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NOTE

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Preface

The second Environmental Performance Review (EPR) of Serbia began in May 2006 with a preparatory mission, during which the final structure of the report was discussed and established. The team of international experts included experts from the Czech Republic, Germany and Italy, and from the secretariats of the European Environmental Agency and the United Nations Economic Commission for Europe (UNECE).

The review mission took place from 23 to 27 October 2006. The draft EPR report was submitted to Serbia for comments in April 2007. In May 2007, the draft was submitted for consideration to the Ad Hoc Expert Group on Environmental Performance. During this meeting, the Expert Group discussed the report in detail with expert representatives of the Government of Serbia, focusing in particular on the conclusions and recommendations made by the international experts.

The EPR report, with suggested amendments from the Expert Group, was then submitted for peer review to the fourteenth session of the UNECE Committee on Environmental Policy on 29 May 2007. A high-level delegation from Serbia participated in the peer review. The Committee adopted the recommendations as set out in this report. The report will be translated into the national language with support from the United Nations Development Programme Country Office in Belgrade.

The UNECE Committee on Environmental Policy and the UNECE review team would like to thank the Government of Serbia and its experts who worked with the international experts and contributed their knowledge and assistance. UNECE wishes the Government of Serbia further success in carrying out the tasks involved in meeting its environmental objectives, including the implementation of the conclusions and recommendations in this second review.

UNECE would also like to express its deep appreciation to the Governments of the Czech Republic, Estonia, Germany, Italy and the Netherlands, as well as the European Environmental Agency and the United Nations Development Programme, for their support to the Environmental Performance Review Programme and to this review.

Executive summary

The first Environmental Performance Review (EPR) of Yugoslavia carried out in 2002 included the review of Serbia as a constituent component of the country. In 2003, the Federation of Yugoslavia was restructured into a looser federation, the State Union of Serbia and Montenegro, based on the equality of the two member States. In May 2006, these two States became fully independent, and Serbia has become a successor state of the State Union. The second EPR of Serbia was carried out in 2006 after Serbia gained its sovereignty. This second review intends to measure the progress made by Serbia in managing its environment since the 2002 EPR, as well as in addressing upcoming environmental challenges.

OVERALL CONTEXT

Since 2002, the overall economic context for the conduct of environmental policy has significantly improved, as has the transition process toward market economy. Structural reforms, price stabilization and some privatization have taken place. The gross domestic product (GDP) has roughly doubled since the 2002 EPR, but the revenues have only benefited a few. Poverty remains a serious problem. This explains the position of the Government, which still regulates prices for heating and electricity, coal, gas and oil, as well as tariffs for water services, since 2005.

The growth in industrial activity has increased environmental pressures due to the obsolete, pollution-intensive technology used in many parts of the industrial sector. The energy sector is a major polluter, as it burns polluting fuels in obsolete equipment without abatement technology. The country's highly diversified industry releases a variety of pollutants. In several environmental hot spots, air and water pollution is high and notably exceeds established standards. Serbia's intensive agricultural production causes soil pollution and water eutrophication problems. Humans also exert significant pressures on the environment, in particular through domestic and transport activities. A result has been the decline of water resources quality in most parts of the country. This is partly due to the poor state of environmental infrastructure regarding waste, water supply and wastewater management and to more than a decade of limited spending on maintenance and rehabilitation in the public and private sectors.

POLICYMAKING, PLANNING AND IMPLEMENTATION

The decision-making framework and its implementation

Serbia has managed to elaborate a complete new set of environmental legislation and strategies ... in spite of the several restructurings of the State since the 2002 review. It has made a serious effort to approximate European Union (EU) legislation on environment into the national legislation. A number of laws have been adopted, such as the *Law on Environmental Protection*, the *Law on Environmental Impact Assessment (EIA)*, the *Law on Strategic Environmental Assessment (SEA)* and the *Law on Integrated Pollution Prevention and Control (IPPC)*; other laws, on waste, noise and biodiversity, are awaiting adoption by the National Assembly. Significant progress in enacting corresponding secondary legislation has recently been achieved. In addition, many strategies have been adopted since 2002. In 2006, a *National Environment Strategy* was approved by the Government and is now awaiting the National Assembly's decision. Serbia is also drafting other important strategies, including on the sustainable use of natural resources and goods and on sustainable development.

... which now need to be implemented. The mechanisms to put this legislation and these policies into action are lacking. Various guidelines have been drafted for guiding implementation, but the legislation is complicated, fragmented and scattered, and lacks provisions for establishing binding instruments across sectors – ministries each issue permits for their respective fields of competence, and integrated permits have not yet been introduced. In addition, the only existing emission standards apply to air pollution, and these are different from those of the EU. There is no strategy for approximation of EU legislation, which makes the introduction of new laws complicated. Law enforcement is weak due to weak monitoring, gaps in standards, and low awareness of and compliance with laws.

The environment inspectorate, although not entrusted with the protection of all resources, is gaining strength. The recent *Law on IPPC* will be implemented soon and inspectors will receive intensive training to acquire the technical background and methodology necessary for performing their new tasks. Nevertheless, inspection capacity is still insufficient at the local level, and the unclear sharing of inspection bodies' competences hampers the effectiveness of enforcement. This is the situation not only in the vertical coordination of inspection bodies between state and local levels, but also between inspections under the supervision of different ministries (e.g. environment, forestry, water). The inspection capacity for compliance monitoring and assessment of self-monitoring by polluters needs to be raised in order to meet the tasks of forthcoming EU harmonization (for example, the IPPC). As the police and the judiciary have an important role in the enforcement process, they need also to be strengthened to make them able to impose effective sanctions.

The reinstatement in 2007 of the Ministry for Environmental Protection reflects a stronger will for protecting the environment and provides a better mechanism and scope to deal with the sectoral ministries. Moreover, other institutions have been significantly strengthened with the improved capacity of the central environmental authorities, as evidenced by the establishment of a National Council for Sustainable Development in 2003 and the creation of an Environmental Protection Agency (EPA) in 2004. Both new institutions, however, now need to be endowed with more power and sufficient staff.

Nonetheless, integration of environmental policy with economic and other sectoral policies is in an early stage in Serbia. Policymaking is still dominated by the planning of operations within sectors. Very few sectoral ministries have a specific structure in place to cooperate with the Ministry of Environmental Protection (MEP), and there are many political and institutional obstacles to this needed cooperation. For instance, because the legislation does not define clear-cut sharing of competences, some ministries are simultaneously responsible for the exploitation and the protection of natural resources (e.g. water, forests, mineral resources and land). National policies are not sufficiently coordinated between one another, and inconsistencies between laws may hamper their implementation. The role of the National Council for Sustainable Development should be strengthened so that it can act effectively as a coordinating body for policy integration.

Information, public participation and education

In 2003, an Environment Protection Agency (EPA) was created. Its first main tasks were to establish an environmental information system and to introduce integrated assessment and reporting. However, communication with data suppliers at all levels – local and national, private and public, and between the environment and other sectors – is difficult. As in other countries, monitoring is shared among several institutions, and as a result, responsibilities overlap between institutions and communication among them is unsatisfactory. Scattered environmental information often goes unreported, data are not harmonized, and forming an overall picture of the environmental situation is not possible. An effective and solid network of topic-related focal institutions, providing regular data flows of the environment related information to the authorities and the public, is needed.

National environmental statistics are weak. Current statistical research is either based on outdated questionnaires or unavailable. Cooperation with European statistical institutions (e.g. Eurostat) is lacking on environment. Reporting on the state of the environment is still at a fairly low level, as the quality of environmental information is questionable. Data flows have been improved by the establishment of the EPA, but many barriers still exist, mostly due of undefined procedures and responsibilities. Moreover, long delays before the information is disclosed to the public substantially decrease the information's relevance.

Access to information and public participation in environmental decision-making has much improved. The 2006 Constitution and a number of new laws which entered into force in 2004–2005 stipulate that the administration is obligated to disclose information and citizens the right to be informed about the state of the environment and to participate in the decision-making process. The effectiveness of these measures, however, is yet to be monitored. In 2005, the Ministry of Environmental Protection (MEP) set up a communication strategy with all stakeholders interested in environmental protection. The MEP organizes regular meetings with NGOs and consults them when programmes and regulations are in process. Access to justice on environmental matters is less advanced, as Serbia has no special regulations for this. Serbia is not a Party to the *Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters*.

The Parliament has proclaimed environmental education to be a priority for the country. Strategies have been developed jointly between the ministries in charge of education and of environment. The formal education system is currently being reformed to incorporate the environment and sustainable development into the curriculum at all levels of education. A large number of related training programmes exist for teachers. Environmental awareness among the general population in Serbia, however, is generally low.

International agreements and commitments

The Republic of Serbia is now fully sovereign to decide on its international cooperation in environment, a task which had been the responsibility of the federal level until 2006. Except for the conventions which were ratified by succession and the *Danube River Protection Convention*, ratified in 2003, due to the country's political instability Serbia has not yet ratified the conventions recommended by the 2002 EPR. This is especially true for the UNECE regional environmental conventions. The MEP is currently working towards the ratification of several conventions, and has introduced by-law which will make their implementation possible (for instance, the laws on EIA and SEA lay the groundwork for the *Espoo Convention on Environmental Impact Assessment in a Transboundary Context*).

*Serbia is working to approximate the EU *acquis communautaire*.* This goal has been a major factor in the modernization of the environmental legislation in recent years, notably with the adoption of basic environmental laws such as on EIA, SEA and IPPC, which are fully in line with corresponding EU directives. Some progress is also being made on noise, chemicals and genetically modified organisms. The next step is to put in place appropriate by-laws, sophisticated mechanisms and tools, and specialized institutions to move on the approximated legislation. Approximation of water legislation, however, is still lagging behind. The environment and the water administrations are not capable of coping with the EU concepts and tasks, and need assistance from abroad.

International assistance on environmental matters is scarce. This is not only the result of the still suspended negotiations of the Stabilisation and Association Agreement with the EU. In fact, there is a lack both of visibility regarding the environmental priorities of the country and of a comprehensive overview of the environment-related projects. Projects developed at the local level are not concerted, and are not registered or integrated into national priorities. Often projects are pursued only as long as foreign assistance is available, and do not progress after this assistance ceases. In this context, donors remain quite reserved regarding further assistance and support. The MEP does not have a project unit capable of providing a roadmap of current environmental projects and future needs and priorities.

MOBILIZING FINANCIAL RESOURCES FOR THE ENVIRONMENT

Economic instruments

Economic instruments for environmental protection have improved little since the 2002 Review. Tariffs are still significantly subsidized in the public sector. Although they have increased, water and electricity tariffs do not fully cover service costs, nor have they reached a level sufficiently high to induce a reduction in consumption. The problem is similar with charges on domestic heating, drinking water supply, and wastewater and domestic waste, which are too low to work as incentives for reducing consumption. Before 2005, payment of emission charges was not enforced. Currently, the "polluter pays" principle is applied to industry, but only to a limited extent, as there is no political will to put constraints on the newly privatized industrial sector. Product charges have yet not been introduced. Fines are low and sanctions are insignificant.

The challenge for the authorities is to find a balanced combination of regulatory and economic instruments for reducing environmental pressures and to achieve a decoupling of pollution from the economic growth process. In general, both economic and regulatory environmental instruments are still weak in Serbia. For instance, in spite of the expanding road traffic and related air pollution increase, there is no discriminating tax between leaded and unleaded petrol, nor any plan to phase out leaded petrol. Not only is the level of taxes and charges too low, but their coverage is limited. As currently designed, these instruments serve mainly for raising revenues, not for changing behaviour. There is a significant lack of statistics for assessing the impact and efficiency of existing traditional instruments. Therefore, it is difficult to adjust or redirect them.

The Environmental Fund has been operational since mid-2006. The amount from charges accruing to the new Environmental Fund, dating from mid-2006, was about 0.02% of GDP. However, with the current narrow coverage of charges, the Fund will never bring in a significant amount of money or support projects eligible for financing, such as those on environmental protection, energy efficiency and renewable energy.

Environmental expenditures and their financing

In 2006, environmental expenditures amounted to 0.2% of the GDP, a figure which reflects public-sector environmental expenditures only, as information from industrial sector is totally lacking. Sixty per cent of total environmental protection expenditures in 2005 were made at the municipality level. Overall, spending on environmental protection has been insufficient to date. The expenditures for covering the infrastructure cost that will be triggered by the implementation of the recent laws on IPPC, waste, air protection and the still-to-be-adopted *National Environment Strategy* (e.g. on wastewater and solid waste treatment facilities, recycling and monitoring equipment, strengthening of public institutions) are estimated to be 0.6 per cent of GDP in 2007, rising to 0.9 per cent in 2009 and 2.4 per cent in 2015. To cover these costs, domestic revenues for environment need to grow significantly and the use of economic instruments needs to be applied to both industry and the citizenry. Foreign financial assistance will also be needed.

There is no published information on the allocation of current environmental expenditures to the main environmental sectors (waste, wastewater, pollution abatement, etc.). It is estimated that municipalities' environmental investment expenditures have on average accounted for a mere 1 per cent of their total environmental expenditures in recent years, the rest being spent on operation and maintenance of old infrastructure. Launched in mid-2006, the five-year *National Investment Plan* (NIP) provides for public investments of which some €20 million (about 1.2% of total) is allocated to environmental protection measures. Funds are being invested on the underdeveloped waste management sector (€11.4 million), water supply and wastewater treatment (€4.9 million), and air pollution (€3.7 million). The main financing sources for the NIP are privatization revenues, accumulated budget surplus from recent years, foreign loans and EU pre-accession funds. However, the financing of the NIP beyond 2007 is not guaranteed.

Moreover, whether the funds are spent on the most pressing environmental priorities is questionable. In the water sector, the spending of revenues from the various water charges is highly compartmentalized. Revenues in each subsector are earmarked for expenditures in the same subsector, not on the most important priority. For instance, more than 50 percent of the water charges are drawn from wastewater and are therefore spent on wastewater infrastructure, whereas only 3.5 per cent are from drinking water charges. Thus, little is spent to improve drinking water infrastructure even though drinking water quality is the key priority objective of the water sector. At the local level, the persistently weak revenues of the municipalities responsible of public environmental services and related environmental infrastructure have led to a deterioration of physical infrastructure and a decline in the quality of services. It is therefore important to find ways to strengthen municipalities' capacities, to explore the scope for inter-municipal cooperation, and to involve the private sector in investment projects. In this context, it is also important to increase the efficiency of providing utility services by giving management sufficient independence in operational and financial matters.

INTEGRATION OF ENVIRONMENTAL CONCERNS IN ECONOMIC SECTORS, AND PROMOTION OF SUSTAINABLE DEVELOPMENT

Water management for sustainable development

Water is abundant but not sufficiently protected in Serbia. Water quality has declined in all streams over the territory, due in part to a worsening of the upstream water entering the country. There has been a lack of investment in water infrastructure since the early 1990s, which is particularly acute for water supply in rural areas. The too-low water tariffs do not encourage citizens to reduce water use, and when water shortages occur, new resources are exploited rather than conservation being encouraged. As for water quality, the infrastructure in domestic wastewater treatment is insufficient, as it is for industrial discharges, and no wastewater treatment plants have been built recently. Water monitoring, standards and permits are far from being approximated to the EU practices. The legal constraints on water protection and sustainable use are too loose and not enforced.

International cooperation at regional level has been the key for progress in the management of water since the 2002 EPR. The ratification of the *Danube River Protection Convention* in 2003 has triggered two major initiatives, one for managing flood risk and the other for transposing the EU Water Framework Directive as well as directives on nitrates and urban wastewater. The Convention has further given Serbia access to financial assistance from the Global Environment Facility fund to combat eutrophication of surface water. The focus is being given to point pollution first, and to diffuse sources from agriculture second. So far, a combined approach is still not envisaged. Since the huge floods of 2006, The United Nations Development Programme Country Office in Belgrade has been helping Serbia to organize its institutions for disaster response and is coordinating foreign financial and technical assistance offered by various donors.

The competent but understaffed Directorate on Water in charge of water management and protection is under the responsibility of the Ministry of Agriculture, Forestry and Water Management (MAFWM). The MAFWM has its own inspection body, and faces similar difficulties to those of the MEP regarding coordination with the local level administration. Coordination between the Directorate on Water and the MEP is also a problem. There is no proper water fund, although money collected from charges is spent on water financing. The budget line for water management is not commensurate with the huge expenses that are to be spent to improve the water situation, first and foremost on the supply of safe drinking water. The current organization of the institutions does not match what is required in the EU Water Framework Directive, which Serbia has decided to follow.

Energy and environment

Production and use of energy is not efficient in Serbia. Electricity and heating production is mostly based on obsolete technology and on the use of lignite and brown coal. Distribution losses are important and the use of energy at residential and industrial locations is not efficient. Estimates show that only 75 per cent of gross electricity production is available for final consumption, and that energy consumption could be reduced by more than 50 per cent. Moreover, the energy sector is a significant polluter. The combustion of domestic low-quality lignite and coal affects air, water and land quality. Today, the share of renewable energy is around 7 per cent and will stay rather stable until 2015, with 32 per cent of electricity coming from hydropower.

Since the 2002 EPR, the legislation, strategies and institutions in the energy sector have been thoroughly overhauled. Both an energy law and an energy strategy have entered into force, in 2004 and 2005 respectively. Although the Energy Strategy contains only general remarks on the lessening of environmental pressures, Serbia has made progress in integrating the environment into other energy sector policies and laws. In addition, an energy efficiency agency was set up in 2005, with four related centres. Technical improvements of power plants were achieved during the period 2001–2006. In spite of the progress made in reducing dust emissions, however, compliance with air emissions limits of the EU directives on combustion plants is planned for 2017 only, at a cost of nearly €800 million.

Energy prices have significantly increased for electricity and heat since 2000; however, they are still below the cost recovery level and low for the region. Households' energy consumption remains very high and electricity and heating expenditures are above the regional average. A block tariff system has been introduced for reducing households' electricity consumption while protecting vulnerable users. But the lack of individual metering systems prevents the application of consumption-linked incentives for heat bills. Overall, more focus needs to be devoted to energy efficiency and the development of renewable energy, and there are many administrative barriers to developing and investing in new projects and a lack of incentives to encourage renewable energy. Awareness campaigns should be organized to reduce energy consumption, demonstrate ecological benefits, and spur the demand on renewable energy.

The Law on ratification of the Kyoto Protocol is awaiting parliamentary approval. As a non-annex I party, Serbia has started preparations for participating in the Clean Development Mechanism (CDM). Projects to reduce electricity consumption may be quite attractive for foreign companies. Serbia is drafting an energy sector CDM strategy with the support of Norway, and will establish a Designated National Authority by the end of 2007. The rather complex licencing procedures for construction of energy production facilities may be an obstacle for new projects under the CDM.

Conclusions and recommendations

Chapter 1: Legal and decision-making framework

Since the first EPR in 2002, the institutional framework for environmental protection has changed significantly in Serbia. New institutions have been created and have been entrusted with important tasks.

The Environmental Protection Agency established in 2004 is in charge of managing environmental information so that it can become an instrument for good governance and decision-making.

The EPA is very weak, with a small budget and staff, and is dependent on cooperation with existing institutional structures, which will continue to monitor media and to collect and analyse data. To become fully operational and fully address its statutory tasks, the EPA needs to be expanded.

The National Council for Sustainable Development established in 2003 is a forum for improving the integration of environmental concerns into the other sectors of economic activity. However, NCSD does not have a permanent secretariat and so far has not operated in practice.

In spite of the fact that it has recently been restored as a full-fledged ministry of environmental protection, the main problem is still the need to strengthen the capacity of the MEP, to make it better able to influence other sectoral ministries so as to address fully the challenges of environmental protection in Serbia. Moreover, the division of responsibility for natural resources is not contributing to adequate coordination of policy and actions.

Recommendation 1.1:

The Government should:

- (a) Strengthen the newly established Ministry of Environmental Protection and ensure that it includes in its competences the protection of natural resources, including water and forests;*
- (b) Introduce structural changes in all ministries and authorities responsible for integrating environmental requirements into their respective policies;*
- (c) Strengthen the position of the National Council for Sustainable Development and make it operational, and create a permanent secretariat for its administrative and technical support; and*
- (d) Strengthen the Environment Protection Agency, to enable it to ensure information systems management as a basis for the strategic, legislative, enforcement and decision-making activities of environmental protection authorities.*

Significant progress has been made towards harmonizing the legal framework with the relevant EU directives. In 2004, four new important laws were enacted that are harmonized with the corresponding directives: the *Law on Environmental Protection*, the *SEA Law*, the *EIA Law*, and the *Law on IPPC*. They approximate the corresponding EU directives and have introduced their principles into the national legislation.

However, SEAs have not been fully implemented yet. The new MEP does not have sufficient capacity to carry them out. The inter-ministerial consultation process is still limited to the formal governmental comments procedure.

This procedure comes at a very late stage in the process, when it is usually too late to make significant changes that would better reflect environmental considerations.

Recommendation 1.2:

The Ministry of Environmental Protection should strengthen its capacity to carry out Strategic Environmental Assessment as envisaged by the Law on Environmental Protection and the Law on Strategic Environmental Assessment.

While environmental legislation has improved considerably since 2002, it has also become very complicated. It is often inconsistent, needs further amendment and lacks implementing regulations. Large areas of the legislation are still not in line with EU requirements, in particular the sectoral laws. The legislation does not define sufficient mechanisms for ensuring effective environmental enforcement. Due the large volume of forthcoming activities regarding the preparation of the *Strategy for Approximation of EU Environmental Legislation* and increasing legislative activities, existing human resources in the MEP, especially those responsible for legislation, economic instruments and supervision, are not adequate to accomplish the related tasks.

Recommendation 1.3:

In order to ensure the implementation of the legislation, the Ministry for Environmental Protection should:

- (a) Continue to harmonize the legal framework with the European Union (EU) Directives and strive to remove existing inconsistencies and further improve its effective implementation; and*
- (b) Strengthen the existing unit responsible for environmental legislation, economic instruments and administrative supervision affairs with an adequate number of professional staff.*

The *National Environmental Strategy* aimed to take into account environmental concerns in other sectors of activities through a broad consultative process that also involved many stakeholders, from national to local institutions, the civil society and the public. Other strategies have been adopted since 2002, and some are awaiting adoption. However, the competent authorities lack the necessary institutional structures and mechanisms to ensure their implementation, nor do they have any plans to introduce these. The NES itself calls for 16 separate action plans for its implementation. Moreover, two “umbrella” strategic documents, the *National Strategy for Sustainable Development* and the *National Strategy for Sustainable Use of Natural Resources and Goods*, are being drafted at a time when a number of strategic documents have already been adopted or are in an advanced stage of preparation or even adoption. In such a context, the respective targets and conditions in the various sectoral strategic documents will be difficult to reconcile.

Recommendation 1.4:

The Government, together with concerned ministries, should:

- (a) Reconcile the content of the strategic documents on environment and sustainable development or coordinate their implementation; and*
- (b) Further develop and adopt the National Strategy for Sustainable Development, the National Strategy for Sustainable Use of Natural Resources and Goods, and the National Programme for Environmental Protection, and consider harmonizing sectoral strategies and action plans with their priorities and goals.*

Enforcement of environmental protection legislation in Serbia is weak, particularly due to the weak monitoring system, the lack of certain environmental standards, and the generally low awareness of and compliance with laws.

Furthermore, the capacity of environmental inspection bodies is inadequate. Since there is no feedback concerning the results of lawsuits initiated by environmental inspectors, it is hard to evaluate the effectiveness of their enforcement activities.

Recommendation 1.5:

In order to improve the enforcement of environmental legislation and rules, the Ministry of Environmental Protection should:

- (a) Continue strengthening enforcement tools and the capacity of environmental inspection bodies at all levels (republic, province and local);*
- (b) Promote training programmes for environmental law enforcement, particularly on new legislation and permitting procedures;*
- (c) Develop, together with the Ministry of Justice, training programmes for judges, state prosecutors and police, to strengthen their capacities in the field of environmental enforcement; and*
- (d) Collect and make publicly available data on concluded administrative, civil and criminal lawsuits concerning the environment.*

Chapter 2: Information, public participation and education

Since 2002, some progress has been made by: (a) the adoption of new laws and by-laws that embed provisions for environmental information, public participation and education; and (b) the establishment of the EPA. The laws provide a basis for public participation in decision-making processes and for the establishment of an information system and a registry of polluters. Implementing regulations are, however, still largely missing (example.g. on the polluter registers, the environmental information system, and enterprise self-monitoring).

The EPA as a young organization has started work to establish an environmental information system and integrated assessment and reporting. However, it has encountered challenges in establishing more efficient communication with data suppliers and in ensuring sufficient information quality. The difficulties stem from the lack of regulation and the overlaps and gaps in institutional responsibilities. Allocation of clear responsibilities to institutions and improvement of communication between them are the main challenges in establishing an environmental information system. The EPA should make more use of the already available EEA/EIONET server and Web portal to improve access to existing information and communication among stakeholders, and should develop an up-to-date electronic system for data storage and processing.

In parallel with the new legislation which lacks some implementing regulations, a number of old laws are still in use. This, combined with communication problems between the environmental and other sectors and between the national, regional and local levels, results in various actors, including the public, having limited knowledge about the existing information (e.g. content, ownership). Environmental information is scattered among users, data are not harmonized, and it is not possible to get an overview of the situation. In such circumstances, any efforts to improve the quality of information can be very inefficient. An overview of available information with its metadata would help to improve transparency.

Recommendation 2.1:

Based on the requirements of the European Environmental Agency (EEA) and European Environment Information and Observation Network (EIONET), the Ministry of Environmental Protection, through its Environment Protection Agency (EPA), should establish an effective and solid network of topic-related reference institutions which would regularly transmit environment-related information to the EPA, which would serve as a national focal point.

The collection of environmental data should be geared towards common goals and concepts. Two-year environmental monitoring programmes are performed by different institutions and at different levels. Their concepts and instruments need to be revised to ensure their harmonization within the country and with international requirements. Cooperation with Eurostat and EEA by the different institutions, for example, the Statistical Office and the EPA, would help the relevant institutions to reach these goals.

Environmental statistics, which are an important element of an environmental information system, are very unreliable. Current statistical research is based on outdated questionnaires (e.g. on water) or is missing (e.g. on waste and environmental expenditures). The draft law on statistics does not foresee any structures to promote harmonization of environmental data provision at the national level. The creation of a council is foreseen, but its tasks would be very political, whereas more operational technical co-councils, for example, would be useful. Environment-related cooperation with European statistical institutions (such as Eurostat) is lacking.

Recommendation 2.2:

(a) *The Government should:*

- *Consolidate the regulatory framework by adopting by-laws on environmental information systems, including on content and procedures of monitoring, reporting systems, and polluter registers; and*
- *Review environmental monitoring programmes, harmonize them with international requirements, and ensure their full implementation;*

(b) *The Ministry of Environmental Protection should enforce self-monitoring of polluters and reporting procedures, and ensure that this information and data are reported to the EPA, and further, to the public.*

- (c) *The Environmental Protection Agency, in cooperation with the Statistical Office, should develop, through cooperation with international institutions, accurate and internationally harmonized national environmental statistics linked with environmental monitoring.*

Reporting about the state of the environment is an umbrella activity that connects and synthesizes activities in different areas. This process often suffers from typical underlying problems such as the quality of information, its relevance or communication barriers. A brief overview of the quality of environmental information in Serbia (according to internationally used criteria) shows that, although the quality is improving, it is still fairly low:

- Information and data are still very scattered;
- Environmental data are in most fields not representative enough (geographical coverage, time series);
- The comparability of data is problematic in most areas (classifications, standards, methodologies used for analyses, indicator calculations);
- Although the legal procedure for accessing information and its disclosure has improved, stakeholders have no overview of the availability of information on the environment. There is no Web portal or clearing house to help users to find and review relevant information; and
- Poor data flows, poor reporting and long delays in disclosing information to the public substantially decrease the relevance of the information. The establishment of the EPA has led to improvements in the flow of data in the country and to international users, but many barriers remain, mostly because of undefined procedures and responsibilities.

Recommendation 2.3:

The Ministry of Environmental Protection through its Environment Protection Agency should, with the support of the Government, improve the quality of the state of the environment reporting and disclosure to the public by:

- (a) *Clearly specifying the coverage of the State of the Environment Reports, in particular by including a section on driving forces and pressures for environmental change, and reconsidering the periodicity of the State of the Environment reports;*
- (b) *Improving ways of reporting on the state of environment that will more timely follow the political agenda, for instance publishing topic-oriented reports and short briefings on emerging issues; and Making the information broadly available in a timely manner.*

Chapter 3: Implementation of international agreements and commitments

Since the first EPR in 2002, Serbia has made significant progress in international environmental cooperation. The institutional capacity of the former DEP in this area has been strengthened. Serbia is continuing work to harmonize its environmental laws with the EU environmental *acquis*. It has been active in developing strategies and policies in the area of environmental protection with assistance from the international community, and a number of projects for strengthening environmental management capacity have been or are being implemented. However, in many cases, projects are donor-driven, and there were limited commitment for their follow-up at the national level, an attitude which is progressively changing. To ensure ownership over donor projects and their effective implementation and follow-up, it is necessary to strengthen capacity of national institutions and improve coordination between various government agencies.

The Government has established the ISDACON Information System. The Ministry of Finance and the DACU are entrusted with ensuring coordination and harmonization of donor activities and use of development assistance at the sectoral and inter-sectoral level. The ISDACON Information System collects information on international assistance projects based on reporting from government agencies and donors. It is not comprehensive, and some assistance, particularly that distributed at the municipal level, remains unrecorded.

Recommendation 3.1:

- (a) *The Ministry of Environmental Protection should clearly define the country's priorities and objectives in the area of international environmental cooperation, and identify resources for achieving them from both domestic and external sources.*
- (b) *The Ministry of Environmental Protection, in cooperation with the Development and Aid Coordination Unit of the Ministry of Finance, should develop a system that would allow full accounting of international*

assistance in the area of environmental protection and promote better coordination of the donor activities in this area, both with the donors and among the governmental agencies and local authorities.

Serbia has continued activities related to ratification and implementation of global and regional environmental agreements. It has prepared a list of conventions that it intends to ratify in the short and medium term. Several new laws that contain provisions in line with MEAs have been adopted, including the framework *Law on Environmental Protection*, the *Law on EIA*, the *Law on SEA* and the *Law on IPPC*. In the period since the first review, Serbia has ratified the Danube River Protection Convention, the Cartagena Protocol on Biosafety to the CBD, and Amendments to the Montreal Protocol to the Vienna Convention on the Protection of the Ozone Layer. Most of the preparatory work has been done for the ratification of the four UNECE conventions (ratification was recommended in the first EPR) and several other MEAs, including designation of focal points and competent authorities; however, at the time of the EPR peer review these instruments had not been ratified. Serbia relies heavily on international assistance for implementation of many conventions. It participates in the AIMS Network, which supports acceptance and implementation of MEAs in SEE.

Recommendation 3.2:

- (a) The National Assembly should speed up the ratification procedure of the agreements, which the Government has adopted as precedence (See list a).*
- (b) The Government should proceed with the ratification of agreements for which all the necessary preparatory work is under way (See list b).*
- (c) In order to ensure the implementation of multilateral environmental agreements (MEAs) for which they have been designated as focal points and competent authorities, the Ministry of Environmental Protection, in cooperation with other relevant ministries and governmental bodies, should elaborate action plans for the implementation of MEAs, build sufficient national capacity, and continue striving to attract international assistance. Participation in the AIMS Network should continue.*

List a of recommendation 3.2:

- *UNECE Convention on Environmental Impact Assessment in a Transboundary Context (i.e. Espoo Convention)*
- *Framework Convention on the Protection and Sustainable Development of the Carpathians*
- *Convention on the Conservation of Migratory Species of Wild Animals (Bern Convention)*
- *Convention of Conservation of European Wildlife and natural Habitats (Bonn Convention)*
- *United Nations Convention on Combat Desertification in Countries Experiencing Serious Drought and/or Desertification Particularly in Africa*
- *Kyoto Protocol*
- *UNECE Convention on the Protection and Use of Transboundary Waters and International Lakes (Helsinki Convention)*

List b of recommendation 3.2:

- *UNECE Convention on Access to Information, Public Participation in Decision /making and Access to Justice in Environmental Matters (Aarhus Convention)*
- *Stockholm Convention on Persistent Organic Pollutants (POPs Convention)*
- *Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (PIC Convention)*
- *UNECE Convention on the Transboundary Effects of Industrial Accidents*
- *UNECE Strategic Environmental Assessment (SEA) Protocol*

Serbia has been pursuing the sustainable development agenda with the establishment of the National Council for Sustainable Development and preparation of the *National Strategy for Sustainable Development (NSSD)*. However, cross-sectoral cooperation is insufficient. Other strategic documents, such as the National Environmental Strategy, need to be taken into account when the National Council for Sustainable Development is finalizing the NSSD. At the local level, a number of Serbian municipalities are involved in developing Local Agenda 21. There is no information on correlation with LEAPs already developed in a number of municipalities or on use of their experience in development and implementation of LEAPs.

Recommendation 3.3:

- a) *National Assembly*The National Council for Sustainable Development, when approving the National Strategy for Sustainable Development, should ensure that its provisions support implementation of other strategic documents, in particular the National Environmental Strategy.
- b) *The Government* should approve the National Strategy for Sustainable Development and submit it to the National Assembly for adoption (see also Recommendation 1.4).
- c) *The municipal authorities*, when developing and implementing Local Agenda 21, should take advantage of the experience of existing local environmental action plans and take into account lessons learned from implementation of local environmental action plans (LEAPs)

Chapter 4: Economic instruments for environmental protection

The 2004 *Law on Environmental Protection* provides the legal basis for the application of the “polluter pays” principle in Serbia. There has been some progress in the use of economic instruments for internalizing the external environmental costs caused by household consumption and business activities. Specific achievements include the recent implementation of environmental charges for emissions of selected pollutants associated with industrial activity, an environmental charge on motor vehicles, a charge on import of substances that deplete the ozone layer, as well as the establishment of charges for industrial waste production and disposal.

Given the short time that has elapsed since their implementation, it is not possible to assess the effectiveness of these instruments (i.e. to what extent the level of environmental charge rates creates effective incentives for polluters to change their behaviour). But there is a general presumption that these instruments, as currently designed, serve mainly to raise revenues, and that strong incentives for reducing environmental pollution are still largely absent. This holds also for other areas such as water pollution and solid waste management. In general, both economic and regulatory environmental instruments are still weak. Not only is the level of taxes and charges too low, their coverage is also limited. The application of the new pollution taxes to potential IPPC facilities should be further enlarged to all relevant polluting activities in the country.

The Government’s awareness of these problems is reflected in the short- and medium-term objectives of the NES and related national action plans to be developed for the decade ahead. The Government, in close cooperation with major stakeholders, should clearly define the main pollution reduction targets and the medium- and long-term time frame for achieving them, and should design specific economic and regulatory instruments that will help reach these targets. Since the statistics required for assessing the effectiveness of existing traditional instruments are largely lacking, it is difficult to adjust or reorient these instruments.

Recommendation 4.1:

The Ministry of Environmental Protection, in cooperation with major stakeholders, should:

- (a) *Conduct a thorough review of existing major traditional regulatory and economic instruments for environmental protection, with a view to establishing their current environmental and economic impact;*
- (b) *Explore the scope for complementary use of economic instruments and traditional regulations for reducing pollution; and*
- (c) *Raise pollution charges and regulatory standards in a gradual and predictable fashion, with enterprises receiving sufficient advance notice to be able to reduce adjustment costs and develop efficient approaches for complying with more stringent standards and policies.*

A coherent strategy that integrates environmental protection with road transport policies and aims at internalizing road transport externalities is still to be developed. Unleaded fuels have a very limited role in the market for fuels. There are no fiscal incentives to promote the use of unleaded fuels, although the effectiveness of such incentives has been demonstrated in many countries. Serbia is one of the last countries in Europe that lacks a definite action plan for phasing out the use of leaded fuels.

Recommendation 4.2

The Government should:

- (a) *Develop an action plan for the complete elimination of leaded petrol as well as the progressive reduction of sulphur content in petrol and diesel fuel to current EU requirements of 50 ppm, and announce a target date for achieving these goals as soon as possible;*
- (b) *Introduce effective fiscal incentives which promote unleaded petrol and low-sulphur petrol and diesel;*
- (c) *Design other measures to reduce pollution related to urban transport, such as strict mandatory technical inspections of vehicles (with a focus on exhaust emissions and noise pollution) and temporary fiscal incentives encouraging buyers to purchase new cars and scrap old ones.*

The challenges in the waste sector are considerable both as regards the creation of an adequate physical infrastructure and the use of effective incentives for achieving reduced waste generation and orderly waste disposal. Waste collection and disposal charges have been increased in recent years, but in general they remain far below the level required for cost recovery. Moreover, they are designed in a way that does not encourage the reduction or selective sorting or recycling of waste. To the extent that this is feasible and practical, charge rates should be based on the volume of waste generated and set at a level that creates incentives for waste minimization and recycling.

Recommendation 4.3:

The Ministry of Environmental Protection, in cooperation with the Ministry of Local Self-Government, should support municipalities in the implementation of an effective household waste management policy. This should include guidance and training in basic techniques for calculating cost-reflective waste charges. In order to create incentives for waste minimization, waste charges should, to the extent possible, be proportional to the amount of waste collected. Municipal collection of enterprise waste should be based on the use of standardized bins and the nature of the waste to be collected. All charge rates should be calculated so as to ensure full cost recovery.

Progress regarding the use of economic instruments for water supply and water protection management has been relatively limited. Strong financial incentives for economical use of water are still largely absent. Revenues from water supply and wastewater collection generally do not cover the operating costs of the local water utilities. There is an urgent need to rehabilitate and extend the regional coverage of the water supply and wastewater infrastructure. But these investments will be worth financing only if there is also a comprehensive review and reform of water and wastewater charges in line with the “polluter pays” principle. Such a reform will also have to address the important issue of the affordability of higher water charges for low-income earners. A range of utility subsidies are available to help households that have difficulty paying their water bills. However, in order to be implemented effectively, social tariffs require adequate metering or reliable estimates of consumption. Examples of alternative instruments are across-the-board price subsidies and targeted cash payments to ensure an adequate minimum disposable income after utility bills have been paid. The Government needs to review its current policy of limiting the authority of municipalities to raise tariffs to cost-recovery levels in line with prevailing local circumstances.

Recommendation 4.4:

The Government should:

- (a) *Initiate a reform of the tariff system in the water sector by gradually raising tariffs to a level that corresponds to full cost recovery for utility services while using targeted subsidies to address affordability problems;*
- (b) *Strengthen enforcement measures to improve bill collection rates on water services;*
- (c) *Apply water pollution charges on the overall quantity of wastewater discharged and the pollution, not just on pollution above specified limits.*

The authorities have included the transfer of ownership of the water utilities’ assets from the state to the local self-government level in the draft Law on Water. They should strive to implement this change as soon as the law is adopted. The incentives for efficient utility resources management, including investments in repair, maintenance and modernization of technical equipment and buildings, would be increased if ownership of the corresponding assets were transferred to the local government level. (See Recommendation 6.1 in chapter 6.)

Chapter 5: Environmental expenditures and their financing

The NES presents a detailed account of the state of the environment and provides a very good overview of the stringent policies required to create adequate incentives for reducing pollution. Considerable expenditures on the environmental infrastructure will also be required to achieve the environmental priorities of the Government, which are aligned with the standards of the EU *acquis communautaire*. A major challenge is the mobilization of domestic and foreign resources to finance these investments in environmental protection and reap the associated economic and social benefits. Related to this is the need to ensure efficient allocation of financial resources and optimize the cost-effectiveness of environmental policy measures. A major requirement in this context is an improved information system for environmental expenditures and their financing, including their close monitoring.

A main problem is the fragmented and apparently also incomplete reporting on public sector environmental protection expenditures. But the available information clearly suggests that given the considerable environmental pressures in Serbia, government spending on environmental protection to date has been insufficient. But the increasing government revenues associated with sustained and robust growth should in principle make it possible to allocate more resources for improving the quality of the environment.

The NIP, which was launched in the second half of 2006, allocates a mere 1.2 per cent of total funds to environmental protection in 2006–2007. In any case, the financing of the NIP beyond 2007 is not guaranteed and will depend, *inter alia*, on the rate of economic growth, progress in large-scale privatization and availability of foreign funds.

There is also no information available on environmental protection expenditures by the business sector, as there is no reporting obligation. At a minimum, such reporting could start with the 250 (potential) integrated pollution prevention and control facilities, and later be extended to other firms with a certain minimum size in terms of sales or employment. Comprehensive and reliable statistics on environmental expenditures and revenues are as important as data on the state of the environment for gauging the effectiveness of environmental policy.

Recommendation 5.1:

The Government should establish a coherent and comprehensive information and reporting system for environmental protection expenditures and revenues covering the public sector, the business sector and private households, using as a general framework the European System for the Collection of Economic Information on the Environment (SERIEE) developed by the Organisation for Economic Co-operation and Development/Eurostat and the associated Classification of Environmental Protection Activities and Expenditures (CEPA).

The establishment of the Environmental Protection Fund is in line with recommendations made in the first EPR. But the overall budget of the Fund is currently relatively small and, judging from projections of own revenues from earmarked pollution charges, this situation will not change over the medium term. This points to the importance of other financing sources, especially government budget allocations, including from privatization revenues and the NIP, but also from multilateral and bilateral financial assistance.

Recommendation 5.2:

The Government should:

- (a) Review its short- and medium-term budget plans with a view to allocating funds for environmental protection that are commensurate with ambitious but realistic policy targets;*
- (b) Ensure that an adequate share of public revenues is channelled to the Ministry of Environmental Protection, as well as the Environmental Protection Fund;*
- (c) Ensure that environmental protection is effectively integrated into all major investment projects financed from the National Investment Plan, especially for the energy, transport and agriculture sectors; and*
- (d) Provide the Environmental Protection Fund with human and financial resources.*

The bulk of public environmental services and related environmental infrastructure is organized at the level of local government and related utilities. The persistently weak revenues of municipalities and their utilities have,

over the past decade or so, led to a deterioration of physical infrastructure and, associated with that, a decline in the quality of utility services.

It is therefore important to strengthen municipal capacities for assessing investment needs and for mobilizing and absorbing the funds required for environmental investments at the local level. It is also important to explore the scope for inter-municipal cooperation with regard to infrastructure services in order to exploit economies of scale and to enhance private-sector involvement in investment projects. In this context, it is also important to increase the efficiency of providing utility services by giving management sufficient independence in operational and financial matters.

Recommendation 5.3:

The Government should promote legal and institutional arrangements which strengthen the capacity of municipalities to prepare investment projects and which enable greater access to domestic capital markets for financing these projects. This involves, among other things:

- (a) Supporting the preparation of multi-annual investment plans for municipal infrastructure development programmes;*
- (b) Encouraging local self-government units to invest in environmental infrastructure through greater use of loans based on existing legislation on public debt;*
- (c) Considering the need to relax existing borrowing constraints; and*
- (d) Developing guidelines and procedures for private-sector involvement in the provision of environmental utility services at the municipal level.*

See also Recommendation 6.2 in chapter 6 on water.

A main feature of the water sector policy is the current system of highly compartmentalized earmarking of revenues from the various water charges. All revenues from a specific section of the water sector (drinking water, wastewater, etc.) are devoted to spending on the corresponding section of the water sector infrastructure, independently of water sector policy priorities.

For instance, more than 50 per cent of the water charges are from wastewater and are therefore spent on wastewater infrastructure, while a small 3.5 per cent are from drinking water charges, so that little is spent to improve drinking water infrastructure even though drinking water quality is the key priority objective. Such compartmentalized earmarking can be a source of inefficiencies because spending in each subsector is dictated mainly by the level of revenues rather than by the relative importance of the various water sector priorities, including environmental priorities.

Recommendation 5.4:

The Ministry of Agriculture, Forestry and Water Management, in cooperation with the Ministry of Environmental Protection, should reconsider the current system of earmarking water revenues, and optimize their allocation according to national priorities in the water sector.

See also Recommendation 4.4 in chapter 4.

Chapter 6: Water management for sustainable development

Since the first Environmental Performance Review, Serbia has made significant progress in water management to bridge the gap with EU practices and directives. However there is a risk that if the new approaches are not properly funded and enforced they will not be applied, as has happened with the set of water laws and regulations currently in force.

Serbia has committed itself to implementing the EU *Water Framework Directive*, the EU *Seveso II Directive 96/82/EC*, the *Helsinki Water Convention*, the *Espoo Convention*, and other international and regional agreements related or linked to water, as a national strategy for harmonizing its legislation with that of the EU. It is also a party to the ICPDR. While most of the contents of the *Water Framework Directive* have been transposed into the draft law on water, this has not solved a few issues such as the institutional overlaps

between the MAFWM and the MSEP. It also does not include the combined approach for point and diffuse sources of pollution of the EU *Water Framework Directive*. Transposition of the EU Directives on Nitrates and Urban Wastewater would facilitate implementation of the combined approach. Furthermore, the draft law on water will need a set of by-laws in order to be implemented.

Recommendation 6.1:

The Ministry of Agriculture, Forestry and Water Management, in cooperation with the Ministry of Environmental Protection, should speed up the drafting of a new Law on Water, taking into account the country's commitments to introducing EU-relevant regulations, including the Water Framework Directive, and provisions of other international multilateral environmental agreements (MEAs), such as the Helsinki Water Convention³ and the Danube River Protection Convention⁴.

Responsibility for implementing a few key aspects of the water sector, such as reduction of discharges, phasing out of hazardous substances and creation of a register of protected areas, is currently shared by the MAFWM and the MSEP. Most of the problems arise from the fact that neither the MAFWM nor the MSEP have devoted enough time or have allocated sufficient funds to cope with these problems. To avoid these and other overlaps and allow for better-coordinated action, the Government should clarify the competences of the Ministry of Environmental Protection and those of the DW of the MAFWM.

See Recommendation 1.1(a) in Chapter 1.

Since the early 1990s, the water utility sector has undergone a major crisis. Insufficient revenues, which result from low tariffs that do not reflect the supply costs of services, as well as low collection rates, have led to a general deterioration of the water supply and water protection infrastructure (buildings, machinery and equipment) owing to inadequate maintenance and servicing. The water sector infrastructure belongs to the State, which is not adequately funding its management.

As local problems are in general best solved at the local level, shifting the ownership of the water sector infrastructure to the municipalities and giving them full responsibility for their functioning, including collection of water charges, would ensure better management of these assets. Municipalities could be given the choice between managing their water utilities themselves and subcontracting their management partly or fully to public or private water companies. This points to the need for the government to develop guidelines and rules concerning the involvement of the private sector in the provision of utility services (see Recommendation 5.3 in chapter 5).

The poor condition of the water sector infrastructure and the insufficient coverage of costs of services provided result largely from an inadequate tariff policy. Higher water prices will not only reduce water consumption but also create incentives for investments by water companies to reduce water losses. The adoption of full cost recovery tariffs will allow not only better financing of the operation and maintenance of water and wastewater services but also the new investments required to extend them.

Recommendation 6.2:

The Government should provide more scope for municipalities and public water companies for financing enhancements in water infrastructure.

Due to the situation that the water quality has in the last couple of years declined from Category II/III to Category III/IV on most of the watercourses in Serbia, an assessment of transboundary impacts from upstream countries should be made. This year the second Joint Danube Survey will be carried out. Serbia should seize this opportunity to assess the transboundary impact of water entering into its territory on the quality of its water resources.

Recommendation 6.3:

The Ministry of Agriculture, Forestry and Water Management, in cooperation with the Ministry of Environmental Protection, should, after the completion of the Joint Danube Survey, carry out with the International Commission for the Protection of the Danube River an assessment of the transboundary impact of upstream countries on the quality of the Danube River entering Serbia.

Not only the streams entering the country are bringing a water of mediocre quality, but also there has been no wastewater treatment plants (WWTP) built in Serbia in the recent period. This has also contributed to the further deterioration of water quality. The MESP or the DW have not allocated any funds for new WWTP and especially not for WWTP in the mining sector which seems to be the one with the highest impact.

The Nutrient Reduction Programme of the Danube River financed by the World Bank contained a subprogramme about nutrient reduction that should be in the near future extended to industry as well as to farming. By the end of 2007, all companies in Serbia have to be privatized, and therefore their projects regarding wastewater sanitation would become eligible for World Bank financing.

Recommendation 6.4:

To ensure good ecological quality of Serbian watercourses, the Ministry of Agriculture, Forestry and Water Management, in cooperation with the Ministry of Environmental Protection, should:

- (a) Develop an action plan for the construction of wastewater treatment plants compatible with the EU relevant directives and allocate corresponding funds in the budget;*
- (b) Request the World Bank to reintroduce nutrient reduction from industrial facilities in the Nutrient Reduction Programme for the Danube River.*

Although the “polluter pays” principle figures to some extent in the current national legislation, its application is not being exercised. There is no bylaw to implement it. Even when it would be justified to apply it to polluters, the environmental inspectors seldom put it into practice due to various difficulties. For instance, the DW that deals with wastewater does not have enough inspectors to perform the number of inspections needed to monitor wastewater discharges in an efficient way. When the polluter is identified, prosecution and fine imposition are successful in only 10 per cent of cases. The costs incurred by the Ministry’s Directorate for Water to identify the source of pollution are usually much higher than the fine imposed on the polluter. Small fines do not motivate polluters to invest in wastewater treatment facilities.

Recommendation 6.5:

In order to ensure full responsibility for water pollution and to establish polluter databases, the Ministry of Agriculture, Forestry and Water Management, in cooperation with the Ministry of Environmental Protection, should initiate a new set of water pollution charges which stipulates the full application of the “polluter pays” principle.

The regulation in force requires that municipalities identify and incorporate into their urban planning sanitary protection zones for water abstraction. Since 2003, only 10 per cent of the municipalities have complied with such obligations, and only a few of them have implemented protection measures for their sanitary protection zones., and therefore the quality of drinking water in Serbia is generally unsatisfactory, with most of the samples failing to meet bacteriological, physical and chemical standards. For 30 per cent of the population living in rural areas not served by public water supply systems, there are no data available, and visits by inspectors from the Ministry of Health are rare. The Ministry of Health should organize an awareness-raising campaign in rural areas to alert the population to the risks of using unsafe water and to prevent outbreaks of water-related diseases.

Recommendation 6.6:

To ensure a safe drinking-water supply, the Ministry of Agriculture, Forestry and Water Management, in cooperation with the Ministry of Environmental Protection and the Ministry of Health, within their competencies should:

- (a) Complete the drafting of the regulation on the protection of drinking water abstraction, and speed up its adoption and further implementation;*
- (b) Enforce measures for the protection of sanitary protection zones at water intakes;*
- (c) Enable municipalities and water-utility companies with the means to improve drinking water treatment facilities;*
- (d) Call on water utilities to reduce losses in the drinking-water supply network and to provide for metering of the water quantities used in their networks; and*

- (e) *Provide access to safe water for the population in areas without public water supply systems, with a target of reducing to 15 per cent, by 2015, the proportion of the population with no access to safe water, as stipulated in the Millennium Development Goals for Serbia.*

Chapter 7: Energy and environment

Serbia's energy supply and especially its electricity supply are based largely on use of lignite and brown coal. Open-pit mines and coal-fired thermal power plants have considerable environmental impacts. High emissions of carbon dioxide from burning lignite are an increasing matter of concern, given their contribution to climate change, which is likely the most serious global environmental problem in the future.

Even though the *Serbian Energy Sector Development Strategy* is primarily based on the utilization of lignite for electricity production as this is the major domestic energy carrier, the Strategy has also recognized among its top priorities the need to increase energy efficiency in both the production and consumption sectors in order to promote a wider use of renewable energy sources and to reduce harmful emissions. Within the Strategy, these priorities are seen as necessary conditions for achieving a better balance between the energy sector and environmental priorities, which is essential for ensuring sustainable development. The ESIP 2007–2012 defines various legal, organizational, technical and other measures and activities that should be implemented to promote energy efficiency and could help decouple economic growth from environmental pressures. The main challenge of the Government at this time is the implementation of ESIP 2007–2012.

Recommendation 7.1:

To reduce the impact of energy production and consumption on the environment, the Government should:

- (a) *Ensure fuel switching from the utilization of electricity for space heating to the use of natural gas or connection to district heating systems;*
- (b) *Increase energy efficiency to reduce electricity and heat demand; and*
- (c) *Significantly increase the share of renewable energy sources in primary energy production by 2015.*

Prices for energy in Serbia are not yet at cost-recovery levels, especially for electricity and heat. As a consequence, necessary investments in modernization and abatement technology have been postponed and delayed, as the companies producing electricity and heat do not have sufficient financial resources. Equally important is the fact that because of the low prices, incentives to reduce energy consumption in State-owned and private industry are lacking. Furthermore, low electricity prices make the construction of new electricity production facilities based on renewable energy and CHP unprofitable, and discourage private investors.

Therefore, the responsible institutions should take into account the main goal for pricing policies, which should be to raise prices to levels that are cost reflective in order to spur economical use of energy, to induce energy savings, to reduce reliance on energy imports and fiscal deficits resulting from subsidies, and to allow for the generation of funds for urgently needed investments in maintenance and modernization of existing obsolete or aged equipment. At the same time, well-targeted social measures should be implemented to ensure affordability of adequate energy supply for poor households.

Recommendation 7.2:

The Government, in cooperation with the Energy Agency, should:

- (a) *Stop subsidizing the energy sector; in particular, it should make electricity prices fully reflective of costs, including the costs of production, grid operation and measures to reduce environmental impacts;*
- (b) *Introduce cost-reflective prices for district heating in cooperation with responsible local authorities. The installation of a metering system should be proposed to allow a switch from area-based to consumption-based pricing as soon as possible. Measures to enlarge or overhaul the network should always include the installation of a metering system; and*
- (c) *Develop special social measures to support vulnerable users.*

One of the main characteristics of the Serbian energy sector is its low efficiency in both energy production and consumption. Improved energy efficiency would also reduce production costs, raise productivity and increase international competitiveness. Efforts in recent years to increase energy efficiency have not been sufficient. One of the most important unsolved problems is to reduce high energy consumption for heating purposes by

households and the public sector. Necessary measures include the modernization of heating systems, the improved insulation of buildings, and the reduction of electricity use for heating purposes. The latter is also necessary to change the unfavorable electricity consumption pattern during winter.

As regards buildings, it is necessary to introduce limit values for energy consumption both for new buildings and for renovations of existing ones. The EU *Directive on the energy performance of buildings* (2002/91 EC) could be used as a guide for developing corresponding standards. The public should be informed of the economic benefits of reduced fuel and electricity consumption, of existing technologies for achieving this, and of fiscal incentives from which they could benefit. The results of pilot projects in all sectors should be widely publicized.

Recommendation 7.3:

The Government, in cooperation with the relevant ministries and agencies, should:

- (a) Establish an energy efficiency fund as soon as possible for financing measures to improve energy efficiency in industry and households. The fund should be fed with a tax on electricity consumption by industrial customers, and be supplemented by international funding and other funding sources. Companies implementing an energy audit and energy-saving measures could be exempted from this tax;*
- (b) Introduce energy consumption standards for the construction of new buildings and the renovation of existing buildings; and*
- (c) Introduce a funding programme to promote insulation measures for residential and public buildings (e.g. soft loans and tax rebates) and to connect flats and buildings to district heating or to the gas grid.*

Recommendation 7.4:

The Energy Efficiency Agency and the Regional Energy Efficiency Centres should continue and intensify awareness- and capacity-building regarding energy efficiency measures. Public awareness campaigns should show the economic and ecological benefits of reduced fuel consumption.

Renewable energy sources and modern combined heat and power plants could contribute much more to security of energy supply in Serbia than they do today. The *Law on Energy* has introduced a legal framework for promotion of renewable energy sources and CHP, but it is necessary to develop relevant secondary legislation and to introduce incentive mechanisms for privileged energy producers in the forthcoming period as well as to raise energy prices. The rather complex licencing procedures for construction of new energy production facilities are another obstacle for wider use of renewable energy sources. These procedures should be gradually improved through amendments of the existing and development of a new regulation. Upon ratification of the *Kyoto Protocol*, efforts should be made to benefit from projects for reducing greenhouse gas emissions under CDM, thereby promoting the achievement of policy objectives related to renewable energy, energy efficiency, CHP, fuel switching and environmental protection.

Recommendation 7.5:

To stimulate both the production and consumption of renewable energy, the Ministry of Mining and Energy should:

- (a) Introduce as soon as possible implementing regulations for the Law on Energy to promote electricity and heat production from renewable energies;*
- (b) Introduce economic incentives, e.g. a feed-in tariff, for electricity produced from renewable energy sources;*
- (c) Simplify the complex licence procedures for facilities based on renewable energy and establish a one-stop shop to prepare renewable energy projects and offer support to possible investors during the licensing procedure;*
- (d) Engage itself, in cooperation with other competent ministries and industry representatives, in developing a range of investment projects in the energy, waste, forestry and agricultural sectors which reduce greenhouse gas emissions or enhance sequestration and which are therefore eligible for financial funding from the Clean Development Mechanisms after the Kyoto Protocol has been ratified; and*
- (e) Designate a body for implementing Clean Development Mechanism projects and entrust it with preparing ready-to-offer projects to investors.*

Serbia's energy sector is still responsible for considerable environmental pollution, though the modernization of production technologies and the installation of emissions reduction technology in thermal power plants have started. An important incentive for the sector to reduce air, water and waste pollution would be the implementation of meaningful pollution charges and fines as stipulated in the *Law on Environmental Protection*. Both should be adjusted to changing economic circumstances and enforced. As in some cases it may not be cost-effective to modernize old facilities, a comprehensive cost analysis for smaller thermal power plants would help determine whether investments to meet environmental standards should be directed to replacement by biomass or gas-fired cogeneration plants rather than refitting of the old plants.

Recommendation 7.6:

The Government should develop measures to further reduce environmental impacts from thermal power plants and refineries on air, soil, ground and surface waters, as well as health impacts on human beings, by introducing best available techniques and abatement technologies, and should find ways to safely dispose of ash deposits

Implementation of 1st EPR recommendations

PART I: THE FRAMEWORK FOR ENVIRONMENTAL POLICY AND MANAGEMENT

CHAPTER 1: Decision-making framework for environmental protection

Recommendation 1.1:

The Federal Government of Yugoslavia, in cooperation with the Serbian Ministry for Protection of Natural Resources and Environment,

- (a) *Should take advantage of their constitutional reviews and the framework agreement with the EU to harmonize all legal instruments concerning the protection of the environment and the management of natural resources; and*
 - (b) *Should establish a mechanism to coordinate the process of approximation to EU legislation.*
- (a) The 2006 *Constitution of the Republic of Serbia* stipulates the right to a healthy environment and the duty of the citizens to protect and enhance the environment. The legal and institutional framework is founded on these bases. Also, the Republic of Serbia prescribes and provides the systems for environmental protection and enhancement and for the protection and enhancement of flora and fauna by adopting laws which enable sustainable management and protection of natural values, improve the environment, and provide a healthy environment. The obligation to harmonize the legal framework with the EU *acquis communautaire* was first mentioned in the *Resolution on Accession to the EU*, adopted by the National Assembly on 13 October 2004. This document stipulates that the legal harmonization has priority in the work of the Parliament, accompanied by special procedures to increase its efficiency.
- (b) In July 2003, the Serbian Government adopted the first *Action Plan for the Approximation of Domestic Laws with the Acquis Communautaire*. Since then, the *Action Plan* has been annually updated and adopted. The introduction of the Approximation Statement does not imply obligatory approximation with the EU legislation; there is a possibility of postponing the approximation in case technical and economic conditions are not fulfilled. A draft law, other regulation or general legal act not accompanied by the Statement is returned to the public institution or organization that proposed it for finishing touches. The procedure for adoption of draft law by Government of Serbia stipulates that the ministry that prepared the draft has to submit it to other relevant ministries and State bodies to obtain their opinions. It is mandatory to submit draft laws to the Serbian European Integration Office, which gives its opinion on the level of harmonization needed with EU legislation. Assistance in harmonization is also obtained through various capacity-building and technical assistance projects, such as CARDS capacity-building projects, TAIEX¹ assistance, or the REReP projects.

Recommendation 1.2:

Serbia's Ministry for Protection of Natural Resources and Environment should implement the Agreement² that they reached on 12 July 2002 on cooperation on environmental protection. Implementation should be consistent with the new constitutional charter and in cooperation with the relevant Yugoslav Ministry.

Before 2006, the two republics tried with some success to implement this Agreement. After the split of the State Union of Serbia and Montenegro in 2006, Serbia took by succession all international environmental agreements except those which specifically related to Montenegro.

Recommendation 1.3:

Based on the 2001 State-of-the-Environment report, the Ministry for Protection of Natural Resources and Environment should further develop an environmental policy, to be approved by the Government, to set clear and achievable goals and objectives. This environmental policy should be implemented through an action plan clearly specifying the responsible actors and the required actions, in a realistic time frame and outlining the means of finance.

According to the 2004 *Law on Environmental Protection*, the management of environmental protection shall be secured and implemented through a national environmental protection programme (NEPP), also called the National Environmental Strategy, to be adopted by the National Assembly for a period of 10 years. It shall provide for integrated environmental protection, and contain in particular:

- A description and rating of environmental status;
- Basic objectives and criteria for the implementation of environmental protection in general, in areas and spatial regions with priority measures of protection;
- Conditions for implementation of the most favourable economic, technical, technological and other measures for sustainable development and environmental protection;
- Long-term and short-term measures for the prevention, mitigation and control of pollution;
- The responsible actors and time frame; and
- Funds for implementation.

NEPP would be implemented through action plans that have to be adopted by the Government for a period of five years. In May 2006, the *National Environmental Strategy* prepared by the Ministry for Science and Environmental Protection was approved by the Government. It is now in parliamentary procedure for adoption.

Recommendation 1.4:

- (a) *The National Assembly should adopt the draft law on the environmental protection system at its earliest opportunity; and*
- (b) *The Ministry for Protection of Natural Resources and Environment should prioritize compliance and enforcement by providing appropriate training in inspection, equipment and human resources to its inspectorate. The Government should allocate sufficient funds for this purpose; in addition, twinning arrangements could be sought with other countries.*
- (a) The new legal framework for environmental protection was adopted in 2004 by the *Law on Environmental Protection*, the *Law on Strategic Environmental Assessment*, the *Law on Environmental Impact Assessment* and the *Law on Integrated Prevention and Pollution Control*, which are fully harmonized with the respective EU Directives. The most significant issues covered by the *Law on Environmental Protection* include: fundamental principles of environmental protection, management and protection of natural resources; measures and conditions of environmental protection; environmental programmes and plans; industrial accidents; public participation; monitoring and information systems; clearly identified competences of the Environmental Protection Agency; reporting; financing environmental protection; liability for environmental pollution; inspection services; and fines. See list in annex IV.
- (b) Since 2003, border inspection competences have been transferred to the republican level. There are two competent authorities for environmental inspection: the environmental inspectorate for air, noise, ionizing radiation, chemicals, protected areas, flora and fauna, waste industrial activities and fishing; and the ecological inspection on borders for transboundary movement of wastes, endangered species of wild flora and fauna, radioactive materials, chemicals, and substances which deplete the ozone layer. The staffs and budget of the environmental inspectorate have increased and the equipment has been modernized (especially mobile monitoring equipment, computers and vehicles). Intensive training for inspectors – including preparation of the *Inspector's Handbook*, training in industrial processes, use of monitoring equipment, monitoring techniques and data analysis – has rapidly increased.

Recommendation 1.5:

The Ministry for Protection of Natural Resources and Environment should require a compliance plan from pre-1992 polluting industries. It should be based on environmental audits done by the enterprises. As a result, the Ministry for Protection of Natural Resources and Environment should issue environmental permits taking into account the compliance plan, stipulating a time frame and the measures required to comply with existing standards and norms.

The system of integrated permitting shall be implemented according to the 2004 *Law on Integrated Prevention and Pollution Control* (IPPC). For new installations, the law becomes applicable as of the time of its coming

into effect. For the existing installations subject to IPPC, the Government shall adopt a programme of harmonization with the law on IPPC by 2015.

CHAPTER 2: Economic instruments and financing

Recommendation 2.1:

The Ministry for Protection of Natural Resources and Environment should:

- (a) *Together with the Ministry of Finance and the Economy, increase the use of economic instruments for environmental protection, specifically emission charges and product charges;*
 - (b) *Give more emphasis to the application of economic instruments in order to increase their use and effectiveness. A programme for the systematic monitoring and evaluation of existing economic instruments should be launched; and*
 - (c) *Start drafting by-laws to apply the polluter and user pays principles and economic instruments.*
- (a) Since 2004, a set of economic instruments has been introduced (e.g. natural resources charges, polluter charges, charges at local level, environmental protection fund, and economic incentives) by the adoption of the Law on Environmental Protection (LEP). Implementation of these instruments will ensure the application of the polluter pays and user pays principles in line with EU requirements.
 - (b) New polluter charges entered into force on 28 December 2005 and have applied since 1 January 2006. They cover pollution charges defined according to the types of pollution from certain sources (e.g. air emissions, generation and disposal of waste, ozone-depleting substances, and motor vehicles). At this stage of implementation, polluter charges have only been addressed to large polluters (IPPC installations). A further step is to gradually widen the scope to medium and small polluters. Product charges are covered in the LEP and have to be developed through by-laws. The Environmental Protection Fund established by the LEP has submitted to the Ministry its annual report on achievements under its work programme for the period 2006-2007. A first systematic evaluation of existing economic instruments is under way. Existing charges for the use and trade of wild flora and fauna were readjusted in April 2005.
 - (c) To develop economic instruments as provided for in the LEP, the Government adopted new by-laws in 2005 regarding natural resources and polluter charges (e.g. charges on the use and trade of wild flora and fauna, and polluter charges defining the type of pollution and polluters, criteria for calculating charges, and the amount and manner of calculation and payment of charges). By-laws also cover criteria and conditions for refund, waiver and reduction of environmental pollution charges.

Recommendation 2.2:

The Government should give municipalities and public enterprises the possibility of setting their own tariffs for municipal services in order to operate on a full cost-recovery basis. Tariffs should be gradually increased to consumer affordability levels, with the possibility of subsidies for lower-income groups.

Municipalities have the scope to set tariffs for local utility services based on recommendations from the public utilities companies. Charges for waste and water services have increased, but in general revenues are insufficient for full cost recovery.

Recommendation 2.3:

The Ministry of Finance and the Economy should increase the efficiency of collection and enforcement procedures by setting higher non-compliance fines.

Although environmental non-compliance fines are included in the general State budget, they are not earmarked for environmental expenditures. Nevertheless, non-compliance fees are still insufficient to influence the behaviour of polluters vis-à-vis environmental protection.

Recommendation 2.4:

As soon as the law on the environmental protection system has been adopted, the Government of Serbia should take the necessary steps to establish and implement an environmental budgetary fund to channel financing for environmental purposes. Its statutes, structure, and management and operational procedures should be set out in an additional regulation. The fund should aim at generating funds from national and international sources,

and not simply be a disbursing mechanism, but also take into account the environmental objectives targeted by economic instruments.

The Environmental Fund was established in May 2005 and has been operational since that time. Its 2005 Statute stipulates its activities, structure, management and operational procedures. Its aim is to provide financial facilities and resources to support and improve environmental protection in the country. In its work, especially in the planning and utilization of finances, the Fund follows international standards of good practice, for example involving public in its work and decision-making.

CHAPTER 3: Information, public participation and awareness-raising

Recommendation 3.1:

The Federal Secretariat for Labour, Health and Social Care, Serbia's Ministry for Protection of Natural Resources and Environment should continue providing support for the establishment of environmental NGO networks and provide NGOs with access to accurate environmental information and the opportunity to participate in environmental decision-making.

Some progress has been made in this area. The Directorate for Environmental Protection (DEP) within the MSEP cooperates with NGO Networks. Continued and targeted DEP support to NGOs is needed for establishing a diverse and strong complement of experts on the NGO side. REC is building a database of Serbian NGOs.

Regular meetings with representatives of NGO are conducted on the premises of the DEP. Key policy documents and draft regulations are sent to NGOs for comment. NGOs do respond to proposals, but are not informed about how their comments are taken in account. Financing, aimed to support NGOs projects from the State budget, is scattered among many NGOs; thus very little is provided for a single project, which quite often does not allow for the completion of the project.

Recommendation 3.2:

The Government of Serbia, through its Ministry for Protection of Natural Resources and Environment should provide the resources to update monitoring facilities for carrying out a comprehensive and systematic monitoring of the state of the environment. (See recommendation 6.4)

Limited progress has been made in this area. Environmental monitoring regulated by the LEP defines the scope and means of performing monitoring and the responsibilities of institutions. It also stipulates that environmental monitoring has to be an integral part of national information system. Its scope is not clearly defined – “monitoring of natural factors” is a term not defined in the law – but also includes transboundary monitoring requirements and obligations for monitoring from international agreements. More detailed criteria and requirements for the monitoring and reporting of data are provided in the two-year State monitoring programmes adopted by the Government. Programmes have been developed and adopted for the different institutions responsible for monitoring, but are not harmonized. Autonomous provincial and local self-governance units should carry out monitoring programmes in accordance with the State programme. The LEP also regulates self monitoring, although more by-laws are needed to fulfil its implementation. The Agency of Environmental Protection (EPA) and the Hydrometeorological Institute (HMI) (air and water automatic monitoring stations) have received new monitoring equipment. HMI has also modernized its own equipment. But much is still needed to build a comprehensive monitoring system.

Recommendation 3.3:

Serbia's Ministry for Protection of Natural Resources and Environment should:

- (a) Prepare periodic reports on the basis of the data collected and analysed: and*
 - (b) Provide training programmes for the staff currently employed in the monitoring institutes.*
- (a) Limited progress has been made in this area. Since 2002, no specific thematic reports analysing collected data have been published. Five reports covering urban air quality, water, soil, biodiversity, and land are under preparation and will be issued for the sixth Ministerial Conference “Environment for Europe” to be held in Belgrade in 2007. The EPA has also coordinated the collection of environmental data and the

processing of the EEA core set of indicators (around 17 indicators, of uneven quality, out of the 35 required).

- (b) Very little progress has been made in this area. Administrative officials, in accordance with the *Law on Administrative Officials* (OG RS No. 79/2005), have the right to training and specialization on issues of their competence financed by the Government. Each year, the Government develops a training and specialization programme, and every governmental body specifies a special programme for its officials, according to its own needs. Many training opportunities are also offered by foreign institutions. Due to lack of human resources, only a few such opportunities are taken.

Recommendation 3.4:

Serbia's Republic Hydrometeorological Institute in cooperation with the Federal Hydrometeorological Institute, should update the water monitoring to include life parameters, such as vegetation and animal ecosystems in the rivers and along the riverbanks. A first step would be to start simple observation studies on the status of the ecosystems close to the riverbanks.

This recommendation was never implemented.

Recommendation 3.5:

Serbia's Ministry for Protection of Natural Resources and Environment should:

- (a) *Introduce public participation in EIA procedures and should include more provision for public participation in the environmental decision-making procedures in accordance with the Aarhus Convention.*
- (b) *Consult Serbia's Ministry of Education and Sport on appropriate ways to introduce environmental protection issues into the curricula of primary schools.*
- (c) *Raise public awareness of environmental issues through information campaigns, the use of the media, environmental programmes, and cooperation with schools and universities.*
- (a) Remarkable progress has been made in this area. Serbia has not yet ratified the Aarhus Convention, but preparations are ongoing. Provisions of the Aarhus Convention have already been incorporated in the four laws adopted in 2004 (*Law on Environmental Protection, Law on Environmental Impact Assessment (EIA), Law on Strategic Environmental Assessment (SEA) and the Law on Integrated Environmental Pollution Prevention and Control (IPPC)*). During the EIA procedure, the competent body informs and consults authorities, organizations and the public. The decision-making process takes account of consultations, proposals for modifications and amendments. A Ministry regulation has been adopted to describe and define public debates on the EIA study.
- (b) Progress has been made in this area. In 2001, when the multidisciplinary and intersectoral approach to environmental education was introduced through the educational reform, principles of sustainable development were included in the school curriculum. The reform in the first and second grades of primary school adopted a more holistic approach to environmental education through a new subject called "The World around Us", as well as in subjects such as the mother tongue, the arts, and physical and health education. The optional subjects "Environmental Education" and "Guardians of Nature" were also introduced. The new school texts have been revised accordingly, methods of active participation introduced, and additional training courses organized for teachers. Environmental education is also an integral part of the draft sustainable development strategy.
- (c) Few success stories in raising public awareness on environmental matters can be registered. Public awareness is not high, but is improving. The Institute for Nature Protection conducts a targeted, active and systematic approach towards the media and schools. It also includes cooperation with journalists. The Recycling Agency also targets the general public, industry and local authorities. Apart from cooperating with media and schools, the DEP has provided financial support to over 30 educational programmes prepared by NGOs. Publishing activities are mostly oriented towards raising the level of environmental awareness among children, and include long-term projects such as "School in Nature" and "Living with the Nature". There are special magazines on the environment for children. Nonetheless, the numbers and quality of articles in daily newspapers and periodicals are generally far from satisfactory. Although there are special radio and TV programmes, insufficient attention is paid to environmental issues.

Recommendation 3.6:

The Ministry for Protection of Natural Resources and Environment should establish an environmental information system. This system should provide data and information on the status and the protection of the environment, which should be made available to decision makers and to the public.

Limited progress has been made in this area. LEP requires the establishment of an information system for environmental protection and an integrated polluter register. Serbia still lacks both. The EPA is responsible for their establishment. A draft Ministerial regulation for the establishment of an integrated polluter register exists, but clear allocation of responsibilities among authorities for its implementation is lacking. By-laws for detailed prescription about the information system and reporting should be adopted by Government, but have not yet been prepared. In practical terms, the EPA has started collecting environmental data from different institutions and compiling them into an integrated database to support production of indicators, as suggested by the EEA.

Recommendation 3.7:

The Ministry for Protection of Natural Resources and Environment should regularly prepare a report on the state of the environment and submit it to the Government of Serbia. The Government should submit the report to the National Assembly, and it should be accessible to the public.

Since its establishment, the EPA prepared reports on the state of the environment in 2003, 2004 and 2005. These were adopted by Government, but have not yet passed the National Assembly, and are therefore not available to the public.

CHAPTER 4: International cooperationRecommendation 4.1:

The Federal Government of Yugoslavia should establish a standing consultative mechanism with Serbia to:

- *Clarify the respective roles of the Federal Government and the two republics with regard to international cooperation in environmental (and other) areas;*
- *Coordinate the implementation of international conventions;*
- *Facilitate decision-making on related issues; and*
- *Discuss the modalities for entering into bilateral agreements specific to one republic (e.g. concerning the coastal area or the Danube River basin).*

This recommendation is no longer relevant after Montenegro and Serbia became independent States. Serbia is a successor State to all international environmental agreements to which the State Union of Serbia and Montenegro was a party.

Recommendation 4.2:

The Federal Government of Yugoslavia should ratify:

- *The Sofia Convention on Cooperation for the Protection and Sustainable Use of the Danube River;*
- *The UNECE Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes;*
- *The UNECE Helsinki Convention on the Transboundary Effects of Industrial Accidents;*
- *The UNECE Espoo Convention on Environmental Impact Assessment in a Transboundary Context; and*
- *The 1995 Revised Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean.*

Following ratification, the Government of Serbia and the Government of Montenegro should implement these conventions.

Yugoslavia in cooperation with the Governments of Serbia and Montenegro should also make operational as soon as possible bilateral agreements dealing with transboundary water issues.

Serbia ratified the Sofia Convention on Cooperation for the Protection and Sustainable Use of the Danube River in 2003. The draft laws on ratification of the Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes and the Espoo Convention on Environmental Impact Assessment in a

Transboundary Context have been submitted to the Parliament and are undergoing parliamentary procedure before approval. The recently adopted Law on Environmental Impact Assessment contains provisions regulating EIA in a transboundary context that comply with the requirements of the Espoo Convention. A draft Law on the ratification of the Helsinki Convention on the Transboundary Effects of Industrial Accidents is under preparation. The Revised Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean is not relevant for Serbia.

Recommendation 4.3:

The Federal Government of Yugoslavia should ratify the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters as soon as possible.

Following ratification, the Government of Serbia and the Government of Montenegro should implement the Aarhus Convention.

Serbia has not yet ratified the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters. However, the legislative basis for ratification and implementation of the Aarhus Convention has been created. In particular, the following laws contain the necessary provisions in accordance with the requirements of the Aarhus Convention: the 2004 Law on Environmental Protection, the 2004 Law on Free Access to Information of Public Importance, 2004 Law on Environmental Impact Assessment (EIA), the 2004 Law on Integrated Pollution Prevention and Control (IPPC), the 2004 Law on Strategic Environmental Impact Assessment (SEA), and the 2003 Law on Urban Planning and Construction. The country has prepared a national profile in the framework of the project "Preparation of a National Profile to Assess Capacities to Implement the Aarhus Convention" supported by UNECE and UNITAR.

Recommendation 4.4:

The Federal Government of Yugoslavia and the respective ministry of Serbia should seek further international support for establishing cleaner production centres. Support for the implementation of conventions related to the management of chemicals should be provided or channelled through such centres, in cooperation with the Basel Convention's Regional Centre for Training and Technology Transfer in Bratislava (Slovakia), United Nations Environment Programme (UNEP) and the United Nations Industrial Development Organization (UNIDO). (See also recommendations 7.2b and 10.3.)

The DEP has finished implementing the project "Preparatory assistance for the establishment and operation of a National Cleaner Production Programme" in cooperation with UNIDO. The next step, which is not yet implemented, is the establishment of a National Centre for Cleaner Production as an independent NGO responsible for supporting industry in technological modernization; for managing a reference library; for cooperating with UNEP, UNIDO and other national centres for cleaner production; and for training, project preparation and fund-raising.

Recommendation 4.5:

The Federal Government of Yugoslavia should consider submitting the following projects (among others) to the Global Environment Facility for funding:

- (a) Enabling Activity for Biodiversity, to develop a national biodiversity strategy and action plan. After implementation of the Enabling Activities, a second project for the establishment of a clearing-house mechanism could be envisaged; (see also recommendation 9.3.)*
- (b) Development of a national biosafety framework. Yugoslavia would need to express its intention to ratify the Cartagena Protocol on Biosafety; and*
- (c) Development of a national implementation plan for the Stockholm Convention, using the Global Environment Facility's "Initial guidelines for enabling activities for the POPs Convention."*

Competent government bodies in Serbia are in the process of implementation of several projects financed by GEF:

- (a) Under the Ministry of Science and Environmental Protection (Directorate for Environmental Protection)-UNDP/GEF:*

- Biodiversity Strategy, Action Plan and National Report. The project has been approved for Serbia and Montenegro, but its implementation has not yet started.
 - National Capacity Self-Assessment for Environmental Management in Serbia and Montenegro (CBD, UNFCCC, UNCCD). This project is ongoing.
 - Development of National Implementation Plan for Stockholm Convention on POPs. This project is ongoing.
- (b) Under the Ministry of Agriculture, Forestry and Water Management, UNEP/GEF:
- Development of the National Biosafety Framework. This project is ongoing.

Recommendation 4.6:

- (a) *The Federal Government of Yugoslavia should continue to give high priority to regional and transboundary cooperation, in particular within the framework of the Regional Environmental Reconstruction Programme (REReP). Further development of bilateral environmental framework agreements with neighbouring or other States is encouraged. Serbia should be enabled to establish transboundary cooperation arrangements where they have specific interests.*
- (b) *Serbia's Ministry for Protection of Natural Resources should consider developing programmes for assistance in the implementation of multilateral environmental agreements in a regional context, in the framework of and fully harmonized with the AIMS project (Support to Acceptance and Implementation of Multilateral Environmental Agreements in South-Eastern Europe, REReP 1.12).*

Serbia continued its participation in regional and transboundary cooperation. It joined the Black Sea Economic Cooperation Council in April 2003. It became a member of the International Commission for the Protection of the Danube River (ICPDR) in August 2003. It also participates in the International Commission for Sava River Basin (ICSRB), and in the Regional Environmental Reconstruction Programme (REReP) and has benefited from a number of REReP projects. It participates in the Environmental Compliance and Enforcement Network for Accession (ECENA), a network of environmental inspectorates; in the Priority Environmental Investments Programme (PEIP); and in the AIMS Network. Serbia cooperates closely with neighbouring and other countries in the area of environmental protection (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Germany, Italy, Japan, Romania, Slovenia and The former Yugoslav Republic of Macedonia, among others), but does not have bilateral environmental framework agreements with most of them. There are plans to sign agreements with several countries.

PART II: MANAGEMENT OF POLLUTION AND OF NATURAL RESOURCES

CHAPTER 5: Management of water resources

Recommendation 5.1:

The appropriate authorities of the Federal Government and the Federal Hydrometeorological Institute should design and, in collaboration with Serbia's Ministry for Protection of Natural Resources and Environment, should implement a Danube nutrient reduction investment project consistent with the nutrient reduction targets called for by the Convention on Cooperation for the Protection and Sustainable Use of the Danube River.

In 2003, the MoESP started the *Danube River Enterprise Pollution Reduction Project (DREPR)* funded by GEF-WB. The project was initiated by a PPU (Project Preparation Unit) that identified the legal framework and assessed the responsibilities of the bodies involved. The project focuses on nutrient pollution from farming facilities, but not from industries. After the preparation phase, the project was assigned to the farming experts in the Ministry of Agriculture, Forestry and Water Management (MAFWM) and the Project Implementation Unit (PIU) was established in July 2005. Beneficiary farmers for the installation of pilot facilities for the reduction of nutrient loads were identified in September 2006 and project implementation is ongoing. Currently, there is no plan to extend the project to industries.

Recommendation 5.2:

Serbia's Ministry of Agriculture and Water Management, in collaboration with its Ministry for Protection of Natural Resources and Environment should prepare a comprehensive national flood disaster management strategy, which includes preparedness, mitigation, recovery and reconstruction. The impact of floods can be further reduced by integrating hazard mitigation measures into land-use planning and investment projects.

The MAFWM and the Hydrometeorological Institute work together to monitor the water levels and start safety procedures in case of flood hazard events. There is no national register of source pollution sites on the riverbanks or in the vicinity of rivers. There is no flood protection strategy at the national level as of yet, but the MAFWM is studying a set of actions, taking into account the recommendations from the ICPDR and the EU approximation process. Those include the flood risk mapping that started in 2006 and the proposal of an inter-ministerial body for flood disaster management. For the protection of environment and human lives, buildings, industries and landfills should not be placed in areas alongside watercourses, but such buffer areas are neither identified nor mapped.

Recommendation 5.3:

Serbia's Ministry for Protection of Natural Resources and Environment, in collaboration with its Ministry of Agriculture and Water Management and its Ministry of Health should:

- (a) Undertake a thorough study of rural water-supply systems, both formal and informal, as the basis for designing a programme for improving rural water supply. In Serbia, the Ministry of Agriculture and Water Management has a list of priority projects in small town and rural water-supply systems that could serve as the basis for an assessment of rural water needs. The assessment should include, inter alia, the state of the existing water-supply systems, an inventory of informal water-supply systems, an inventory of private wells and a survey of water quality in private wells;*
- (b) Provide the legal and institutional framework for monitoring, regulating and supporting the rural water sector, as a priority;*
- (c) Focus on water-supply systems for medium-size cities and rural areas. This includes urgent investment to get infrastructure working again, lower operating costs, provide operational and management information and deal with immediate water quality problems;*
- (d) Include in a rural water-supply programme a component for health education and promotional activities that would incorporate, among other things, education and training on the appropriate design and use of wells, design and use of home-made chlorination systems, school sanitation and health, and water quality monitoring in remote rural communities; and*
- (e) Give top priority to the provision of water-supply and sanitation services to communities or persons who are underserved.*

In 2002, the MAFWM initiated a four-year programme to improve water and sanitation conditions in small and medium-sized towns in Serbia. The programme carried out the conceptual and preliminary design for the upgrading of water and sanitation facilities for all the town and villages in Serbia. The programme co-finances the works up to 50 per cent of the capital cost, with a yearly budget that increased from CSD 20 million in 2002 to CSD 600 million in 2006. Among all funded projects, 50 per cent were for the construction of sewerage systems.

Inventory and monitoring of wells for water supply is under the responsibility of the Ministry of Health (MoH). However, due to budget shortfalls and limited staff (inspectors), drinking water quality is not monitored in rural areas. The MoH carries out awareness-raising campaigns to sensitize the population to water-quality and use issues. The rural population is being made aware of the health hazards deriving from the use of improperly treated water.

Recommendation 5.4:

Serbia's Ministry for Protection of Natural Resources and Environment, in cooperation with its Ministry of Health should expand drinking water quality monitoring to rural areas.

The Ministry of Public Health, through the Public Health Institutes, is responsible for water-quality monitoring. No drinking water-quality monitoring has been performed in the last four years due to the lack of financial and staff resources. Water quality analyses are carried out only on the basis of specific requests from individuals and upon the payment of the costs for the analyses.

Recommendation 5.5:

Serbia's Ministry of Agriculture and Water Management should:

- (a) In the medium term, improve the financial situation of water and waste-water utilities through appropriate pricing policies, management strengthening, and better operating procedures;*

- (b) *Allocate funds to achieve a cost-effective mix of institutional strengthening, improved efficiency and service expansion;*
- (c) *Give priority to maximizing the efficiency of existing water utility systems with a first step directed towards reducing the huge losses in the systems; and*
- (d) *Continue developing private sector involvement.*

The Ministry of Public Administration and Local Self-Government is in charge of the overall coordination of water utilities. Water companies, in agreement with their main (and often sole) shareholder, the municipality, set and apply tariffs for water and sanitation services.

The level of tariffs is very low and inadequate for a cost recovery policy. Water companies are cross-subsidized by the municipal budgets for maintenance works and, more rarely, by new investments.

In the last three years (2004-2006), the increase of water tariffs has been controlled by the Ministry of Finance, with a maximum ceiling of the programmed inflation rate.

Due to low tariffs and the lack of adequate budget lines from the municipalities and central government, in the last 10 years water utilities in Serbia could not satisfactorily maintain and upgrade waterworks. There is no programme to reduce water losses, and when the level of service becomes inadequate the common approach is to increase the water injected into the network. As a result, the system is highly inefficient.

Institutional strengthening, management and services improvement programmes have been carried out in rare cases, usually with the support of international donors and investors.

Low tariffs and poor collection rates have thus far not encouraged the participation of the private sector in the management and operation of water utilities.

Recommendation 5.6:

Serbia's Ministry of Agriculture and Water Management should:

- (a) *Reduce consumption through water-demand management and demand-reduction programmes that would include a cost-effective metering strategy, consumption-based billing, tariff levels that are sufficiently high to induce consumers to use less water, and public awareness on water conservation;*
- (b) *Adopt adequate commercial management systems;*
- (c) *Replace the current "basic cost-plus" tariff formula with one that provides incentives for cost reductions and allows for an acceptable level of profits and reduces large differences in tariffs among household, industrial, and other users. Targeted support for vulnerable users should be included as part of the tariff reform; and*
- (d) *Improve the efficiency and reduce the operating costs of the utilities with policies aimed at: improving their financial management and control, streamlining personnel, making plant and network operations more efficient through rehabilitation and adequate maintenance, reducing water and energy consumption, using good materials, and insisting on quality civil works. These efforts should involve the customers as part of a more general effort to improve client orientation.*

Local water utilities are responsible for applying and collecting tariffs for water abstraction, supply and distribution, as well as for waste-water collection and treatment. The MAFWM charges the water companies for the supply of raw water and waste-water discharge.

The price of raw water and the law on tariffs prevent the system from switching to a water-demand and demand-management scheme. Adequate tariff policies and a commercial management system have been adopted only in few cases and at the request of international investors (e.g. the European Bank for Reconstruction and Development) as a condition for providing loans. There has been little or no change in the differences in tariffs applied among household, industrial and commercial users.

As a result, adequate maintenance, reduction of water and energy consumption, and quality of civil works have been greatly affected. Due to large cross-subsidies from the municipal budget, local water utilities are not

motivated to adopt a cost-recovery and efficient market-based management scheme. Additionally, water utilities are often overstaffed.

However, a draft law on water, currently under discussion in the Parliament, includes a set of measures that should potentially overcome such situations. These measures include the adoption of realistic water prices and water related service fees (user pays principle), the polluter pays principle and sustainable financing.

Recommendation 5.7:

Serbia's Ministry for Protection of Natural Resources and Environment, in collaboration with its Ministry of Agriculture and Water Management should set priorities for the selection of the most urgent needs in waste-water treatment infrastructure, such as waste-water treatment plants that discharge into or upstream of vulnerable zones, e.g. drinking water resources, recreation areas, and protected areas.

According to the 2002 *Water Master Plan*, by 2021 waste water shall be treated for all settlements with a population equivalent larger than 5,000. In 2004, MAFWM started a programme to co-finance water and sanitation facilities. MAFWM's contribution is up to 50 per cent of the capital cost. Priority has been given to the cases in which waste water is discharged into minor watercourses, whose class would be more affected by the sewage flow. Anyhow, most of the funds have been used for water supply and sanitary networks.

According to the law, municipalities are in charge for the mapping and protection of vulnerable areas, but only 10 per cent of those have complied to this obligation so far. As a result, protection plans have not been prepared. From this perspective, the draft law on water foresees insurance coverage for the use of floodplains according to the risk.

Recommendation 5.8:

The Ministry for Protection of Natural Resources and Environment and its Ministry of Agriculture and Water Management should set up a methodology and related practicum (instruction) and carry out a survey of spot and diffuse pollution sources by catchments and sub-catchments, inter alia, to provide a basis for mapping pollution loads.

The Serbian Environmental Protection Agency (SEPA) is in charge for the set-up of the new registry of polluters that has been built starting from the harmonization of exiting registries of polluters. Before the SEPA was established in 2002, data on point source of pollutions were gathered and stored with different methodologies by a number of bodies (e.g. Institutes of Public Health, MAFWM, Municipalities). The process of harmonization is ongoing. Up to now, diffuse sources of pollution have not been considered.

Recommendation 5.9:

The Ministry for Protection of Natural Resources and Environment should:

- (a) *Introduce standards and norms for water quality (surface and ground) taking into account physical and hydro-ecological aspects of water systems, consistent with relevant international legislation;*
 - (b) *Establish, in cooperation with competent authorities for standardization, methodological standards for sampling and laboratory analyses (chemical, microbiological, biological) of natural waters; and*
 - (c) *Initiate and enforce accreditation of laboratories that examine natural and waste waters and ensure standardized inter-calibration methods and procedures.*
- (d) Standards and norms are updated regularly (regarding physical and chemical parameters), but the biological standards have not been legally introduced.
- (e) Same as (a)
- (f) The process will be obligatory by the end of 2007. It is being implemented now, but the implementation is not yet compulsory.

The ICPDR (signed in 2004) and the draft law on water (drafted in 2006 by the MAFWM) are likely the two most important milestones in the process of approximation of the Serbian water legislation to EC Water Framework Directive. However, the draft law on water has not been approved by the Parliament yet. The Ministry of Health is currently studying the parameters, procedures and methodologies for drinking-water

quality, based on both the EC Directive and WHO standards. Part of this initiative has been funded by a project of the European Agency for Reconstruction (EAR) carried out with the Serbian Institute of Public Health.

A new law for the accreditation of laboratories is under preparation, but it is expected to be in force no earlier than late 2007.

CHAPTER 6: Air management

Recommendation 6.1:

The Federal Government of Yugoslavia should accede to three of the protocols to the UNECE Convention on Long-range Transboundary Air Pollution: the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone, the Protocol on Heavy Metals and the Protocol on Persistent Organic Pollutants.

The Governments of Serbia should implement them.

Serbia took steps for ratification of the two following protocols to the UNECE *Convention on Long-range Transboundary Air Pollution*: the *Protocol on Heavy Metals* and the *Protocol on Persistent Organic Pollutants*. The *Protocol to Abate Acidification, Eutrophication and Ground-level Ozone* is still under consideration.

Recommendation 6.2:

Serbia's Ministry for Protection of Natural Resources and Environment should each establish the legal framework for air management, based on a multi-pollutant and multi-effect approach and integrated prevention and pollution control, including limit values for emissions.

Air-quality emission limit values are regulated by the *Ordinance on Limit Values, Methods of Imission Measuring, and Criteria for Determination of Measurement Points and Data Recording* (OG RS No. 54/1992, 30/1999) for a certain number of polluting substances (inorganic substances, organic substances, carcinogenic substances). Emission limit values are regulated by the *Ordinance on Emission Limit Values, Manner and Deadlines of Metering and Data Recording* (OG RS No. 35/1999). The *Regulations on Limit Values, Imission Criteria for Establishing Measuring Sites and the Data Evidence* do not prescribe target values; they will be prescribed after the adoption of the *Law on Air Protection*.

The *Law on Air Protection* is in the Parliament for adoption. This draft law, it introduces (1) target values due to specific mechanisms of creation of certain polluting substances, including ozone, (2) margins of tolerance (percentage of permitted temporary exceedence of imission limit values), as well as (3) upper and lower evaluation limits for enabling evaluation and defining air-quality categories. All regulations on air quality are harmonized with EU regulations and with the *Council Directive 96/1962 EC on ambient air quality assessment and management* and its daughter directives, which set air-quality standards.

Recommendation 6.3:

Serbia's Ministry for Protection of Natural Resources and Environment should:

- (a) Prescribe environmental audits to be carried out by large enterprises or other big polluting sources;*
- (b) Establish a pollutant release and transfer register of big polluters (PRTR) on the basis of the audit results; and Develop national action plans to combat air pollution, taking into account the monitoring data and results from mobile sources.*

Such plans should cover all existing stationary and mobile sources and include a mixture of effective control measures, including the more rational use of raw materials, energy management, lower-waste technologies, basic control techniques and better housekeeping.

(a) There is no environmental audit carried out by any type of enterprise or big polluting sources because there is no law, nor any mention in the legal framework. Serbia has adopted the *Law on IPPC* regulating the conditions and procedures of granting integrated permits for installations and activities that might have adverse effects on human health, the environment or material resources, as well as types of activities and installations, supervision and other issues that are of relevance for environmental pollution prevention and control. A few large industries or big air polluters are in the process of obtaining IPPC permits (e.g. the "Holcim" cement plant

in Novi Popovac), and some polluters are setting up self-monitoring (e.g. the thermo-power plant “Nikola Tesla”, Oil Refineries of Serbia, cement plants, etc.).

(b) Although there is no audit system, the development of a pollutant release and transfer register (PRTR) based on a preliminary list of big polluters has been started. No action plans to combat air pollution have been developed due to the lack of auditing.

Recommendation 6.4:

Serbia’s Ministry for Protection of Natural Resources and Environment and its Ministry of Health should establish an environmental information system on air pollution starting with source emission data according to the EMEP sector split. It should cover SO_x, NO_x, VOCs, ammonia, CO, CO₂, particulate matter (PM 10 and 2.5), heavy metals and POPs.

Sufficient funds should be allocated from the budget to redefine a national monitoring strategy respecting international requirements (EMEP, PRTR) and to extend the air pollution monitoring programme to mapping critical loads and participating in international cooperative programmes. (see also recommendation 3.2)

Air-quality monitoring is carried out by a network of measuring stations set up at different levels by institutions such as Public Health Institutes (PHI), the Hydrometeorological Institute (HMI), and other research institutes.

According to the adopted biannually Decree on Determining Air Quality, the air-quality network of the State monitoring system of the HMI includes 13 stations not affected by significant sources of pollution, 10 stations located in meteorological stations affected by a range of sources of pollution, and one meteorological station for implementing the EMEP programme. The monitoring stations carry out 24-hour sampling of air quality and chemical analyses to determine ambient concentration of SO₂, NO_x and soot.

The network of local urban stations covers monitoring of basic pollutants: soot, SO₂, NO_x, CO, ozone, particulate matter and heavy metals. Air-quality monitoring activities are based on the biannual monitoring programme adopted by the Government, which comprises a monitoring network located in 76 measuring points in 40 settlements. In addition, 19 settlements are covered by 44 measuring points of local network for monitoring specific pollutants depending on the proximity to industrial facilities (e.g. formaldehyde, phenol, NH₃, benzene, etc).

CHAPTER 7: Waste management

Recommendation 7.1:

The Federal Secretariat for Labour, Health and Social Care should:

- (a) *Urgently find funding for the Institute for Nuclear Sciences in order to define the composition of radioactive waste stored in the Institute’s facilities;*
- (b) *Introduce treatment facilities and the environmentally sound disposal of radioactive waste; and*
- (c) *Regularly monitor and maintain the facilities so as to prevent radioactive contamination in the vicinity of Belgrade.*

The Ministry in charge of environmental matters in cooperation with International Atomic Energy Agency (IAEA) is implementing the VIND Programme (“Vinca De-commission”), which consists of three parts: (1) the decommissioning of existing the nuclear reactor; (2) the management of nuclear waste; and (3) the export of nuclear waste. The Ministry is regularly financing the disposal of radioactive waste (CSD 120 million/year, about €1.5 million).

Recommendation 7.2:

The Federal Secretariat for Labour, Health and Social Care should:

- (a) *Prepare a proposal for the harmonization of all existing laws and regulations on hazardous waste, in cooperation with the competent authorities in Serbia and*
- (b) *Establish a coordination structure and procedures for the control of transboundary movements of hazardous waste and its disposal. Coordination should include the relevant federal authorities, including the customs authorities, from the Government of Serbia and local authorities responsible for waste movement on their respective territories. (see also recommendations 4.4 and 10.3)*

The coordination mechanism should be complemented with training programmes for customs officials and inspectors on how to control hazardous waste shipments and management operations, including recycling, so as to meet Basel Convention obligations. In this regard a user-friendly technical handbook or guidelines on how to determine what constitutes hazardous waste for the use of customs officials and inspectors could be drafted.

- (a) The legal framework for the control of and protection from hazardous waste and harmful substances is prescribed by the LEP, the *Law on Handling of Wastes*, the *Regulations on Management of Substances with Hazardous Properties*, the *Regulations on Criteria for Determining Location and Disposition of and Waste, Processing Facilities, Temporary Storage or Final Disposal of Waste Materials Deposit Sites*, and the *Regulations on Conditions and Methods for Classification, Packing and Care of Secondary Raw Materials*. The inspectorate has to check for compliance with this framework.
- (b) As a Party to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Serbia is responsible for all transboundary movements of hazardous waste and its disposal on its territory. The monitoring of imported waste is realized through control of transboundary waste, in compliance with the Basel Convention and waste categorization regulations (*Regulations of documentation attached to claim for waste import, export, and transportation* (OG RS No. 69/1999)), and in accordance with *Regulations for Documents Submitted with Request for Import, Export and Transit of Wastes*.

Within the framework of imported waste characterization, there is documentation on transboundary waste movement and conducted control of each imported waste shipment, in the form of the laboratory certificate of waste characterization, including reliable documentation on the amount of imported waste, and its tracking to processing.

Recommendation 7.3:

Serbia's Ministry for Protection of Natural Resources and Environment should each prepare inventories of industrial (including hazardous) waste generation. The inventories should include:

- *The main sectors generating industrial (including hazardous) waste and the number of installations per sector;*
- *The kinds of waste being generated;*
- *The production processes producing the waste; and*
- *The location where waste is being stored and discharged.*

This recommendation has not yet been implemented. The EPA has started with the preparation of inventories of waste generators. Data will be included the PRTR registry. Industrial waste is being deposited either in landfills situated on plant grounds, or in mixed and/or industrial landfills.

Recommendation 7.4:

Serbia's Ministry for Protection of Natural Resources and Environmental Protection should:

- *(a) Draw up a comprehensive waste management strategy for industrial waste, municipal waste and hazardous waste, paying special attention to hazardous industrial waste;*
- *(b) Develop an implementation plan, on the basis of the waste management strategy, that would include, inter alia, legal and economic priorities, measures and targets to ensure that goals are met.*

As preparatory steps for the development of the implementation plans, the respective Ministries should each prepare a study of the waste recycling industry.

In 2003, the Government adopted the *National Waste Management Strategy*, which is the basic document providing condition for the rational and sustainable republic waste management. In the following phase, the Strategy must be supported by several implementation plans for collecting, transport, treatment and disposal of controlled waste. A draft *Action Plan for Waste Management* is in development according to the *National Environmental Strategy*, but has yet to be adopted.

Recommendation 7.5:

Serbia's Ministry for Protection of Natural Resources and Environment should develop and implement a law on waste management. The law should as far as possible take into account relevant EU waste legislation. It should:

- *Define and classify all waste, including hazardous waste;*
- *Lay down clearly the responsibilities for waste management;*
- *Provide for regulatory instruments for local authorities and procedural mechanisms to ensure proper implementation, including permitting requirements; and*
- *Specify institutional arrangements for its enforcement.*

The draft Law on Waste Management, which is harmonized with all relevant EU directives, was adopted by the Government in May 2006. The DEP is drafting the Law on Packaging and Packaging Waste.

Recommendation 7.6:

Serbia's Ministry for Protection of Natural Resources and Environment should launch a wide information campaign addressing businesses, institutions and members of the public to promote the minimization of waste at the source. It should be complemented by educational and training programmes to prepare the separate collection of municipal waste. Communication media, such as television, radio and newspapers should be used to the fullest extent.

This recommendation has not been implemented.

Recommendation 7.7:

Serbia's Ministry for Protection of Natural Resources and Environment should, in cooperation with selected municipalities, prepare a study for the rehabilitation of landfills. On the basis of the results of this study, they should initiate demonstration projects for the construction of new sanitary landfills.

To carry out the implementation of the 2003 *National Strategy for Waste Management*, DEP financed and co-financed the following activities (€800,000):

- Development of technical documentation for sanitation and remediation of existing dumpsites for 19 municipalities;
- Sanitation and remediation of existing dumpsites in four municipalities; and
- Development of technical documentation for construction of seven regional landfills covering the waste of 38 municipalities.

In 2005, 24 projects with a value of €300,000 were financed, including the development of technical documentation for construction of three regional landfills for 16 municipalities, and the development of technical documentation for sanitation, closure and re-cultivation of existing dumpsites for 22 municipalities.

During 2006, the environmental fund financed different projects in different municipalities across the country. For instance, the environmental fund co-financed a project of sanitation of landfill for solid waste in the municipality of Kikinda (€61,000). Within the National Investment Programme, which is financed from the privatization revenues, several environmental projects will be financed in the period 2006-2007 (€20 million).

CHAPTER 8: Mineral resources management

Recommendation 8.1:

Serbia's Ministry of Energy and Mining, in cooperation with its Ministry for Protection of Natural Resources and Environment should develop long-term strategies for their mining industries that take into consideration, among other issues, the rehabilitation of the industries to minimize their negative impact on the environment, the clean-up of existing waste and decontamination of waste water, the maintenance or reconstruction of weak or damaged tailing collectors and dams and the rehabilitation of degraded land. The strategies should also address the need for regular monitoring, data collection and analysis.

On the basis of these long-term strategies, they should develop short-, medium- and longer-term action plans that would serve as a basis for discussions with multilateral and bilateral partners as well as with investors. (see recommendations 10.2 and 10.8)

No implementation has been undertaken so far. All strategies related to mineral resources and groundwaters will be developed in 2007.

Recommendation 8.2:

Serbia's Ministry of Energy and Mining, in cooperation with its Ministry for Protection of Natural Resources and Environment in developing their actions plans, should work closely with the management of the mining and related energy companies to identify sources of financing for the implementation of the companies' environmental rehabilitation. An adequate and reliable timetable should be established for each project, and implementation deadlines respected.

Not yet implemented; dependent on the implementation of Recommendation 8.1.

Recommendation 8.3:

The Ministry for Protection of Natural Resources and Environment should ensure that the Geological Survey collects data for the sustainable management of resources. Its main functions should be: (a) to conduct mineral studies and to identify new hydrocarbon basins, (b) to identify appropriate sites for investment, (c) to conduct seismic and risk assessments of hazardous geological processes, and (d) to produce geo-scientific databases, maps and reports.

The Geological Institute of Serbia (or Geological Survey) was created in February 2006.

(a) The Geological Institute is currently:

- Financing several projects of basic geo-investigation and mapping the territory of the country at the scale of 1/50,000, which provides an adequate basis for a knowledge of minerals in the country;
- Identifying seven hydrocarbon basins; and
- Carrying out two or three drilling operations per year.

(b) An Agency for Mining within the Ministry of Energy and Mining is in the creation stage and will be responsible for identifying appropriate sites for investment.

(c) The Geological Institute will conduct seismic and risk assessments of hazardous geological processes.

(d) A Geographical Information System dedicated to geological activities was developed in 2003 and is regularly updated.

Recommendation 8.4:

The Ministry of Energy and Mining should introduce best available technologies to reduce substantially any environmental pollution from coal, oil and gas exploration and exploitation and copper mining and smelting. This should be done in parallel to the introduction of environmental management and international environmental standards in the Serbian mining industry. (see also recommendation 10.3a)

No action has been taken on this issue.

CHAPTER 9: Biodiversity conservation and nature protection

Recommendation 9.1:

Serbia's Ministry for Protection of Natural Resources and Environment should facilitate the harmonization of their nature protection legislation with international biodiversity conservation and management criteria. Cooperation with scientific and public institutions, non-governmental organizations and other stakeholders would facilitate this process.

The draft *Law on Nature Protection* is in the ministerial procedure for comments. It is harmonized with international norms and standards and foresees the establishment of appropriate mechanisms and instruments of protection and sustainable use of biodiversity. The law and other projects will give grounds for the development of the national strategy for biodiversity protection.

The inventory of the two most endangered categories of flora, according to the World Conservation Union (IUCN) criteria, has been completed by using the international CORINE methodology and geographical information system technology. The corresponding *Red Book* (Volume 2) will be published in early 2007. The inventory of vertebrates is on going.

Cooperation of the Ministry with scientific and public institutions, NGOs, and other stakeholders such as IUCN, REC, the Faculty of Biology, and the Institute for Nature Conservation and the Faculty of Agriculture is under way.

Recommendation 9.2:

Serbia's Ministry for Protection of Natural Resources and Environment, its Ministry of Agriculture and Water Management and its Ministry of Trade, Tourism and Services should:

- (a) *Within the next four years, harmonize all of their respective legislation that impacts on nature conservation and protection, agriculture, water and tourism; and*
 - (b) *Reflect these harmonized laws in all relevant management plans.*
- (see also recommendation 12.6.)*

- (a) The harmonization of legislation having impacts on nature conservation and protection, agriculture, water and tourism is postponed until the adoption of the *Law on Nature Protection* (see implementation of Recommendation 9.1).
- (b) As well, this is not reflected on the management of National Parks and other protected areas. Nevertheless, they have five-year management plans, which are split into annual management plans. Other areas, without protected status, have annual management plans.

Recommendation 9.3:

Serbia's Ministry for Protection of Natural Resources and Environment in order to implement the Convention on Biological Diversity and other international agreements, as well as their own nature protection policies, should develop and implement national biodiversity strategies and action plans, in cooperation with international organizations and national stakeholders. The institutional strengthening and capacity building of nature protection administration and management staff at all levels should be included.

(see also recommendation 4.5)

The national strategy for biodiversity and its action plan will be developed with UNDP and other national stakeholders.

Recommendation 9.4:

The Ministry for Protection of Natural Resources and Environment of Serbia, in cooperation with scientific institutions, national park management and other stakeholders, should develop and implement management plans for each national park, according to international standards and best practices, and taking into account the interests of local communities. (See also recommendations 14.2 and 14.3.)

Although the law of Nature Protection is still not adopted, the management of National Parks and other protected areas takes into account, as much as possible, international standards and best practices. They are applying to be part of EMERALD network.

Recommendation 9.5:

Serbia's Ministry for Protection of Natural Resources and Environment, in cooperation with its Ministry of Agriculture and Water Management should each develop and implement a national forestry strategy based on sustainable forest management, taking into account international forest certification principles. This should be done in cooperation with all stakeholders, using transparent and internationally recognized procedures.

Based on the *National Strategy of Agriculture*, the *Strategy of Development of Forestry* was adopted by the Government in 2006. A forest law, currently being drafted, will integrate sustainable forest policy principles.

PART III: ECONOMIC AND SECTORAL INTEGRATION

CHAPTER 10: Industry and the environment

Recommendation 10.1:

The Federal Secretariat for Labour, Health and Social Care, as soon as possible and in cooperation with the Federal Ministry of Economy and Internal Trade, and with the authorities responsible for environmental management and industrial development in Serbia should develop an overall strategic framework and action plan for the reconstruction and modernization of industry, with agreed priorities, as the basis for discussions with potential donors and external investors.

See implementation status of Recommendation 10.6.

Recommendation 10.2:

The Federal Secretariat for Labour, Health and Social Care, in cooperation with the Federal Ministry of Interior Affairs and the environment ministries of Serbia should, as soon as possible:

- (a) Make a thorough review of current practice and problems in the handling, storing and depositing of hazardous substances from industry and of related chemical spills and risks of chemical accidents;*
 - (b) Based on this review, develop an up-to-date strategy and an action plan for the remediation of chemical spills and for the prevention of chemical accidents and of other negative environmental impacts from the handling of hazardous substances;*
 - (c) Review, update and enforce the requirements for industry to establish a risk management and safety system in collaboration with the relevant authorities; and*
 - (d) Review and update, as necessary, current procedures for the authorities involved in emergency operations in the event of chemical accidents. These procedures should take account of those contained in the UNECE Convention on the Transboundary Effects of Industrial Accidents and the Seveso Directive.*
- (see recommendation 10.8)*

This recommendation has not been implemented due to the following reasons:

- (a) Poor enforcement of the legislation on the risk of accident risk management;*
- (b) Lack of risk management plans;*
- (c) Insufficient cooperation between the risk management actors (industries, municipal authorities and state agencies and organizations);*
- (d) Improper storage of chemicals and hazardous waste;*
- (e) Out-of-date industrial technologies;*
- (f) Insufficient training in technological disciplines;*
- (g) Poor organization and implementation of preventive measures, negligence and inadequate handling of hazardous substances; and*
- (h) Poor condition of transport infrastructure and vehicles.*

Recommendation 10.3:

Serbia's Ministry for Protection of Natural Resources and Environment, in cooperation with its Ministry of Economy and Privatization should:

- (a) Establish a clean production centre and promote the introduction of cleaner technologies, environmental management and international environmental standards in industry (see also recommendation 8.4); and*
- (b) Develop action plans for the clean production centre to promote demonstration projects for cleaner technologies and environmental management systems within selected priority areas. The economic advantages and the means of financing cleaner technologies should also be highlighted in the demonstration projects.*

This activity should be undertaken in cooperation with other institutions currently involved in cleaner production activities and with important stakeholders such as industrial associations, private banks and universities. (see also recommendations 4.4 and 7.2 b)

- (a) From January to June 2006, a pilot project "Preparatory assistance for the establishment and operation of a National Cleaner Production Programme in Serbia" was carried out with UNIDO. The Ministry of Science and Environmental Protection and the Ministry of the Economy coordinated this project. The Faculty of*

Technology and Metallurgy of the University of Belgrade was the implementing institution. Six enterprises, of which four are private, participated, and the results were:

- An environmental team for cleaner production was established;
- An environmental policy was adopted;
- A cleaner production assessment was carried out in accordance with UNIDO methodology; and
- Cleaner production projects on the savings of materials and energy, a decrease in all air, water and ground emissions, the minimization of waste generation, and the reuse of on-site waste and emissions were all initiated.

- (b) By the end of 2006, a project was initiated which defines the specific requirements for the establishment and organization of the National Cleaner Production Centre (NCPC) in Serbia, which will be based on a strong sectoral approach, concentrating mainly on the national priority sectors, namely on agro-industry and chemical. The NCPC will play an important role in coordinating all national CP efforts and will promote partnership links between public and private institutions at the national and regional levels and enhance capacity-building for more effective market access. Support is planned for a period of 36 months.

Recommendation 10.4:

Serbia's Agency for Privatization should include environmental clauses in the sales contracts for the privatization of enterprises and industries.

See implementation status of Recommendation 10.5.

Recommendation 10.5:

The Government of Serbia should regulate and increase the role of their environment ministries in the privatization of enterprises and industries by introducing environmental audits or environmental impact assessments including cost estimation of the environmental damage from past pollution.

Under the *Law on Privatization*, environmental audits can be required without cost estimation of the environmental damage from past pollution. The Government issued a Decree that prescribes:

- A list of projects for which an environmental impact assessment is obligatory; and
- A list of projects for which an environmental impact assessment may be required.

The lists are in accordance with Annex I of the Directive amending the *Directive of the Council 337/85 on assessment of the impact of certain public and private projects on the environment 97/11*.

Recommendation 10.6:

The Ministry of Economy and Privatization, in cooperation with the Ministry for Protection of Natural Resources and Environment and the Ministry of Health, should prepare and adopt an action plan for industrial development that takes full account of the health of the population and the sustainability of the environment.

The 2006 *National Environmental Strategy* contains some mechanisms that provide for the protection of the environment to be taken into consideration in other policies. The current situation of the institutional framework for environmental protection is characterized by inconsistency and overlapping responsibilities and competences between institutions.

Unspecified and unclear division of competences regarding issues on water, land, forests, and mineral resources leads to compartmentalized, incomplete and ineffective approaches to their protection. Most environmental institutional reforms will be carried out in the short term (2006-2010), as they are usually the preconditions for implementation of other policy reforms.

The strengthening of capacity in all Ministries for integration of environmental issues in sectoral policies is needed to integrate environmental policy with other sectoral policies, especially those pertaining to energy, industry, agriculture, transport, privatization and tourism.

Recommendation 10.7:

The Ministry for Protection of Natural Resources and Environment should draw up a detailed action plan for institutional strengthening and capacity building in the enforcement, inspection and control of industry's environmental performance to be implemented as soon as possible. The plan should specifically focus on:

- *The effective organization and use of the resources of the Ministry allocated for the enforcement, inspection and control of polluting industries;*
- *The identification of needs for additional resources;*
- *The improvement of professional skills and technical know-how in environmental management, pollution abatement, cleaning measures and cleaner technologies;*
- *The provision of the necessary equipment;*
- *The standardization of the inspectors' work;*
- *Possibilities for delegation to the municipalities; and*
- *The introduction of self-monitoring through voluntary agreements.*

(see also recommendations 1.4 and 6.3)

A section within DEP has been created. At the end of the 2005, a *Manual for Environmental Inspectors* was published by the environmental inspectorate. The first part of the book focuses on environmental legislation, the second on the minimum criteria for environmental inspection, including checklists, reports, orders and lawsuits. A "Guideline on contents of the annual work plans and on contents of reports of carried inspections supervision as well as on method and conditions on sending reports" is under preparation, and should be adopted by end of 2007 and effectively applied from January 2008. According the LEP, autonomous province and local self-governments should perform inspection supervision over the implementation of activities mentioned under the LEP. Self-monitoring is also regulated by law, but there are no cases reported.

Recommendation 10.8:

The Ministry for Protection of Natural Resources and Environment should assess both the need for clean-up operations additional to the already planned activities and the potential risk of chemical accidents. An action plan should be prepared and implemented to ensure the necessary clean-up operations and to minimize the identified risks. (See also recommendation 8.1. and 10.2)

No action taken. See implementation status of Recommendation 10.2.

CHAPTER 11: Energy and the environment**Recommendation 11.1:**

The Federal Ministry of Economy and Internal Trade and the relevant authorities of the two republics should:

- (a) *Update the existing Strategy for the Development of the Energy Supply Industry and develop action plans and programmes to improve energy efficiency and integrate environmental principles in the energy sector; and*
 - (b) *Promote and implement a legislative framework and develop an institutional framework to facilitate implementation.*
- (a) In 2005, the Government adopted the *Energy Sector Development Strategy by 2015* and the *National Action Plan on Gasification*. Strategy programmes ("Energy Efficiency in Industry" and "Energy Efficiency in Municipal Sector") were to be introduced in 2005. The Government approved the *Action Plan for Improving Energy Efficiency and the Strategy and Programmes to Promote Renewable Energy*. The *Strategy of Introducing Cleaner Production* is in an early phase of preparation.. The Energy Law was adopted in 2004, and the *Treaty Establishing the Energy Community* was ratified in 2006. The Government established the following institutions:
- The Energy Efficiency Agency in 2002; and
 - The Energy Agency in 2005.

- (b) The secondary framework is still missing.

Recommendation 11.2:

Serbia's Ministry of Energy and Mining should end all subsidies of energy prices. The electricity companies should be allowed to set prices to reflect the real economic costs. Targeted support for vulnerable users should be included as part of the tariff reform.

Energy prices are still subsidized. Petrol is the only fuel following market prices so far. For gas, electricity, and heat for district heating, prices are still subsidized. Electricity prices have risen continuously since 2002, but are still not covering production costs. Electricity prices for industry are lower than in all neighbouring countries.

The actual block tariff for electricity is often seen as a social tariff, although it has not been developed for social reasons. The Energy Agency is preparing a new tariff system. The Government has to adopt it and will decide on electricity prices. Support measures for vulnerable users by financial support are being discussed.

Recommendation 11.3:

Serbia's Ministry of Energy and Mining, together with the energy efficiency agency (once established) together with the electricity company, should start broad-based public information campaigns to publicize energy-saving and energy-efficiency measures.

The Energy Efficiency Agency has started education and training programmes in the building sector, in industry and in municipalities, for example training of energy managers in municipalities. The Electric Power System of Serbia (EPS) has also run educational programmes for children to show that electricity is the most expensive form of energy and that it should be rationally consumed.

Recommendation 11.4:

Serbia's Ministry of Energy and Mining should begin the restructuring of their energy sectors as soon as their national assemblies adopt the new energy laws.

The Ministry of Energy and Mining should establish an energy efficiency agency and ensure that it receives sufficient resources to develop and implement the approved energy policies and strategies.

The restructuring of the energy sector is under way. Unbundling has progressed in some fields. The Electric Power System is in charge of generation, distribution and sales, while a newly established entity is responsible for the energy network and grid management.

Unbundling has also progressed in the oil and gas sector. An important step was the establishment of the Energy Agency as a regulatory body with the task of enhancing the development of an open energy market and setting its rules. The Agency has developed methodologies that regulate price-setting in the electricity, natural gas, oil and oil derivatives transportation sectors, which should come into force in January 2007.

The Energy Efficiency Agency was established in 2002. It has so far been focused on pilot projects rather than on developing and implementing energy policies and strategies.

Recommendation 11.5:

Serbia's Ministry of Energy and Mining, together with the energy efficiency agency (once established) should introduce a standards and labelling system for household appliances to decrease electricity consumption.

There are no standards or labelling systems for household appliances. Until now, the Energy Efficiency Agency has mounted a campaign explaining the labelling system used in the EU to raise public awareness.

Recommendation 11.6:

Serbia's Ministry of Energy and Mining, together with the energy efficiency agency (once established) in cooperation with the management of the thermal power plants, should:

- (a) Rehabilitate the thermal power plants to a state where they can operate within emission limits, as a matter of priority;*
- (b) Provide the necessary financial resources for this purpose, through increased tariffs and governmental funding; and*

- (c) *Introduce a fee system guaranteeing the emission limits and forcing the production plants to comply with them.*
- (a) Measures on modernization have been started with electrical filters at several power plants to reduce emissions of dust. As for measures for SO₂ reduction, these are planned from 2008 onwards. Compliance with the directive on large combustion plants is planned from now until 2014.
- (b) As electricity prices are still below production costs, the State-owned companies' budget for environmental measures is limited and necessary measures to reduce environmental damages are delayed. Apart from these companies' budget, funding can also come from international funds and loans, as well as from Serbian Environmental Fund.
- (c) A fee system for plants operating under the IPPC directive has been in use since 2005.

Recommendation 11.7:

The Ministry of Energy and Mining, through the energy efficiency agency, should:

- (a) *Work toward increasing the share of co-generation. Natural gas should be used as a fuel. The Ministry should also remove existing market barriers for the heating companies to deliver electricity to the grid; and*
- (b) *Begin now to develop a strategy on how to overcome the constraints on renewable energy sources and to begin an implementation programme on the basis of this strategy. The implementation programme should include demonstration projects and create favourable conditions for new or existing production units using renewable energy sources, e.g. priority in production, a smoother approval process, attractive tariffs, investment support.*
- (a) A strategy or programme to increase the share of co-generation does not exist yet. Market barriers for heating companies to deliver electricity to the grid still exist. Privileged heat producers (including heat from combined heat and power (CHP) plants) are entitled to the benefit of relief measures, (e.g. tax relief) according to the Energy Law, but there is no information on current practice.
- (b) A strategy and programme do not exist. A strategy is under preparation. Privileged electricity producers such as producers using renewable energy sources are entitled to preferential measures (tax relief), but the rules and secondary legislative framework are missing. Permission procedures are very complicated. The Energy Efficiency Agency is preparing several projects (biomass and small hydropower).

Recommendation 11.8:

The Ministry of Energy and Mining, in cooperation with the municipalities, should rehabilitate district heating plants in line with modern heating concepts, adjusting the capacities of all components to energy demand estimated after implementation of energy-saving measures.

Some district heating companies have started rehabilitation work and also pilot projects to save heat energy demand by introducing valves and metering systems as well as consumption-based prices. Some programmes on energy efficiency, on new renewable energy sources, on environmental protection, on scientific research and technological development, and on specialized education and training of personnel are being applied to existing and entirely new activities within the energy activities, including the introduction of a modern energy statistical system and adoption of additional-specific energy regulations for improving the performance of energy activities.

CHAPTER 12: Agriculture and the environment

Recommendation 12.1:

Serbia's Ministry of Agriculture and Water Management should transpose European Union regulations on phytosanitary, veterinary and food safety and genetically modified organisms and implement them as a priority. An important part of the implementation will be to organize the responsible institutions and make enough funding available to them. Serbia and Montenegro should work together to find efficient collaborative solutions.

Directives on phytosanitary, veterinary and food safety, genetically modified organisms and novel foods, food and feed hygiene, animal by-products, animal feed, packaging, labelling, natural water, additives/flavourings, pesticide residues, contaminants, irradiation, animal health, animal welfare, plant health, plant protection products, and import controls were transposed into the national legislation.

Recommendation 12.2:

- (a) *The Ministry for Protection of Natural Resources and Environment and the Ministry of Agriculture and Water Management should establish an inter-ministerial working group, which should be a forum to discuss and make proposals on policy development in the agricultural sector.*
- (b) *The inter-ministerial working group (if established), or the Ministry of Agriculture and Water Management, should manage the process of developing practical national codes of good agricultural practices and recommendations for their implementation. Measures should be taken to involve the other stakeholders, e.g. agricultural institutes, farmers associations, in this process.*

Due to disagreements on responsibility-sharing regarding the protection of forests and waters, the two institutions never established an inter-ministerial working group.

Recommendation 12.3:

The Ministry of Agriculture and Water Management, in further developing the extension services in Serbia, should support the implementation of “codes of good agricultural practices” once they have been established. In particular it should give the extension service a mandate and resources to actively promote the optimal and efficient use of agricultural inputs by helping farmers establish nitrogen management plans and apply integrated pest management where necessary.

The Ministry of Agriculture, Forestry and Water Management has already initiated projects to implement codes of good agricultural practices. With the World Bank’s support to rural areas in difficulty and with the financial involvement of the interested farmers, the Ministry is establishing nitrogen and phosphorus mitigation management plans.

Recommendation 12.4:

The Ministry for Protection of Natural Resources and Environment, the Ministry of Agriculture and Water Management and the Ministry of Health should initiate research programmes to improve the interdisciplinary understanding of the effects of agriculture on health and the environment. Improving the understanding of how to minimize nutrient and pesticide run-off, and finding cost-effective and environmentally friendly solutions for the handling of manure are two examples. These research programmes should be linked to the development of codes for good agricultural practice, and the results used in training programmes for advisers from the extension services and in higher agricultural education.

This recommendation has not been fully implemented. It is worth mentioning, however, a project financed under the GEF-World Bank Investment Fund for Nutrient Reduction in the Black Sea/Danube Basin: “Serbia Danube River Enterprise Pollution Reduction Project”. The preparation of the Project was executed by the DEP and the implementing agency is the Ministry of Agriculture, Forestry and Water Management.

The aim of the proposed project is to increase the prevalence of environmentally friendly practices among polluting enterprises in the Danube basin of the Republic of Serbia. In particular, the project will target nutrient pollution from livestock farms, notably pig and cattle farms, as well as nutrient-discharging industries such as fertilizer factories and slaughterhouses. It has three components: Regulatory Reform and Capacity-Building, Investment in Nutrient Reduction, and Awareness-Raising and Replication Strategy.

The Ministry of Agriculture, Forestry and Water Management will use this project as a base to extend the project’s principles to the full territory of the country. This will be based on voluntary and financial contributions from farmers.

Recommendation 12.5:

The Ministry of Agriculture and Water Management should promote the development of organic farming.

The Ministry of Agriculture, Forestry and Water Management promotes organic farming. These farmers receive financial or technical help from the Ministry to apply organic farming principles and to diversify their production. In 2005, the Ministry provided funds from the State budget for the certification of organic production (40% of certification value). In 2006 the Ministry provided funds for the promotion of organic production, the education of producers, the establishment of organic production, and for certification. Support measures for development of organic production are envisaged for 2007 as well.

The Ministry has organized and supported producers of organic products for the “Bio Fach” Fair in Germany in 2005 and 2006, and continuation of this support is envisaged for 2007.

Recommendation 12.6:

The Ministry of Agriculture and Water Management and the Ministry for Protection of Natural Resources and Environment should promote ecological labelling of food products. Support should primarily be directed towards developing regulations, capacity building, providing information to the public and establishing and developing organizations for organic farming.

The Ministry of Agriculture, Forestry and Water Management promotes ecological labelling of food and agricultural products. Until now, the certification is delivered by foreign companies. A tendering is ongoing to have in the country a company able to certify and deliver an eco-label. A Serbian eco-label is on the preparation phase.

The Division for Organic Production has been established in December 2005, within the Sector for Rural and Agricultural Development of the Ministry of Agriculture, Forestry and Water management.

In 2006, the Parliament adopted the *Law on Organic Production and Organic Products* (OG RS No. 62/2006), which has been adjusted to Regulation 2092/1991, the *Regulation on the requirements for the legal entity issuing certificates for organic products and on the issuing procedures*, and the *Regulation on packaging, storage and transport of organic products* (OG RS No. 96/2006). Preparation of other by-laws is under way. In December 2006, the National Label for organic products was announced.

Recommendation 12.7:

The Ministry of Agriculture and Water Management should include the following in an environment-related regulatory framework for agricultural production in a medium-term perspective and apply those considered feasible:

- *Application of the same permitting and inspection procedure for large animal production facilities as for any other industrial production facility;*
 - *Restrictions on animal density per acreage of manure disposal;*
 - *Instructions for manure storage facilities and spreading practices;*
 - *Obligatory tests of pesticide sprayers and training of farmers using pesticides;*
 - *Regulations on non-tilled protection zones along watercourses including drainage canals;*
 - *Impact on biodiversity; and*
 - *Restrictions on the use of genetically modified organisms.*
- (see also recommendation 9.2.)*

Official controls of animal origin products are conducted according to the following regulations:

- *Law on Veterinary Matters* (OG RS No. 91/2005),
- *Regulation on the mode of conducting veterinary-sanitary examination and control of animals before slaughter and control of products of animal origin* (OG SFRY No. 68/1989),
- *Regulations on Loading, Reloading and Unloading of Animals, Products, Raw Materials and Animal Waste, Transportation Vehicle Requirements, Sanitary and Technical Condition of the Consignment and Form of the Consignment Health Condition Certificate* (OG SFRY No. 69/1990),
- *Regulation on the quantities of pesticide, metals, metalloids, and other toxic substances, drugs anabolic and other substances that could be found in food* (OG SFRY No. 5/1992, 1119/92 and 32/2002), and
- *Regulation on Marking and Identification Mark of Packed Food Stuff* (OG SCG, No.4/2004)..

Instructions for manure storage facilities and spreading practices are under preparation. Mandatory tests of pesticide sprayers and the training of farmers using pesticides are regularly conducted. The competent authority for management of genetically modified organisms (GMOs) is the Ministry of Agriculture, Forestry and Water Management. GMOs are regulated by the following laws and by-laws:

- *Law on genetically modified organisms* (OG FRY No. 21/2001);
- *By-law on restricted use of genetically modified organisms* (OG FRY No. 62/2002);
- *By-law on content and data of register of genetically modified organisms and products from genetically modified organisms* (OG FRY No. 66/2002);
- *By-law on trading with genetically modified organisms and products from genetically modified organisms* (OG FRY No. 62/2002); and
- *By-law on introducing into production genetically modified organisms and products from genetically modified organisms* (OG FRY No. 62/2002).

The Ministry of Agriculture, Forestry and Water Management drafted a new Law on genetically modified organisms harmonized with relevant EU directives. The draft law on GMOs defines conditions for GMO usage; the deliberate introduction of GMOs into environment; the production, handling, trade, transport, the labelling of GMOs or product containing GMOs; and the conditions and measures for prevention and mitigation of potential harmful effects resulting from use of GMOs.

According to the existing *Law on genetically modified organisms* (OG FRY No. 21/2001), there is no obligation for the labelling of GMO products. Certain by-laws contain provisions regarding labelling, but existing legislation does not provide for conditions for their implementation. Therefore, a new draft Law is being prepared to overcome his situation.

Existing legislation defines fines for unauthorized use of GMOs that can have harmful effect on human health, with possible imprisonment of up to one year.

Recommendation 12.8:

The Ministry of Agriculture and Water Management and the Ministry for Protection of Natural Resources and Environment, at the outset of the reforms that are planned, should define national priorities for the preservation of biotopes and the rural landscape, including wetlands. Priorities for the preservation of biotopes and landraces of crop plants and animals could be developed within the framework of a national biodiversity strategy. The priorities should be an important background for the development of agricultural policies.

The *Agriculture Strategy* adopted in 2005 stipulates a number of activities for the management and conservation of genetic resources for food and agriculture. The protection of agro-biodiversity is ensured by the implementation of the *Convention for Biodiversity Conservation*. The national databases referring to plant and animal genetic resources are harmonized with international standards. The Ministry of Agriculture, Forestry and Water Management has supported projects dealing with the management, conservation and research of agro-biodiversity. Harmonization of the national legislation with EU legal acts has not been completed.

CHAPTER 13: Transport and the environment

Background information:

The Ministry of Capital Investments³ has taken over responsibilities regarding transport matters. The Road Directorate was created in July 2006. An environmental unit was set up within the Directorate. This unit serves as a link with the governmental authority responsible for the environment.

Recommendation 13.1:

The responsible authorities of the Federal Government and Serbia should allocate a greater percentage of funding for rail, water and urban public transport based on sustainable transport policies. Consideration should also be given to services for non-motorized transport.

Sustainable transport policies have not yet been introduced. The situation is as follows:

- The condition of the railway infrastructure has deteriorated due to lack of maintenance. The share of railways in passenger and cargo transport has significantly declined in the past decade.
- Harbours generally do not have adequate environmental infrastructure and environmental protection systems.
- Public transport is not promoted. Infrastructure is obsolete and not maintained, as are public transport vehicles. The population thus relies on road transport.
- The state of network road infrastructure has deteriorated due to lack of maintenance and to war damage.

Recommendation 13.2:

The responsible authorities of the Federal Government and Serbia should develop a strategy to phase out highly polluting cars and to introduce high-quality fuels, taking into account environmental elements. This could be achieved through fiscal measures, such as eco-taxes and car registration taxes, or other measures.

It is forbidden to import cars that are not compatible with the EURO III standard. The Government considers that this measure will lead to a gradual renewal in the car fleet.

Recommendation 13.3:

Serbia's Ministry of Transport and Telecommunication, in collaboration with its Ministry for Protection of Natural Resources and Environment should develop a sustainable transport policy that fully incorporates environmental considerations through strategic environmental assessments. In Serbia, the spatial plan should be integrated into the policy that will be developed under the new Law on Planning and Construction.

Serbia should also actively participate in the Subgroup on Environment and Transport in the framework of the Central European Initiative and in the Transport, Health and Environment Pan-European Programme (THE PEP).

Serbia adopted the laws on strategic environmental assessment (SEA) and environmental impact assessment (EIA) in 2004. SEA is however in the beginning phase and the conditions to carry on a complete SEA are not fully implemented. Implementing legislation is still incomplete or missing. Serbia participates in the Subgroup

Recommendation 13.4:

Serbia's Ministry for Protection of Natural Resources and Environment, in cooperation with its Ministry of Transport and Telecommunications, should promote capacity building in the municipalities in transport issues and should assist the secretariats for environmental protection and the persons responsible for making transport-planning decisions to receive training in environmental management and sustainable transport principles.

Not implemented.

Recommendation 13.5:

The relevant authorities in Serbia should develop a plan to phase out the use of leaded petrol as quickly as possible taking into account an existing database (UNECE "Regional Car Fleet Study") to identify the fuelling requirements of all vehicle types in their republics and, if necessary, the changes needed to run the vehicles on unleaded petrol.

The Government has no real plan to phase out leaded petrol in the short term. It is introducing some measures that would help to facilitate a steady change of the car fleet:

- Annual technical checks (security and pollution); and
- Ad-hoc checks followed by immediate upgrading, if necessary.

See also implementation status of Recommendation 13.2

Recommendation 13.6:

Serbia's Ministry of Transport and Telecommunications (Road Administration) should:

- (a) *Ensure that environmental impact assessment is carried out when building new or reconstructing existing transport infrastructure; and*

- (b) *Ensure that environmental parameters, for instance the results of the EIAs, are integrated into the new database.*
- (a) According to the 2004 *Law on Environmental Impact Assessment*, impact assessments shall be carried on projects on transport (including infrastructure). In particular, all the projects that are planned in areas with protected status. See implementation status of Recommendation 13.3.
- (b) There is no database to store the results of EIAs.

Recommendation 13.7:

The Water Traffic Administration, in collaboration with the Ministry for Protection of Natural Resources and Environment and Danube partners, should assess the application of an indirect tax system for shipping waste in Serbia, and should develop such a system, as appropriate.

Neither the Water Traffic Administration nor the Ministry of Science and Environmental Protection assessed the application of the above tax system. There is currently no plan to consider it.

Recommendation 13.8:

The Water Traffic Administration, in collaboration with the Ministry for Protection of Natural Resources and Environment and Danube partners, should assess the toxicity of the river sediments and war debris and make arrangements for clean-up and the appropriate disposal of these materials.

The European Commission, through the CARDS program, funded and carried out in 2003-2005 a Master Plan for the improvement of the Serbian waterways. Areas covered by the Master Plan include: the regulation of free ship navigation, the rehabilitation of waterways, and the development of ports. In the coming years, five projects identified in the Master Plan will be implemented and one will include the clean up of polluted river sediments and war debris.

CHAPTER 14: Tourism and the environment

Recommendation 14.1:

Serbia's Ministry of Trade, Tourism and Services, in cooperation with its Ministry for Protection of Natural Resources and Environment should:

- (a) *Each prepare and submit for approval by the Government a policy for sustainable tourism. The policy should serve as a framework for all tourist-related activities. In Montenegro, it should be consistent with its declaration as an Ecological State (1991);*
 - (b) *Develop a tourism master plan, also based on the overall policy for sustainable tourism, to allow for appropriate economic, spatial and resource planning and the development of the necessary infrastructure in tourist areas. In Serbia, the master plan should be harmonized with the draft action plan for sustainable tourism in protected areas. In Montenegro, where a tourism master plan has already been drafted, the Ministry should ensure that it reflects the (new) sustainable tourism policy;*
 - (c) *On the basis of the policy, develop guidelines for tourism development at the local level and introduce eco-standards for tourist premises;*
 - (d) *On the basis of the policy, identify the important sustainable tourism indicators and provide the means for monitoring, collecting and evaluating the data accordingly; and*
 - (e) *In cooperation with the Ministry of Culture, make an inventory of all sites of tourist interest. As the sites are identified, individual plans for their sustainable development should also be prepared (e.g. for sustainable tourism in national parks).*
- (see also recommendation 9.4)*
- (a) The Ministry of Trade, Tourism and Services (www.minttu.sr.gov.yu) developed the *Strategy for Development of Tourism till 2015*, which was adopted in October 2006. The *Strategy* includes all principles of sustainable tourism.
 - (b) The Tourism Master plan is part of the *Strategy*. Protected areas are not yet included in the Tourism Master Plan. Some tourism activities are running in the protected areas. These economic activities have to comply with the 2005 *Law on Tourism*.
 - (c) Guidelines for tourism development were developed. Eco-standards are still in preparation phase.

- (d) In cooperation with United Nations World Tourism Organization (UNWTO), sustainable tourism indicators were introduced. In addition, Serbia started a project with UNWTO called the Satellite Tourism Account.
- (e) Some inventories were accomplished, especially regarding ancient Roman architecture, in collaboration with NGOs and the Ministry of Culture.

Recommendation 14.2:

Serbia's Ministry for Protection of Natural Resources and Environment should establish the following economic instruments to support sustainable tourism:

- Entrance fees at national parks;
- Fiscal incentives for tourist premises that implement eco-standards, such as "green hotels" that give special attention to the conservation and protection of resources such as water and energy.

(see also recommendation 9.4)

- There are some projects either to create gates at the entries of the National Parks and collect fees or to create tolls for road crossing protected areas.
- There are no incentives towards a "green" management of any type of economic activity.

Unfortunately, illegal buildings in National Parks have been reported. No concrete action has been taken to combat this issue.

Recommendation 14.3:

Serbia's Ministry of Trade, Tourism and Services, in cooperation with its Ministry for Protection of Natural Resources and Environment should:

- (a) Carry out widespread campaigns to raise awareness of sustainable tourism particularly among hotel managers, tourist agencies, tourists and municipal authorities. The campaign should make use of workshops, community meetings, brochures and posters, among other media; and
- (b) In cooperation with Serbia's Ministry of Education and Sport introduce sustainable tourism development into the curricula of the higher schools for tourism and catering.

- (a) Some campaigns to raise awareness of sustainable tourism are being launched in Serbia. Some training is also provided for managers in all economic tourist activities.
- (b) The University in Belgrade and a high school in Novi Sad have introduced the sustainable tourism development concept into their curricula.

Recommendation 14.4:

The Government of Serbia should establish an inter-ministerial body on sustainable tourism that would also include representatives of local authorities and appropriate non-governmental organizations.

No inter-ministerial body on sustainable tourism has been created. The Ministry of Trade, Tourism and Services plans to create an Agency for Tourism in 2007.

CHAPTER 15: Human Health and the Environment

Recommendation 15.1:

The Federal Secretariat for Labour, Health and Social Care, Serbia's Ministry of Health, in cooperation with its Ministry for Protection of Natural Resources and Environment should:

- (a) Together draw up a national environmental health action plan (NEHAP) to identify priorities and establish an implementation plan, paying particular attention to resource requirements. Among other issues, the NEHAPs should address activities for awareness-raising, and define a strategy to improve waste-water treatment, waste disposal, air quality, drinking water, food safety and traffic safety;
- (b) Consider the establishment of an intersectoral body for environmental health that would, inter alia, aggregate, analyse and interpret the relationship between existing environmental and health data; review existing laws, conventions and regulations for environment and health, with particular reference to World Health Organization (WHO) guidelines and European Union regulations; and coordinate environment and health activities with a view to building strong environmental health networks at all levels;
- (c) Help municipalities to develop local environmental health action plans with strong public participation; and

- (d) *Give consideration to the UNECE-WHO Transport, Health and Environment Pan-European Programme (THE PEP) as a policy tool around which specific actions and partnership (including at the international level) to tackle the environmental and health problems posed by transport could be developed.*
- (a) According to the decisions made at the WHO workshop organized in Belgrade in March 2006, the Serbian national *Children's Environment and Health Action Plan (CEHAP)* working group (National CEHAP Committee) decided to draft a new CEHAP (*Children's Environment and Health Action Plan*).
- (b) After splitting of the State Union into two separate countries, Serbia started the official nomination of its National CEHAP committee, consisting of representatives from different sectors and experts from various institutions. This working group is now reviewing existing laws and regulations on the environment and health, interpreting the relationship between environment and health data to the WHO Office Bonn and drafting the CEHAP.
- (c) Municipalities are aware of the importance of environmental health process and most of them are already involved in the creation of local environmental action plans (LEAPs). The guidelines for incorporating the "health" component in these plans must be given on behalf of responsible Ministries for environment and health.
- (d) Local City Secretariat for Environmental Protection of Belgrade has its representative in the National CEHAP Committee and is a good example of close cooperation between national and local level.
- (e) The *PEP Programme on Transport, Health and Environment* is already considered as a policy tool and specific actions are developed in the transport sector. A new *Law on Traffic Safety* is being adopted, considering the fourth Ministerial Conference's recommendations on children's health and environment.

Recommendation 15.2:

- (a) *The appropriate statistical office(s) should carry out a census as soon as feasible;*
- (b) *The statistical offices and public health institutes at all levels should cooperate to identify a common set of essential environmental health indicators that need to be monitored and reported on a regular basis and decide among themselves on which institutions should be responsible for collecting these data. These data should be collected systematically and made available to the public. Ongoing international developments could provide a most useful reference for this work, also in view of improving international comparability of data;*
- (c) *The public health institutes at all levels should address the need to undertake combined exposure assessments and analyses of health and environmental data in order to identify the negative health effects of environmental pollution. This should include reviewing the existing data collection and standardized protocols for data collection and evaluation, in close cooperation with statistical offices. Missing data should be identified and recommendations on reorganizing data collection should be given. The result of the analysis should be routinely reported; and*
- (d) *Serbia's Ministry of Health, in cooperation with its Ministry for Protection of Natural Resources and Environment should initiate scientific investigations into the impact of specific local environmental pollution on health and address public concerns in relation to these issues.*
- (a) The Statistical Office of Serbia is carrying out the development of statistical data on Environmental Health.
- (b) Public health institutes at all levels already analyse environment and health data and identify negative health effects of environmental pollution (e.g. indoor and outdoor air, noise, pesticides, lead, poisoning). International developments provide useful guidelines, especially the Environment and Health Information System (ENHIS) project, which is a substantial step towards a comprehensive EH information system to support relevant policies, including those addressing children. This system proposes allowing international and interregional comparisons of the leading environmental health issues in Europe to be linked to national assessments by employing a uniform methodology. Serbia is invited to send data on four policy indicators:
- Policies to promote safe mobility and transport in children;
 - Policies to reduce weight problems and obesity in children;
 - Policies to reduce unintentional injuries to children not related to traffic; and
 - Policies to reduce child exposure to ultra-violet radiation.
- (c) Combined exposure assessments and analyses of health and environmental data to identify the negative health effects of environmental pollution are already provided within the Public Health Institutes related to

some environment risk factors. A review of existing data collection and evaluation is being made in close cooperation with statistical offices.

- (d) Certain scientific investigations regarding the impact of specific local environmental pollution on health are already planned with the advice of the Serbian National CEHAP Committee. There are no finances for these activities, even though this field was identified as a priority through the Biennial Collaborative Agreement (BCA) between WHO and the Ministry of Health. UNEP is supporting the project of investigating the lead impact, originated from traffic, on children's health. Also, several other studies and investigations were financed with the help of local authorities and NGOs, for instance:
- The impact on health of fly ash particles originating from Thermal Power Plant in Obrenovac; and
 - The impact of cadmium originating from tobacco industry in Nis, on the health of kindergarten children.

Recommendation 15.3:

The Federal Secretariat for Labour, Health and Social Care, Serbia's Ministry of Health should:

- (a) *Carry out continuous and major public awareness campaigns to reduce smoking among the population. Particular efforts should be made to prevent young people from taking up the habit. Initiatives such as "The National Committee for Tobacco Prevention", "Quit and Win" or "Clear the air from cigarette smoke" have to be strengthened financially; and*
- (b) *Work together to develop and pass anti-smoking legislation to protect children and other non-smokers from passive smoking. Existing regulations have to be enforced. No-smoking policies in public and private buildings should be initiated.*

The National Committee for Smoking Prevention established by the Ministry of Health tries to raise major public awareness of the risks of smoking and exposure to passive tobacco smoke among the population, in particular among children. A draft version of the *Strategy on Tobacco Control* has been prepared and was to be adopted by the end of 2006. Campaigns are regularly performed for the *World No Tobacco Day* and for the *National No Tobacco Day* on 31 January, as well as "Quit and Win".

The Parliament ratified the *Framework Convention on Tobacco Control* on December 1, 2005. The *Law on Smoking Ban in Closed Premises*, the *Law on Tobacco* and the *Law on Advertising* have been already adopted. Smoking is banned in all school premises. Selling tobacco products to children under 18 has been banned..

Recommendation 15.4:

The Federal Secretariat for Labour, Health and Social Care, Serbia's Ministry of Health, in cooperation with its Ministry for Protection of Natural Resources and Environment, should:

- (a) *Adopt and implement the WHO Guidelines for drinking-water quality in order to improve the microbiological and physico-chemical safety of drinking water; and*
- (b) *Strengthen the legal and institutional framework for monitoring and enforcing drinking-water quality standards in accordance with the UNECE Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes (see Recommendation 4.2).*
- (a) The WHO guidelines for drinking-water quality were partially adopted in the Book on Regulation on Hygienic Safety of Drinking Water (OG SFRY 42/1988). However, the preparation of a new Book is under way and takes into consideration the third edition of WHO Guidelines.
- (b) The ratification of the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes is under preparation. Also, activities regarding the ratification of the Protocol on Water and Health are ongoing.

Recommendation 15.5:

(a) *Serbia's Ministry for Protection of Natural Resources and Environment should regulate and implement the proper management of medical waste. This should include, inter alia:*

- *Developing separate collection strategies for wastes with different levels of hazardousness;*
- *Providing incinerations, disinfection and special treatment for infectious medical waste; and*
- *Exploring ways to reuse and recycle materials to reduce the amount of hazardous waste.*

These activities could begin as pilot projects, implemented in cooperation with local authorities, hospitals and other stakeholders.

- (b) *Serbia's Ministry of Health should, through their public health institutes, train medical professionals and others who have contact with medical waste.*
- (a) *The National Waste Management Strategy has been adopted, as have the Guidelines for Handling Pharmaceutical Waste. The European Agency for Reconstruction supported the supply of equipment for medical waste collection, including the procurement for 78 units of such equipment for the entire country.*
- (b) *Funding permitting, the Ministry of Health is training professionals and other citizens who may have contact with medical waste.*

Recommendation 15.6:

The Federal Secretariat for Labour, Health and Social Care, Serbia's Ministry for Protection of Natural Resources and Environment, in cooperation with its Ministry of Health, should:

- (a) *Supervise the medical check-ups of the population at risk in the hot spots, e.g. nursing mothers, to assess the possible health effects on industrial pollutants and the extent of the body burden of the pollutants. The data of human bio-monitoring and health effects should be combined with environmental monitoring data. Such knowledge helps to decide which environmental clean-up actions are most urgent;*
 - (b) *Initiate, during clean-up actions, human bio-monitoring and effect monitoring to measure the effectiveness of the actions; and*
 - (c) *Initiate epidemiological environmental research programmes in cooperation with international organizations, regional health authorities and research institutes.*
- (a) *Medical check-ups in the hot spots are already implemented in Serbia, especially in wide industrial and polluting zones. Data of human monitoring and decisions for most urgent clean-up actions are expected if the project on "capacity-building in children's health and environment in Serbia" is accepted for financial support.*
 - (b) *Clean-up actions are from time to time followed by monitoring to prove their effectiveness. One example is the air pollution monitoring in Pancevo and actions for the reduction of detected pollution.*
- Epidemiological and environmental research programmes in cooperation with WHO Regional and Country Offices will be possible, provided financial support in the field of environmental health is available from the international organizations or other donors.*