designate the SACs and provide adequate protective measures.

The challenges for the implementation of the Directives 79/409/EEC and 92/43/EEC are to increase the protection of wild birds which are presently outside the protected areas, ensure the strict protection of some species not yet protected at all in Bulgaria, and strengthen institutions for nature protection at central and regional levels. The situation requires the preparation of national lists of habitats and species needing protection, compatible with the Cadastre and GIS initiatives. Enforcement of new laws on hunting and on fishing is needed. Effective control according to these laws will require cooperation between the Regional Forestry Boards (operating under the Ministry of Agriculture and Forestry) and the National Natural Parks Service (of the Ministry of Environment and Waters).

The ongoing transposition of PESBLC and PEEN philosophy and terminology into the environmental laws will underline the importance of the key elements, the "transboundary protected areas", "ecological corridors", SPAs and SACs. However, other transboundary infrastructure projects like highways, railways, telecommunications, oil pipelines, power transmission lines etc., will create concerns for nature protection. In this regard, all current pan-European achievements in the establishment of ecological corridors across engineering constructions should be studied and, where possible, used as examples. To this end, the MEW should cooperate with all relevant institutions and NGOs, focusing on questions connected with globally threatened species (GTS actions), to prepare action plans for inclusion in national legislation, under the terms of Article 14 of the Bern Convention.

Further regulations need to be adopted related to the Protected Areas Act, including guidelines for the management of the protected areas of exclusive State property, guidelines for the functions and structure of the Directorates of the National Parks, a regulation for the development of management plans of protected areas (including forestry elements), a regulation on admission fees for protected areas and forests, as well as on payments for compensating damage caused to

protected areas. Specific requirements should be developed in the bills for transboundary protected areas and for the protection of the biosphere.

Finally, Bulgaria's richness in terms of biodiversity makes the country a sort of island on the biodiversity map of Europe. The Ministry of Environment and Waters should determine priorities among the large number of well-developed projects included in the National Biodiversity Conservation Programme, possibly after some programme revision. Some of them have been mentioned in the National Report on Biological Diversity Conservation in Bulgaria. High-priority regions for new or expanded protected areas are the Rhodope Mountains, the Black Sea coast, Strandja Mountains, areas surrounding and connecting the existing national parks in the Rila, Pirin, Vitosha, and Stara Planina Mountains, and the valley of the Strouma river. It is suggested that increased international cooperation for biodiversity protection in the country be sought, through projects that could involve collaborative scientific research on the biogeography and biological diversity of the Balkan Peninsula, the preparation of Balkan-wide Red Data Books, etc.

*Recommendation 7.1:*

*The unified administration of the sequence Biodiversity Conservation Strategy ⇔ Pan-European Strategy for Landscape and Biodiversity Conservation ⇔ Pan-European Ecological Network (including protected areas and objects) should be continued. The EU accession process should serve as a coordinating framework for all required legal and managerial improvements (including with regard to the obligations under environmental protection conventions). Priorities should be set among the measures proposed in the National Biodiversity Conservation Programme.*

Due to economic difficulties in 1996-1997, monitoring of biodiversity was conducted for only some national parks and reserves. There is a lack of information concerning development trends of many species, above all the commoner species. The evaluation of this sector of interest should be accelerated, being particularly important for agricultural lands and forests and neighbouring protected areas.

The National Nature Protection Service is not operating on the basis of full information on protected areas. The development of a relevant information network including monitoring is regarded as a priority, together with the development of the GIS and a register of ecological and protected areas. Due to new fines, for example for herb and mushroom gathering and grazing in protected areas, which the Cabinet approved in 1999, and other regulations regarding the use of nature resources in buffer zones and in protected areas, new information will be required by the National Natural Protected Service. It is also necessary to foresee the inclusion of a protected areas component in the National Programme for the Adoption of the EU Common Acquis in the field of Statistics, which is under development.

The National Nature Protection Service should implement existing projects and develop new management and business plans, where possible within the framework of international cooperative projects for protected areas (e.g. the Central Balkans, Pirin, Siliistar, etc.). A second priority for the Service should be the continuation of the development of a methodology aimed at evaluating the success of protecting biodiversity inside as well as outside the protected areas, with the purpose of disseminating conclusive information to land users. Thirdly, the Service should also continue the development of a methodology for assessing the economic value of biodiversity.

Exchanging bio-monitoring information should be considered an important preparatory measure for the creation of GIS and cadastre components, as well as forest certification components, including those relevant for the sequence BDCS ⇔ PEBLDS ⇔ PEEN. Materials already available could be used as such or updated. The publication and dissemination of unpublished scientific

material from the nineties on animals and plants is highly desirable, as it would be helpful for the linkage of the Biodiversity Conservation Strategy and the PEBLDS.

The category of transboundary protected area does not exist so far in Bulgarian legislation. Relevant approaches need to be developed as pilot projects in new legislation preparing the PEEN implementation process, using current European experience (for example, that of the Czech Republic and Germany). Moreover, as biosphere reserves are not included as a special category in the legislation, it is not yet possible to enlarge biosphere reserves in transboundary regions, as has been done in the Carpathian Region and the Danube Delta.

Recommendation 7.2:

*The compilation and publication of information on protected areas and on aspects of biodiversity protection in adjacent areas should be improved. Such information should facilitate revision of legal instruments, enable decisions to be made in the event of conflicts over land use, and promote trans-frontier initiatives in the area of nature management.*

As Bulgaria has recently taken steps to promote ecotourism, the adoption of a national policy on ecotourism and the integration of ecotourism into municipal and regional planning processes, environmental assessments, and environmental education programmes are required. At present, there is virtually no cooperation between the Ministry of Economy and the MEW in this regard (see Chapter 1). Internet information sources are being developed, but are not properly monitored. In March 2000, the Bulgarian report on the state of the environment in 1997 presented on the EIONET Internet site contained no information on protected areas, but included information about soil, water and air. Only the Sreberna Reserve and the Pirin National Park have their own web pages.

The cooperation of all interested parties in the NBCP needs to receive constant attention. Cooperation between the Ministry of Environment and Waters and the Ministry of Economy is an important priority along with cooperation with tourism firms, which began to advertise protected areas independently. The process will require the closer cooperation of all parties involved in the National Biodiversity Conservation Programme, including its PEBLDS component. The further unification of the nature management administration is an important part of the process, together with further unification of legislation.

Recommendation 7.3:

*The cooperation between the Ministry of Environment and Waters and the Ministry of Economy should be improved, as it should with the companies that have begun to disseminate information on protected areas or the profitable use of protected areas. The scheme should promote the development of a fully coordinated policy on ecotourism, by guiding the development of tourism concepts at national, regional and local levels, as well as the publication of reliable and harmonized information on protected areas.*