Strategic Environmental Issues in Central and Eastern Europe

Environmental Needs Assessment in Ten Countries

The Regional Environmental Center for Central and Eastern Europe
STRATEGIC ENVIRONMENTAL ISSUES IN CENTRAL AND EASTERN EUROPE
About the REC

The Regional Environmental Center for Central and Eastern Europe (REC) is an independent, non-advocacy, non-profit foundation. The REC was established in 1990 by Hungary, the United States, and the Commission of the European Communities. Seven countries have since joined these founding sponsors.

The REC's mission is to promote cooperation among diverse environmental groups and interests in Central and Eastern Europe; to act as a catalyst for developing solutions to environmental problems in this region; and to promote the development of a civil society. Beneficiary countries are Albania, Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Slovak Republic, Slovenia, and the Former Yugoslav Republic of Macedonia. In these countries, the REC primarily supports environmental non-governmental organizations (NGOs), but also cooperates with local authorities, national governments, academic institutions, and the private sector.

In addition to its headquarters and local office in Budapest, the REC has local offices in Warsaw, Bratislava (serving both the Czech and the Slovak Republics), Bucharest, and Sofia. There are local coordinators in Croatia, Slovenia, Albania, and the Former Yugoslav Republic of Macedonia.

The information presented in this document exclusively contains the opinions of the interviewees. No additional sources of information have been used. We would like to stress that the information presented does not necessarily represent an official view, or the view of all persons interviewed. It also does not necessarily represent the opinion of the Regional Environmental Center.

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STRATEGIC ENVIRONMENTAL ISSUES
IN CENTRAL AND EASTERN EUROPE

Volume 2

Environmental Needs Assessment in Ten Countries

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Regional Environmental Center for Central and Eastern Europe
The Regional Environmental Center presents Volume 2 of the Strategic Environmental Issues Report, containing reports on the environmental needs assessment in Albania, Bulgaria, Croatia, the Czech Republic, Hungary, the Former Yugoslav Republic of Macedonia, Poland, Romania, the Slovak Republic and Slovenia, conducted between October 1993 and April 1994. This volume is based on information collected during questionnaire-based interviews conducted with nearly 150 top government, non-governmental organization (NGO), academic and business experts from the region. From February to May of 1994, the draft country surveys were revised and updated as comments were received from the interviewed experts. The opinions and interpretations presented were taken directly from the original sources. While Volume 1 presents a regional analysis and an annex containing concise country specific information, Volume 2 provides a more detailed picture of the situations in the individual countries. Lists of the interviewed experts appear in the Appendix 1, the questionnaire used to conduct the interviews is shown in the Appendix 2.

The country reports highlight priority environmental problems as seen by environmental experts from the CEE countries, with special attention given to the relationship between those problems and the particular characteristics of the transformations occurring in each country. The extensive information collected through the interviews has been presented in as uniform a manner as possible to enable recognition of the differences and similarities between the countries. In addition to reviewing the most critical environmental problems in the different countries, Volume 2 illustrates many opportunities for cooperation among CEE countries in developing solutions to those problems.

There are many similarities among environmental issues challenging the CEE countries. These countries are also experiencing similar phenomenon related to the political, economic and social transformations they are undergoing as they strive to develop market based economies and democratic societies. Having similar goals and challenges creates a setting in which cooperation could be extremely helpful to all concerned. However, one of the first steps towards such cooperation is the preparation and exchange of comparable information on the strategic issues confronting them. This volume provides such information.

There are several benefits which may be drawn from the information presented in this volume:
- countries may identify their strengths and weaknesses in addressing various environmental issues in comparison with their CEE neighbors;
- opportunities and strong encouragement to establish contacts, exchange experiences and to provide mutual support in solving environmental problems within the region are presented;
- environmental impacts of the transition processes occurring in the CEE countries may be investigated, and;
- suggestions for how Western environmental assistance programs can be improved and how CEE countries can more effectively use and attract such aid are given.

Cooperation among the CEE countries in environmental protection has thus far been rather limited yet the potential for this remains great. The exchange of information and experience in many areas (i.e. environmental legislation and policy, implementation of economic instruments and the establishment of environmental finance systems) as well as the utilization of advisory and training skills existing in the region could be beneficial to all countries of the region. We hope that this publication can help to expand this cooperation.

This volume was prepared by Jürg Klarer and Patrick Francis with the support of the REC Initiatives Team. The following persons conducted interviews and drafted country reports: Andras Bezegh (Hungary); Sergiu Cristofor (Romania), Patrick Francis (Bulgaria, FYR Macedonia, Poland and Romania), Marijana Ivanova (FYR Macedonia), Jürg Klarer (Czech and Slovak Republics), George Romanca (Romania), Voline van Teeseling (Albania), Magdolna Toth Nagy (Croatia and Slovenia), Veselava Tsakova (Bulgaria) and Janos Zlinszky (Hungary). Additional interviews were conducted by Jason Brandwene (Czech Republic), Renata Kiss (Slovak Republic), Nianta Thomas (Hungary) and Voline van Teeseling (Hungary). The draft reports were language proofed by Marguerite Downey.

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Stanislaw Sitnicki, Executive Director
ALBANIA

Political, economic and social impacts on environmental protection at the spring of 1994

Political changes

Albania was subjected to very strict communist rule for a period of about 55 years. The Albanian society was much more restricted from contact with other countries than many of the other former communist ruled nations of CEE. This perhaps explains the fact that protests against the political system started only at the end of 1990. Those protests started among students, mainly for economic reasons, and were later supported by intellectuals and the working class. The repression was so fierce that a dissident movement could never really develop. In early 1991, the first free elections were held, but they were won by the Socialist Party. Another year of protests followed and, in 1992, after the second free elections in Albania, the Social Democratic Party established itself as the largest party in the country and the democratization process made a real start.

In the early days of the political transformation process, the environment became a relatively important political issue. The environmental problems in Albania were most visible negative effects of the totalitarian system and the uttering of environmental protest was seen as an expression of anti-communist ideas. In the early days of the new government environmental NGOs formed, from which the Association for the Preservation and Protection of the Natural Environment of Albania (PPNEA) has become the most important voice for the environment outside the government.

In the following years the importance of the environment as a political issue decreased. Although two years ago the Committee of Environmental Protection (CEP) was established within the Ministry of Health, the political importance of environmental problems is rather low. This Committee has little real authority. In fact, it consists of only 11 experts and it does not have an independent status. While it has considerable power under the environmental protection law it has not been able to exercise this power. The position of the Green Party in Albania is illustrative as well: it has no representatives in the Parliament and it is not considered to be a serious partner by the other parties.

Economic changes

The restructurization from a planned to a free market economy is the cause of many problems in Albania. Inflation was enormous in the beginning and the country experienced rates of 50% monthly. By the end of 1993, however, inflation stabilized at a rate of 3 to 4% per month. The privatization process is having rather extreme effects on Albanian industry. Only very few State companies survived the privatization process. Most of the enterprises in sectors like the chemical, metallurgical, and mechanical industries, have been closed down because of outdated technologies and inefficient production systems. Although the impact of closing down major industrial operations has been disastrous on the economy and employment, the impact on the state of the environment is without doubt positive. The air pollution resulting from industry, has decreased to a great extent. The quality of surface water and groundwater has also improved, as well as the quality of soil. These improvements are partly overshadowed by the fact that the closed down operations have left Albania with serious problems due to persistent pollution created in the past.

The enterprises that have not been closed down are mostly still State property. These enterprises are facing financial difficulties and are often barely able to pay their employees’ salaries. It’s not surprising that those enterprises are not able (nor sometimes willing) to invest in the environment. However, it seems that new enterprises are not interested in environmental investments as well. The motivations for foreign companies to start in Albania may be related to the lax environmental requirements. In the early days following democratization no environmental legislation existed and no control on the establishment of new companies was present. As a result, many illegal activities were set up at that time.

Privatization has also occurred in the agricultural sector, with somewhat more success than the industrial sector. About 70% of State-owned land has been privatized thus far. Besides the social problems (occasional disputes between former and future landowners) the privatization in agriculture led to the redistribution of agricultural lands. Land from former cooperatives has been divided into small pieces. In order to increase the workable surface area, terraces are being cut into the mountainsides. The effect of this terrace building is disastrous soil erosion. On the other hand, the use of pesticides and fertilizers has decreased in recent years, because they are too expensive for the private landowners and farmers are too inexperienced with the use of them. Under the former political system, farmers used to be advised by State experts in the cooperatives on the use of fertilizers and pesticides. The conclusion can be drawn that the privatization of land had both positive (reduction of use of pesticides and fertilizer) and negative effects (soil erosion) on the environment.
The climate for foreign investments is just now becoming favorable. Foreign investors are attracted by the Albanian government to assist in building up the tourist industry in the country. The government recently presented a Masterplan on Tourism and established a Ministry of Tourism. The development of tourism includes, however, a potential risk for damaging valuable nature areas in the future. The Ministry of Tourism employs one person who is responsible for the environmental aspects of proposed activities. However, no language regarding the environment can be found in the Law on Priority Tourism Development Zones, which became effective in January 1993, and no representative from the Committee for Environmental Preservation and Protection is included on the Tourism Development Committee.

Open borders and new relationships with foreign countries have led to the import of Western goods in Albania. While the incomes are still quite low (the average annual income in 1992 was USD 500), Western products have started to become visible, with a prime example being cars. Under the communist government, cars were hardly seen in Albania. Now old and polluting cars, often second-hand vehicles from Western European countries, are considered trophies. As a result, the quality of the air in cities is decreasing rapidly.

Social changes

The first years after the political transformation in Albania can best be described as an anarchy. The democratization process gave citizens new freedom, which they felt they could exercise without regard to the consequences. This new freedom of choice sometimes led to serious environmental damages. An example of this is the unlimited cutting of wood for fuel. Most of the households in Albania and all of the households in the countryside, are dependent on fuel wood for heating. Albania has been struggling, for many decades, with the problem of providing sufficient heating for dwellings. The recent reduction in the energy supply caused the shortage to become even more severe. In the last 45 years 30% of the forest area has been destroyed by the clear-cutting activities of Albanian citizens and foreign companies. In addition, hunting and fishing, as well as the sale of medicinal plant species, have become popular ways of earning hard currency. Rare bird species and fish have been exported and sold for relatively high prices. The hunting practices themselves often have serious consequences. For example, explosives used for fishing are damaging the habitats. Although laws on hunting and fishing were established in the 1970's, no means for the enforcement of these laws exist.

Unemployment in Albania is extremely high. The personal problems of the people with regard to their basic needs are enormous. As many people in Albania are homeless, unemployed, and live in poverty conditions, it is understandable that the environment is not a priority issue among the population. The environmental awareness of the public can be described as very low. Unemployment in the countryside has also resulted in a rapid growth of the cities. Tirana grew in a few years from 300,000 to 400,000 inhabitants. The new inhabitants, often people from the northern mountainous parts of Albania, settle mainly in the suburbs of the cities, where the infrastructure is not sufficient to support the increasing populations. The rapid urbanization significantly increases the pollution in cities because adequate waste management is lacking and the water supply is poor.

Assessment of environmental assets and damages

Natural capital

The environmental situation in Albania is, compared to many other CEE countries, rather good. The quality of air, water and soil evidently increased during the transition period. However, reliable data on the state of the environment are not available. Albania's nature can be described as unique and relatively untouched. Parts of the coastal zones were protected areas or military zones, so access to them was forbidden. The flora and fauna in those coastal zones is said to be very diverse, containing several endemic species and medicinal plants. The lagoons in the coastal zones, glacial lakes in the North of the country and forests from Mesozoic origin are additional areas of great natural value. Albania also has great resource deposits of oil, gas, coal, copper, iron, nickel and is one of the world's largest producers of chrome. Albania can base its free market economy on the exploitation of these resources. The country is already a net exporter of energy, mainly derived from hydroelectric power. As a final resource for economic development the coastal nature areas are seen as having significant potential for the development of tourism. The relatively untouched natural areas, with their valuable ecosystems, hold particular potential for the development of ecotourism.

Environmental damages

Unlike the situation in many other CEE countries, Albania's environment is not mainly threatened by industrial pollution. New companies that were or will be set up are a potential threat for Albania's environment. Many examples of the establishment of new companies, mostly foreign, are known to pose real threats to the environment. In the beginning of the transition period no control was exercised over the establishment of new companies. These firms, usually small or medium sized, often began operations without consideration of environmental protection, or even worse, their main activity was sometimes precisely the exploitation of Albania's natural areas. For example, the hunting of rare bird species for export earnings, unlimited fishing with the use of explosives, and foreign orders for the delivering of rare pines for Christmas trees are all ongoing, unregulated activities. Forest areas have been seriously damaged by illegal tree cutting. Other environmental...
damages result from the absence of sewage treatment plants (which threatens drinking water supplies) and modern waste management facilities. Living conditions in the city of Tirana continue to decline as its population grows well beyond the capacity of its infrastructure.

**Hot spots**

Several industrial hot spots were mentioned by the experts. The town of Lac is situated in an industrial area with a copper smelting facility. The health situation there has become so bad that people are being evacuated. (The new Environmental Protection Law contains provisions forbidding industrial activities close to living areas in the future.) The evacuation of inhabitants also took place near Vlorë, a coastal city near the peninsula of Karaburun, due largely to pollution from a nearby PVC factory. The metallurgical and copper mining and treatment industries are also explicitly identified as environmental threats. The petroleum industry is also causing enormous environmental problems in the country. The heating plants that run on petroleum (and coal) are usually situated close to urban areas, e.g., near Korca, Fieri, Ballshi and Tirana. None of the heating plants have introduced clean-technologies or pollution control equipment.

**Priority environmental problems**

**Deforestation**

The collection of fuel wood for home heating grew over the last few years in part as a result of the closing of some power industry operations. The supply of electricity and heat has always been a problem in Albania, but this situation has been exacerbated over the last years. While the country produces a small excess of electric power, which is mainly distributed for industrial activities or exported, this power is unavailable for household use due to the lack of infrastructure. Estimates are made that 80 to 90% of the Albanian households rely on wood as fuel. Wide-scale woodcutting is resulting in rapid deforestation.

**Soil erosion**

The deforestation mentioned above, together with terrace building in agriculture is causing enormous soil erosion. With privatization in the agricultural sector leading to smaller plots of land, farmers are trying to work every possible square meter. Terrace building in the hills and mountain areas allows more arable land but the fertile topsoil is being eroded at an alarming rate as a result.

**Water pollution and waste management**

Albania's water quality suffers as a result of the absence of sewage treatment facilities. One expert stated that in 800 places in Tirana, leakages of sewage water into drinking water occur. (This number was refuted by an other expert, however, who said that the actual number of leakages is much smaller.) The lack of a sound solid waste collection and treatment system is another major problem and has resulted in a growing amount of waste in the cities. The growing population in the cities is increasing the generation of waste, thus increasingly affecting citizens' health and living conditions.

**Critical steps to start or continue environmental improvements**

**Management and administration**

One of the most important steps to be taken is the institutional strengthening of the CEP, which was established within the Ministry of Health in March 1992. The Committee is responsible for the development and implementation of environmental policy in Albania. The Committee needs to be expanded and given more authority to properly carry out its mandate. It was reported that this will only be possible if the Committee is made independent of the Ministry of Health. CEP was also criticized for spending too much time on international relations and not enough time on domestic issues. Additionally, the development of regional or local environmental structures is also needed. It was reported that currently regional and local authorities do not have any responsibility with respect to the environment. In relation to this the parliament will probably approve the employment of 35 more experts that will act as Environmental Inspectors at the district level. It was also explained that training for environmental experts and decision-makers is very much needed to improve environmental management. This management could be improved if money collected through environmental taxes and pollution fines were earmarked for environmental purposes rather than absorbed into the general state budget. More data on the state of the environment and nature of Albania are also necessary to better judge the possibilities and costs for improvements. Therefore, setting up a sound monitoring system is essential.
Enforceable environmental policy and law

Recently, the CEP developed, in cooperation with the World Bank, an Environmental Strategy Study for Albania. This Strategy contains recommendations, actions and options regarding: pricing policy and economic restructuring; the legal and regulatory framework; institutional strengthening; environmental financing and investment; public participation and information; and; specific environmental problems (i.e. soil erosion, deforestation, urban pollution). The CEP wants to develop its policy according to the "polluter pays" principle and will focus on the management of past pollution, prevention of new pollution and the raising of public awareness. The impression exists that for the time being the environmental policy is not being established according to a clear framework or structure. Because of the very limited financial resources of the CEP the formation of an environmental policy is highly dependent on external funding and can be characterized as ad hoc policy.

Recently, the General Law on Environmental Protection has been approved by the Parliament of Albania. This law is the first environmental law in the country, dealing with the whole range of environmental problems. The General Law on Environmental Protection has been criticized as being too general by many environmental advocates, although it is perceived as a good start. Some experts mentioned the importance of bringing Albania's legislation and standards in accordance with existing international legislation and standards. According to many of the experts, additional provisions on several topics (e.g., on nature protection) are necessary to make the law useful. A Hazardous Waste Law has been drafted and due to the combined effort of several ministries, laws on forestry and hunting were approved and a law on fishing is expected to follow soon. A Law on Environmental Impact Assessment (EIA) is in preparation. This is Albania's first experience with EIA regulations and a legislative framework is lacking. It is very important to apply EIA legislation that is specific to Albania's needs and circumstances. It is expected that EIA requirements will first be applied to specified industrial activities and the development of tourism in the coastal areas. However, implementation of EIA legislation is only planned for the longer term (3-5 years).

The CEP, with its 11 experts, is responsible for the environmental law enforcement in the whole country. Under these circumstances it is understandable that enforcement is rather problematic, although the CEP has the right (by the establishment of the General Law on Environmental Protection) to fine companies that do not meet their duties. In practice, however, hardly any measures have been taken against companies or individuals that have broken the law. In the first years after the political transition, this lack of enforcement resulted in a situation in which new companies (many of them foreign-owned) could begin operations without observing the laws. In those early years only a few, outdated environmental laws existed. Currently, while the new General Law of Environmental Protection is in effect and the CEP has been given the authority to fine companies for continuing proscribed activities, this does not happen in practice. Hopefully the situation is going to change soon, as the parliament agreed on the expansion of the CEP by employing 35 environmental inspectors on the district level. Although protests were heard against a district approach and in favor of local inspectorates, the employment of those inspectors for the country is a first step to improve enforcement of the law. In addition to the lack of manpower, enforcement is also obstructed by the fact that state companies have special governmental protection. The biggest and most polluting companies are still state property in Albania. As they already have serious difficulty in paying the salaries of their employees, they are more or less freed from environmental investment obligations. While some are required to pay fines, they are still net receivers of state money.

Expertise and public support

Raising environmental awareness is considered by the experts as a critical step towards achieving future environmental improvements. Environmental education (at all levels of the society) has been mentioned as crucial for establishing a future basis for environmental improvement and protection. Legislation, economic instruments and other tools can never stand alone when the public, as well as decision-makers, do not support such steps. The training of environmental experts and decision-makers is very important for the development of needed programs, policies and campaigns. Exchange of information and experience with Western experts is crucial in this regard. Environmental education is not currently integrated in a structural way in lessons at schools or universities and is also not provided elsewhere. The government (represented by the CEP) and the NGOs each perceive environmental education as the responsibility of the other body.

Economic and technological resources

More financial resources are necessary for the funding of environmental projects in Albania. Most experts agree that Albania cannot provide the necessary funding and that foreign investments and grants must be obtained. However, some experts claim that the introduction and implementation of the "polluter pays" principle should provide financial resources for environmental improvements on a more consistent basis. While most of the experts did not stress the need for new technologies it was noted that the country is seriously lacking adequate wastewater treatment plants and modern waste management facilities.
Driving forces for environmental improvement and degradation

Economic changes

The changes in the economic sector in Albania are very important driving forces behind the improvement as well as the deterioration of the state of the environment. The economic problems in Albania are so severe that they receive priority attention from the government. The only way to build up the economy is to create a better climate for the establishment of economic activities, to which foreign investors are especially attracted. Macroeconomic stabilization is a priority in Albania in order to attract those investors. Privatization is playing an integral role in the country's economic plans. Privatization in agriculture and industry has had enormous positive, as well as negative, impacts on the environment as already described.

Foreign companies

From the beginning of the transition period foreign companies have been interested in Albania. In the beginning, many examples of illegal exports (i.e. rare bird species) and imports (i.e. pesticides) and illegal establishment were evident, with mainly unfavorable environmental effects. Only recently, foreign companies have been interested in investing in Albania on a more legal basis as the economy seems to be stabilizing. At the moment the Albanian government is strongly trying to attract foreign investors to help develop tourism.

International contacts

The new contacts abroad have led to Albania's participation in international projects and organizations. The contacts with other countries have helped Albania to be more aware of its environmental problems and to understand more about the country's situation. NGOs especially seemed to gain important new ideas from contacts abroad.

Government

The government is, in fact, the only decisive authority in environmental policy-making. Within the government, the CEP is the main driving force for improvement, supported by the advice of the NGOs (mainly PPNEA with whom the Committee has good relations). However, the position of the CEP within the government is relatively weak and needs strengthening.

Integration of environmental protection and economic development

Obstacles to integration

Due to the present enormity of the economic and social problems in Albania the development of the economy is the leading priority among politicians, the government and the public. The integration of environmental policy with other policies is thus perceived as a low priority. An additional barrier is the fact that CEP is a very small authority, and lacks the influence and institutional strength to achieve such integration. The success of the CEP efforts may be hindered by weak relations with other ministries and parliament and in any case cooperation between them is insufficient.

Decision-makers, as well as people with scientific or NGO backgrounds, do not seem to realize that economic benefits can be derived from environmental investments and vice versa. The relationship between these two concepts is not recognized. In addition they do not seem to be aware of the environmental consequences of some economic activities. Economic and environmental problems are considered as completely separate problems, and when faced with a choice the economic considerations always prevail. The general idea is that first the economic situation must improve before environmental measures can be taken.

Existing and proposed measures for improving integration

A new law requiring the use of EIAs is being drafted and should help in integrating environmental protection and economic development. It is expected that EIA requirements will first be applied to specified industrial activities and the development of tourism in the coastal areas. However, it is believed that a few years will be required before EIAs can be fully utilized. Although not intended as a measure for environmental protection, the price increases for water and energy could be mentioned here. The Ministry of Finance recently raised the prices of water and energy. The low prices of those resources have contributed to enormous wastes in the past. The price raises could be a useful step towards preventing those wastes in the future.
Financing environmental improvements

The financial resources of the CEP are very limited. The Committee is allotted a yearly budget which is not substantial and is sufficient only to pay for staff and some small scale projects. Income from fines is minimal according to the experts. The General Law on Environmental Protection gives the CEP the authority to fine polluters. However, this instrument has thus far been ineffective due to lack of enforcement. Although future adaptations of the "polluter pays" principle could be a source for financing, there are no financial solutions for the management of past pollution in Albania. According to the government, including the CEP, newly established industries can not be charged for past pollution. The CEP is currently discussing the introduction of an environmental tax in Albania. However, those discussions are purely conceptual and there seems to be little prospect for, as well as no experience with, the introduction of this instrument. These ideas are not expected to become practical realities in the near future. For the time being Albania is mostly dependent on foreign assistance and investments for major environmental protection efforts.

International cooperation

CEE-regional cooperation

Cooperation with other countries in the region does not exist on a systematic basis. Seminars and conferences are occasionally organized, however, they do not contribute to environmental improvement in a consistent or stable way. Although the region has many environmental experts, they were all educated under the communist system and do not have experience in coping with the current problems. There is some exchange of information and experience within the region on the government and NGO level. The extent of Albania's international cooperation in the region does not go much beyond its neighbors. Cooperative projects have been implemented mostly with respect to border areas, e.g., natural areas, transboundary rivers, lakes, and seas. Albania is currently negotiating with the FYR Macedonia about the border lakes (Ohrid and Prespa). The CEP claims that its very limited staff makes expanding foreign relations not feasible.

Western assistance

Western assistance in Albania was initially in the form of food supplies. Albania was one of the last countries in the region to receive Western environmental assistance. Western environmental assistance in Albania has mainly gone for carrying out studies. Real investments are only expected to occur after the year 2000. Albania has bilateral environmental cooperation with Holland and Germany. As mentioned before, the World Bank assisted in the elaboration of an Environmental Action Strategy, with additional funding from the EC PHARE Program, and is assisting in carrying out a broad and complex study on the environmental situation in Albania. EBRD is the main financier of a tourist development plan in the coastal area in the Southern part of Albania. It is unclear to what extent environmental concerns are being integrated in this development project. Finally, Albania also cooperates with the International Union for the Conservation of Nature (IUCN) on the protection of one of the country's lagoons and with United Nations Environmental Program on coastal zone management.

Some criticism has been put forward with respect to some Western assistance projects regarding the fact that a substantial part of the money for Albania is spent on expensive consultants. These consultants are generally perceived as people who earn a lot money for the collection of data which are already available in the receiving country. Most of the experts asked for more real cooperation with Albanian experts instead of only using the results of work already conducted in the country. Western assistance is only useful when the experience and results do not disappear abroad, but stay in the country. Furthermore, the endless project cycles that are necessary to prepare a project were criticized. A concrete example was given about Albania's need to build a sewage water treatment plant. According to the CEP it is not necessary to elaborate endless studies on sewage water treatment plants, but they should just be built and copied from already existing examples.

An overall conclusion on Western assistance was that it is seen as insufficient and often ineffective in the manner which it is provided. A better equilibrium should be found between financial and technical support, as well as the exchange of information and experience. The latter is often lacking and probably of fundamental importance for the future development of Albania's environmental policies and actions. One of the respondents formulated the need for assistance as follows: "Albania needs support on issues in which Western countries have more experience. Albania faces an enormous growth in automobile use and needs assistance to tackle the problems that occur in relation to this growth, e.g., air pollution and insufficient infrastructure." Another issue that was mentioned was ecological agriculture. Western countries conducted many studies on the possibilities of ecological agriculture. In fact, Albania has a form of ecological agriculture since no fertilizers and pesticides are used at the moment. Albania may be able to develop its agriculture further in this way and make it an important export product. However, Western assistance will probably be necessary in order to develop ecological agriculture techniques.
Interest groups in environmental protection

National government

The national government has the final decisive voice and does not give high priority to environmental problems. Albania faces severe economic and social problems, which the government wants to tackle first. Although a Parliamentary Committee exists that deals with environmental problems, it does not seem to have any perceptible impact. The CEP is responsible for environmental administration at the national level, yet consists of eleven people. Soon, this body will be expanded by experts who will be responsible for enforcement of the General Law on the district level. The CEP is only a department of the Ministry of Health and has no independent status. Its influence on national decision-making is limited.

Municipal government

The municipality of Tirana has an Environmental Office, which is involved in the solution of urban environmental problems. However, they have no decisive power for implementing environmental policy. The establishment of this office seems to be more of an unofficial personal achievement by certain individuals than an official, accepted structure within the municipal government.

Academics

The influence of academics is mainly passive. They are often sought for advice by the CEP. Scientists do not seem to unite together for environmental progress, but rather act as individuals. However, many scientists (especially in the biological sciences) are NGO members.

Environmental NGOs and journalists

The role of NGOs in the environmental decision-making process is very limited. The position of the environmental NGOs seems to have diminished since the initial political changes in Albania. However, some groups (especially PPNEA and the Biologists Association) regularly contribute advice and expertise to the CEP. For instance, they were consulted for their opinion about the Draft Law on Hazardous Waste. Despite their relatively weak position in society and their weak influence on the decision-making process, some NGO actions have had successful results. They have overturned some governmental decisions and they occasionally receive broad support from the public. Some PPNEA members are journalists working on environmental documentaries. Although PPNEA has been making television programs for a few years they believe that these programs have just recently reached a significant number of people.
Political, economic and social impacts on environmental protection at the spring of 1994

**Political changes**

Concern for environmental problems was a driving force for the initial political changes in the country, though the environmental effects of these changes have not been dramatic according to many of the experts. Previously, environmental laws and policies existed but they were unrealistic or simply not enforced. As one expert reported, “controversial environmental policies were subjugated to ideological and/or industrial values.” With the changes of the recent years some progress has been made in the actual implementation of policies. Also, social groups such as environmental NGOs were previously not allowed to exist or were silenced. Now such groups are active and attempt to play a role in decision-making. A new Environmental Protection Act was adopted in 1991 and amended in 1992. A National Environmental Strategy was developed in 1990-1991 in cooperation with the World Bank with implementation having begun in 1992. Indeed, one result of the political changes has been the possibility for international cooperation with western institutions and organizations. Bulgaria has begun to integrate into the western world and this has had positive effects.

The ongoing transition has not been easy and in some ways the government has simply been overwhelmed by the changes, finding it very difficult to adapt to new demands and new circumstances according to one expert. Another explained that annual reports on the state of the environment, though published, have not been submitted to Parliament and the Council of Ministers, as required by law, for three years. It was also reported that the diminished authority of the state government has led to weaker regulation of activities effecting the environment. The old systems have been dismantled but new systems and procedures appropriate for the new situation have not yet been established. Political instability has also resulted in incomplete policies and legislation and has hindered the privatization process. The government is in the process of changing its way of thinking and acting. It is necessary now for it to more clearly identify goals and priorities and coordination among the various state institutions must be improved. Some experts indicated that the current government is not strongly supported by parliament and thus important new policies and laws have not been passed. Additional revisions in certain existing environmental policies and laws are required, and harmonization with EC standards has already successfully started in the fields of environmental assessment and human health.

**Economic changes**

Under the previous economic system, the environment was adversely effected by the focus of the economy on heavy industry. With the orientation towards world market prices for raw materials efficiency has become a motivating factor for industry. Many industries have simply not been able to survive and economic production has decreased dramatically (about 35%), resulting in a visible reduction of pollution. This economic decline has, unfortunately, also diminished the funds available for environmental investments as much of these funds come from fines and penalties on industry for environmental damages. Moreover, the sudden changes have created a chaotic situation in which it has become very difficult to clearly identify needs and priorities.

Some market reforms, such as privatization, have progressed only very slowly according to the experts and have not yet had major impacts on environmental protection. This has some negative effects, for example there still exist many large state enterprises which are virtual monopolies in their sectors (i.e. energy production, water supply, meat production and leather industry) and thus able to avoid enforcement of environmental regulations. On the other hand, according to one expert, the slow progression has allowed time for the development of necessary related rules and mechanisms regarding the environment. Indeed, in 1992 the Parliament adopted an amendment to the law of privatization which guarantees revenue for environmental protection amounting up to 5% of the privatization transaction.

**Social changes**

The political changes brought new social freedom. Now people have the right to speak and to pressure the government to take certain actions. Public pressure has actually been successful in defeating some proposed environmentally harmful activities, such as the expansion of a dangerous metalworks plant. Environmental NGOs working on a professional level have had a positive impact on environmental protection and public awareness of environmental issues is rising. The MoE has even created a special office for NGO relations. (One expert noted, however, that while the public’s awareness may be rising it is becoming less ready to act on that awareness.)
Other changes, especially economic, have created social pressures having negative effects on the environment. After the initial euphoria generated by the new freedoms of democracy, environmental issues have fallen far on people's agendas. People still express concern, but not enough to act. To some extent the environmental movement was used merely as a tool for advancing political reforms. Once the political reforms came, interest in the environment fell and people found other priorities. The political activism of some NGOs has diminished their and others' public standing. The romantic period of change was brief and people are now faced with the reality that the transition period will include great difficulties. Because of the collapse of the previous economic system many people, and the government as well, are in a financial crisis. Job security is now a priority issue with unemployment about 16% and rising. In such an atmosphere the environment is just not a priority.

Assessment of environmental assets and damages

Natural capital

The natural environment in Bulgaria is perhaps not damaged to the same extent as in some other CEE countries, or even as in developed western countries in the past. Unique Bulgarian forests, mountain areas like East Rodopy, Rila and Pirin, and the Black Sea coast provide a number of attractive tourism areas. There are many well preserved areas with exceptional biodiversity, and about 60% of the various European species can be found in the country, including some rare species. Instruments for environmental protection such as environmental impact assessments and environmental audits are being used more commonly and these may also be considered assets, as may the deep commitment some people have for protecting the environment and nature. A few of the experts reported that while Bulgaria has some well qualified people on the subject of environmental protection, their skills often go under utilized because of a lack of coordination and inadequate financial resources (low salaries in the field).

Environmental damages

It is difficult to separate environmental problems threatening economic development from those threatening human health, since serious problems effect both. In several areas (i.e. Stara Zagora, Assenovgrad and Ruse) extreme soil pollution from heavy metals produced by metalworking facilities has rendered lands unusable for agriculture. Certain river stretches, such as of the Danube, Iskar and Maritsa, are considered extremely polluted and the water there is not fit to use even for irrigation. Mining activities result in serious air and water pollution. In some mines the levels of radioactivity pose serious threats. Exposure to lead from automobile exhaust is a growing threat, especially effecting children.

Several hot spots posing severe environmental risks have been identified including: the Plovdiv, Pirdop, Vratsa, Ruse, Montana and Kurdzhaly regions (non-ferrous metalworks have polluted air, soil and water with lead, arsenic, cadmium, etc.); the Varna-Devnya region (polluted by a giant chemical factory); and the Burgas region (contaminated by a petroleum plant).

Priority environmental problems

Water resources

Water problems were one of the most often mentioned issues by the experts as a top priority. Water quality is damaged by a variety of sources with pollution from industrial discharges and domestic wastewater chief among them. Wastewater treatment facilities often do not exist or do not operate properly. Another problem is that water reserves are already low and dropping. One expert reported that water is rationed 108 cities and is of low quality almost everywhere in the country. (Another expert countered this statement, however, saying that drinking water corresponds to international standards in all but a few locations.) The condition of the Danube River is reported as very poor, with transboundary pollution cited as one of the causes. The poor quality of the Danube also contributes to high pollution levels in the Black Sea.

Air quality

Along with water problems, air quality was most often cited by the experts as a priority environmental issue. Bulgaria's heating and energy system is based on the burning of low quality coal which results in heavy emissions of pollutants. The situation is worsened by the lack of modern pollution abatement equipment and the fact that the energy plants are sometimes located in the middle of residential areas. Growing problems resulting from automobile emissions were cited by several of the experts, with these problems becoming acute in the major cities. Extremely dangerous threats associated with radioactivity were also noted by a few of the experts. Bulgaria's nuclear power plants were described as very unsafe and posing huge risks to human health and the environment. As with water problems, air problems were also described as being exacerbated by transboundary pollution, in this case from Romania.
Waste management and soil contamination

The issues receiving the next most attention from the experts as priority problems were those associated with waste management. Household, industrial, and agricultural waste were all listed as being improperly dealt with. The need for recycling systems and modern disposal facilities was also discussed while one expert explained that Bulgaria is now being flooded with disposable packaging from the west and that such waste (especially plastics) just did not previously exist in the country. Severe soil contamination from industrial and agricultural waste was mentioned as a related damage resulting from poor waste management practices. Apparently in some areas the soil is damaged to the point that it is unusable for agricultural purposes.

Nature protection and biodiversity

Nature protection and preservation of biodiversity were cited by a couple experts as also being priority issues. Deforestation due to acid rain and drought was noted by one expert whereas another explained that biodiversity is now at risk from growing tourism and the exploitation of natural resources for economic purposes.

Critical steps to start or continue environmental improvements

Management and administration

Improvements in the areas of environmental administration and management are definitely needed. Currently there is a lack of strong experience in decision-making and problem solving. Better coordination and collaboration between MoE and other ministries and institutions such as the Ministry of Education and the Privatisation Agency are greatly needed. An Inter-ministerial Council was established in November of 1993 to address this. The management responsibilities and functions of the Ministry of Environment should be much more clearly defined. Regional and local environmental management plans and programs should be developed. Modern monitoring capacities, and methodologies like environmental impact assessments and environmental audits are also needed. (In recent developments to address these issues, a new computerized national monitoring, data analysis and information system has been introduced, legislation requiring EIAs passed and a bill concerning audits is being drafted.) Public participation should be encouraged in the environmental management process and mechanisms established to ensure that this happens. One expert suggested that the National Environmental Fund may be more effective if removed from the control of the MoE, while another suggested that a special environmental protection bank would be helpful.

Enforceable environmental policy and law

With a National Environmental Strategy being developed in 1990-91, in cooperation with the World Bank, US EPA and US AID, needs for improvements in policy are not as great as others according to most of the experts. This Strategy was not officially adopted but is used by the MoE. The Strategy should be officially adopted by the Council of Ministers. Environmental policy is set primarily by the Minister of Environment and Vice-ministers. There is no separate office or department for policy. Improvements in priority setting amongst the different environmental media are needed. Improvements in environmental legislation are probably not the highest priority as an Environmental Protection Act was passed in 1991, and amended in 1992. Legislation has been passed establishing an Environmental Protection Fund, requiring the use of EIAs and regarding hazardous waste management. A new system of penalties for pollution has been established and the polluter pays principle is being introduced. Some additional amendments should be made, however, and accordingly, bills have been drafted for air, water, soil, protected areas and solid waste and are awaiting adoption by parliament.

While environmental policy and law were not often mentioned as priority weaknesses, law enforcement certainly was. Most of the experts agreed that enforcement is woefully insufficient due to a lack of professional expertise, financial resources, and supportive political will as well as "the more or less conscious and public subjugation of environmental concerns to industrial and political goals."

Expertise and public support

Environmental education and improved expertise is badly needed in all sectors of society and should begin at the youngest possible age in the view of many of the experts. One expert noted that all people should come to realize that a market economy is not an end goal in and of itself, but merely a tool to use in sustainable development. The values of people are currently changing in a negative way and this change should be counteracted at least partly through education. All types of information channels should be used to increase appreciation for the environment. For those people most involved in environmental decision-making long-term, extensive, professional level training is needed. Education and training efforts must be well prepared and focused, with the results closely evaluated. Since 1989 many environmental training and education activities took place in Bulgaria, and they were often too brief and yielded marginal results according to one expert.
Technology and services

Technology was rarely mentioned by the experts as a high priority need. Nevertheless, various types of modern clean technology were reported as needed, both for production processes and abatement functions. These needs are especially acute in the energy sector. Existing boilers are old and pollution abatement equipment is lacking. New legislation now requires EIAs for new businesses (though their practical implementation needs further improvement) and a bill regarding environmental audits is being drafted. According to one expert, however, it may be several years before there is a strong demand for such services.

Driving forces of environmental improvement and degradation

Free market reforms

Forces associated with market reforms were most often cited as having strong influences on the state of the environment in Bulgaria. International competition and truer prices for raw materials have caused some industrial producers to go out of business, resulting in the reduction of pollution from this sector. However, these reforms are also having harmful impacts on the environment. Strong profiteering interests have emerged and heavily influence much of governmental decision-making to the detriment of the environment in the view of one expert. Others explained that the necessary legal framework (i.e. bankruptcy and investment regulations) for realizing many of the benefits of market reforms has not yet been established. The "rules of the game" have not been set, but the game goes forward nonetheless with the environment sometimes being harmed. Privatization was mentioned often as having potential for both positive and negative impacts on the environment, as well as being significant for its extremely slow progress thus far in Bulgaria.

International institutions

International pressure from foreign assistance and financial institutions, as well as from market competition is having a positive effect on environmental protection because the government is required to agree to environmental improvements in order to receive aid, and competition improves the quality of products and technologies.

Social problems

Social problems resulting from the economic crisis, such as job and economic insecurity, currently dominate the priorities of the general public and government officials with negative environmental impacts. In the face of such problems environmental protection is seen as a luxury which will simply have to wait until more fundamental needs are satisfied.

NGOs and public participation

NGOs and public participation in decision-making is having a positive effect but needs to be much stronger. Citizens' movements played a significant role in launching the political changes in Bulgaria, however, their influence on government policy has eroded substantially in the past few years. One expert noted that the polarization of different interest groups is having a negative impact on the environment. There is no mechanism for state and local governments, NGOs and businesses to work together on solving environmental problems. The groups do not understand each others' positions and motivations.

Integration of environmental protection and economic development

Obstacles to integration

The most often mentioned obstacle was the lack of money. Economic development itself is not progressing well and the various market mechanisms for environmental protection, widely used in other countries, do not yet function in Bulgaria. The situation is worsened by the lack of the necessary legal basis for such integration, the weak enforcement of existing law, and the continued state ownership of virtually all large industrial enterprises. Environmental protection is also simply not a priority. Economic concerns receive top priority and decision-makers do not appreciate the importance of, or possibilities for, integrating economic development and environmental protection. As reported by one expert, the dominant thinking is "environmental protection is expensive and we are very poor, so it will have to wait." The MoE is considered one of the weakest of all government ministries while the Ministries of Finance and Industry, for whom environmental protection is a very low priority, are very strong. Moreover, government officials lack the experience and knowledge needed to grasp the concepts and formulate the needed strategies. One expert explained that people working in the MoE lack expertise about market economics and the economists working in other ministries lack expertise about the environment. Another expert echoed this sentiment when explaining that sophisticated expertise in "green" economics is largely missing at all levels of decision-making. It was also reported that the current political powers were not likely to support the needed integration.
Concrete examples of sustainable development are lacking according to the experts. The concept exists on paper, and it is discussed, but unfortunately there is not much more at this time. There are some efforts being made to implement the polluter pays principle. There are fines for air pollution and wastewater discharges, however, the amounts are very small and the industries just pay them without effect. With the state still very much involved in the production sector the effectiveness of the polluter pays principle is very limited. The concept of tradable pollution permits has been proposed but no concrete steps have been taken in this direction. The use of environmental impact assessments and environmental audits is becoming more common and should be helpful.

Financing environmental improvements

The primary financial mechanism for environmental protection is the general state budget. In 1992 the National Environmental Protection Fund was established by the Council of Ministers (by Decree) in order to implement the Environmental Protection Act. The Fund is managed by the MoE and a board which represents various other ministries and industries, and provides subsidies for environmental investments. (Mechanisms for low and interest free loans are also being developed.) There are some pollution discharge fees and fines for excessive emissions, but it was stated that the amounts actually collected are insignificantly small. There are plans to further develop the pollution fines system and to introduce new environmental taxes. Municipal Environmental Protection Funds also exist and there are as well incentives in the forms of tax reliefs and exemptions for environmental technologies.

With existing domestic financial resources water purification stations are being constructed in certain strategic areas. It should also be possible to develop environmental education programs, protect valuable natural areas, enhance public participation in environmental decision-making and implement small-scale projects at the local level. To properly manage hazardous waste, build wastewater treatment facilities for large cities, make nuclear power plants safer, and install modern pollution control equipment foreign financial assistance will be necessary.

International cooperation

CEE-regional cooperation

There has been very little cooperation with CEE neighbors. One reason is that they are also poor, and another is that after the communist governments of the region collapsed there was a natural tendency for the countries to move away from cooperation after so many years of forced alliance. There is some cooperation regarding the Danube River and the Black Sea, but it is very limited. There is a growing realization that CEE and indeed Pan-European cooperation is necessary. Countries of the region have common histories and it would be helpful for them to cooperate in developing their own paths toward sustainable development. Regional cooperation is clearly needed on issues involving the Black Sea and the Danube River, as well as transboundary pollution from Romania. Cooperation would also be helpful in attracting and effectively using foreign assistance.

Western assistance

Several examples of successful cooperation with western countries and institutions were cited: professional training has been supported by the EC PHARE Program, US AID (Environmental Training Project), and US EPA (Environmental Management Training Center), the National Environmental Strategy was prepared with assistance from the World Bank, and there has been additional help from the Swiss, the Germans, the Japanese, the British Council and the British Know-How Fund as well. The "Environment for Europe" process has been helpful in this regard and the upcoming European Environmental Ministers Conference in Sofia, 1995, should have a positive influence on the Bulgarian government and NGOs.

Nonetheless, there have been some negative experiences with western countries as well. There was a well publicized case of a German firm trying to bring its hazardous waste into Bulgaria. Sometimes foreign assistance institutions are deciding what to fund without the input of local or national experts, while on other occasions the priorities of the aid institutions are not the same as Bulgaria's priorities. Additionally, the loan policies of international financial institutions are not very favorable according to some of the experts.

Up to this time most of the western assistance went into policy improvements and institutional capacity building. Now support should be given for concrete activities that will yield measurable improvements in the environment. Investments in technology are needed, as is help in harmonizing legislation and regulations with EC standards. National and local consultants should play a more significant role in projects supported by foreign assistance. Expertise in many areas continues to be a need, as does management training,
Interest groups in environmental protection

National government

There was no consensus among the experts as to which interest group is having the greatest influence on environmental decision-making but the national government was most often mentioned as playing a major role. It controls the large majority of funds allocated for environmental protection, makes environmental policy and proposes environmental law. Parliament was mentioned by only one expert as having a major influence. The experts had differing opinions on the impact of local governments. Some experts listed them as playing important roles while others stated that their role is very limited due to their lack of revenue sources and the fact that they do not yet have the necessary legal authority.

NGOs and scientists

NGOs and scientists are having an impact on environmental decision-making, though it is probably less now than it was directly after the initial political changes in Bulgaria. Up to and at that time the environment was used as a platform for criticizing the previous political system. Now, however, people have other priorities and the environment has fallen far on the agenda. NGOs and scientists are successful, however, at carrying out educational and training courses, and they are becoming involved in EIAs. Most of the experts agreed that NGOs and scientists have a very important role to play and that they must continue to improve the strength of their activities.

Media

The media was cited a few times as potentially playing a significant role in environmental decision-making, but still tending towards sensationalism and not always presenting the facts.

Industry and trade unions

Industry and trade unions, especially the mining union, were noted as being quite strong and usually having negative impacts on environmental decision-making.
CROATIA

Political, economic and social impacts on environmental protection at the spring of 1994

Political changes

After the May 1990 elections the transition to a market-based democracy began. With the political changes pluralism has begun to mature. On the political scene, the birth and development of the new state was the major issue. The legal and institutional infrastructure, as well as ownership patterns are in transition due to the dynamic restructuring process. The greatest changes, however, have resulted from the war which has had severe political, economic, social and environmental repercussions. Besides the physical destruction and human suffering, the war has resulted in the loss of access to international funding which seriously limits the resources available for environmental improvement. (Presently only humanitarian assistance is being received.) The primary goals of securing economic development, reconstruction, normal living conditions and returning the refugees are pushing environmental concerns low on the list of priorities. Full integration into Europe seems impossible at this moment, although slight improvements in this matter can be observed.

The new state of Croatia has inherited relatively good environmental laws. Sectoral laws and regulations, including an Environmental Assessment Act, have existed since 1984. New environmental laws and amendments are being drafted. The draft Environmental Protection Act is being reviewed by the government bodies and the parliament.

Environmental issues are under the authority of several different ministries according to sectors. The Ministry of Civil Engineering and Environmental Protection plays a coordinating role. Nevertheless, a strong, separate Ministry of Environment is needed. Due to other priorities, incomplete legislation, inadequate institutional framework and lack of funding, it has not been possible to develop and implement a proper environmental strategy. Because of other concerns, the parliament is not able to play a strong controlling role and therefore the Parliamentary Committee on Environment is relatively weak. Response to existing negative trends has been insufficient. However, this situation is improving.

Within the new government it is becoming easier to identify and assign responsibilities, although this process is not as fast as it should be. Improvements are needed in the areas of institutional structure and capacity to properly use all available institutions and to take advantage of existing expertise. Environmental expertise is available on a relatively high level but it is missing in some specific fields. Few experts and NGOs are involved in the decision-making process in environmental field, but public awareness regarding environmental issues is increasing and NGOs are free to work according to their own priorities.

The structure of local authorities is also changing. A new structure for local and regional governments is being established and the process will take a few years to be completed. Under the existing scheme of administrative jurisdiction most environmental protection matters are handled at the national level. Municipalities and towns have authority over local environmental protection and town planning, and counties have authority over protection of the environment with respect to subjects shared by multiple municipalities.

Economic changes

In Croatia the transition to a market economy has been somewhat different than the transition in other countries of the region. The war has contributed to the economic crisis and the combined result has been a fall in the living standard and quality of life. Industrial production has fallen to 50% of the 1990 level. Now, after a period of relative stability, some improvement is expected. Industry and agriculture were severely damaged during the occupation, and experts are hoping that the overall development process will be more dynamic in the near future.

Since the fall of 1993, economic reform and development questions (including to some extent the environment) have come to the forefront. More attention is being given to obtaining Western assistance, reducing inflation, and pursuing development options. So far, privatization has only undergone its first phase, which includes small and medium-sized enterprises. The new privatization law, adopted in 1991, does not include environmental concerns. A proper banking system has not yet been established but some efforts to improve the situation have been taken. It will be difficult to progress with the economic changes if vital outside support cannot be secured.
Many experts think that industry and business should contribute more to environmental solutions, i.e. through fees or taxes, or requirements to invest in environmental improvements. Industrialists tend to assume that pollution will decrease through technological solutions, while environmental advocates believe it is necessary to consider industrial and ecological interests together in the development process. Because of the current economic crisis some polluting industries have ceased operation (i.e. a huge aluminium factory near Sibenik) resulting in a positive impact on the environment. It is expected that additional environmental problems caused by certain major industrial facilities will be solved in the course of economic restructuring because these facilities are obsolete, require excessive investments in modernization and will simply go out of business.

Social changes

The democratic changes stimulated a new approach towards political, economic and social problem-solving and environmental protection. Democratization has also enabled new NGOs to form and begin acting and caring for the environment. Environmental awareness has been increasing at all levels of society.

Unfortunately, the economic crisis and war have led to mass poverty. In addition, the huge flood of refugees has also become a priority requiring immediate attention. Much of the population is in no position to give attention to environmental problems and the conditions necessary for the development of a civil society are substantially lacking. Only a very small group of individuals, mainly intellectuals, is strongly interested in ecological issues. As the economy is in a difficult situation, there is always the pressing question of how to bridge the gap between social and economic (industrial) interests. There is strong pressure on the politicians to secure reconstruction and the return of refugees before any other issues are addressed.

Assessment of environmental assets and damages

Natural Capital

Despite the country's problems, Croatia does have very rich natural capital which is well preserved. There are seven national parks and six natural parks with 900 protected animal and plant species. There are also plans to expand these areas. Some of these areas which were previously under special protection are now occupied by military forces and incurring damages (i.e. Plitvice, Krka, Kopacki Rit, Lonjsko Polje). Some of them are famous for their rare habitats. Croatia also contains very valuable wetland areas. Lonsko Polje, a 60,000 hectares wetland, is one of the most important bird sanctuaries in Europe.

In spite of a great number of protected areas, natural resources management could be much improved. There is a need to develop preventive approaches for preserving the richness of Croatia's natural capital. The country's assets include the scenic coastal area with its potential for tourism, the fertile agricultural area of Slavonia, and the drinking water resources in the Karst area. There are vast forested areas (some of them are still virgin with inhabitant species living in truly natural conditions), and large wetland areas. The Adriatic Sea along Croatia's coast is cleaner than along Italy but very vulnerable because of its shallowness.

So far there is no environmental protection strategy to secure the proper management of these assets. Tourism and agriculture are claimed to be the strategic sectors which can serve as the basis for a future development. However, the "green/blue strategy" advocated by the government to develop tourism and agriculture has been more of a verbal approach than a practical one according to some experts. There is awareness of the value of the existing rich natural capital but it is not articulated as part of a policy or strategy.

Environmental damages

The most serious environmental damages in Croatia have been caused by the war. So far little information is available regarding the extent of damage in the occupied areas. The areas directly affected by the war include Plitvice Lakes National Park and Kopacki Rit Nature Park, Lonjsko Polje, and Krka National Park. Waste materials in war zones and damages due to the bombing of chemical industrial complexes are resulting in pollution of groundwater, soil, and rivers. Many natural habitats, especially forests, were devastated by fires. There has been serious contamination of certain locations due to both intentional and unintentional spilling of chemicals, sometimes resulting in explosions and human injury.

The supply of drinking water is also affected by the war, partly because some water supply facilities are in territories still occupied, and partly because some facilities have been destroyed. There have been attacks on the Kutina fertilizer factory, the Ivanicgrad gas refinery and the Sisak oil refinery which has endangered a 20–40 km zone around those facilities with a potential ecological disaster (liquid ammonia, fertilizer, acids, sulphur, etc.). An emergency response system has been established including a plan with the necessary steps for making the installations more safe, evacuating local residents and providing sheltering, but money needed to finance such activities is not evident. The government has tried to intervene and prevent major damages in some areas by removing dangerous materials and assessing the destruction. In some cases catastrophes were averted due to timely actions.
Besides those caused by the war, there were also other serious incidents of environmental damage. The Sava river is heavily polluted yet supplies several million people, industry, and agricultural areas with water through the underground water in its basin. Acid rain is endangering about half of the woods in Gorski Kotar. Improper disposal of communal and toxic waste is endangering water resources in certain areas.

Some areas have been identified as environmental "hot spots." Certain industrial plants should be closed immediately (i.e. the charcoal producing plant in Bakar is causing serious pollution). In Kutina the fertilizer plant is producing phosphates and pesticides which are causing health hazards. Also of concern is the concentration of chemical and pharmaceutical industries and fuel plants in the Eastern and the Western parts of Zagreb.

Priority environmental problems

There is no clear picture of the state of the environment. The last official report dates back to 1987. Improving this situation is a priority. However, obvious issues mentioned are as follows:

Air quality

Air pollution is caused by traffic, home furnaces burning coal, the chemical industry and transboundary sources in Italy. Heating has been changed gradually to gas and central heating and thus the situation has improved although in some towns it is still bad. Generally, air quality is not as high a priority problem in Croatia as it is in some other CEE countries.

Water resources

Underground water resources in the Karst area (40-50% of total supplies in Croatia) are polluted by improper waste management and the lack of wastewater treatment facilities. In Dalmatia (Zadar) there is no source of drinking water due to the fact that the regional water supply source (river Zrmanja) is still controlled by military forces.

Waste management

One of the major environmental concerns is the deposition of waste and the need to develop efficient and good waste management. Many experts see this problem as of the highest environmental priority that needs immediate solution. The waste problem is causing water pollution and endangering drinking water resources and the health of the population. The problem is mainly due to the lack of appropriate sanitary landfills, incomplete legislation and the temporary occupation of some disposal sites which thus cannot be used (Vinkovci, Osijek, Pankrac, Lipik, Novska). The problem of nuclear waste disposal is a very complex issue and is politically sensitive. (The waste is currently on site inside the Krsko plant in Slovenia.)

Forests and nature protection

Industrial hot spots and traffic, as well as transboundary pollution, are endangering forests and nature in general. A new highway has been planned to go through Gorski Kotar to the coast, which can disrupt and adversely impact nature if preventive measures are not taken.

Energy sector

The energy sector, primarily coal burning power plants, is responsible for many of the environmental problems in Croatia with air pollution being chief among them. The public was also very concerned about the potential for a nuclear catastrophe during the war. Hydropower plays a significant role in Croatia's energy supply and, while it produces much less air pollution than coal burning substantial natural areas usually must be sacrificed in order to construct the necessary dams and reservoirs.

Critical steps to start or continue environmental improvements

Management and Administration

The primary goal of environmental advocates is to set up a separate Ministry for Environmental Protection. The need for a separate environmental ministry is recognized by the government and parliament and its establishment depends mostly on financial resources becoming available. The new draft framework law on environmental protection envisages the establishment of a three level environmental protection system including a separate independent MoE with a supporting (inspectorate) agency and a system of regional and local-level environmental protection authorities. According to this new system, the MoE is to be responsible for elaborating and executing an overall environmental policy, for the effective coordination and cooperation with other ministries regarding environmental issues, and for relations with the experts institutions, NGOs and local governments.
Another critical step in the field of management and administration is greater involvement of outside academic and NGO experts in the environmental decision-making process and the establishment of better cooperation among all institutions dealing with environmental and nature protection. There are good environmental experts and institutes in Croatia but most of them are not included sufficiently in the decision-making process. A database on the state of the environment is also needed. Some beginning steps have already been taken to establish a coordinated and decentralized environmental management system. Some experts think that the "know-how" to identify, prepare and manage the implementation of projects is insufficient. (This criticism is based on the experience with the methodology used in developing proposals for the Croatian contribution to the Project Portfolio for the Lucerne-Sofia Process.) Greater expertise is also needed in the area of law enforcement, especially given the new market conditions.

**Enforceable environmental policy and law**

A national environmental strategy needs to be developed which will elaborate methods for preventing the unsustainable exploitation of natural assets as well as methods for developing sustainable tourism, transportation, energy management, industry and agriculture. At present there is no elaborated concept of a completely independent environmental policy. The proper institutions for developing and executing an environmental policy are still missing and the necessary legal framework is also incomplete. Some steps have already been taken to prepare a comprehensive national environmental strategy. A declaration on the environment, which could be a starting point for formulating such a strategy, was adopted by the parliament last year.

Some progress has already been made in the area of environmental legislation. The draft of the environmental framework law has been prepared. Discussion has started in the parliament and it will probably be adopted by May of 1994. This law will determine the general framework for all specific laws and regulations in the field of environment. Operational and sectoral laws will also have to be drafted. Some sectoral laws are already existing (water, nature protection, soil, forests, protection against noise, etc.), while others are missing (waste, air). The new Law on Nature Protection was passed last year. The energy strategy adopted by the parliament and government more than three years ago was based on cooperation between the ex-Yugoslav republics. The situation since then has changed considerably and the strategy should also be changed. The new framework law is generally considered to be a good start if adopted. Proper political conditions and educated experts are needed, however, to draft environmental laws that can be realistically implemented.

EIAs have been obligatory since 1990, and relatively widely implemented and regulated since 1984. The new environmental framework law encompasses this in a broader concept and plans a new regulation on it. There is a list of activities for which EIA is necessary and the local and governmental authorities are authorized to request an EIA in cases where they see it as necessary. EIAs should be conducted for every new investment, but now the scope of businesses included under the law (as presently interpreted) is too narrow. It is necessary to develop a manual on EIAs which will explain the law, regulations and the proper methodology for conducting them.

**Expertise and public support**

A certain level of environmental education and training exists through formal and informal mechanisms but more should be done both by the government and the non-governmental sector (NGOs, experts, media). It would be important to educate and train the key people who disseminate the knowledge, to produce a self-sustainable process.

A more comprehensive approach to environmental education is necessary. Specifically, training is needed in environmental management and legislation for experts who are working in environmental administration. Experts working now in this capacity are mostly architects and engineers. It is necessary for experts belonging to different disciplines to work together on environmental issues. Also, education and training is required for members of the various political parties, so that they will be able to responsibly address environmental problems and protection in their agendas.

The government should promote a network of national institutions proficient in environmental training. General education of the public is also needed. Electronic media should play a more active role in creating more responsible attitudes among the public in order to put more pressure on the policy makers. The term "ecology" is sometimes misused, and anything can come under this heading. Even commercial enterprises rely on slogans including ecological terms. Also, NGOs should contribute to environmental education to a large extent because they have qualified experts in a variety of fields. However, in order to realize educational goals, financial resources will be needed. Positive examples from other countries and outside financial assistance will be required.

The government has good relations with some of the NGOs and the public is supportive of the government in many environmental issues. Public participation is a strong element of the EIA process. NGOs and scientific experts participate in some discussions of legislation and policy, but generally this involvement should be improved. It is necessary to strengthen the environmental NGO organizations so that they can better help this process and assist in the definition of environmental priorities.
Technology and services

There is a danger of dirty technology being imported as laws are not in place, or incomplete, to prevent this. Modern technologies are needed in almost all sectors as existing production systems are often old and heavily polluting. Pollution abatement equipment is also greatly needed. The damages resulting from the war have exacerbated the needs for new technology as many facilities have been seriously damaged and require extensive repairs and new investments.

Driving forces for environmental improvements and degradation

Market reforms

The development of a market economy, privatization, and foreign investment are assessed as factors causing both positive and negative impacts. Privatization is only just starting and massive foreign investment depends on the future prospects of the economy. However, these developments can endanger the environment and nature if protective legislation to guide new development and privatization is not in the place. Another potential threat results from businesses which pursue profits to the exclusion of other considerations, such as environmental protection. Very often companies claim financial hardship and possible job losses are used as an excuse for avoiding environmental protection measures.

International relations and competition

The main positive driving forces coming from abroad include: The desire to join the European Community and adopt European standards, international competition and export in itself. Tourism which demands high environmental quality and competition with other tourism-oriented countries is also considered as having positive impacts. International environmental conventions and treaties also have a positive external influence.

Western consumption patterns

It is assumed that all characteristics of Western consumerism will appear in Croatia sooner or later. At present, half of the population would welcome sustainable development, the other half would not. When this issue appears seriously on the national agenda the society will be polarized in this respect.

Additional influences

Driving forces for improvement: democratic changes; human resources if pooled and better organized; NGOs and the public; economic instruments should have a positive impact if properly implemented.

The main negative driving forces for environmental degradation: the war; incomplete legislation; inadequate enforcement infrastructure and the lack of standards, and; industry focusing on short term profits and considering environmental investments only as costs, not as benefits.

Integration of environmental protection and economic development

Obstacles to integration

Presently, good coordination between environmental and economic policy does not exist and environmental issues are not integrated with the economic policy. The cooperation between ministries is not sufficient and not encompassing all the necessary sectors. The lack of funds, other more pressing priorities (the war), potential slowing of economic development, the lack of expertise in some specific fields, and insufficient cooperation with outside experts and NGOs are also mentioned as obstacles to integrating environmental protection and economic development.

Existing and proposed measures for improving integration

A national environmental strategy and a development strategy could facilitate the integration. The parliament should play an important role in adopting these and putting pressure on all players. The new environmental law will be an important instrument to achieve this goal. In general, there is not enough knowledge regarding the integration of the economy and the environment. Training is needed on how to establish integration, win-win solutions, no cost programs or low-cost investments which include economic efficiency and environmental management. It is necessary to get beyond the still existing notion that environmental investments only have costs.
Financing environmental improvements

In the present situation the state is poor and the environment is not valued as it should be. It is difficult to get funds from the central budget for environmental purposes. There are no central environmental funds, neither on the state nor on the regional level. Many experts think that a strong, independent Ministry of Environment would be able to obtain more funds. The new draft framework law includes plans to establish such a national fund from which some money will be designated for the local level as well. Presently there is a fund for water management activities, which operates by collecting fees for water pollution. In addition, money is raised from users’ fees for extraction of minerals and is used for improvement of environment in the local communities affected by mineral extraction. Also there is a fee for waste management and a certain percentage of the price of waste disposal goes to the communities threatened by the landfills. The majority of this money is collected at the state level but these mechanisms are not integrated in a comprehensive system. The fees are now managed by different ministries and there is a need to have one central body which would serve to more effectively manage them. Considerable improvement is expected from the adoption and enforcement of the new Environmental Protection Act.

At present, only small funding resources are available on the state and local levels for financing environmental improvements. Waste and wastewater treatment projects can be financed from taxes and other incomes from the local level. Part of the revenues collected for use of the sewage system and water supply can be used for environmental purposes but only part is left at the local government level. For example, the Zagreb City government can, to some extent, finance larger investments if it generates additional funds itself.

The idea of using economic incentives as efficient tools for environmental management is widely accepted, but few instruments are in operation with the exception of some taxes (tourist tax) and tax preferences (fuel tax) as well as tax preferences for non-leaded petrol and environmentally friendly packaging.

The pricing system for resources is one of the economic incentives already used in the energy field. The prices for energy consumption vary with respect to the type of energy source. The Ministry of Finance is entitled to change the prices. However, it is necessary to improve this system in the future and to make a clear difference between industrial and household energy use, and urban and countryside consumption.

International Cooperation

CEE-regional cooperation

There are many common problems where regional cooperation among CEE countries would be helpful in devising solutions, especially with Hungary and Slovenia. This type of cooperation could also help with building better relations towards the West. There already are some ongoing common projects with Hungary, Slovenia, Italy and Austria and better cooperation with other CEE countries is envisioned. There is a need for common steps and measures to improve quality of the environment and decrease transboundary pollution through the development and application of standards for air and water emissions in all CEE countries.

Western assistance

Some positive examples of international cooperation and knowledge transfer include: a U.S. Environmental Protection Agency symposium on the strategies for environmental protection; the co-sponsoring of an International Conference on the Effects of War on the Environment (including Austrian, British, and German experts) in 1992, and; the Danube River Basin Project.

External funds are very much needed as internal resources are extremely limited. The Ministry of Environment is looking for external assistance from the EC, UN agencies, the World Bank, foreign foundations and others. An environmental protection plan for Croatia has been prepared by the Ministry in which the most important tasks are outlined. This document declares not only that extra funding would be needed, but that substantial environmental improvements can be achieved only with external financial support. However, NGOs think that many results can be achieved with available domestic resources, for example, public awareness raising.

Many think that there is a need for a new Marshall plan which would also include Croatia. Presently, Croatia is not involved with the main Western assistance programs due to political reasons. According to most of the experts political considerations should be coordinated with environmental ones but not to the detriment of the latter. Before the war, the World Bank had a large project at Istria to the amount of 250 million USD which has not been completed. Environmental advocates have been trying to get funding from the World Bank and the European Bank for Reconstruction and Development for nature protection activities in order to set up a waste management strategy for the Istra region. Recently there has been some slight progress in the area of international cooperation as Croatia has been accepted as a participant in the Global Environment Facility. There is also some hope to develop projects with the sponsorship of the UNDP.
Environmental problems requiring external funds are seen as follows: concrete projects regarding solid and hazardous waste management; clean up of the principal rivers and the Adriatic Sea, and; the establishment of a comprehensive monitoring system for air and water. In some cases, seed money would be enough to initiate activities, which could then be continued with funds from other sources.

The main criticism of Western financial assistance is that it is usually too strongly tied to the use of Western technology and expertise. Western help has more positive impacts if the technical expertise is oriented towards a concrete field of knowledge which is missing in Croatia. Croatia has to assess, understand and better present its environmental problems and needs to potential Western donors in order to secure future assistance. The greatest value of cooperation is seen as experience and knowledge to be gained rather than money obtained. International advice and projects can play an important role also because they seem to have a more influential impact than similar advice or initiatives coming from Croatian institutions.

Non-financial assistance is especially needed in the following areas: drafting legislation and addressing legal issues; developing standards and enforcement guidelines; training in environmental management; cooperation in research, information systems, and equipment; environmental education in and out of schools; the post-war reconstruction of ecotourism; reconstruction and improvement of the environmental quality in national and nature parks in the post-war period to sustain the biodiversity.

Interest groups in environmental protection

According to many of the experts, there is no clear environmental decision-making process and therefore it is difficult to say which interest groups are having the greatest impact. It is hoped that after the basic framework law on environmental protection will be adopted, the situation will be different. There are some small groups trying to impose their anti-environmental interests (nuclear energy lobby, waste import, dirty technologies, etc.). But so far their impact is limited.

National and regional governments

The National government has the strongest impact on the environment. However, there is still the need for an independent MoE and much better enforcement mechanisms are required.

Academia

Academics are not involved as they should be in the decision-making process. There are some very good experts and research institutions, but cooperation among them is quite poor and their capacities are under-utilized.

NGOs and the public

The NGOs need to play a stronger role in the decision-making process. Now their influence is more on the personal level. Some NGO experts have gained respect from the government officials and they have a certain degree of influence on policy making. The NGOs which organize for special actions and local issues can have significant impact. NGO influence is limited because the public has lost interest in environmental issues, mainly because of the war. Other limiting factors are: lack of funding, organizational skills, and education.

Business and industry

Business and industry are having an increasing impact on environmental decisions. They have money, which gives them power, and it is difficult to control and influence them. However, industry is still mostly state controlled. While there are some negative environmental impacts resulting from privatization, in the long-term privatization could be beneficial for the environment if combined with effective legislation, standards, and enforcement.
CZECH REPUBLIC

Political, economic and social impacts on environmental protection at the spring of 1994

Political changes

In 1990, new environmental institutions were established at the national level - the Czech Ministry of Environment and the Federal Committee of Environment. The responsibilities of the latter included federal legislation, environmental policy, international relations and bilateral cooperation, federal information systems and nuclear security. Before the "velvet revolution", the different areas of environmental protection were under the direction of several ministries and other state organs. The Federal Committee does not exist anymore due to the split of the Federation in 1993.

Between 1990 and 1992 many high-level, influential positions in the administration, parliament, government, etc., were held by people with considerable environmental knowledge and awareness. With the elections in June 1992 a more rightist coalition came into power. The present government is, as an expert mentioned, less "green" than the previous one and the economy is its primary concern. The economic lobby has become strong now, as well. This has effects on both domestic and international policy. Some experts claim that the position of the Ministry of Environment (MoE) is weak now, and even that a decline in the prestige of the MoE is perceptible. Others claim that the governmental changes are probably not too important, at least for now, and that the environmental agendas among Czech political parties do not differ greatly. Some experts mentioned that a more pragmatic, economically-oriented government may set the basis for the broad application of the polluter pays principle and will address and resolve issues regarding the economic feasibility of some of the provisions in the new environmental laws. Environmental advocates criticized the development that before the change of government, regular meetings were held between the MoE (and other Ministries) and NGOs where the actions of the Ministries were discussed while now the dialogue is less intensive. Since 1989, though, access to existing information has been improved and new types of information are collected and made available. The situation concerning statistical data on environmental protection is also being gradually improved.

Most of the experts agreed that the split of the Federation in 1993 did not have larger effects on environmental protection and policy. However, a number of impacts have been mentioned. The role and responsibilities of the MoE are more clearly defined now. The discussion about the future of the Federation and then the split in 1993 displaced environmental issues from the political agenda to some extent. The previously strong cooperation between Czech and Slovak NGOs became weaker.

Since 1990 new legislation, such as the General Environmental Protection Act, the Environmental Fund Act, the Air Protection Act, the Waste Management Act (there was no previous legislation on waste), the Nature Protection Act, the Act on the Phase Out of Ozone Depleting Substances, and the Environmental Impact Assessment Act have been passed. Some of the new laws have created conflicts of interest among the Ministries, and thus amendments and explanations to them have been and continue to be necessary.

In 1992 the authority for physical/territorial planning was given to the Ministry of Economy. This authority had previously been with the MoE since its establishment in 1990. Most issues of regional planning are handled at the district level. If there are conflicts that cannot be solved on the district level, the final decision is made by the Ministry of Economics. Some experts suspected that environmental concerns are probably less of a priority now than when regional planning was under the jurisdiction of the MoE, which might have effects in terms of preventive environmental protection.

Economic Changes

Between 1989 and 1993 the decline in GNP was more than 20%, mostly due to the decrease in industrial production (which contributed a major portion of the country's pollution). The level of environmental pollution was not diminished to the same extent as the decline in industrial production because the most polluting industries did not reduce their production significantly. An expert mentioned that this is because the largest enterprises are protected by the government due to social (employment) concerns and also because these enterprises are often earning foreign currency. Therefore, as some experts mentioned, the existing laws are not applied strictly to all enterprises. However, the situation is supposed to improve in the future because the new environmental laws (i.e. air, waste, and in the near future also water regulations) will gradually come into effect (these laws require compliance within 5-7 years for existing facilities).
Privatization is not expected to have a negative impact on the environment, as there are regulations in place to prevent this. Through environmental audits or EIAs, measures to achieve compliance with the environmental laws will be identified (these regulations are provided only for the second wave of privatization). At present it is difficult to judge the impact of privatization and the success of these provisions because the second wave of ownership transfers has not advanced very far yet. Responsibilities for financing the cleanup of past pollution are unclear in practice. At present the rule is that the responsibility is with the new owner.

Social changes

Shortly after the revolution, environmental protection was considered the second most important issue for the country (after preventing the return of the totalitarian socialist system). Four years later environmental protection is considered much less important by the public. This changing attitude could already be observed by 1991. Environmental issues previously had significant importance in part because environmental activism was to some extent tolerated by the communist government and political protesters could unite under the banner of the environment without great risk of repression.

After the changes, many members of environmental NGOs went to work for the MoE. Many of them became somewhat disappointed after the initial enthusiasm. For many others, NGOs were a simply a base to use for general criticism towards the political system and they are not involved in environmental issues anymore. On the other hand, many new, often small environmental NGOs were established after the revolution. An umbrella organization, "the Green Circle", has been established to strengthen the dialogue and improve coordination with the MoE. This idea was not easy to carry out because the individual NGOs were reluctant to have somebody else speak in their name.

A significant portion of the public, like the government, is now concerned with the pressing economic situation and the development of the business sector. People behave as private citizens and private entrepreneurs, looking after their most immediate and direct concerns and issues. They are primarily interested in taking advantage of the new possibilities available in an open society, but also in the new threats and hardships facing the country. However, the social situation has basically stabilized (strikes are now rare for example). As one expert stated, the society is rather sensitive to impoverishment and hence there are measures in place to fight against this.

Assessment of environmental assets and damages

Natural Capital

The experts mentioned that about 40% of the land in the Czech Republic has some sort of protected status. There are three national parks and 24 protected landscape regions and numerous nature reserves. The government is considering at present the addition of a new national park. Nature conservation has a long tradition in the Czech Republic (the first forest law was promulgated in 1754 and the first nature reserves were declared in 1838).

Environmental damages

The mining districts in Northern Bohemia have been devastated mainly due to air pollution (which is the primary source for health problems). To a smaller extent, the industrial areas of Northern Moravia (black coal mining and steel production) and Prague (mainly air pollution from automobiles and industrial production, causing harm to a large portion of the population) have also suffered environmental damages.

The planned building of a nuclear power plant in Temelin is very controversial and under discussion. There is a strong lobby in the government for the construction of the plant because it will benefit many industries. An expert mentioned that Temelin is in many peoples' view a reasonable way to improve the environmental situation in Northern Bohemia, because continued use of the existing power sources would simply prolong the poor environmental conditions. Northern Bohemia is producing most of the energy for the country. The Clean Air Act specifies that by 1998 when Temelin starts, emissions must be substantially reduced.

Priority Environmental Problems

Priority attention must be given to areas where human health is endangered, primarily industrial centers and big cities due to air pollution.

Air pollution is closely related to energy issues. With respect to this, the cleaning up of Northern Bohemia must continue. The energy policy (energy production, efficiency of energy use, energy saving) must be more compatible with environmental objectives. Air pollution from transportation is becoming an increasing issue.
Another issue which must be focused on is the increasing production of waste and proper waste management/minimisation (industrial and domestic origin).

Most of the experts preferred not to prioritize specific environmental problems along media lines but rather stressed the need for a methodological, comprehensive approach for the different media. It was also noted that considerable attention has already been given to identifying and prioritizing environmental problems in the Czech Republic and that such information is included in the official environmental policy and has also been published elsewhere.

Critical steps to be taken to start or continue environmental improvements

Management and administration

The cooperation between the MoE and related research and scientific institutions could be improved to ensure that their activities complement each other. Management capacities must generally be strengthened on all levels. The main problem of public administration at the local level is the lack of finances. Administration staff often cannot be paid adequately in comparison to what they could earn at private firms. In some districts the administration is managing very effectively in spite of the limited resources, but in general, local authorities are lacking qualified experts.

There is an intensive debate going on about the planned restructuring of the government administration structure (to involve the national, regional, and municipal levels). With respect to environmental management, it is necessary that duties and responsibilities at the local and regional level are more clearly defined. Also, the creation of a unified information network between regions must be accelerated.

Enforceable environmental policy and law

The new state environmental policy was prepared at the end of 1993. The document sets, in a comprehensive way, clear priorities and timelines for the individual components of the environment, for economic sectors (energy production, industry, transportation, agriculture, raw materials) and for human health, education and science. It also outlines intra-governmental cooperation. The policy is considered an important breakthrough. How successful the implementation will be remains to be seen.

Some experts critically explained that up to now a cooperative effort involving the whole government on environmental issues has largely been lacking. In terms of the energy, transportation, agricultural, fiscal, and taxation policies, the government does not adequately take environmental concerns into consideration. However, an expert noted that most of those policies are not officially approved yet and might be reformulated.

Together with the Ministry of Economy the MoE is preparing regional environmental policy. Environmental protection is now mainly directed at the national level. This regional policy should clarify the responsibilities and authority of the regional administrations. In certain areas there has been a gradual tendency to transfer power to the regions. Local self-governments also have responsibilities and power, but often they have no money for implementation, as the primary taxes go to and largely stay at the national level.

Since 1990, nearly the entire system of environmental legislation was replaced. The new environmental law generally has been considered as good by the experts. The rapid adoption of new environmental legislation was partly due to the recognition of the immediate need to improve the environment in the Czech Republic. This has resulted in some problems concerning interpretation and the feasibility of compliance with the law. Thus, amendments to the laws have been necessary. In some cases, explanations to the laws have had to be prepared. Relating to these points, many struggles have developed among different interests, especially among the Ministries. For example, the MoE has prepared a law for forest management in cooperation with the Ministry for Agriculture. All issues relating to forest management are presently under the authority of the Ministry of Agriculture, which has caused some power struggles between the two Ministries.

Some experts mentioned that because of the short deadline for compliance with the new strict regulations (5-7 years), often end of the pipe technologies will have to be installed, which are costly and economically inefficient. They suggested to integrate more economic tools, so that businesses can find the optimal economic solution for the required environmental benefit. Generally, there are major problems related to enforcement. The society does not tend to consider breaking the law as reprehensible or unethical. The people do not tend to report the infractions of which they are aware. The enforcement institutions face problems mainly related to management. They are not sufficiently developed, often understaffed and, in many cases lack necessary expertise. The measuring equipment they must use is often in poor condition. Regulations for the different media - air pollution, water pollution and waste management - are enforced separately. A more integrative approach would make sense.
Expertise and public support

The need to strengthen environmental education has been mentioned as a top priority. The forty years of poor attention to this area is a difficult burden to overcome. Improvements in education and training begin and develop slowly. Thus, an overall improvement in environmental education and training in the Czech Republic will be a gradual process. It is also necessary to improve the level of expertise of the environmental actors in the country. A better understanding of the problems they face and knowledge of alternative solutions and new technologies will greatly improve their ability to tackle those problems. A starting point would be to improve the information exchange regarding successful actions within the Czech Republic and the CEE Region, as well as ideas and solutions implemented or discussed in the West.

Technology and services

There is a lack of advanced technologies for environmental applications. The domestic environmental technology sector is underdeveloped and thus most abatement technologies, with some exceptions, are imported. Currently there are no economic incentives to support the development of domestic capacities in this field. Concerning this point, the government could give more support (this task is beyond the mandate of the MoE). The employment of state-of-the-art technologies is inhibited by the limited amount of money available. When examining options for reducing industrial emissions and effecting waste reduction, it is important to rely not only on end-of-pipe solutions, but to also consider what is called "integrated technology", which is a systematic approach to emissions and waste reduction. Employing an integrated technology strategy can reduce waste and emissions more efficiently and effectively than an end-of-pipe approach.

Driving forces for environmental improvements and degradation

Market reforms / restructuring of the economy

The decline in industrial production has been the major reason for some reduction in pollution levels. However, this is not the desired way to achieve environmental benefits and probably in the future industrial production will begin to increase again. Privatization is a major driving force for environmental improvement, especially in the long-term. It will correct the property rights issue, i.e. people will take responsibility for the management of their businesses and have the incentive to run them efficiently. They can also now be held responsible for compliance with environmental and other laws. While the privatization process is only just beginning, it will continue to effect gradual improvements in the environment. On the other hand, there may be some negative impacts from privatization in the near term because people are behaving as entrepreneurs, seeking short-term profits and pursuing any opportunity to maximise their financial gains. This may lead to exploitation of loopholes in the environmental laws and enforcement system. Some claim that the economic instruments that are presently employed (mainly fines and charges) are a driving force for environmental improvement to some extent, but they are not as effective or efficient as they should be.

International Competition / Foreign Pressure

The Czech Republic experienced some foreign pressure in the 1980s with regard to transboundary air and water pollution issues. This inspired several cooperative projects with its neighbors. This kind of pressure is not strong anymore though. Currently, Austria is pressuring the country with its opposition to the planned nuclear power plant in Temelin. The issue of integration into the European Community and its impact on environmental protection will be significant and Western standards have already been a driving force in the development of the Czech Republic's environmental law and regulations.

Western Consumption Patterns

Without a doubt the society is adopting Western consumption patterns. The "throw away mentality" is already perceptible. While this is a negative development from the environmental point of view, it was probably inevitable and not surprising. At present, the public does not seem to be aware of the problems associated with this trend. Economic incentives, especially with respect to business practices, could be used to prevent, or diminish, wasteful consumption habits.

The "greening" of business

Companies are being pressured to adopt environmentally sound practices. There is legal pressure in the form of new environmental laws and regulations, as well as improved enforcement. There is also perceptible informal pressure from the public encouraged by the increased environmental facts and data now available. As a result, even some of the most polluting large companies are responding to environmental concerns. They are also taking steps to improve the environmental awareness of their top management. The establishment of the Czech Environmental Management Center by 30 companies, the Association of the Producers of Environmental Systems, the Czech Business Council for Sustainable Development and the Business Leaders Forum of the Czech Republic are examples of industry's interest in environmental protection.
Integration of environmental protection and economic development

Obstacles to integration

Environmental concerns are usually not taken into account in economic policy. Environmental protection is considered as an issue that can be solved only when the economy is strong enough. The most critical factors that are necessary in order to improve the situation are: better environmental education and experience in dealing with environmental problems and issues, especially in non-environmental circles, and; improved information exchange with the industrialized countries of the West regarding successful policy integration and policy instruments and mechanisms. There is a lack of broad dissemination of this information at all levels (i.e. international treaties, literature, and personal contacts).

Additionally, the lack of cooperation and the conflicts of interests are hindering integration. An illustration of the adversity encountered in attempts to integrate economic and environmental policy is the history of the environmental tax. The Czech Republic has a comprehensive, modern tax system, consisting of seven special laws on taxation. Six of these taxes are in place. The seventh is the so-called ecological tax, which is still being prepared by the MoE in cooperation with the Ministry of Finance. It is doubtful whether this tax law will ever be adopted, and if adopted, whether it would be effective. Suspecting this, some advocates for an environmental tax attempted to include parts of it in other laws (i.e. income tax). Due to the efforts of the pro-environment lobby, some amendments were eventually included in the income tax law. It remains to be seen, however, what kind of effects these amendments will have. The lack of cooperation and the conflicts of interest actually seem to have made the result worse than it would have been without the intervention of the green lobbies.

Existing and proposed measures for improvements in integration

The topic is under discussion in some environmental circles, as well as a few economic circles. This discussion, though, is quite limited and no concrete measures have been taken to address this issue. Possibilities and the need for integrating environmental protection and economic development are not understood by the key sectors of government and therefore only a small number of measures are in place. In the state environmental policy, however, the gradual integration of environmental considerations into all economic and social activities is outlined as a long term goal.

Sustainable development was stressed as an important concept at the 1992 World Conference on the Environment in Rio De Janeiro. Sustainable development should be integrated into the Czech Republic's environmental policy according to the ideas laid-out at this conference. The MoE does cooperate with the United Nations' Commission for Sustainable Development. While there is some interest in this issue, the concept of sustainable development is not clear to a lot of people and different definitions exist. This could be an important topic for environmental education and/or training activities.

Financing Environmental Improvements

The limited resources available for environmental protection are generally used for the following types of activities: constructing wastewater treatment plants; establishing waste landfills or improving the management of existing ones; installing desulphurization technology in coal power plants; replacing lignite fuel with gas, and; accident prevention at industrial sites.

The situation regarding the financing of environmental investments needs to be improved. A major problem in obtaining financing for environmental investments is the short time period required for repayment of a loan - usually four or five years. Many environmental investments are long-term projects and a longer term is necessary for repayment. In addition, there are no guaranty funds available for environmental projects and banks are not prepared to bear the risks at this point. Some banks in the Czech Republic do have a policy on environmental management however.

Another area to be addressed regarding financing of environmental projects concerns the management of the State Fund for the Environment. This Fund could grow very large in the future as more companies are required to pay into it. The managers of the fund are interested in how to improve the decision-making process and in placing more emphasis on providing soft loans rather than grants.

Companies complain that the current structure of economic instruments is not efficient and does not provide much incentive for environmental improvements. The situation is better regarding wastewater (fees reflect investment and operational costs) and in the area of waste treatment (they can compare whether it is more useful to pay the fine or to pay for changing the technology). They also complain that these collected fees, which go to the State Environmental Fund, are not used effectively for industrial needs. There is some interest in the business community in tools that enable optimal environmental benefit from an economic point of view. They would like to get away from "command and control" regulations and replace them with measures based on the new idea of "eco-efficiency".
International Cooperation

CEE-regional cooperation

There is a strong need to strengthen the East-East dialogue. However, it is not perceived as urgent by the public, probably due to the rejection of the commonly shared past four decades and a stronger orientation, in general, towards Western Europe. On the other hand, East-West cooperation has developed more sufficiently.

Western assistance

Experts stressed that the Czech Republic has had numerous positive experiences with Western assistance. Western assistance has been criticised in a general way, however. Many people have bad feelings about the fact that in many projects a sizable sum of money is spent for studies which are carried out by foreign consultants without adequate involvement of local participants. Sometimes a direct, deeper knowledge about the specific Czech problems is lacking when this occurs.

Proposals to improve the effectiveness of foreign assistance include: 1) ensure the adequate involvement of local representatives and experts who have direct experience with the issues in the country; 2) support the projects on a long-term basis (i.e. ensure support for the implementation of the projects), and most importantly; 3) financial and in-kind support for knowledge and information exchange with respect to problem solving techniques in the West.

It was stressed that there are no issues that can only be solved with foreign assistance and that the situation concerning external financial help is not absolutely critical. The experts listed some issues which could be addressed more quickly with foreign support:
- converting existing industrial plants (e.g. coal producing plants or generally facilities in the energy sector) into pilot plants with state-of-the-art abatement technology and integrated environmental management.
- assistance in the areas of science, assessment, some special types of technologies, and local and regional planning.

Interest groups in environmental protection

National and Local Governments

The MoE formulates and implements national environmental policies. Generally, however, the government is more concerned with the economy and does not make sufficient efforts towards directing action in environmental issues. There is a tendency to consider environmental protection as an issue that can be solved only when the economy is strong enough. Local governments have power and responsibility in different areas but usually too little money for the realization of concrete projects. Sometimes strong lobbying for local economic development activities impedes adequate consideration of environmental concerns.

Businesses

The business community is becoming increasingly more influential in the environmental decision-making process. Some experts think that the growing strength of the economic lobbies will possibly have negative impacts on the environment. However, there is growing interest among companies in improving their environmental policies as well as in integrating environmental concerns into the national economic policy in a practical and feasible way.

Environmental NGOs

Environmental NGOs have considerable influence on environmental decision-making with regard to some specific, local issues (sometimes they can mobilize public and/or media pressure), but limited impact on issues relating to environmental policy. They have generally been criticized for some of their weak efforts which were described as poorly coordinated and lacking publicity. Their influence is often not as strong as it could be and they are still not demanding enough. This situation seems to be slowly improving however.

Media

The media has considerable influence but reports focus mainly on "hot stories" with a tendency towards sensationalism. The main approach is popular. There is insufficient coverage of the real issues and of positive and constructive examples of environmental protection.

Academia

The influence of academia and science on the environmental decision-making process has been described as weak by the experts.
HUNGARY

Political, economic and social impacts on environmental protection at the spring of 1994

Political changes

After years of hard and later soft dictatorship democracy is evolving in Hungary. The real democratization process began in 1990 with the opportunity for free elections. The first legitimate government took office promising to establish the rule of law and a market economy where private property, personal freedom, competition, and social security are fundamental values.

In the second half of the last decade environmental NGOs were playing an active political role in preparation for the democratic turn. In fact, opposition groups were in environmental disguise: as environment became the only issue where dissident opinions could be voiced without considerable risk, all opposition started to gather under its banner. As a result, in the campaign preceding the first free elections, the environment featured highly on the agendas of the political parties. With the new freedom new organizations started to form and become active. Among others, environmental NGOs spread all over the country. Green parties also formed from dedicated environmentalists. Though they did not have representatives in the parliament they were able to promote environmental issues in the media. Freedom of speech is another great achievement of the new democracy in Hungary. Environmental problems are now open for discussion, although information on the environment is still not sufficient.

Replacing the former unilateral Eastern political orientation, the main objective of Hungarian foreign policy has become integration with Western Europe. Hungary is currently an associate member of the EU. This facilitates cooperation with EU's existing environmental protection institutions and EU environmental directives are continuously being incorporated into the Hungarian regulatory system.

In 1990 the highest level of environmental management was reorganized. Responsibilities were spread among the Ministry for Environment and Regional Planning (abbreviation in Hungarian, Ministry for Transport, Communication and Water Management, Ministry for Agriculture, Ministry for Interior, Ministry for Welfare, Ministry for Industry and Trade and municipalities. (Responsibilities will probably change as a result of the 1994 elections.) The administrative structure has also changed at the local level. Freely elected local governments are responsible for their territory, in principle, including the environmental issues. This means environmental responsibilities on a scale not experienced before. Addressing these issues is all but impossible due to the present lack of environmental management professionals. However, according to the legislative structure the responsibility for environmental issues lies primarily within the competence of the environmental inspectorates.

The national assembly has passed 300 laws in the last few years, even though these laws are sometimes uncoordinated. New environmental law has been submitted to the parliament but it has not yet debated the bill. For the 1994 elections, each party developed its own environmental program. Unfortunately, however, the experience of the past four years indicates that these programs may remain more rhetoric than anything else. Politicians who promoted environmental protection during their campaigns in 1990 changed their tunes once elected: they considered economic and social problems to have higher priority. Environmental issues were only complicating the difficulties of the moment. At May of 1994 the environment generally remained missing from the agenda of public discussions as economics and unemployment dominated attention.

Economic changes

The country's economic performance is determined by the poor sectoral structure, a very high burden inherited from the previous system (over 21 billion USD outstanding debt), and the collapse of the traditional markets. GNP was almost 20 percent lower in 1993 than four years earlier. The greatest slump took place in 1991 (12% decrease from the previous year). The rate of decline in GNP gradually slowed down to almost zero in 1993. Industrial output fell by 30 % in four years. It reached bottom in 1991 and then levelled out in 1992. Signs of recovery appeared in 1993 when the gross output rose by 4% over the previous year. The decline in agricultural performance has been similar, but the timing was significantly different from industry. The initial decline began later and it has not reached bottom yet.

The country's future heavily depends on the success of its economic restructuring. In general, Hungary is becoming a more energy efficient economy. Specifically, the main issue is to identify the prosperous economic sectors and the most environmentally sensitive sectors, and then to investigate and evaluate them. The traditionally overdeveloped sectors like metallurgy and mining are declining, which is good news from an environmental standpoint. The building materials and chemical industries seem to have comparative advantages.

The decreasing GNP has meant decreasing pollution, i.e. the decrease in production from heavy industry resulted in a substantial improvement of the environment, mainly with respect to air pollution and hazardous
wastes. In the agricultural sector the effect has been similar. The land of the formerly state owned farms has been divided into small, privately owned plots and the farmers have no money to buy pesticides and fertilizers. This has been good for the environment, but bad for the economy due to lower production levels.

The privatization process supports restructuring and has a positive effect on the environment. The new companies want to be cost-effective. Once energy pricing reflects real world values, companies will make greater efforts to reduce energy consumption. In addition, implementing laws and regulations which hold the polluter responsible for environmental damages encourages companies to reduce their impacts on the environment. At present, these instruments do not exist in Hungary.

The inflation rate is decreasing in Hungary with the current projection for 1994 being 20%. During the past four year period industrial production prices doubled, agricultural purchase prices rose by 70% and consumer prices went up 260%. The high inflation rate has made loans expensive, which together with the high tax rates has discouraged investments, especially those for environmental protection.

In Hungary an extremely fast privatization process took place. The privatization and subsequent bankruptcies of many enterprises in the transition period have led to new problems. The regulations governing bankruptcy declarations are also faulted. In such cases a company is only required to self-report the extent of environmental damages it caused and there is no follow-up auditing of the validity of this declaration. Privatisation could have been a good opportunity for the assessment of environmental assets and damages. Albeit there is an obligation by law, there is a general resistance to include environmental experts in the privatization process. The result is that privatization agencies do not confer with environmental experts. Many complicated questions are raised with respect to this issue, i.e. how should properties be evaluated, what standards are necessary to measure environmental clean-up costs, and how much training is needed in agencies to effectively run the privatization process.

The number of privately owed enterprises has increased sevenfold since 1989. Average company-size is smaller than before, which makes it difficult to follow their economic or environmental impacts effects and also complicates enforcement. Due to the lack of adequate capital and weak enforcement some of these companies are ready to buy obsolete Western technologies. Some companies have imported wastes from the West, claiming they are raw material for their production process in order to get around the waste import laws. Small environmental businesses have also emerged. They have an unambiguous, positive effect, even though their technical capabilities and level of proficiency are generally low. There is a lack of professional organizations representing their interests, which would exclude enterprises with low operating standards.

The present economic situation in Hungary does not favor environmental improvements, therefor, compromises which balance environmental and economic standpoints should be made. These compromises should not result in irreversible change in the environment. In addition to market mechanisms for environmental protection state actions are also needed to counteract certain exaggerating effects of the market, and the proper adaptation of international experiences to the Hungarian circumstances. For example, seriously polluted air, caused by traffic, is damaging the environment. The well-developed railway and public transport system could be used to reduce pollution, (e.g. in cities or by replacing truck transport with rail transport).

Social change

The structure of society has changed in the past four years. The former ideology based on equalizing incomes has disappeared and now income differences are increasing. The number of business owners is also increasing, while at the same time more and more people, mostly those unemployed, are becoming marginalized. The dramatic fall in production resulted in a decrease of nearly 25 % in employment. The trend did not stop in 1993 with the number of those employed 6 % lower on an annual average. The current rate of unemployment is 12%. This means that there is an increasing portion of society that is lacking its basic needs and thus, consider environmental protection a luxury.

Consumption patterns of the above average income group changed in an environmentally harmful direction. This group is buying an increasing amount of expensive goods with more and more throw away packaging material, while selective waste collection has yet to be introduced. On the other hand, a positive trend is that old, highly polluting cars are being replaced with new cars with low emission. However, the overall number of cars is increasing and the total emissions from transport has not changed. While the perceived Western attitude favoring healthy living and physical exercise has been quickly adopted by these people, environmental awareness has not become fashionable with them. A typical example is the failure of selective waste collection schemes in the wealthy districts of Budapest due to non-compliance.

The free, self-organization of society is favorable for environmental interest groups. Today, Hungary has an open social system. The public has become more sensitive to environmental problems and in many cases plans to build polluting factories have been terminated due to the opposition of the public. NGOs in Hungary are well-developed. However, some think they are losing popularity. First described as heroic, now the media are not showing much interest in their activities. The development of a strong environmental lobby is needed.
Assessment of environmental assets and damages

Natural capital

The density of the population in Hungary is about the European average, approximately 110 persons per square kilometre. This means that there are many areas where nature has been undisturbed. The natural capital in Hungary consists of areas attracting tourism with their scenic landscape such as areas around Lake Balaton; and also those areas less frequented and therefore not polluted by human activity, such as parts of the Plains, the Transdanubian area and the North of Hungary. National parks, landscape protection areas, nature conservation areas and several forests regions are protected by law, now totalling about 15% of the country's area.

Environmental damages

Hungary has numerous environmental damages, not only from the previous decades, but also from the last century. The activities of recent decades have, however, resulted in the worst damage. Under the previous political system citizens were excluded from decision-making and the population lost interest in solving problems, including environmental ones. The centrally-planned economy forced industrial production, while the prices of energy and raw materials were kept at an artificially low level. Environmental assets are not included in the national budgeting, but the economic consequences of environmental actions (such as proposed legislation) are regularly estimated by the academic community.

In the past, agricultural production was increased by excessive use of chemicals. The negative effects on natural assets were apparent and far-reaching. Despite the fact that chemicals are no longer used to a great extent in agriculture, the effects of the previous heavy chemical use persist.

Lake Balaton has a special importance for the tourist industry. In the summer season some 2 million tourists visit the lake shores and spend 20 million visitors-day there. Lake Balaton, Hungary's main recreational district, is polluted by sources of effluent originating from communal sewage systems, agricultural activity and other causes. The impact of these effects has resulted in the diminishing quality of the lake as a recreational area. However, ambitious regional programs, such as sewage treatment and diversion and the re-establishment of the reservoir called Small Balaton gives hope for improving the water quality of the most threatened Western bay of Lake Balaton.

Regarding specific pollution problems, in contrast to other CEE countries, environmentally critical areas are less concentrated in Hungary and only a few hot spots can be named, and the differences between these areas and other parts of the country with more typical levels of pollution is less pronounced. These "warm spots" are the Sajo valley, the Transdanubian industrial district and Budapest. The most serious problem is the increasing contamination of drinking water sources.

Hungary has a lot of contaminated sites around chemical factories. The chemical industry was quite developed in Hungary at the beginning of this century and through the 1960s. The chemical industry produces a lot of hazardous waste. Because the management of this hazardous waste is not regulated in a proper way, there have been a lot of instances where people have discovered hazardous waste under the ground surface. Former Soviet military bases should also be mentioned. Many natural areas have been polluted by kerosene, oil, etc. Of more than 170 sites requiring remediation, twenty have already been cleaned-up and five additional sites are in preparation.

Priority environmental problems

Environmental problems and priorities in Hungary are recognized to be rooted in the geography and history of the nation, shaped by the legacy of decades of socialism and the political and economic aspects of the transition period. The most outstanding was reported as water quality.

Water pollution

The greatest water pollution problem stems from the lack of canalization and the ensuing surface and subsurface water contamination. Nitrate contamination is already a problem in parts of the country's drinking water supplies. The lack of wastewater treatment plants in the country exacerbates the problem. An increased number of regions in Hungary are being provided with new water supply lines, whereas canalisation to the same regions is lagging far behind. Consequently, the higher water consumption leads to increasing amounts of inadequately disposed of wastewater.

There is a real threat of groundwater levels dropping in certain regions surrounding the Danube near the Slovak border. Since this groundwater is the only water supply source for some areas, there could be serious water shortages in the area. The controversial issue of the diversion of the Danube at Bös is still unsettled and the feasibility of achieving an immediate solution is low.
Air pollution

Ambient air pollution has three main sources: industry, households and traffic. A significant portion of the industrial air pollution problem is related to power plants and the usage of high sulphur content lignite coal and the lack of desulphurization equipment. Emissions of air pollutants from metallurgy is decreasing due to economic restructuring and declining production. Among other air polluting activities, emissions from the organic and inorganic chemical industry are also considerable. In the heating season pollution from household heating is significant at the local and regional levels due to low emissions from chimneys. Traffic has become the fastest growing air pollution source in the past 15 years and is mainly concentrated in urban centres.

To reduce air pollution government regulations are necessary, such as emission limit values based on BAT (best available technology) principles, sulphur and carbon taxes, establishment of subsidies on unleaded petrol, restricting importation of polluting cars, etc.

Waste

There are problems in the areas of both hazardous waste and municipal solid waste. The problems include more than 2000 illegal dumping sites, inept processing of toxic and hazardous waste, weak laws governing storage, and decentralization of landfills. There is also a lack of initiative to reduce waste production. Regional incinerators are few and expensive. Selective collection, recycling and reuse options have not been developed beyond the infancy stage in most areas.

Critical steps to start or continue environmental improvements

Management and administration

Reasonable administration of the environment, including the formulation of policies and measures, can ultimately be guaranteed only if the quantity and quality of relevant information is adequate. Due to the serious lack of appropriate data, statistics, and indicators it is difficult to define clear environmental goals. This, combined with the lack of a legal framework for environmental protection is probably the most detrimental to the environment. The Ministry of Environment is not very persuasive in pointing out what they want to achieve in five years. Without a national strategy there are problems of poorly allocating resources, both Western assistance and dedicated national resources.

The MoE does not have enough leverage to negotiate with other ministries for the incorporation of environmental considerations into the policies of other sectors such as energy, finance or economic development. According to some experts the MoE needs more highly trained environmental specialists, often right to the top level. Others criticized it as being too political. The budget allocation for the ministry provides an insight into the priority given to environmental protection by the government (0.6% of GNP is allocated for environmental protection whereas environmental damage is estimated at 3-10% of the GNP).

Since enforcement is so critical all over the country, regional inspectorates should be strongly supported. Currently, however, they have little incentive or motivation. Their financial basis should be more substantial. At this moment, unfortunately, inspectorates work partly as government authorities and partly as private consulting firms because they are only partially supported from the state budget, creating a strange situation. This should be changed as soon as possible. These bodies should be fully supported by the state.

Enforceable environmental policy and law

So far the government has been playing a mainly reactive role to environmental problems, but now there needs to be a change towards a more proactive stance. A move towards a long term, preventive approach would prove less expensive in the long term in financial and human health terms. In the short term, sound, proactive governmental measures leading to environmental legislation and institutional framework development are necessary steps to the medium-term goal of integrating environmental protection with economic growth.

It is of the utmost importance to develop the national environmental policy and strategy based on the concept of sustainable development, as well as to effectively implement the "polluter pays principle" and economic instruments to provide resources for consistently executing derived programs. The main criteria for prioritizing environmental problems should be human health and ecological risks. The recently adopted directives on environmental impact assessments and the "National concept on environmental protection and nature conservation" are considered as proper steps towards responsible environmental protection in Hungary. Most experts also agree on the necessity of the current energy price policy with which energy prices are rising faster than inflation. However, a substantially higher energy price would result in a better industrial structure and cleaner environment. This painful step is still avoided for fear of political consequences.
There is a lack of new laws or regulations tailored to solve Hungary's environmental problems. Necessary environmental legislation has not yet been enacted and most of the special regulations are obsolete or missing. Additionally, there are aspects of law enforcement that are unsuitable in the post-socialist era development climate. The newly adopted EU regulations might lose effect due to the serious difficulties of enforcement.

The Constitution of Hungary recognizes the right to a healthy environment. The Constitutional Court recently ruled that it is against the Constitution for the state to allow changes in nature or in the quality of environment representing setbacks from already achieved levels. The application of this decision has stopped the privatization of nature protection areas, which was the practice of recent years. The Court, and the "Ombudsman" (an elected Speaker for Civil Rights) are obliged to guard environmental rights. The new environmental law, submitted to parliament during the spring of 1994, awaits to be reviewed and passed. Principles of public participation, right-to-know and freedom of information are appearing in legislation at various levels. They will have to be developed further and put into practice.

**Expertise and public support**

Incorporation of systematic environmental education beginning from the kindergarten, familiarizing the teachers with environmental issues, and introducing environmentally-related curricula at the universities is seen as the only long term solution. Not only public awareness should be raised, but also the environmental awareness among decision-makers, i.e. a recent article in the newspaper pointed out that only 20% of the 385 Members of Parliament are concerned about the environment. This situation is probably even worse on lower administration levels. The MoE tries to promote that type of education. The current limited public support for environmentally benign behavior and the lack of public awareness on environmental problems has indirect detrimental impacts on all element of the environment.

**Driving forces for environmental improvement and degradation**

**Market forces**

New possibilities in marketing allow the opportunity for the establishment of a system for identifying environmentally friendly products (environmental labelling) and such a system has been recently introduced in Hungary. This system is based on motivation and on commitment to the environment felt by both producers and consumers alike. This encourages market competition for environmental friendliness. However, it is known that for market based methods to be truly successful a true market needs first to exist.

**Government**

Increasing efforts have been made to incorporate environmental issues into legislative procedures, such as the act on environmental liability in bankruptcy. Environmental remediation should be required by law in the privatization process and environmental impact assessments should be compulsory for environmentally sensitive investments. Another opinion is that environmental considerations have not been introduced into the privatization process properly, and the question of liability is not clearly defined, to the detriment of prospective investment and the environment.

**International relations and trade**

International political and economic relations represent a strong incentive for environmental protection. The political decision for future integration into the EU is very important and is evaluated as a positive driving force. Adoption of European environmental directives into the Hungarian regulatory system would make reasonable requirements on products and technologies as well.

**Environmental protection industry**

The sector of environmental industries and services is underdeveloped. The Environmental industry is small, while consultant services are more advanced. Besides international consulting firms a number of Hungarian companies have appeared. The entire sector is striving to set up an association to protect its business interests.

**Integration of environmental protection and economic development**

**Obstacles to integration**

Although integration of environmental considerations into all other policy areas is a crucial step towards sustainable development, not too much has been achieved in this area because decision-makers do not have integrated ideas about environment and the economy. This results in the neglect environmental problems. A fundamental problem arises from the fact that the environment continues to be regarded as a mere economic externality within the operation of the market economy.
It is valid to think that the former socialist countries should not have to make some of the same mistakes as the West did in the past, however, there cannot be a leap to such sophisticated solutions until an operating market system is established where an economic regulatory system is feasible. Economic incentives only work when implemented together with a sophisticated monitoring and control system. The monetary value of environmental assets is difficult to measure in economic terms. There are no valid data available on production, nor on costs and generally there is a lack of know-how.

**Existing and proposed measures for improving integration**

In the 1970-80s a broad system of so-called environmental protection fines (non-compliance fees) were introduced and are still in use (i.e. on wastewater, sewage, hazardous waste, noise and certain air pollutants). In addition, in the field of water management there is a system of user charges. These fines and charges, however, do not reflect the real harm to the environment, in fact their levels are many times lower than actual costs incurred. The introduction of new economic instruments (i.e. fuel charges and other product taxes) has just recently started. Their effect is positive in terms of raising revenue for environmental protection programs, but their usefulness as incentives are questionable and a longer time period is needed for a thorough evaluation.

The use of economic instruments for environmental protection is a subject which is being analyzed and debated by a small circle of people in Hungary. More thorough knowledge of the range of possibilities and their potential benefits should be acquired by the relevant government, business and academic specialists. Plans for restructuring the existing system of economic instruments are included in draft environmental legislation. Generally, however, it can be said that the establishment of new mechanisms for integrating environmental concerns into economic development is not a high priority for decision-makers.

**Financing environmental improvements**

The Central Environmental Protection Fund is a separated state fund earmarked for the purpose of implementing efficient environmental protection schemes, including investments. The disbursement of money from the Fund is under the authority of the Minister of Environment and Regional Policy, and the Fund administration as well. Sources of income for the Fund are basically environmental fines, environmental product charges, user fees and emission charges, some international aids serving environmental protection, direct budget allocations, and voluntary payments to the Fund. Profit-oriented investments can only receive assistance from the Fund in the form of loans or loan guarantees.

**International cooperation**

**CEE-regional cooperation**

Hungary's special geographic position makes cooperation a necessity. More than 90% of Hungary's surface water flows in from abroad. With respect to SO$_2$ emissions, Hungary exports about 45% of its emissions, and more than 50% of sulphur compounds deposited in Hungary originates from abroad.

Former East-Block countries reduced most of their relations on the ministerial level. Fortunately, everyday cooperation continues at the operational level. Hungary's relations with other countries in the region regarding environmental issues could be much improved. (The Slovakian dam issue remains a major obstacle though and meaningful cooperation with the former Yugoslavia is out of question at the moment.) There is some cooperation with the Czech Republic. The best relations probably exist with Poland. Joint environmental actions within the CEE region are extremely limited at present. There are many areas that would benefit from joint agreement and cooperation among these countries (i.e. transportation and surface water issues).

**Western assistance**

There are five major sources of foreign assistance for financing environmental improvements: EC PHARE, OECD bilateral programmes, German Coal Aid, US AID, and foreign NGOs. In 1992-93 the greatest portion of the aid has come from the EU, amounting to more than 50%. OECD countries bilateral programmes amounted to approximately 20-25% of the total. The German Coal Aid contributed with 15-20%, the US AID 5-10% and foreign NGOs 1-2%. The Japanese Government recently offered assistance in the form of loans with especially advantageous terms for environmental investments.

Western countries have offered substantial support to Hungary during the transitional period. The most important aspects of this aid are in the form of knowledge transfer, help in institution building, and directly financing projects. The experiences with western assistance have not always been positive. Some consider the main goal of western consultants to be making money, which means that as little effort as possible is put into the work. Some "assistance" projects are organized in such a way that consultants come, write a report and leave again. This is, in fact, only transportation of money from the left pocket to the right, i.e., Western assistance is sometimes merely self financing, which really does not help Hungary that much. It is noted that Hungary is also guilty of this practice. CEE countries have not learned enough regarding the proper use of
Hungary

financial resources and they also lack experience to tackle environmental issues. Western programs, like PHARE, have very strict rules, making it difficult for countries to comply and receive assistance.

Hungary should make use of Western assistance and, therefore, develop better diplomacy by trying to combine the EU's interest with our own interest and then, for example, ask for more investments in alternative transport. International programs should be reformulated and the objectives should be adapted to the real needs of the countries. Furthermore, western consultants should pay more attention to the local circumstances.

**Interest groups in environmental protection**

*National government*

The most important interest group is the national government because of its economic policy (e.g. its tax policy). At the moment Hungary is experiencing a recession, which is forcing the government to protect its domestic industry. It would be better, in terms of the environment to reduce or eliminate some industries, like metallurgy and chemical, but now they are strongly protected. This is a strong force for environmental deterioration.

*General Public*

The public, however, is mainly interested in environmental problems that directly affect them. In some areas people are concerned about the air pollution, because it is visibly threatening their health and that of their children. They are mostly unaware of other problems, like waste problems or the destruction of nature. People do not seem to recognise the need or the benefits of the separate collection of waste. Although the low environmental awareness of people is a serious problem, decision-makers do not feel they have the right to judge consumption patterns of the Hungarian people.

*Media*

The media has a general environmental awareness raising responsibility. However, journalism is not of the highest quality and often relies on sensationalism. In general, there is very limited coverage of environmental issues. There is a general lack of a working structure to widely distribute information, whether from the government, NGOs, or the media.

*Environmental NGOs*

According to some experts, NGOs should play a different role than they do now. At the moment they act more like consultants than as NGOs. They still protest often, but do not undertake more sophisticated efforts necessary activities to raise the environmental awareness of the public. They should direct their activities towards concrete problems and should explain these problems in ways that citizens can understand and appreciate.

Some experts also suggested that the most effective level on which to influence environmental policy making is the local authority level. NGOs on local level should cooperate with them. NGOs should act more as partners to local authorities and should be careful not to strictly emulate western NGOs because they have much greater financial resources and are working in a very different atmosphere.

During the democratisation process, the partnership between different interest groups has not been very good. This partnership between the different groups must be improved to solve the serious problems which exist. Many new NGOs have recently been formed and their role is not well defined.
Political changes

The process of democratization has generally had positive effects on environmental protection in the FYR Macedonia. (A few experts mentioned, though, that it has also had some adverse effects, as chaos and anarchy have appeared to some extent in the absence of the previous political system.) One expert noted that environmentalism as a movement really only began in the FYR Macedonia with the political reforms. The new freedom of democracy has allowed the public to speak out about problems such as environmental deterioration, and now citizens and environmental NGOs publicize the issues and react strongly to the different problems. In the words of one expert, "democratization has allowed greater 'glasnost' in environmental issues." Access to environmental information has also improved which helps the pro-environment efforts of NGOs and journalists. The political changes have allowed greater contacts and cooperation with western experts and organizations as well. Environmental interests are now promoted by various individuals and groups in decision-making at both the government administration and parliament levels. Some elected officials have even embraced environmental issues in their platforms. (A few experts noted, however, that the pro-environment positions announced by politicians are often merely hollow attempts to win electoral support.) Environmental activists from the Skopje NGO "Survival" formed the political party "the Greens of Macedonia," however, support for them was not great and they eventually joined another party.

Despite the benefits resulting from democratization, most of the experts agreed that the negative impacts of other political changes, namely the political conflicts with Greece and the fallout from the war in Yugoslavia, have had much stronger, and negative, influences on environmental protection in the FYR Macedonia. Certain environmental problems in the FYR Macedonia, such as the improvement and protection of Lake Dojran and the Vardar River, simply cannot be solved, and continue to worsen, without close cooperation with Greece. The economic crisis resulting from the trade embargoes with Greece and Yugoslavia dominates public and political concern and environmental issues are considered a low priority. This has contributed to a lack of progress being made in enacting and formulating greatly needed new environmental legislation and policies. Progress in the areas of law and policy has also been hindered by the lack of a separate Ministry for Environment.

Economic changes

Economic changes occurring in the FYR Macedonia in recent years have had major impact on the environment, almost entirely for the worse. Nearly all of the interviewed experts explained that benefits expected to be gained from free market reforms have been overwhelmed by hardships resulting from political tensions with Greece and the war in Yugoslavia. Due to economic embargoes, markets have been lost in both of these countries, which represent two of the country's four neighbors. Moreover, pollution abatement equipment, critically needed by many factories, cannot be imported from these countries. A third neighbor, Albania, has severe economic problems of its own, leaving Bulgaria as the only bordering country with which to have normal trade relations.

The sharp economic decline experienced in the FYR Macedonia and the currently very weak economy have increased stress on the environment as short-term economic priorities now dominate decision-making in all sectors. Industry claims that it barely has enough money to pay salaries and that investments in environmental protection are simply not possible. The government says that it is doing all it can but that it too is severely hampered by the lack of financial resources. Members of the general public are experiencing increasing threats to their economic welfare and thus the environment is seen as a luxury item. In such circumstances environmental protection is considered a very low priority.

Social changes

The social changes of the recent years have occurred largely as a result of the above-mentioned political and economic changes, and are having wide-ranging effects on the environment. Political changes resulted in new social freedom, with which many more people became involved in environmental protection activities. Previously, public opinion was controlled and there was no public participation in governmental decision-making. Now citizens and citizen groups are willing and able to take part in government decision-making. The number and activity of NGOs has expanded rapidly, from 13 in 1991 to about 60 now. In 1990 the Macedonian Ecological Movement (DEM) was formed as a national umbrella organization consisting of independent environmental groups and professional associations. DEM has since become a member of the international environmental organizations "Friends of the Earth" and "Greenway." Three members of DEM serve as advisors to the Parliamentary Committee on Environmental Protection. Some industrial and governmental officials have recently become concerned about their reputations on environmental issues largely as a result of NGO efforts to raise public concern about the environment.
Nearly all of the experts explained, however, that the social changes resulting from the worsening economic conditions have had destructive effects on environmental protection. Because of the dire financial situation of many people, much of the public is more concerned about job security and economic welfare than environmental issues. Most people are concerned about the immediate issues of daily life, not the long-term health of the environment. As an example in support of this, one expert cited the increased exploitation of forest areas through the illegal harvest of trees and poaching of wild game. Government efforts in addressing the problems were reported as inadequate and a few experts stated that some government and parliament officials were just not interested in environmental problems at all.

**Assessment of environmental assets and damages**

**Natural capital**

Despite of the FYR Macedonia's small size the country has important and valuable natural assets. The major lakes of Ohrid, Prespa and Dojran were mentioned by nearly all of the experts as extremely valuable and in great need of special care. These lakes are home to many endemic species and offer excellent opportunities for scientific research. Their great beauty provides the basis for a bustling tourism business. The value of Lake Ohrid has received special recognition, with the lake being listed by UNESCO as a site of World Heritage. The FYR Macedonia also has national parks (Pelister, Mavrovo and Galicica) which include many plant and animal species unique to Europe.

**Environmental damages**

Economic development in the FYR Macedonia is threatened by a variety of environmental damages. Perhaps chief among them is water pollution, which was mentioned by nearly all of the experts. Water pollution from industrial and domestic sources causes more damage than can be calculated according to one expert. Plants, fish, terrestrial animals, humans, all suffer from it. Each year large-scale fish-kills occur, and often water supplies are unusable for livestock due to industrial pollution. Some of the rivers are considered to be dead. The situation is exacerbated by already low and decreasing groundwater reserves. Water pollution negatively effects the state of the major lakes as well, which in turn has a detrimental effect on tourism. Other threats to economic development in the FYR Macedonia include deforestation due to drought, fire and illegal cutting, and soil contamination from poor management of industrial and agricultural waste.

Human health in the FYR Macedonia is also threatened by several other environmental factors. Air pollution from industry, home furnaces, and automobiles was mentioned as a considerable health threat. Emissions of SO$_2$ from coal burning power plants and heavy metals from metalworking facilities were cited as having especially dangerous impacts on human health. Automobile exhaust was also mentioned as a serious and growing problem, particularly in the city of Skopje. One expert explained how air conditions in Skopje become worse in the winter due to temperature inversions, (Skopje lies in a valley), and that recent studies showed that car emissions were responsible for 60% of the pollutants present in such periods. The city of Titov Veles was also mentioned as a hot spot because of the large metal smelting facility located on its upwind edge.

**Priority environmental problems**

**Water resources**

Water problems were most often mentioned by the experts as priority issues. Surface waters are contaminated by domestic, agricultural and especially industrial pollution. Groundwater supplies are low and dropping due to the drought of recent years. The FYR Macedonia's major lakes - Ohrid, Prespa, and Dojran - all suffer from inadequate wastewater treatment facilities (partial systems have been constructed, but were not finished because of insufficient funds), and Dojran's status is further threatened as its level continues to drop due to water diversions in Greece. The FYR Macedonia's major rivers, especially the Vardar but also the Bregalnica, are highly polluted by numerous sources and are considered dead in many places.

**Air quality**

Air quality in many areas of the FYR Macedonia is also a serious issue and was the next most often mentioned problem by the experts. Emissions of SO$_2$ from power plants (in Bitola and Oslomej) and homes burning low quality coal, and heavy metal emissions from metalworking facilities were cited as major concerns. The city of Titov Veles was described as being a hot spot for air problems due to the emissions from the large smelting facility located there, and the capital city of Skopje is increasingly effected by automobile exhaust.

**Deforestation**

Deforestation resulting from illegal cutting, the drought of recent years, and fires encouraged by these droughts, was another issue cited by many of the experts.
Waste management and soil contamination

Problems related to waste, both communal and industrial, were also mentioned as being priorities. One expert noted that soil contamination resulting from improperly managed waste is especially troublesome because, unlike the dynamic media of water and air, soil does not have much capacity to clean itself. Soil contamination also threatens food production and eliminates some areas from agricultural use.

Critical steps to start or continue environmental improvements

Management and administration

Improvements in the field of management and administration are strongly needed. There is no separate Ministry of Environment, and according to some of the experts, even within the currently responsible Ministry for Urbanism, Civil Engineering, Transport and Ecology the environment is a low priority. There are also no specialized research institutions for environmental protection. Cooperation with the other Ministries could and should be more substantial as well. There is no effective monitoring and inspection system for all environmental media. The duties and obligations of the local governments in environmental protection are undefined which adds to management problems.

Enforceable environmental policy and law

Improvements in environmental policy are greatly needed in the FYR Macedonia. At the present time there is no official environmental policy. An unofficial environmental strategy was prepared in 1991, and is used by the Ministry of Urbanism, Civil Engineering, Traffic and Ecology to some extent, however the document was never officially adopted. Currently there is no separate office or department for environmental policy. (Indeed, there is no separate Ministry of Environment).

Improvements in environmental law are also a high priority as the country is currently without environmental legislation suitable for the contemporary circumstances. The need for new environmental law is urgent as this should guide the development of new policies, standards and management methods. A new Environmental Law, based largely on the 1991 strategy mentioned above, has been drafted and is presently awaiting debate in parliament. The draft law was formulated in consultation with many different groups, including scientists, businesses and NGOs, and has been accepted by the government administration. The draft law attempts to harmonize environmental standards with European norms. Law enforcement is also very weak and in need of considerable improvement. One expert noted that the illegal activities of industry are almost entirely tolerated.

Expertise and public support

Improvements in environmental education and expertise were not often mentioned as high priority needs, however a few experts did state that ecological consciousness is inadequate in all sectors of society - government, business and general public. One expert discussed how there are currently many environmental education programs, and some well trained experts, but that the government is lacking sufficient expertise in the area of environmental protection. It was also mentioned that professional training of various types was needed for decision-makers and business managers.

Technological resources

Modern technologies are greatly needed in many areas according to most of the experts. The needs include air pollution abatement equipment for industrial facilities, the transition from coal to a natural gas heating system, wastewater treatment technologies, modern environmental monitoring devices, and hazardous and communal waste treatment systems.

Driving forces for environmental improvement and degradation

National government and parliament

The FYR Macedonia's national government, (along with industry), was most often mentioned by the experts as a driving force on the state of the environment. Most of the experts were highly critical of the national government claiming that the failure of it and of the parliament to formulate and adopt urgently needed new laws, policies, management tools and methodologies has had a strongly negative impact on the environment.
Industry

Industry was mentioned equally with the national government as being a driving force on the state of the environment. Industry has a very short-term emphasis on immediate profits and the responsible Ministry simply does not force them to comply with environmental laws and regulations according to most of the experts. Industry does not place a priority on environmental protection and usually claims that it has no money to improve the situation.

NGOs and the media

NGOs with environmental experts and the media were the next most often cited forces effecting the state of the environment, in this case for the better. NGOs have raised public awareness of environmental issues and pressured the government to establish the needed laws and policies. At the same time, a large number of journalists are interested in environmental issues and have been very helpful in publicizing them.

Economic crisis and the general public

The economic crisis, worsened by the FYR Macedonia’s political conflicts with Greece and the effects of the Yugoslav war, was also cited by a few of the experts as having strong harmful impacts on the environment. According to the experts, the general public, in part because of this economic crisis, is another negative driving force on the state of the environment. Concern for environmental protection is generally very low and abuse of nature is common. One expert stated that citizens do not even care about hygiene around their homes let alone hygiene of the environment.

Integration of environmental protection and economic development

Obstacles to integration

A variety of obstacles exist in the FYR Macedonia to integrating environmental concerns into economic development. Most often mentioned by the experts was the absence, or inadequacy of, environmental policy and law to mandate and guide such integration. The next most cited obstacle was the lack of financial resources to implement environmental protection considerations in economic development. Several of the experts also explained that other priorities, particularly economic and political issues, were dominating decision-making processes. Politicians were described as being pre-occupied with international issues and re-election campaigns. The poor performance and capacity of the government was also cited as a major obstacle, as was the lack of a separate Ministry of Environment. Government (and industry) officials are sometimes unable to understand how economic development and environmental protection can be integrated. There is a lack of expertise in formulating the necessary policies and mechanisms. In some cases, government decision-makers are not concerned about environmental issues. The generally low level of environmental awareness and concern in all segments of society is another obstacle.

Existing and proposed measures for improving integration

Unfortunately, the experts were not aware of existing measures for improving the integration of environmental concerns into economic development and they could not list any examples of sustainable development or the polluter pays principle. The new draft environmental protection law was, however, cited several times as a proposal to make advances in these areas. The concepts of both sustainable development and the polluter pays principle are included in the draft law, which has been approved by the government and is now awaiting debate in the Parliament. The draft law also gives attention to pollution prevention as a priority and includes requirements for environmental impact assessments for certain types of projects.

Financing environmental improvements

According to the experts the only financial mechanism for environmental protection in the FYR Macedonia is the general state budget, and this source is too small. One expert noted, however, that the polluting enterprises themselves make some investments in environmental protection and that the government tries to monitor and record these investments. Some new mechanisms are proposed in the draft law, such as pollution fines and an environmental tax on automobiles.

A few of the experts had the opinion that the country’s financial resources were so limited that virtually none of the environmental problems could be solved using only them. However, most agreed that considerable progress could be made on several issues. Most of the experts believed that environmental legislation and policy could be improved with existing resources, and that law enforcement could be carried out much more effectively. Several experts stated that small local problems could be successfully addressed, and communal waste management was cited as one such example. Improvements in environmental education and awareness raising were mentioned by a few experts, as was the reduction of air pollution from automobiles. Other issues noted were
the establishment of a National Environmental Fund, energy efficiency and completion of the conversion to natural gas, and the establishment of a separate MoE.

Problems mentioned as being solvable only with foreign financial assistance included hazardous waste management and the protection and restoration of the major water bodies - Lakes Ohrid, Prespa, and Dojran, and the Vardar River. These will require extensive water treatment facilities which the FYR Macedonia simply cannot afford at this time.

**International cooperation**

**CEE-regional cooperation**

Examples of successful cooperation with other CEE countries were extremely limited. Some cases of cooperation with neighboring countries were cited at the NGO level, but no such experiences were cited at the government level. Most of the experts agreed that CEE cooperation would be very helpful in many areas, and is absolutely essential on some. Effective protection of Lake Ohrid requires close cooperation with Albania, with whom the FYR Macedonia shares the lake. Lake Prespa is shared with both Albania and Greece, and likewise, its protection requires cooperation between the three countries. Lake Dojran is in a critical state due to water diversions in Greece, and in this situation cooperation is essential. The Vardar River is also shared with Greece and requires significant improvements.

**Western assistance**

The large majority of experts stated that there had not yet been any foreign assistance for environmental protection in the FYR Macedonia, thus they could not cite any positive or negative experiences. Cooperation with foreign NGOs has been better than anticipated, one expert reported, with REC, Friends of the Earth International and Greenway all providing important assistance. One expert noted that a few years ago the Government of Yugoslavia received 23 million USD for environmental purposes, part of which was to come to the FYR Macedonia, but that none of the money actually arrived due to the political break-up and war. Another expert mentioned that some western firms had tried to bring polluting technologies into the country, while other firms had attempted to dump their hazardous waste in the FYR Macedonia.

Several types of foreign assistance would be especially helpful in the FYR Macedonia according to the experts. Most often mentioned was technological assistance. Modern pollution abatement equipment is needed for water and air protection, and monitoring systems are required. The next most often cited form of help was western expertise and experience. This help would be very useful in developing new laws, policy, methodologies, and improved management capacity. Direct financial assistance was also indicated by many of the experts as being a very helpful form of aid. Other types of assistance which were mentioned include support for NGOs, nature protection and environmental assessments.

**Interest groups in environmental protection**

**NGOs and the media**

NGOs and the media were mentioned most often, by a wide margin (and usually together) as having the greatest impact on environmental decision-making. Both are very active in publicizing environmental issues and promoting environmental education. NGOs have been especially engaged in pressuring the government to take action for protecting the environment and have also conducted their own direct actions. The FYR Macedonia's national environmental umbrella group, DEM, uses an innovative technique in awarding annual "Green Apples" to individuals and organizations making significant contributions to environmental protection, while assigning "Rotten Apples" to those having particularly negative environmental impacts.

**National government**

The national government received the next most mention as the dominant influence on environmental decision-making. Unfortunately, this influence was generally regarded as negative by most of the experts. (A few experts noted that the national government should have the most influence, but does not.)

**Scientific experts**

Scientific experts were also cited as having significant impact on environmental decision-making. One expert noted that NGOs with scientific experts have been especially effective. Like some comments about the national government, a few of the experts explained that scientists should have the primary influence but do not.
POLAND

Political, economic and social impacts on environmental protection at the spring of 1994

Political changes

Poland now has a young, evolving democracy. In this new system governments, businesses, non-governmental organizations and individuals are searching for their roles. A civil society is developing and where the State government was once responsible for decision-making, now regional and local governments, industrial and trade lobbies, non-profit groups, and private citizens are demanding that their interests be accommodated in the formulation of new policies and laws. These changes effect the environment in many ways, for better and worse. The move toward democracy has many positive effects on environmental protection. Citizens are now able to legally organize themselves into interest groups and to act toward achieving common goals. These groups, often in cooperation with the media, uncovered and publicized the true nature of environmental problems in Poland and are now engaged in efforts to solve those problems. Local governments have received new powers and obligations and are playing an increasingly active part in environmental protection. New, more effective laws and policies have been enacted, and the legal system is providing new opportunities for protecting the environment. Another political change which is having, and will increasingly have, positive impacts on environmental protection is Poland's progress toward joining the European Community. The process has already begun and Polish laws and standards will be harmonized with European directives.

The political changes have also, however, resulted in new challenges to environmental protection. Many of the experts discussed how Poland's environment is suffering because some politicians are more interested in advancing their own careers than in helping to formulate sound public policy. It was also noted that many political and governmental leaders are entirely concerned with other issues and that environmental protection receives too little attention. Indeed, in the face of various economic and social pressures the environment is virtually off the political agenda and the Ministry of Environment (full name: Ministry of Environmental Protection, Natural Resources and Forestry) is recognized as one of the weakest Ministries in the government. The situation is made worse by inadequate cooperation and coordination among the various State Ministries. Furthermore, with frequent changes in the ruling government coalitions, Poland has had four different Ministers of Environment in the last three years, making consistency in policy and leadership very difficult. Certain new, more effective environmental laws are also remain to be passed and progress in this area has been hindered because of the frequent changes in Parliament.

Economic changes

The profound economic changes of the past few years in Poland have also had great impact on environmental protection in the country. Market reforms have included the removal of price controls for raw materials, the elimination of State subsidies to producers, privatization of industries, international competition and foreign investment. The basic result, as noted by several of the experts, has been that “many of the most inefficient producers, which were also usually the worst polluters, have been shut down.” Producers now have to be more conscious of environmental issues from start to finish of the production cycle. With the lifting of price controls manufacturers must pay much more for their raw materials. The combined effect of competition and the elimination of State subsidies has caused producers to use resources much more efficiently in attempts to become profitable. Foreign investment has added to competition as well as made new methods and technologies available for production systems and environmental protection. Privatization has largely separated the State from the production sector, enabling it to truly regulate manufacturers and their environmental impacts. With the government in this new role, it is now able to effectively use various economic instruments, such as pollution fees and fines, which compel producers to make investments in environmental protection, as well as generate funds for the governments to make environmental improvements themselves.

The experts noted that market reforms have also had some negative effects on environmental protection. With increased competition and higher production costs there are strong incentives for producers to cut costs wherever possible. In some cases this results in manufacturers foregoing the expenses of environmental protection and externalizing such costs onto society. There is also concern that with the pressure to privatize State enterprises environmental concerns are ignored or inadequately dealt with by the responsible State authorities. A few experts also noted that some foreign investors, having little vested interest in Poland, are only concerned about maximizing their profits and disregard matters of environmental protection to the extent possible.
Social changes

The considerable social changes which have taken place in Poland over the past few years are closely related to the economic and political changes mentioned above, and like them, are having both positive and negative effects on the environment. The elimination of price controls and high inflation has created a situation in which many consumer goods now have Western, or near Western prices, while salaries remain low at Eastern standards. With market reforms driving the closure of many large industrial facilities, unemployment has increased dramatically. According to all of the experts interviewed, it is now one of, if not the, dominant issue on the social, economic and political agendas. As a result, other important issues, such as the environment, are receiving inadequate serious attention. The overriding concern of many citizens and decision-makers alike is now economic security. Naturally, this has many effects. Citizens, while expressing concern about the environment, say that they simply cannot afford to sacrifice money or time on behalf of its protection. Several of the experts noted that many government officials and politicians, at various levels, have made "economic growth at all costs" their objective. In such an atmosphere the pro-environment lobby is having difficulty in convincing decision-makers and the general public that the health of the economy and the health of the environment are inextricably linked. It is true that with the advent of democracy, the pro-environmental activities of NGOs and local governments have increased substantially. These groups, as well as private citizens, are taking advantage of the new freedoms and opportunities to express their concerns and to participate in policy-making. The pro-environment lobby remains, however, relatively weak in comparison to other interest groups such as labor unions and the trade and industrial lobbies. This situation could be improved, though, through better cooperation within the environmental protection sector. Many opportunities exist for NGOs and governments to cooperate, and they should do so to promote the importance of environmental protection within the policy-making arena and society generally.

Assessment of environmental assets and damages

Natural capital

In spite of its environmental problems, Poland does have areas of great natural value, some of which are unique on a European scale. Nearly every expert participant discussed the importance of Poland's "Green Lungs" area in the north-east region of the country. This area, largely undeveloped and free from industry, contains numerous lakes, streams, forests and Poland's healthiest environment. The area has been the focus of a sustainable development project which also includes neighboring Lithuania, Belorussia and Ukraine in an attempt to protect the "Green Lungs of Europe." A plan for truly sustainable development in this region is vitally needed at this time as the pressures of economic growth threaten to exploit the areas' natural resources in environmentally damaging ways. Other valuable natural assets which were mentioned include the wilderness areas of south-east Poland, the lakes region in the north-west, and the many national parks and other protected areas located throughout the country. It was also noted that Poland still contains areas where the soils are very clean and for the most part free from chemicals and artificial fertilizers, thus considerable potential exists for producing healthy foods for domestic consumption and export.

The experts also described other types of assets, such as human resources and institutional mechanisms, as being important for environmental protection in Poland. The maturing NGO sector and highly skilled environmental economists, engineers and other professionals were listed as valuable assets. Various institutional mechanisms were also identified as significant, such as Poland's extensive financial instruments for environmental protection and the growing use of environmental impact assessments.

Threats to economic development, health and living conditions

Many of the experts described the environmental threats to economic development, health and living conditions as being closely inter-related and difficult to separate. Indeed, environmental threats to economic development are also likely to adversely affect human health and living conditions, while serious health threats clearly hinder economic development and threats to living conditions often negatively effect health. Nevertheless, certain environmental problems were identified as specifically impacting these individual subjects.

Threats to economic development include polluted surface waters, the dropping groundwater table, acid rain, accumulated toxic wastes and certain geographic regions or "hot spots." Polluted surface waters and diminishing groundwater supplies were perhaps the most often mentioned as having clear effects on economic development. As demand for water grows, supplies wane and wasteful use continues. One expert commented that "in Poland we have to spend a great deal of money and time simply securing clean water," while another noted that "in many cases the water is polluted beyond imaginable standards." Acid rain, with its devastating effects on the health of forests and soil was also listed as an obstacle to economic growth. The tremendous costs of dealing with accumulated toxic wastes was noted by one expert, while several described the Silesia and Black Triangle regions as serious threats.
Several human health threats were also identified. Chief among them were air emissions of NO$_x$, SO$_2$, and particulate matter from coal-burning home furnaces and local boilers. Exposure to heavy metals was also mentioned, as were low quality drinking water and food contaminated by air and soil pollution. Another health threat mentioned by many of the experts, one which is rapidly worsening, is that of exhaust fumes from automobiles. Health threats were noted as being especially dangerous for infants and children. In certain areas of Poland, the negative consequences of poor environmental conditions can be seen through the low birth weights and high mortality rates of infants.

The threats to living conditions overlap considerably with the threats to health. The most mentioned disamenities were low emissions and the surging increase in automobile use. As one expert explained, "city centers all around Poland are in intolerable states because of emissions from low stacks and autos." Living conditions in urban areas are further lowered by excessive noise levels, with figures reaching 80 dB in some city centers. Other factors reducing the quality of life in Poland are poor land-use planning which results in industrial facilities being located in the middle of residential areas, and "landscape pollution" in the form of huge, ugly housing blocks which separate inhabitants from the earth.

Environmental hot spots

Two geographic regions of Poland were identified by the experts - Silesia and the Black Triangle - as being environmental "hot spots." These areas are in such poor environmental condition that their very existence threatens economic development, human health and living conditions. The Silesia region, located in south-west Poland, has suffered severe environmental damage from numerous causes: air, water and soil contamination from out-dated industry; low emissions from coal-burning furnaces; and water pollution and toxic wastes from mining. The so-called "Black Triangle," part of which is also in south-west Poland, has been devastated by acid rain caused by emissions from industrial sources in Poland, the Czech Republic and especially Germany. Economic losses in this area have been extensive due to thousands of hectares of forest being killed and agricultural areas rendered unusable.

Priority environmental problems

Air and water

Air and water quality were the problems most often mentioned by the expert participants. Low emissions of SO$_2$, NO$_x$, and particulate matter from coal-burning home furnaces and local boilers are a special priority, as are industrial emissions from out-dated facilities which contribute to acid rain and heavy metals in the environment. Transboundary air pollution, primarily from Germany and the Czech Republic, is another significant problem, especially regarding acid rain. One expert explained how the acid rain problem also exacerbates water problems by denuding forests and accelerating water runoff thus further lowering water reserves. The problems of diminishing water tables, and polluted surface waters were also noted as priority issues. Poland's underground water supply is very limited and diminishing, while only about 1% of surface waters, widely polluted by domestic, industrial and agricultural sources, are fit for drinking. The effects of these problems, both air and water, are far-reaching and include definite impacts on economic development and human health.

Waste, traffic, and energy

Following air and water, problems related to waste, traffic and energy were most often discussed by the experts as priority issues. Waste, both municipal and hazardous, was cited as a growing problem in Poland. The situation is aggravated by the influx of disposable packaging from the West and the lack of adequate management facilities. It was reported that waste segregation and recycling is not very common and, instead, the less environmentally friendly option of waste incineration is being promoted in some cities as a solution. The tremendous increase in automobile use was also mentioned by some of the experts as a serious and worsening problem. Catalytic converters are not required in Poland and, while heavily polluting old cars remain in use, the number of new cars soars. The energy sector was another issue listed as needing priority attention. With poor quality fuels, and inefficient production, distribution and consumption systems, this sector adversely affects air, water and soil.

Major environmental concerns of the public

A variety of issues were mentioned by the experts as being major public concerns, however, the most common response was that citizens are mainly interested in whatever the local "hot issue" is that most directly affects them. Very often that issue is something effecting human health such as drinking water quality, urban air pollution, or food contamination.
Critical steps to start or continue environmental improvements

Management and administration

One expert discussed how a new, integrated approach to environmental protection is needed. This new approach should avoid focusing narrowly on specific media (i.e. air, water, soil) or sectors, and should involve all segments of society - governments, businesses, and citizens - in being responsible for environmental protection. Furthermore, it is necessary to better integrate environmental concerns into the policies of other sectors (i.e. finance, transportation, industry). Also needed are more clearly defined responsibilities for the various institutions charged with environmental protection. This is especially true as responsibilities for environmental protection increasingly shift to local and regional authorities. This shift in obligations creates new challenges for local governments but also allows them greater control in addressing the problems with which they are directly confronted in their territories.

Some of the experts explained that existing cooperation within the State government is inadequate, especially between the MoE and the Ministries of Agriculture and Industry. Some progress has been made, however, regarding the privatization process as an Inter-Ministerial Unit has been established to consider environmental issues related to ownership transfers. It was also noted that certain skills and know-how have improved considerably at the government level with the help of foreign assistance and that this process should continue.

Enforceable environmental policy and law

According to most of the experts Poland's environmental policies are generally good. The official Environmental Policy was approved by the Government and Parliament in 1991 and is based on the concept of sustainable development. Recently a new office for environmental policy was established in the MoE. Improvements are required, however, in order to make these policies more practical to implement at the regional and local levels. While many of the experts discussed the need for certain legal improvements, such as in the areas of water, waste, emissions trading, and liability, an emphasis was clearly placed on the critical need to improve enforcement. Poland's environmental laws, with some exceptions, are considered as rather good. Enforcement, however, is far from ideal. Monitoring is also insufficient. Poland has a State Environmental Inspectorate, however, in the words of one expert, "where it once was a lion without teeth, it is now a set of teeth without the lion." In other words, resources committed to enforcing environmental laws are inadequate. The laws themselves sometime contribute, however, to difficulties in enforcement. One expert explained that some of the laws are very rigid and lack the flexibility necessary to facilitate their execution.

Expertise and public support

Education and training is needed for many segments of society, including the youth, environmental professionals, politicians, and workers. The need for improved public education and participation was the critical step most often mentioned by the experts. Environmental education has been introduced into some professional schools but remains largely absent from official primary, secondary and university curriculum. One such effort to address this need is Poland's National Environmental Education Center. The Center, supported by the EC's PHARE program and the British Know-How Fund, is working with local authorities and NGOs to promote and expand environmental education throughout the country. These efforts are crucial as most experts agreed that environmental awareness and concern are simply too low in all segments of society. The mass media could and should play a more positive role in addressing this issue as well. Full access to environmental information is an essential element for these improvements to occur and also to help build a strong pro-environment lobby which is capable of mobilizing effective public pressure for environmental protection. Such a lobby is especially needed at this time as mass marketing and advertising increasingly promotes environmentally harmful goods and lifestyles.

Economic and technological resources

Taking a wider perspective, one expert stated that fundamental improvements in the strength of Poland's economy are critical before environmental protection investments can reach satisfactory levels. Increased financial resources were often reported as necessary for significant advances in environmental protection. One expert identified the priority problem as that of restructuring the entire economy and selecting appropriate new technologies to be used in that process. A variety of modern technologies are needed for both production and pollution control, however, such technologies are usually very expensive and one expert reported that the capital required to purchase these technologies is also very costly. (Interest rates on loans are often prohibitively high.) The establishment of new financial mechanisms, such as tax incentives, would help to encourage new investments in technology. Alternative energy and hazardous waste management technology were mentioned as being very necessary forms of technology. Some environmental services are beginning to be used now in Poland. EIAs are becoming more commonly used and there is capacity within the country to conduct environmental audits.
Driving forces for environmental improvement and degradation

Market reforms

Market reforms are having great impacts, both positive and negative, on the state of Poland's environment. They have eliminated the most inefficient production, which was also usually the worst polluting, and forced more efficient use of resources generally. Now largely separated from the production sector, the State is able to act effectively as a regulator of producers and their environmental impacts. The reforms, however, have caused economic recession and heretofore unknown unemployment. This crisis has created a mentality of "economic growth and security at all costs" within society. The higher production costs and competition brought on by the reforms have led some producers to engage in money-saving practices in which environmental costs are externalized onto society. Additionally, the drive for profits fosters short-term thinking in which environmental investments having long-term benefits are often foregone.

Democratization

Political changes occurring since the transition to democracy are also having significant effects on Poland's environment. Public participation in decision-making of all kinds, including environmental, is increasing greatly as citizens and citizen organizations become more active. Aiding this process is freer access to information. The political reforms have had their negative effects as well, however. Some of the experts noted that many of Poland's politicians are inexperienced and pre-occupied with political power struggles rather than with devising much needed new public policy. Furthermore, as is the case in most other segments of society, the thinking and behavior of many government and Parliament decision-makers are now dominated by short-term objectives.

Western lifestyles

The hierarchy of values is changing in Polish society, with the popularity of western lifestyles emphasizing material consumption growing tremendously. As a result of open borders and aggressive marketing by western and domestic firms, Poland is being flooded with one-use packaging and environmentally harmful products, automobiles being a prime example.

Emerging lobby groups

Interest groups of various sorts are coming forth to participate in decision-making processes and to lobby for their particular concerns. The pro-environment lobby, including NGOs, governments, and private businesses, is growing in size and capacity. This lobby is improving public awareness and concern for the environment, managing and protecting valuable natural resources, and promoting environmental considerations in policy-making. Unfortunately, however, the pro-environment lobby remains weak in comparison with other interest groups, such as trade unions and industrial lobbies. These groups are better organized, have well-defined constituencies, and more resources. Furthermore, the pro-environment lobby has thus far failed to persuasively demonstrate to decision-makers the linkage between the long-term health of the economy and the health of the environment.

Economic instruments and independent local governments

Poland has established a wide variety of highly effective economic instruments for environmental protection. The extensive system of emission fees and fines, as well as new institutions such as ECOFUND (Poland's debt-for-environment swap mechanism), are now playing significant roles in protecting Poland's environment. Another influential development has been the establishment of independent local governments. These now have new opportunities and responsibilities for environmental protection. Some of the experts explained how certain local communities have diligently pursued environmental improvements, while others, unfortunately, have shown little interest or a lack of capacity to do so.

Integration of environmental protection and economic development

Obstacles to integration

The many obstacles to the implementation of environmental policy, and to the integration of environmental and economic policy in Poland are closely related to the political, economic and social changes occurring in the country at this time. Several of the experts explained that in the youth of its democracy some of Poland's politicians and government officials are inexperienced or simply do not understand the true importance of environmental issues. One expert explained that the officials know that they do not want to be like the previous system, but they do not know what they do want to be like. Furthermore, communication and cooperation amongst the political parties, or between the different government ministries are sorely lacking and such a situation is not conducive to the development of sound public policy of any kind. Additionally, in such circumstances politicians and government officials are strongly influenced by well-organized lobbies promoting their own priorities which generally are not environmentally friendly.
Various economic factors are also posing obstacles. For one thing, there are simply inadequate funds available for environmental protection. Secondly, the market reforms have helped the short-sighted mentality of "profits now" to become widespread in Poland. This mentality, effectively promoted by a variety of lobby groups, perceives environmental investments (usually having long term benefits) merely as drains on profits.

Social circumstances also contribute to the above-mentioned obstacles. The State government, NGOs, businesses, and citizens are trying to define their new roles in Poland's evolving society. The pro-environment sector, which includes representatives from all of these groups, now must play a more significant part in providing the vital public service of environmental protection. Currently, however, they are unable to sufficiently fulfill this role. The pro-environment sector has thus far been unable to convincingly demonstrate the inseparable link between the health of the economy and the health of the environment to politicians, government officials, business leaders and the general public. Especially to convince politicians and government officials this requires the effective use of economic arguments describing the true costs and benefits of various investment options, including those for environmental protection. Such arguments have not been sufficiently used to this point. Among the results are the low priority placed on the environment by virtually all segments of society, limited public pressure for environmental protection, poor enforcement of environmental laws and policy, and further exploitation of the situation and environment by profit motivated interests.

Existing and proposed measures for improving integration

The concept of sustainable development is often discussed in Poland, and appears in some official policies such as the National Environmental Policy of 1991 and the Forest Management Policy of 1990, yet few concrete examples actually exist. The most often mentioned example was that of the "Green Lungs of Poland," a project whose specific goal is sustainable development for the north-east part of the country. The project has been officially backed by a coalition of State, regional and local governments, and the expanded concept of a "Green Lungs of Europe" has even been supported by the neighboring countries of Lithuania, Belorussia and the Ukraine. The project is in the beginning stages, however, and its implementation remains to be seen. Some of the experts noted that while examples of sustainable development on a national scale are hard to find, such examples do exist at the local level, and that it is here where the greatest potential for actually implementing the concept lies. Also mentioned were some of Poland's National Parks, with their new management philosophy of involving the local community in practical but sustainable use of the parks' natural resources.

Poland makes use of the polluter pays principle and has one of the most well-developed discharge fine and fee systems in all of Europe. The various forms of "polluters pay" in Poland mentioned by the experts include: private environmental protection investments made by firms themselves; pollution fees and fines paid by enterprises into various government environmental protection funds; user fees for environmental services (i.e. water treatment) and the exploitation of natural resources (i.e. timber harvesting and mining); and the published list of the "80 worst polluters" in the country. Some experts explained, however, that polluters still do not pay as much as they should, as some receive special privileges and the fines do not reflect the true costs of the environmental damage incurred.

Several measures have been proposed or recently implemented in Poland to make improvements in the areas discussed above. A few of the experts discussed the success of a demonstration project using tradable emissions permits. The project, however, cannot be expanded at this time because there is no legal authority to do so. Other recent developments include the establishment of an Inter-Ministerial Unit to deal with the environmental ramifications of privatization, and the functioning of the Environmental Impact Assessment Commission, which assesses the environmental impacts of certain large investment projects in the country. There have also been proposals to establish national and local Sustainable Development Councils, similar to that which resulted from the Rio Conference.

Financing environmental improvements

Poland has several very effective financial mechanisms for environmental protection. Chief among them are the National, Provincial and Local Funds for Environmental Protection, which are financed by the various pollution fines and natural resource user fees. Poland also has the innovative ECOFUND, a foundation established to manage funds acquired through debt-for-environment swaps with a few of the Paris Club countries. Additional mechanisms include the general Polish State Budget, and the Environmental Protection Bank, which provides preferential loans for environmental investments. As mentioned previously, Poland has had success with tradable emissions permits, and there are various plans for product taxes (according to the environmental costs associated with goods) and environmental liability insurance. One expert also noted the need for economic incentives for the import of environmentally friendly technology.

Poland spends about 1 billion USD annually on the environment (about 1% of GNP). Foreign assistance, while amounting to only about 5% of this total, plays an important catalytic role in launching projects and developing institutional capacity and expertise. The experts described a diversity of environmental problems which could be solved using domestic (Polish) resources, as well as problems that would require foreign assistance. Most of the experts realized, however, that given the very limited nature of foreign assistance the large majority of
environmental problems in Poland will have to be solved using Polish resources. Some of the experts explained that it is a matter of time. With the help of foreign assistance, some of Poland's environmental problems can be solved more quickly than without assistance.

**International cooperation**

**CEE-Regional cooperation**

Cooperation within the Central and Eastern European region does exist, but it appears to be rather limited. Some of the experts even noted that they could not identify any significant examples. Others cited cooperation between Poland, the Czech Republic, and Germany regarding the "Black Triangle," with the Czech and Slovak Republics in the "Silesia Project," with Slovakia and Ukraine concerning the Carpathian Biosphere Reserve, and Lithuania, Belorussia and Ukraine in connection with the "Green Lungs of Europe" project. The experts identified a number of environmental problems requiring regional cooperation. Often mentioned were the problems of cleaning up the Baltic Sea and implementing sustainable development in the "Green Lungs of Europe" region. These issues are regional in scope, requiring regional cooperation, and far more resources than Poland alone is able to contribute.

**Western assistance**

There are many cases where western assistance has contributed significantly to environmental protection efforts in Poland. Numerous capital investments, such as water treatment facilities and air pollution control technology, training in the areas of environmental management and methodology, and NGO development programs are examples of productive assistance provided by a wide range of western countries and international institutions. This assistance was described as very helpful in establishing the foundations for sound environmental protection programs and for starting much needed advances in technological capacities.

Many of the experts also cited examples where western assistance has not been as effective as it could be or has even had negative effects. One such example was Poland's new forest management program, sponsored by the World Bank. This program was widely criticized by NGOs and some forestry experts for promoting unsustainable harvest levels and requiring the purchase of heavy western equipment which may not be suitable for Polish forests. Other criticisms were aimed at western firms promoting their environmentally unfriendly goods and technologies which have in some cases been banned in the west (i.e. pesticides) or have simply fallen out of public favor (i.e. incinerators). Many of the experts also explained how much of the "assistance" is actually consumed by the donor countries themselves, for example through donor country experts performing endless feasibility studies while being housed at Poland's most expensive hotels. Environmentally harmful lifestyles are also sometimes being promoted in the name of "assistance" by some politically motivated foreign agencies as well as international financial institutions.

The experts also offered suggestions as to what forms western assistance should take in Poland. Most of the experts agreed that while feasibility studies may be essential elements of project planning, investments leading to actual environmental improvements are needed at this time. Western assistance in the form of certain types of expertise, especially in the areas of modern technology and environmental management methodology, would also be very helpful. The need for new environmental technologies was also noted by several of the experts. Other issues discussed as requiring international cooperation were the restructuring of Poland's energy sector, biodiversity protection, and dealing with the growing waste management problem. Many of the experts stressed that assistance should take the form of cooperative efforts or joint ventures in which Polish experts and Polish resources play significant roles, and it was reported that this is indeed occurring. One such mechanism which was favorably mentioned as an effective form of assistance was Poland's debt-for-environment swap foundation - ECOFUND. On a more fundamental level, some of the experts mentioned that improvements in environmental protection would be facilitated by strengthening Poland's economy. Western countries could contribute to this by eliminating various trade barriers existing against Polish goods, by supporting foreign investment in Poland which would share some of the burden of environmental improvements, and assisting Poland's industrial restructuring.

**Interest groups in environmental protection**

**Poland's National Government**

The various levels of government were most often mentioned by the experts as having the largest impact on environmental decision-making, both to the environment's benefit and detriment. Despite the trend for authority to shift to the regional and local governments, Poland's National Government remains an important player in the environmental arena. Considerable decision-making responsibility is still in the hands of the State, as are certain important institutions like the State Inspectorate for Environmental Protection. The diminishing role of the State was, however, also listed as a detriment to environmental protection in Poland. According to some of the experts the National Government is weakening and becoming increasingly susceptible to the influence of powerful business interests which often place a low priority on the environment.
Regional and local governments

As mentioned above, decision-making authority is steadily being transferred from the State Government to regional and local governments. In this situation local and regional officials are increasingly charged with environmental management and protection responsibilities. It is at these levels that environmental policy is being implemented, and it is here that permits are issued, standards negotiated, and facility sitings approved. The growing significance of local and regional governments brings mixed blessings for the environment, however, because while some governments give environmental issues a high priority, others simply do not.

Business interests

Along with governments, emerging new businesses, industrial lobbies and trade unions were most often mentioned as having great impact on environmental decision-making in Poland. On the one hand this is a natural result of the democratic and market reforms taking place in the country. On the other hand, however, the influence of business interests has strengthened markedly because of the current pervasive public concern for economic growth and employment opportunities. In such a social atmosphere, the environment has become a very low priority and business interests are capitalizing on this by influencing decision-making processes to their benefit. The negative environmental effects are multiple: businesses resist environmental protection measures first of all because they are able to, and secondly because they are viewed merely as something reducing profits; trade union and industrial lobbying efforts keep precious resources flowing to inefficient sectors badly in need of restructuring; and this in turn hampers the mobility of labor and capital which could be better utilized in other areas, including environmental protection.

The media, environmental NGOs, and general public

Like Poland's political and economic systems, its media, environmental NGOs, and private citizens are also in a period of transition. Their roles are evolving and expanding, and yet their potential remains far from fulfilled. The media was acknowledged as potentially having strong influence in the environmental decision-making arena, however, it was criticized for sometimes being inconsistent and unprofessional. Environmental NGOs and the general public were noted for their currently weak impacts on environmental decision-making and for the need to strengthen their roles. Many of the NGOs are fully aware of their insufficient influence and are very actively trying to improve their skills and capacities. While environmental concern throughout society is relatively low, NGOs, interested individuals and some government offices are working diligently to improve the situation.
Political, economic and social impacts on environmental protection at the spring of 1994

Political changes

The political changes of recent years have had some distinctly positive effects on the state of Romania's environment. With the move towards democracy people now have greater freedom to express their concerns about environmental problems and to demand government action toward solving them. Citizens now have the right to organize themselves and environmental NGOs have been established. Some pro-ecological political parties were also formed, and they were successful in winning some seats in parliament during the 1990 elections. (One expert stated, however, that these "green" parties failed to win widespread support because they did not adequately include other important social issues in their programs.) Another positive effect has been that environmental protection has become institutionalised with the establishment of the Ministry of Environmental Protection (in late 1989) and other environmental institutions. Other benefits arise from the new possibilities for international cooperation and the exchange of information and experience associated with such opportunities.

Unfortunately, the political changes have had serious negative effects on the environment as well. With the collapse of the previous political system instability and uncertainty have emerged. Frequent elections and new governments in the past few years have resulted in a continuous turnover in key decision-making positions which led to a lack of consistent policy. Many of the interviewed experts also explained how the old laws are simply not adequate for the new circumstances, but that sorely needed new laws have not been enacted. For example, the lack of proper land-use planning laws has encouraged the chaotic development of all sorts of residential and commercial buildings, putting a blight on the landscape and damaging the environment. A growing disrespect for the rule of law in general has led to various abuses of natural resources, with increased wildlife and fisheries poaching and illegal tree cutting being mentioned by a few of the experts. In such conditions the existing regulatory offices have little real power to enforce the laws. Political power struggles also hinder the development of needed laws as the politicians are often more concerned about elections than public policy.

Economic changes

Economic changes have had major impacts on environmental protection, and indeed on society as a whole. Like in other CEE countries, the market reforms in Romania brought significant reductions in heavy industrial output and thus a reduction in air and water pollution from this sector was generally experienced. International trade was also noted by one expert as having the positive effect of making modern, more environmentally friendly, technologies available now in Romania. Privatization has also had impacts. It was noted that property ownership is sometimes unclear and thus working of lands for agricultural production has diminished. One expert mentioned that with privatization, property owners are also beginning to appreciate how contamination diminishes the value of their property, and thus some owners have begun to pressure polluters for compensation. It was noted, however, that the wider effect of privatization has been very minimal because the number of enterprises and properties actually privatized has been very low. Privatization will definitely play a more important role in the future.

Indeed, the experts did not cite many positive effects of the economic changes on the state of the environment. Negative effects were much more commonly described. There has been a general collapse of the economy due to closing markets (of the former Soviet Union and Yugoslavia) and non-competitiveness of some Romanian industries. The dire state of the economy has created a situation of chaos. There is little to no monitoring or regulation of industrial activities and the pressure to produce as cheaply as possible is strong. In such circumstances the environment often suffers. The grave financial situation has also resulted in a much lower budget for environmental protection expenditures. One expert reported that currently less than 0.5% of GNP is devoted to environmental protection, thus pollution abatement equipment goes without being repaired and needed new technology is not purchased. At the same time, with the national borders being opened for trade, the amount of solid waste has increased, and the number of second-hand automobiles in use has risen, adding to air pollution problems.

Social changes

The political and economic reforms have led to substantial social changes as well. The possibility now exists for the public to influence governmental decision-making, and a citizen environmental movement has developed. Improved access to government information and the freedom to organize and to take action have resulted in the true, very poor state of the environment being discovered and publicized. In some areas of the country, especially where the environmental health effects have been acute and well-documented (i.e. Baia Mare and Copsa Mica), there have been dramatic increases in public awareness and pressure regarding environmental issues. The environmental movement has even succeeded in placing representatives in the
government administration and parliament. It was mentioned, however, that the impact of the citizen environmental movement remains much too small to sufficiently address the many serious problems.

The social changes have also had adverse impacts on the environment. As already mentioned, the profound political and economic reforms have created instability and insecurity in the society. Economic changes have resulted in a serious economic decline. The general population has suffered from this and many people now struggle to meet their basic needs. Poverty is increasingly driving people to exploit their natural surroundings for subsistence purposes and economic gain (uncontrolled commercial development and illegal hunting, fishing and tree cutting were listed by the experts as examples). Under these conditions the environment is simply off the agendas of most people, including politicians and government officials. Citizens are pre-occupied with securing their economic welfare to the exclusion of other issues. The situation is worsened by a level of passiveness amongst the people, which is a legacy of the previous political system. People often wait for the government to initiate solutions to the problems, even though the government has major difficulties of its own.

Assessment of environmental assets and damages

Natural capital

Some areas of Romania have remained largely free from pollution and the country contains many areas of great natural value. Substantial forest areas exist, and the diversity of flora and fauna is considerable. Some areas of special natural value already have protected status, with 12 National Parks having been declared. The Danube River Delta, Europe's largest wetland, is an other special area. In recognition of its unique value, a Danube Delta Biosphere Reserve was established. The Little Island of Braila, the last part of the Danube floodplain in its natural state, also has great value and should receive special protection. Some of the experts noted that with such areas existing in Romania, the potential for developing eco-tourism is very strong. There are also certain other types of assets from which Romania's natural environment benefits. Environmental NGOs, skilled researchers at a variety of institutions, and concerned media professionals are examples. Traditional values and lifestyles, still common in rural areas, are also assets as they exhibit a kind of environmentally friendly and truly sustainable development which has occurred for centuries.

Environmental damages

Economic development and human health in Romania are threatened by a variety of environmental problems according to the experts. About 25% of all forests are damaged by acid rain caused largely by pollutants coming from power plants burning low-quality coal. The damages to forests are especially harmful because deforestation results in increased soil erosion and reduced air quality. Water pollution from household, industrial and agricultural sources was cited as another threat, effecting fish breeding, irrigation, and drinking water supplies. One expert explained that 18% of surface waters are of such low quality that they are not even fit for industrial use and another reported that 4000 km of rivers are considered highly polluted.

A number of environmental hazard areas, or "hot spots," have also been identified, where the environmental problems are severely threatening human health. Cities such as Baia Mare, Copsa Mica, Zlatna, Onesti, and others suffer extreme contamination from nearby industrial facilities. Primary culprits include metal-working plants and fertilizer manufacturers. In all, more than 1.2 million people in the country are directly and continuously effected by pollution, with life expectancies in Baia Mare and Copsa Mica being about 10 years less than the national average.

Priority environmental problems

Water quality

One of the two environmental problems most commonly mentioned by the experts was that of water quality. Both surface and ground waters are heavily polluted, especially by industrial sources such as chemical and petrochemical facilities, with domestic, agricultural and mining waste waters also causing problems. Wastewater from these sources is a serious problem because most is discharged untreated or only partially treated. Over 4000 wastewater treatment facilities exist in Romania, but most do not function adequately. The Danube River is highly polluted in some areas and contributes significantly to water quality problems in the Black Sea.

Nature protection and restoration

Along with water quality, issues of nature protection and restoration received the most attention from the experts. Biodiversity, natural resources and scenic landscapes are threatened by a host of factors: unregulated commercial and residential development destroys habitat and is aesthetically unappealing; increased illegal hunting and fishing is depleting wild game; unauthorized tree cutting for profit and subsistence fuel damages forest areas. In some areas, environmental contamination from industrial pollution is so intense that all life is threatened.
Air quality

Air quality is a serious problem in many parts of Romania and was the next most mentioned priority issue by the experts. Industry, especially the energy and metallurgy sectors, is the primary cause. Another important and growing source of air pollution is automobiles, especially in urban areas.

Solid and hazardous waste management

Problems associated with solid and hazardous waste were also cited by many of the experts. Proper treatment and disposal facilities are seriously lacking and the problem is worsening as non-degradable throwaway packaging constitutes an increasing portion of the wastestream. One result of poor waste management practices is serious soil contamination in some areas.

Economic and political instability

Though not strictly an environmental problem, economic and political instability were mentioned by several experts as being the primary causes of the various environmental problems in the country. The economic crisis has created circumstances in which exploitation of the environment has intensified while the government and parliament are having great difficulties in developing and implementing measures which will effectively address the numerous problems.

Critical steps to start or continue environmental improvements

Management and administration

The Ministry of Environment was established in 1990 and later renamed the Ministry of Waters Forest and Environmental Protection. Also, the network of Field Agencies for Environmental Protection was established as a monitoring and control institution. The MoE is organizing an Inter-ministerial commission to improve the management of environmental issues within the transformation process. Such a commission may help to improve coordination and cooperation between the ministries, especially between MoE and the Ministry of Industry. Proper environmental management in the industrial sector is seriously lacking according to most of the experts. One expert stated that industrial enterprises have departments of toxicology for worker protection but generally do not have special offices for environmental protection. The potential of existing environmental expertise and information was described as under-realized because it is not coordinated or centralized for easy access.

Enforceable environmental policy and law

Improvements in the areas of policy, law and enforcement are greatly needed according to most of the experts. A National Environmental Strategy was formulated in 1992 in cooperation with the World Bank, however, its implementation has been very limited. While certain individuals within the MoE are responsible for policy development there is no separate office or department for environmental policy. New environmental laws are needed in many areas. At present, old outdated laws still govern environmental issues. A new draft Environmental Protection Act, and a Danube Delta Biosphere Reserve Law are presently under preparation. The lack of private property laws is also a problem, as currently a "tragedy of the commons" situation exists, in which many areas are still officially owned by everyone but nobody (in practice) is directly responsible for protecting them. Enforcement of existing laws is also seriously lacking and this is perhaps an even greater priority than the enactment of new laws.

Education and expertise

Environmental education is a high priority need in the opinion of the experts and all segments of society need awareness raising, with special emphasis on young people and decision-makers. Every possible forum should be used to advance environmental education. A couple of the experts noted that religious leaders could and should play an important role in this process as new, environmentally and socially harmful lifestyles and values are being promoted during this time of transformation. Professional training of specialists and decision-makers is especially crucial for improvement of environmental management and the integration of environment and development issues.

Technology and services

There is a definite need for modern production and environmental protection technologies as currently old and obsolete technologies are heavily relied upon. Technology for wastewater treatment and air pollution abatement used to be produced in Romania, however, this is no longer the case. While technological needs do exist, end-of-pipe solutions should not be the focus and improvements in law, enforcement and education were viewed as higher priorities.
Driving forces for environmental improvement and degradation

Free market reforms

Market reforms were cited by many of the experts as being a significant force effecting the environment, for better and worse. The loss of markets in the former Soviet Union and the non-competitiveness of Romanian industry has led to a substantial decline in production and thus a decrease in some types of pollution. However, as a result of the economic decline many people are suffering financially and poverty is increasingly driving intensified exploitation of natural resources.

International trade

International trade and open borders have also had both positive and negative effects on the state of the environment. Western firms dealing in polluting and hazardous industries have come to Romania looking to take advantage of weak environmental regulations and enforcement, while at the same time, open borders have allowed access to more environmentally friendly products and technologies.

NGOs and the media

The influence of environmental NGOs is growing, and having positive effects on the state of the environment. Their participation in the decision-making process is helping to improve public policy and raising environmental awareness. In a few cases, public opposition has halted the development of environmentally dangerous projects. The mass media is another emerging force for positive change, with newspapers, radio, and television giving attention to the environment.

International financial institutions

International financial institutions are also influencing environmental protection in Romania, largely for the better in the view of many of the experts. The government is in serious need of money, and institutions like the World Bank provide such assistance but with conditions for environmental improvements. As a result, the government has been forced to improve policies and management. Unfortunately, the World Bank usually supports only profitable projects which means that some efforts which might be more beneficial to the environment but which have less quantifiable or more long-term benefits do not get implemented.

Government authorities

Government authorities were often cited as being a driving force for change in the state of the environment. Most of the experts criticized the government for being ineffective in solving the many environmental problems the country is faced with. The environment is simply off the agendas of most decision-makers and a very conservative mentality giving special treatment to heavy industry still persists. Nevertheless, government environmental administrations carry much of the burden for making environmental improvements as they are largely responsible for formulating and implementing environmental protection policies and actions.

Industry

Industry was also listed as a driving force, unfortunately, for negative change. Much of industry still uses old and inefficient, environmentally harmful technology and in the currently difficult economic conditions wields significant influence because of its revenue generating capacity and the employment opportunities it provides. Many of the experts explained that industry has minimal concern for environmental issues, is largely unregulated and strong enough to effectively influence governmental decision-making.

Integration of environmental concerns into economic development

Obstacles to integration

A variety of obstacles to integrating environmental concerns into economic development were mentioned by the experts. Perhaps the main one is the false belief held by decision-makers that environmental concerns only obstruct and hinder economic development. Most of the decision-makers simply do not understand how a healthy and clean environment is a necessary base for a sustainably strong economy. The situation is worsened by the plain fact that the environment is simply a very low priority for people. There is no widespread support for environmental protection, thus it is not on the agendas of decision-makers. This contributes to the MoE being one of the weakest ministries in the government. The other ministries have little real support for the objectives of the MoE. Free market reforms and the current economic crisis have encouraged the dominance of short-term thinking and the drive for immediate profits, which tend to exclude proper consideration of the long-term benefits to be gained by environmental investments. There are also more practical, but nonetheless serious obstacles such as the lack of a legal mandate for such integration, the lack of necessary expertise and knowledge, and the severe shortage of money required to address these issues and to make needed capital investments.
Existing and proposed measures for improvements in integration

Unfortunately, the experts were not able to describe many existing concrete examples of sustainable development or meaningful implementations of the polluter pays principle. Some progress has been made in the field of water management with the introduction of a fine system and a "Water Fund". A variety of pollution fines do exist officially, but the amounts are very low and they are neither effective as incentives to reduce pollution nor as sources of revenue for environmental investments. The concepts of both sustainable development and the polluter pays principle are included in the new draft environmental protection law which is in parliament. It is not known when this bill will be enacted as there are about 60 other bills also in parliament at this time. The Inter-ministerial commission mentioned earlier was also listed as a measure which should improve the integration of environmental concerns into economic development. One expert also reported that a special governmental counsellor will probably be engaged to deal with environmental problems.

Financing environmental improvements

The general state budget was reported as virtually the only mechanism for financing environmental protection. The amount of money appropriated from the state budget for environmental purposes is already very small, less than 0.5% of gross national product, and diminishing. In theory there is money generated by a variety of pollution fines, but some of the experts explained that in reality this money is so minimal that it is insignificant. International institutions also contribute some money for environmental protection and there is some financial support for NGOs coming from foundations. New mechanisms, including stronger pollution fines, environmental taxes and a National Environmental Fund are proposed in the draft environmental protection law.

Despite the very limited nature of Romanian financial resources, most of the experts agreed that some environmental problems could be solved with domestic funds. (One expert noted that it is very difficult to identify problems which could be solved with national resources because it is very unclear just what the sum of those resources is given the way in which the national budget is managed and distributed.) Problems which might be solved using domestic resources include nature protection, repairing and maintaining existing pollution abatement equipment and environmental damage caused by poor agricultural practices. Foreign financial assistance is most likely needed for new environmental technologies, especially in connection with large capital investments like wastewater treatment facilities and air protection devices. Remediating serious environmental hazard areas will also require foreign assistance.

International cooperation

CEE-regional cooperation

Romania has had some successes in cooperating with its CEE neighbors in addressing environmental issues associated with the Danube River and Black Sea. Successful cooperation with other CEE countries on environmental issues has, however, been extremely limited and improvements in this area are greatly needed. Such cooperation is clearly essential for effectively protecting these two areas (the Danube River and the Black Sea) and would also be helpful in dealing with transboundary air pollution, harmonization of environmental standards with EC norms, and the development of nuclear safety plans. One expert noted that stronger economic cooperation within the region would also go a long way towards improving the environmental conditions in the individual countries.

Western assistance

The experts described a number of environmental successes in which western assistance played an important role. EC PHARE and the British Know-how Fund have supported environmental assessments and the World Bank provided significant help in developing a National Environmental Strategy. The United States Agency for International Development has provided much needed training through the Environmental Training Project program and NGOs are supported by REC and various western NGOs.

As for negative experiences with western assistance, some of the experts indicated that they did not know of any such experiences, while a few experts explained that it is important for the aid recipients themselves to be prepared to receive the aid and to be able to suggest how it might be best used. Apparently the Romanian government and other institutions receiving aid have not always been adequately prepared to effectively use it. Some of the experts also indicated that a considerable amount of aid money has actually gone to foreign experts making short-term visits to prepare feasibility studies which lacked meaningful input from local experts and were not realistic.

Western assistance should move beyond feasibility studies and assessments and should support direct concrete actions such as technological investments and cleanup of the most severely damaged areas. Expertise and training would also be especially helpful in numerous areas, including: management training for
government, industrial, and NGO leaders; the development of post-graduate university programs; and the use of methodologies like environmental impact assessments. Assistance should come in the form of partnerships and make maximal use of Romanian input.

**Interest groups in environmental protection**

*National / local governments and parliament*

The national and local government administrations were reported most often as having the greatest impact on environmental decision-making. The national government is responsible for initiating environmental policy and law, and local and regional governments are primarily responsible for implementing those policies and laws. Parliament was also cited as having significant influence, in a negative sense, with its failure to enact a new environmental protection law.

*NGOs and the media*

NGOs' influence on environmental decision-making is growing, but remains relatively low. To some extent it depends on the individual organization, as some include highly qualified experts while others are lacking specialists. The media's influence in this field is also growing. They are now free and uncensored and able to distribute information quickly to many people.

*Scientists*

Scientists have some influence through their research and ability to recommend standards and various policy options, however, their role is limited in part because of the poor coordination and distribution of the results of their work.

*International institutions*

International institutions such as the World Bank, the EC and the European Bank for Reconstruction and Development also have notable influence through the conditions they attach to grants and loans given to the government as well as policy advice. Their involvement was generally considered very helpful by the experts, especially in regards to the development of better environmental policies and expertise.
SLOVAK REPUBLIC

Political, economic and social impacts on environmental protection at the spring of 1994

Political Changes

The environmental lobby had more political influence in the first few months following the "velvet revolution" than it has now. Between December 1989 and June 1990, the Minister of the Environment was the Vice-Prime Minister. The Green Party had six deputies in the Slovak Parliament during its first session (July 1990 - June 1992). After the elections in June of 1992, the Green Party was no longer represented in parliament. There are generally less people in parliament and government now with experience in environmental protection issues. The diminishing priority status of environmental issues is also due to the more pressing political issues now before parliament. Ongoing conflicts over a variety of contentious issues further complicate the political process.

The split of the Federation in January 1993 had effects in some particular areas of environmental protection. Experts mentioned that environmental concerns moved down the priority list to a greater degree in Slovakia than in the Czech Republic because of political and economic reasons. Also, resources for some projects which were previously sponsored from the former Federal budget are not available anymore. On the other hand, government representatives considered as very positive the fact that international cooperation, which was mainly directed by the Federal Committee of Environment, can now be undertaken by the MoE. Problems related to sometimes unclearly defined authority between the Slovak Commission for the Environment and the Federal Committee of the Environment have thus disappeared.

A very important political event regarding the environment was the creation of an independent environmental administration in 1990. As a central body, the Slovak Commission for the Environment was established as an over-sectoral body, above the status of a Ministry. In 1992 it was renamed the Ministry of Environment and was set on the same level as other Ministries. Unlike the Czech Republic, Slovakia established independent regional environmental offices. There are plans to integrate them as a part of the general regional offices of state administration. The general regional offices are responsible for several areas such as education, social affairs etc., but not for financial issues or the collection of taxes (for this a separate office is responsible). From the state side this reorganization of environmental administration at the local level is called "horizontal integration of the administration," following the prefecture structure of France. The heads of the regional offices would be the representatives of the state government. Some environmental advocates criticize this reorganization as a tendency towards centralization and a reduction of the power and independence of the local authorities.

Between 1990 and 1992 almost the whole system of environmental law was renewed. After the split, Slovakia adopted all the new environmental acts from the Federation. However, as environmental advocates mentioned, since the elections in 1992, no environmental acts have been adopted by the Slovak Parliament to complete the environmental legislation.

Economic Changes

The whole concept for restructuring the economy into a free market system was elaborated in the former Federation. The Slovak Republic, after requiring independence did not change this concept much and in essence this policy is continued. In practice, however, there are some differences, mainly in the process of privatization which has been at a virtual standstill for months. Some experts mentioned that generally the role of the state in economic development is greater in the Slovak Republic than in the Czech Republic.

Restructuring agriculture means that 80% of the land will be (re)privatized, and will result in a change in the structure and practices of agricultural production. Experience so far has shown that the new owners are concerned with short-term profits, regardless of environmental concerns. For example, they cut the trees (even in the National Parks and in the Nature Protected Areas) for export to the West. They also drain wetlands and exploit land for grazing. However, in cases where smaller agricultural enterprises are transferred to private ownership they often do not use as much pesticides and fertilizers as before (mostly because of the high cost of these chemicals), resulting in a positive impact on the environment.
The primary mechanism for restructuring the economy is privatization. It is requiring drastic changes in ways of thinking, not only regarding economic development, but also in relation to environmental concerns. In terms of the environment the core problem of privatization is to solve the question of past pollution - ecological liability. Privatization has not yet had a strong impact on the environment in Slovakia. Its progress has been quite slow thus far. The first wave of privatization, so called "small" privatization, has generally resulted in more positive than negative impacts on the environment. The sense of personal responsibility that comes with the new private ownership is resulting in a change in business practices and efficiency improvements that in some cases indirectly benefit the environment. The slow pace of privatization has also had its effects and environmental consequences. For example, it has happened that once it is known that a factory is going to be privatized, the current owner (the state) is no longer concerned with its environmental status, resulting in the neglect of its environmental responsibilities. (Which reflects the importance of the liability issue.)

During the first wave of privatization, there were no legal requirements to address environmental issues. In the second wave large companies which include the biggest point sources of industrial pollution will be privatized. In the 1992 law regarding the second wave of privatization there is an order requiring environmental audits to be done for each privatization unit. But the information required by the audit has disputable and relative value. The audit is primarily of use to the prospective buyer and helps to regulate the price. The range for bargaining on the price is so broad that it may result in as much responsibility being held by the state as by the new owner, which means that it is more or less a question of agreement between the two parties. At present the MoE is working out more precise conditions to ease the process of negotiations about how the responsibility for environmental liability can be shared between the two parties. These documents do not address the questions of time allowed and how the clean-up has to be done. They serve mainly to make the privatization process quicker. The proposed approach is that the state will be responsible for all environmental liability outside the area a company is owning, whereas past pollution located on the premises is the responsibility of the new owner. In some cases this approach is not possible because of too large economic problems (e.g. the aluminium factory in Ziar nad Hronom) or with companies where the ecological liabilities are higher than the value of the enterprise to be privatized. In these cases, possibilities for negotiations shall be provided as follows: first, the price of the enterprise can be reduced because of ecological debts, and; second, the National Property Fund can donate funding to solve the issue. Third, companies can create an own fund to address the issue, in which parts of the taxes to be paid to the state and also a part of the environmental fines and fees, the company may eventually have to pay, can be deposited. This approach is well supported by private companies.

Social changes

With the opening of the "iron curtain" the society was opened, too. Information about the state of the environment has been prepared and published, and environmental experts and organizations were allowed to influence the decision making process. In addition, international organizations offered assistance and have been welcomed. However, environmental advocates stressed that at present the amount and access to information remains insufficient and public participation is limited. It was noted that the situation was better before the elections in 1992.

The transition period has resulted in serious social problems such as unemployment and economic threats to parts of society. Because of this, and also because of public attention moving towards new interests and concerns, awareness and interest regarding environmental problems has decreased. Just after the revolution environmental concerns were a high priority of the public. This was the case in part because before the revolution voicing concern about environmental problems was one of the few possibilities to criticize the rulers of the former system.

Assessment of environmental assets and damages

Natural capital

Slovakia is rich in natural treasures. National Parks and Protected Nature Areas are being adversely impacted by intensive tourism, damaging forestry practices and local industries. Citizens and local authorities living in the adjacent areas aren't generally concerned with these problems. The government is currently considering the Tatra National Park as a potential site for a future winter Olympics. This could have serious environmental consequences for the area. Environmental advocates contend that promoting ecotourism in these areas is a better alternative. One significant example of squandering natural capital is in the Danube Basin where intensive cutting of natural forests is taking place. In this case, the economic value of the cut timber is of more interest to the loggers than the value of the standing forest ecosystem. In Central and Eastern Slovakia, there are also instances where forests are cut for use as fuel. Other examples of natural capital are Slovakia's wetland areas. Accordingly, there are ongoing activities to protect the biodiversity of Eastern Slovakian wetlands and Southwestern Slovakian fresh-water resources.
Environmental damages

The government's general policy for building a "strong" Slovakia includes a high level of energy use. Two new power plants are under construction (nuclear - Mochovce, hydro- Zilina on the river Vah). Both power plants will raise serious environmental issues, e.g., the disruption to the river and its adjacent lands and the disposal of nuclear waste. The former Soviet Union accepted all of the high level waste before 1990, but now none of the successor states accepts it. The nuclear power plants (Jaslovské Bohunice, and Mochovce) have "temporary" dumps on-site, but their capacity is limited. The low level waste and intermediate level waste are reprocessed. This situation is an obvious environmental threat with serious potential consequences. Environmental advocates agree that implementing efficient energy-saving technologies would be a better solution to the energy problem, however, this alternative would depend on western financial and technical assistance. However, the nuclear issues are not so much in public discussion. The well publicized issue of Gabcikovo - Nagyvaros (damming the Danube for energy production) is still the subject of controversial and emotional discussion. Experts also mentioned pollution from (heavy) industries as prominent sources for environmental damages, such as chemical, petrochemical, metallurgical, steel mill, cement, paper and cellulose, and aluminium industries.

Priority environmental problems

Air pollution

Air pollution is considered to be one of the most pressing environmental issues. The major types of air pollution are: SO2 emitted by industrial facilities burning low quality, high-sulphur coal (e.g. the power plant in the Homa Nitra region, the steel mill in Kosice, and the petrochemical factory in Bratislava); toxic substances and heavy metals (e.g. coming from fertilizer and pesticide manufacturers, arsenic and fluorine from the aluminium plant in Ziar nad Hronom, chemical industries in Eastern Slovakia, mercury, copper and others coming from color metallurgy in the Spis region); dust created by the cement and magnesit industries; NOx from automobile exhaust, and; CO2 from power plants, industrial facilities and automobiles.

Water pollution

The biggest sources of water pollution are urban conglomerations and industry. In general, industrial plants don't treat effluent prior to discharging into rivers. In addition, few sewage treatment plants exist and municipal wastewater is often discharged to rivers with little or no treatment.

Waste management

Most of Slovakia's solid waste is burned in incinerators with insufficient abatement technologies. The country's waste problem is exacerbated due to the secret importation of waste from western nations.

Agricultural pollution

Use of pesticides and artificial fertilisers with nitrates, are the principal causes of pollution from agriculture, which appears mainly as water pollution.

Critical steps to start or continue environmental improvements

Management and administration

The structure of the environmental administration has been reorganized several times since 1990. Furthermore, there is a high turnover of staff, also in high positions. The same goes for other administrative bodies which cooperate with the environmental administration. For instance, the directing staff of the Ministry of Privatization has been changed recently and now discussions about environmental concerns in privatization have to be started anew. Another issue is that 25 - 30% of the staff of the environmental administration left because of the lack of money. The future effect of this turnover remains to be seen. In terms of cooperation between the MoE and other Ministries and organizations, the general lack of understanding of the interdependence of environmental concerns with other issues is affecting effectiveness and efficiency. The MoE is a young institution and in some cases its representatives have yet to find their new roles and positions in the transformation process.

Enforceable environmental policy and law

A new official environmental policy was adopted in November 1993, and is in accordance with the Environmental Action Program for Central and Eastern Europe, endorsed at the Lucerne Ministerial Conference. The new policy addresses issues more concretely and is considered an important step towards solving environmental problems. The subjects included in the policy are: 1) air pollution and global environmental
security; 2) drinking water supply and limitation of water pollution; 3) soil protection and food quality; 4) waste management and treatment; 5) biodiversity protection, optimal use of natural resources, and landscape optimization. However, as an expert mentioned, no money has been allocated for the practical implementation of the policy in the state budget for 1994.

The main principle of the former environmental policy, which was elaborated by the Slovak Commission for the Environment, is the "ecologization" of human awareness, of legal and economic instruments, of the organization of territory and of production technology. Under this term, a cross-sectoral approach and an infiltration of environmental concerns and principles into other areas was understood. The implementation turned out to be difficult however.

Between 1990 and 1992, Slovakia enacted new environmental legislation, including the General Environmental Protection Act, Waste Act, and Clean Air Act. Several acts are still under preparation (e.g. in the area of water pollution and nature protection, the old and outdated laws from 1973 and 1955, respectively, are in force). Additionally, an act about risk assessment for existing companies is being prepared by the MoE. A new Environmental Impact Assessment Law has been drafted and the environmental administration and environmental advocates are optimistic about its effect.

As a result of the quick development of the new environmental law system and also because of constant and rapid changes in the structure of the economy, it was and still is necessary to make amendments to the existing new acts in order to ensure the ability of the economy to meet the requirements of the regulations. It was mentioned that harmonization with laws of other areas, for instance economic, is insufficient. Economic tools should be considered which benefit the environment, for example incentives and subsidies for pollution control activities and technologies.

Enforcement of environmental laws is a serious problem. Environmental inspectorates have been established, but in some cases it is unclear as to who actually holds the enforcement power. Also a lack of options for enforcement has been mentioned. Many companies cannot pay the environmental fees and fines and most of the heavy industries are still state owned. Usually no alternative measures are provided if a company cannot pay the fines. In addition, as in other CEE countries, the efficiency of enforcement in Slovakia is weakened because of obstacles like insufficient technical support, management problems, low public respect for the rule of the law, etc.

**Expertise and public support**

The experts stressed that improving environmental education at all levels should be high priority. There is a lack of environmental professionals. Management and organizational skills should especially be improved, and here the exchange of experience with western countries would be helpful. A broad dissemination of knowledge concerning modern ideas and methods in the field of environmental protection is lacking. An increase in public awareness and public participation regarding environmental issues is also greatly needed to create pressure on decision-makers and to promote an atmosphere where solutions to problems can be elaborated. Access to environmental information must be improved, and information about the actions of decision-makers and businesses should be public and broadly disseminated.

**Technology and services**

Environmentally sound investments and improvements in all areas of business and society are greatly needed as well as the broad adoption of environmentally friendly technologies and products. The main problems, however, are the lack of investment opportunities and finding money for investments. There are some private companies which offer environmentally friendly technology, but this sector is still underdeveloped. There are few working incentives which support such activities.

**Driving forces for environmental improvement and degradation**

**Foreign trade and investment**

Foreign trade and investment has both positive and negative impacts on the environment. Modern technologies available through international trade can benefit the environment as may foreign investors producing export goods according to EC standards. However, some foreign firms are promoting environmentally harmful technologies and dirty industries in Slovakia. For example, it was reported that an Austrian lobby is pressuring Slovakia to accept its hazardous waste in return for financing a waste incinerator in Bratislava.

**Economic restructuring**

In the near-term, the economic sector will be the driving force in regard to the environment. Restructuring of the economic system, privatization and change of ownership, western investment and the adoption of western technologies will directly affect the environment in both positive and negative ways. In general, economic
reforms provide benefits to the environment, but the growing emphasis on quick profits and short-term thinking tends to negatively impact the environment.

**International pressure**

International pressure connected to environmental issues is coming from Austria because of the existing and planned nuclear power plants in Jaslovske Bohunice and Mochovce, and from Hungary concerning the hydropower plant Gabčíkovo-Nagymaros.

**Environmental activists and scientists**

Positive driving forces towards environmental preservation and improvement in Slovakia include the activities of environmental movements and volunteers, the work of environmental experts, scientific research, and positive pressure through diplomatic channels.

**Integration of environmental protection and economic development**

**Obstacles to integration**

With the exception of some very rare cases, economic and environmental policy are not integrated at all. The experts mentioned several major obstacles impeding the integration of these two vital sectors. On all levels, there is a serious lack of broad dissemination of information and awareness of modern ideas and approaches to harmonize economic development with environmental protection. The ideas that "environmental protection is an obstacle to economic growth" and that "environmental problems can be solved when the economy is well" persist. Economic planning focuses on short term goals, while the environment requires long term thinking. Cooperation and communication between these two sectors (as well as among others) is only just beginning and economic interests still receive official priority over environmental interests.

**Existing and proposed measures for improving integration**

At present, there is no official approach or concept provided to harmonize environmental concerns with economic goals. However, development concepts for different branches of the economy (energy, mining, metallurgy) are currently being elaborated. The MoE is being consulted with during the drafting of the plans. According to one expert these plans will include a greater stress on tackling environmental problems. It remains to be seen whether this cooperation will result in better integration in practice.

The effectiveness of economic instruments for environmental protection is low in Slovakia. Charge and fine rates are too low to provide real incentives to change polluting behavior. An obstacle for enforcement is that most of the heavily polluting large industrial facilities are still state owned. Many companies are not able to pay, and the amount of fines and charges officially imposed is much (ca. 30 times) higher than the amount actually collected. The government does not currently seem to be very engaged in adopting new market incentives that would benefit the environment.

**Financing environmental improvements**

Sources of funds for environmental protection include: a part of the state budget; the State Environmental Fund, and foreign assistance. Revenues generated by the environmental fines and charges are deposited in the State Environmental Fund. The money is then redistributed through a grants program. The government is now discussing the establishment of a "revolving fund" which would give soft loans for environmental improvements. This program will probably be open to companies as well as municipalities.

Slovakia is faced with economic hardship and cannot afford needed investments in new technologies (e.g., pollution control, abatement and energy efficient technologies) nor the reconstruction of old facilities. While funding is generally insufficient in Slovakia, there are areas where small investments would yield significant results (e.g. environmental education, especially for long term benefits or pilot projects in the areas of energy, tourism, recycling, water management, etc., to demonstrate the advantages of a sustainable economy.

The fact that there are no tax breaks or subsidies to encourage businesses to invest in environmentally sound practices is a definite problem. For example, there were some initiatives to separate plastics from the municipal waste in Bratislava, but the lack of incentives for recycling the plastics defeated the effort. In the tax system, which consists of eight special taxes, an ecological tax is provided. But it is not in force yet and in fact nobody knows just what the ecological tax should look like.
International cooperation

CEE-regional cooperation

The experts listed the following issues in which CEE cooperation is important and required (or already developing): transboundary air pollution (a regional and global issue); transboundary water pollution (e.g. Danube issues); the import and export of waste; energy production and distribution; issues related to pollution from transportation; harmonization of environmental policies; the establishment of common National Parks (e.g. Beskides on the border Slovakia and Poland and Danube-Ipeli/Ipoly on the border of Slovakia and Hungary); the protection of forests (also connected with air pollution); environmental education, and; cooperation between NGOs.

Western assistance

Many, and mostly positive experiences with international assistance have occurred. Many important projects have been successfully completed, especially in the areas of environmental assessment and strategy development (often in industrial hot spot areas). However, the experts stressed the need for assistance to continue the implementation of the recommendations, (investment loans are required), as this is the major problem for implementation and gaining real results from such studies.

The experts cited some examples of negative experiences with western assistance. Environmental advocates criticized EBRD for investing in the aluminium plant in Ziar nad Hronom, a serious pollution source and major energy consumer. Some of the criticisms are related to points that the selling price of aluminium is below production costs on the world market, Slovakia does not have sources of raw material for aluminium production and does not have abundant sources of cheap and clean energy.

Apart from the many positive examples, experience thus far has shown that Western technical assistance is not always working in the most efficient and long-lasting way. A bigger number of local experts should directly participate in the projects. Projects could be more closely adapted to the local conditions and local people should profit more from western experience, management and problem solving techniques. Also, projects should be transparent. Often feedback and discussion of the results is too cursory and coming too late. Some experts had the opinion that international assistance should be focused more on smaller enterprises and NGOs. Additional foreign environmental assistance would be especially helpful in increasing the effectiveness and efficiency of environmental management in the state administration and NGOs, to incorporate environmental principles into the economic strategies, especially into the energy policy (efficient use of energy and energy saving program, alternative sources of energy), to address air pollution caused by automobiles, and to propagate a sustainable way of life.

Interest groups in environmental protection

National and local governments

Environmental decision-making is mainly directed at the national level by the MoE and the state government generally. At the local level, environmental authorities sometimes have great influence on environmental decision-making (depending on individual personalities).

Media

The media can potentially play a big role in Slovakia, unfortunately however, they aren't concerned to a large extent with environmental awareness and education.

NGOs and academia

NGOs and academia play roles in environmental protection, but they do not have much power and influence. The public is less inclined to accept the NGOs opinions than they were four or five years ago. Academia as a whole has lost influence, mainly because of a lack of financial support. The potential impact of NGOs is also diminished by the lack of funding. The amount of official support from the state budget for NGOs decreased about 10 times since 1991 and only a very few NGOs are now being supported.
Political, economic and social impacts on environmental protection at the spring of 1994

Political changes

The change to parliamentary democracy has largely brought benefits for environmental protection. Significant new environmental legislation was passed, NGOs have entered the political arena and pro-environment political parties were even created. A Green Party was established and entered the first governing coalition with four ministers under the condition that it could promote its environmental program. There was a chance to put environmental issues on the political agenda, but in practice, not much was done to improve the environmental situation. The symbolic objective of their platform was the closing down of the Krsko nuclear power plant. They were not successful, however, in achieving this goal during their years in power. During the first few years of the transition environmental problems were pushed to the background by the problems of creating a national identity. Since the 1992 elections, when the Green Party lost, no political party has been actively interested in the environment. Due to the differences within the party between radical environmentalists and other factions, the Green Party split. Some of the members of the Green Party remained in leading positions of other parties, while others joined NGOs.

The establishment of parliamentary democracy has in itself brought indirect benefits for the environment. As mentioned, NGOs became more active politically, however, this has resulted in some negative consequences for the NGO movement. For a few years only those NGOs who obeyed the rules of the political parties were able to make an impact in the environmental arena. These green parties consist mainly of persons with ecological ideologies, but they lack environmental experts like those participating in Western NGOs. There is limited access to political channels for experts who are concerned with specific environmental issues.

Economic changes

During the transition to a market economy the old system of production, which was characterized by an emphasis on energy intensive heavy industry, has been changed to a great extent. Success depends on whether or not this trend will continue and the economic program includes rehabilitation and restructuring. Industrial production in 1993 was still falling. In 1991 the growth of GNP was 9.0%, in 1992 7.2%, while in 1993 it was expected to be between -1.0 and 1.0%. At the same time, however, 35,000 new jobs have been created in new factories, indicating that the restructurization process of industry has started and is progressing. Pollution is decreasing in part because heavy industry is in crisis and production has declined. The energy prices remain under government control, though, and they are kept low which does not encourage energy efficiency.

The free market reforms have led to an economic decline and funding for the environment is very limited. The implementation of some of the most important environmental projects, like the desulphurization of the Sostenj power plant, was stopped due to the lack of money. The government also plans to further develop infrastructure, the energy sector, railroads, telecommunications, etc., which should have a positive influence on the environment. However, capital for environmental investments is quite limited which means that loans will have to be sought which will in turn lead to an increase in the foreign debt. Slovenia currently has a total debt of about 1.7 billion USD, and the country will also have to take over a portion of the ex-Yugoslavian debt (but it is not yet known how much this will be). The government is seeking funds from abroad within the framework of the Slovenia Environmental Project.

Privatization is expected to generate funds for the economy as well as the environment. The privatization process has been started and funds are being put in a Development Fund. The small and medium sized enterprises (those with between 500-2000 employees) are being privatized first. Public ownership of large companies (in which citizens can buy shares) is also an option for some enterprises. Managers and workers can also buy shares of their own enterprise. The Agency for Privatization is the authority responsible for approving the schemes of privatization. The tasks of debt management, restructuring, and financing belongs to the Development Fund. Privatization of the banks will be started after a rehabilitation program is completed. The first step is to reduce debts and support the change of ownership structure. As a second step their debt will be managed by the Development Fund.

Social changes

After the disintegration of the central planning system, the links between science, government, and local communities were broken. As the political system and society organized themselves in new ways a vacuum was created. Experts working in the different institutes and citizens were not part of the decision-making process. The only way to express themselves was through the media and protest letters. Democratization has, however, allowed the development of many different views. Environmental activists and organizations have become more involved in decision-making and politics. This expanded political activism has caused some crisis, however, in the NGO movement because many NGOs did not agree with using environmental issues for political purposes.
Economic reforms are also causing serious social problems. There are 100,000 unemployed people which are creating social pressure on politicians which may ultimately impact the economic strategies. At present, day-to-day survival is the most important priority for citizens. Economic and social problems have priority over environmental concerns and are perceived as the most important issues, both by the public and the government.

During the past years the NGO movement in Slovenia has undergone great changes. Environmental issues are returning to the political agenda now due to the activities of new NGOs. One example is the Slovenian E-Forum (Environment, Economy and Energy), established in June 1993, which integrates experts of different institutes and universities. There are other NGOs, already operating in the past, whose activities tend to represent certain ethical norms and lifestyles based on moral feelings rather than expert knowledge. These are organized in local groups dealing with local problems and through cooperation they are able to have some influence on the national level. NGOs can act along with the media to publish articles and studies in order to increase environmental consciousness. They also attempt to influence decision-making by cooperating with and sometimes pressuring the government. It was reported, however, that currently NGOs and environmental experts are not involved enough in the discussion of environmental issues. The relationship between politicians and scientists depends on the political climate of the moment and experts working at the universities and institutes are presently inadequately supported.

The environmental consciousness of the public is relatively high in Slovenia. People accept that nature and the environment have to be preserved, but they provide only passive support. A number of NGOs are working quite effectively, but the public remains unsupportive of solutions that are costly. This attitude is caused in part by earlier experiences with some politicians who manipulated environmental concerns as a means for political gains. Environmental issues are still sometimes used as tools in political battles of local communities and parties.

Assessment of environmental assets and damages

Environmental assets

Slovenia is rich in natural capital. National parks provide special protection for particular areas (Triglav, Crkvinica). A new law is being prepared to protect rare species, large territories (such as parks), and different natural phenomena like the disappearing lake in the Karst region. There are suggestions to expand the national park system by adding seven of the most important areas of rich natural value. Some of Slovenia's rivers are well preserved (Soca, Krka and Kolpa). The alpine areas could also be an important source of clean drinking water. Wetlands are another natural value but there is a serious problem of protecting those in the vicinity of large towns like Koper, and along the Mura River.

Slovenia's natural beauty could bring financial benefits. The question is how to utilize this beauty properly, protect the resources, and ensure economic progress and human welfare at the same time. Slovenia has to base its development on agriculture and tourism. Two options are open: 1) to develop a tourist industry based on the seaside, or 2) to be an alpine country with a busy harbor. It is not yet decided which direction the country should take. So far, the tourist industry is in state hands. It is necessary to develop small-scale, quality opportunities for tourism, however, it must be regulated. In certain regions ecotourism is successful (Karst area) and it is possible to build upon this. The tourism sector does not yet fully appreciate the potential attraction of the country's valuable assets, therefore, it has not been able to properly market them. Slovenia could compete with Austria and Italy in this field. The Ministry of Economy is responsible for promoting tourism and they are cooperating to a certain extent with the MoE, but sometimes it is difficult for them to find a common language to use in setting goals.

Environmental damages

Acid rain caused by emissions from thermal power plants and automobiles is seriously damaging forest areas in the northeast and coastal areas of the country. Transboundary pollution from Italy is also contributes to poor air quality. Surface water is polluted due to the lack of wastewaster treatment plants and solid waste disposal facilities. Groundwater is contaminated by the dumping of hazardous waste (Drasko Pole, Ptuj, Celje). Human health is currently effected by threats to drinking water coming from agricultural activities (fertilizers and pesticides) and industrial pollution. The most serious case in which human health was threatened occurred a few years ago on the Krupa River when there was an environmental catastrophe involving polychlorinated byphenols. Health effects of poor environmental conditions have also been documented in Kamnik, as air pollution from coal burning has led to respiratory illnesses especially among elderly people and children.
**Priority environmental problems**

**Air quality**

Air quality is not a problem in all areas of the country, however in some locations (comprising about 40% of the population) it is under acceptable standards. Air problems are especially intense in specific locations prone to temperature inversions in the winter. Valleys (including the capital area of Ljubljana) sometimes become inundated by smog resulting from the emissions of coal burning furnaces, industrial facilities and automobiles.

**Hazardous, municipal and nuclear waste**

Hazardous waste was reported as the next priority problem and it is a subject in which the general public has a special interest. Appropriate policies, as well as treatment and disposal facilities, are lacking. Currently the waste is stored on the sites of the facilities or dumped illegally. Proper management of municipal waste also poses considerable challenges. There are some pilot projects for waste management, recycling, and separate waste collection, but it takes time because a market has to be built up for the recycled products. The issue of nuclear waste also remains unresolved. New disposal sites are very much needed but citizens are strongly opposed to having such facilities located near their communities.

**Water pollution**

Water pollution is another serious environmental problem in Slovenia. Wastewater treatment facilities are lacking and improper disposal of wastes results in contaminated surface and groundwater.

**Transport**

Environmental problems related to transportation are also serious issues. There is the danger of constructing new highways from Italy to Austria and Hungary. Slovenia is becoming a transit country because of Austrian and Swiss restrictions on transport in their countries. The government has not been able to prevent this development. Highways are considered by many to be the ultimate solution to the problems of transport, development, and employment. There is assistance from the EU and soft pressures from Italy linked to the associated EU membership of Slovenia. There is the danger that motorways which are not needed in Slovenia will be built anyway to satisfy foreign demand. These highways are likely to endanger protected areas and may be built on first class agricultural soil. The Ministry of Health (which is currently lead by members of the Green Party) is trying to introduce health related environmental solutions to transportation problems.

**Energy sector**

The energy sector is the ultimate cause of many of Slovenia's environmental problems. Power production based on high sulphur coal is the dominant cause of air pollution and the nuclear plant poses long-lasting threats to air, soil and water. Currently energy is produced by three thermal power plants, a number of hydropower stations, and one nuclear power plant. The Krsko nuclear plant has been the subject of pointed public and political discussion and was a major item in the Greens' environmental program. Their suggestions to close the plant were not realistic according to the MoE, which is also in charge of nuclear safety. The ministry would like to assure the financial viability of the plant and see that it covers its costs. A fund will be set up to decommission the plant but it is not possible to stop operating it, as it is the single biggest source of energy, accounting for 25% of supply. Others suggest that it should be completely closed in two years if there are no funds because it will need renewal which costs a lot of money and the plant will not be profitable anyway. Slovenia is looking for alternative renewable energy sources (wood, solar energy, wind) and interested in constructing smaller capacity hydropower plants which do not damage nature so much.

**Forest protection**

More than half of Slovenia (53%) is covered by forests. Currently 63% of these areas are privately owned but the figure is expected to rise to around 80%. With privatization the forests will be exposed to new threats as their care and management become the responsibility of the private owners. Acid rain poses another risk to the health of the country's forests.

**Critical steps to start or continue environmental improvements**

**Management and administration**

Improvements in environmental management and administration are very much needed and accordingly the restructuring of the environmental administration is being finalized based upon the concept presented in the new environmental framework law. The MoE will be strengthened and new responsibilities (nature protection, construction permitting) will be added. According to the new structure the division of responsibilities between the different institutions dealing with environment will be clearly defined. Water management authority has
already been passed to the association of municipal services. An environmental protection agency and environmental inspectorate will also be established. The agency will deal with monitoring, planning, preparing rehabilitation programs, enforcement, environmental permitting, EIA and will be responsible for environmental management in general. The inspectorate will have a controlling and enforcing role. An environmental fund will be established financed partly from the central budget, and partly from money generated through privatization. The fund should be operational from the beginning of 1994. A juridical reform is under way creating 42 regions and involving regulations of other fields which have an impact on the environmental sector. The MoE plans to further develop the national environmental strategy and other regulations. The Slovenian Environmental Project, financed by the World Bank, and other technical assistance programs will also be used for elaborating the overall strategy.

In conjunction with the above-mentioned changes in administration, goals and priorities for environmental protection need to be better formulated and identified. In this respect, the new environmental framework law should be very helpful. Experts with diverse backgrounds are needed at the management level. Environmental administrators also need to improve their abilities to communicate and cooperate with the public.

The division of responsibility between the national government and the local authorities in the environmental field is still a problem. There is inadequate cooperation between the two levels. The government cannot solve the local problems, but unfortunately the local communities are left to themselves without having the necessary resources. There is a need for more restrictive environmental policy at the local level. So many different interests are present at this level that decisions are often based on politics rather than expert information.

**Enforceable environmental policy and law**

The concept contained in the recently adopted environmental framework law is to lead to proper environmental policy and management. The necessary institutional framework for this is being created. Critical steps to build effective environmental policy which spells out the priorities, advantages, and assets are the following: changing the emphasis on the lawmaking approach to a policy-making approach; analyzing the state of the environment including the assessment of what has been done in the past three years, locating key environmental problems and elaborating solutions for them with expert involvement; creating functional and effective institutions at all levels; assessing foreign assistance programs; using environmental legislation and economic instruments as tools; reaching consensus with all interest groups and within the government to overcome the present sectoral divisions, and; strengthening public participation and better public communication.

Some of the above problems are already being addressed. Nevertheless, some key elements are missing like the identification of critical environmental problems and the elaboration of solutions based on a systemic approach (elaborating economic models for particular cases, setting up the necessary institutions, etc.). It is necessary to come to a common understanding about the environment. Presently the Ministries of Environment, Agriculture and Health all have different definitions.

The Slovenian Environmental Project, which is often mentioned as a strategy is, in fact, a program dealing with a few outstanding environmental issues. The Project has not been based on a methodology for establishing priorities. Some of the greatest environmental problems are included, but they are not prioritized. The Project was elaborated by the MoE, however, the parliament has never adopted it. The MoE is planning to prepare a National Environmental Strategy and to present it to the parliament by June of 1994.

The first crucial steps have been made toward effective environmental legislation. The basic framework law on environment has been adopted by the Parliament, but sectoral laws (such as nature protection) and regulations are still missing. Until these are adopted and methodologies (standards) to implement them elaborated, however, the framework law will not function properly. This might take 3-4 years. The parliament wants to adopt these regulations in a few months but this is not likely to happen. The concept of the framework law is considered good but it is impossible to enforce with the existing environmental administration. A complex and incremental approach would be needed in the implementation and enforcement. EIA will play a very important role in new management efforts. The new framework law prescribes EIA but it is still it is not widely used and should be implemented with urgency. Slovenia has already lost 3 years in implementing this very important instrument.

It is necessary to change the view that it is enough to have environmental laws without proper implementation and enforcement mechanisms. This lawmaking approach should be changed to a public participation and public communication approach. The framework law already exists, now public participation and education is needed. Many people are sceptical about the extent to which wider involvement of experts and NGOs will actually occur. These people do not expect quick change because currently only a very small group, consisting of government and parliamentary experts, is involved even in the preparation of the national environmental plan. A strategy is missing to bridge the gap between the public and the government. Also, there is a conflict within the government regarding enforcement of environmental laws. Currently the MoE participates in the process of drafting environmental law but it is not responsible for enforcing the laws once they are adopted.
**Expertise and public support**

The level of environmental training and education is relatively high in Slovenia but more has to be done. The framework exists for training, and in general, technical training is good but there is a need for training of specific environmental experts (i.e. environmental economists, environmental lawyers, etc.). Improved expertise is also needed for environmental managers in government, businesses and NGOs. Many specialized institutes exist with environmental experts, but the disciplines are closed and they are not interfaced with each other, thus coordination of knowledge and an integrative approach to problem-solving is missing.

Elementary schools have the choice to introduce alternative programs, including environmental education. There is a fear, however, that due to being included in the official state school system, these programs might lose their appeal. More support for out of school programs and alternative forms of education are needed. Many NGOs are involved in environmental education and public awareness raising programs. The media needs to present environmental issues in a format that is more attractive to the public.

In order to be able to implement laws and regulations, allies would be needed who have similar interests, but public participation is not functioning very effectively. The decision-making system is not as open as it could be and environmental experts and NGOs are not able to play as significant role as they probably should.

**Technology and services**

There are many enterprises in Slovenia still using outdated technologies. Slovenia is desperately in need of retrofitting many of its industrial facilities. It is necessary to train experts in how to use modern environmental protection methods and technologies. The general public also needs to be made aware of environmentally friendly products which exist. Without their cooperation it is difficult to make any serious progress. Western assistance is invited but there is a high concern about the import of dirty technologies. So far Slovenia has not been greatly endangered by dirty industries but the fear is there. The application of new technologies should be supported through economic and market instruments. A special association of environmental businesses has been created within the Chamber of Commerce to create a market for these industries and environmental services. Environmental consulting services are developing slowly but more experience and expertise is needed. New economic development is leading to small entrepreneurs producing eco-products, bio-products, eco-designs, eco-agriculture, etc., and these producers are looking for support. Unfortunately, policies or market regulations to support them are missing thus far.

**Driving forces for environmental improvement and degradation**

**Privatization**

Privatization is looked at in the short-term as a negative driving force on the state of the environment, because needed legislation to control it and safeguard environmental protection is lacking. The privatization law does not include clear regulations about who is responsible for past environmental damages, clean up, compliance schedules, application of environmentally friendly technologies, etc. The EC is providing some assistance with regards to environmental auditing in the privatization of some enterprises, but audits are not obligatory. In the long-term privatization could be positive if the above issues are properly dealt with.

**Market economy reforms**

Economic reforms could be a positive factor if the general process was directed in environmentally friendly ways, but if present trends are followed there is a high probability that environmental protection will not be a priority. Competition can be a negative driving force if businesses are looking only to profit as quickly as possible. Sometimes they present themselves as being "greener" than they actually are to improve their image. Also, Western firms are sometimes interested in exporting their dirty technologies or polluting activities to Slovenia to avoid stricter regulations in their own countries. The reforms also have positive effects, however, as the use of resources becomes more efficient, the focus on energy intensive heavy industry subsides, and modern environmentally friendly technologies become available.

**Membership in the EC**

Entering the EC will be a strong positive driving force towards environmental improvement, as Slovenia will have to comply with EC standards and Western environmental attitudes if it wants to export to those markets. The question is whether Slovenia will be able to enter the EC with the first group of CEE countries or not. Some fear that entering the EC will cause Slovenia to lose its independence in determining its own development path. Others are concerned about the effects EC membership will have on Slovenia's agricultural sector. It is feared that few farmers would survive if they had to operate under true free market conditions given the current level of state subsidies.
Western development patterns

With open borders and pervasive marketing Western products and lifestyles are becoming increasingly popular and bring new environmental problems. Automobile transportation is growing rapidly and Slovenia has become a transit route between Eastern and Western countries. Greatly increased exhaust emissions, more traffic jams, and growing pressure to construct highways result. Some environmentally harmful Western goods, such as throwaway packaging, have become much more common in Slovenia and the country is not prepared to deal with them (waste separation and recycling is largely lacking).

NGOs and environmental education

The activity of environmental NGOs is growing and becoming more effective in helping environmental improvements. Education and training in environmental issues are also positive factors. The University of Ljubljana established a postgraduate program in environmental protection to train students and teachers.

Integration of environmental protection and economic development

Obstacles to integration

Officially environmental protection is integrated with economic development but the practical signs of this are difficult to see. The various ministries having impacts on the environment do not work together as closely as they should and do not tackle environmental problems in a comprehensive way. The MoE has to fight with other ministries for the protection of environmental interests in other sectoral policies and this task is especially difficult as the MoE is considered to be relatively weak in comparison with them. Foreign assistance sometimes creates additional obstacles as there is not always a complex approach in evaluating all of the impacts of such assistance. Politicians do not fully appreciate the fact that Slovenia could profit greatly from integration of environment and economy in the long run, and they usually are concerned just with short-term interests.

Existing and proposed measures for improving integration

The prevailing liberal economic theory has to be transformed to become more environmentally sustainable. A legal framework has been provided for sustainable development but the concept needs to be put into actual practice. The polluter pays principle exists but enforcement must be improved if potential benefits are to be realized. Short-term thinking should be changed for long-term thinking. Environmental impact assessments are now required by the environmental framework law and these should be helpful in incorporating environmental concerns into economic activities.

Financing environmental improvements

Sources of funding

There is a decrease in funds available for environmental protection. In Slovenia some economic instruments were already in use in past years. An Ecofund existed in 1989-90 and was financed by a tax on water management and the use of the environment in air and waste fields. 33 million USD were collected. The previous government eliminated the fund, however, in 1990 and therefore Slovenia lost more than 60 million USD of potential funding in that time. Since then environmental projects have been funded from the state budget, fees and penalties paid by polluters and by foreign assistance programs. The new environmental law envisions the setting up of a new Environmental Fund. Some of the current major environmental projects are funded by Western assistance programs (World Bank, EBRD). Local communities receive revenues from industrial users of the environment and larger contributions are being sought from citizens to pay for certain environmental services such as waste management, water supplies and wastewater treatment and gasification.

The idea of utilizing economic instruments for environmental protection is widely accepted in Slovenia. The Environmental Fund should be operational from 1994. However, the Ministry of Finance is against earmarking separate funds for environmental purposes and would rather see the central budget and the banking system used in this regard. The economic instruments currently used (taxes, fees and penalties) serve more to augment the budget than to provide incentives for environmental protection. Increases in the energy prices are also considered as a possible way to generate funds and protect the environment.
International cooperation

CEE-regional cooperation

East-East cooperation should be strengthened more. There is a huge similarity of problems as well as accumulated knowledge that should be shared to the benefit of the region. There have been some cases of successful cooperation within the region but these were some years ago.

Western assistance

There have been both positive and negative experiences with Western assistance. It is positive that Western banks demand certain environmental plans and standards before supporting projects. It is negative that Western assistance is often more oriented towards opening markets for their own technologies, products and experts than towards meeting Slovenian needs. Also, in a few cases Western technology has been applied or promoted which was not appropriate for Slovenian needs.

The process of getting assistance should be more transparent, and the CEE countries (MoEs) should be more involved in the preparation of terms and selection of consultants. The success of the assistance depends on how much money can be spent in the recipient country and how much knowledge can be transferred. Local consultants should be involved in foreign assistance projects as much as possible. It is also sometimes a problem that foreign consultants working in Slovenia know very little about the country or the region as a whole.

Interest groups in environmental protection

National and local governments

National government has the strongest role in environmental decision-making. The MoE is the most substantial force pushing for environmental interests, but its impact is limited by other, mostly economic interests. There is also an increasing impact from the local government as some environmental responsibilities shift away from the state government.

Academics

Academicians do not have enough influence. The decision-making system insufficently takes into consideration the opinion of a wider group of experts. Experts working in the institutes belonging to the ministries usually have more impact than other experts.

Environmental NGOs and the media

The NGOs play a positive role but their impact remains relatively weak. The NGO movement is evolving, new NGOs are being formed and their impact is growing. The media also plays a positive role but, likewise, its impact could be much stronger.

Parliament and political parties

The parliament does play a role but their decisions are often difficult to implement due to technical, administrative, financial and political problems. The Greens provided a certain alternative during the last government but they could not put into practice what they promised.

Businesses

They have a strong and increasing influence. There is an element of the business community which is internationally oriented and is coping with European standards and thus plays a positive role in improving the environment.
Appendix 1: List of Interviewed Experts

ALBANIA

Arben CICO
Head of Economic Department and Sectoral Analysis Department, Ministry of Finance.

Leke GJIKNURI
Chairman Protection and Preservation of Nature and Environment (PPNEA).

Baki HOXHA and Petraq KRASTAFILLAKU
Safety and Environmental Department, Ministry of Energy and Mineral Resources.

Shaban KAMBERI
Chief Environmental Office, Municipality of Tirana City.

Alexander KOLACI
Head of Department of Plant Protection, Ministry of Agriculture and Food.

Sokol KONGOLI
Office of Tourism Policy, Ministry of Tourism.

Fatos LULO
Member Committee for Environmental Preservation and Protection, Lawyer.

Pascal MILO
Member of Parliament; Deputy Chairman of Social-Democratic Party; Chairman Committee for Education, Science and Social Problems.

Etheni RUKA
Member of Parliament; member of Socialist Party, member Committee for Education, Science and Social.

Lirim SELFO
Chairman Committee for Environmental Preservation and Protection (within the Ministry of Health).

Jani VANGJELI
Director of the Institute of Biological Research, Faculty of Natural Science, University of Tirana.

BULGARIA

Ada BAINOVA
Professor of environmental toxicology; Board Member of the Environmental Management Training Center; Member of the Environmental Advisory Council to the European Bank for Reconstruction and Development

Venko BESCHIKOV
Bulgarian Academy of Science; former Deputy Minister of Environment.

Simeon BOZHANOV
Environmental Advisor to the President of Bulgaria

Ivan FILIPOV
Director of EC PHARE Program in Bulgaria.

Oreola IVANOVA
Director of International Cooperation at the Ministry of Environment

Dimitar MANDADJEV
President of the National Water Council.

Kliment MINDJOV
President of Borrowed Nature Association.

Belin MOLLOV
Head of Department of Territorial Administrative Structure and Local Authority, Ministry of Regional Development and Construction; member of Sofia City Council.
Pencho PENCHEV
Professor at the University of National and World Economics; Vice-President of the Institute for Sustainable Development (Sofia)

Elena PETKOVA
In-country Coordinator for the Environmental Training Project of the University of Minnesota; In-country Representative of the Institute for Sustainable Communities, Vermont.

Evgueni POPOV
Consultant on market instruments and environmental issues; Coordinator of Environment and Sustainable Development Project of University of Minnesota.

Michail STAINOV
Head of the Populated Areas Department, Ministry of the Environment of Bulgaria.

Krassen STANCHEV
Director of the Institute for Market Economies.

Antoni TONCHEVSKI
Assistant Professor at the Institute of Chemical Technologies; in-country coordinator for Community Based Environmental Project of Ecoglasnost, held by the Institute for Sustainable Development, Vermont USA.

CROATIA

Damir BRLEK
Environmental Inspector, Ministry of Civil Engineering and Environmental Protection.

Boris CAVRAK
INA Oil Industry.

Paula DURBESIC
President, Croatian Ecological Society; Department of Zoology, University of Zagreb.

Franjo GASPAROVIC
Environmental Economist.

Goran GRANIC
President, Parliamentary Committee for Environmental Protection.

Duro HUBER
Croatian Ecological Society, Member of the Board; University of Zagreb, Faculty of Veterinary.

Valerija KELEMEN-PEPEONIK
Head of Section for Environment, City Bureau for Development Planning and Protection of Environment, Assembly of the City of Zagreb.

Zdenka KONRAD
Scientist, Institute "Ruder Boskovic".

Vladimir LAY
President, Green Action, Zagreb.

Roman NOTA
Ministry of Economy

Inge PERKO-SEPAROVIC
Professor, Faculty of Political Science; President, Green Alliance.

Viktor SIMONCIC
Vice Minister, Ministry of Civil Engineering and Environmental Protection.

CZECH REPUBLIC

Martin BRANIS
Director, Institute for Environmental Studies, Faculty of Science, Charles University.

Fedor BRUOTH
Deputy Director, International Relations Department, Ministry of the Environment of the Czech Republic.
Milan CAHA
Director, National Center for Environmental Education.

Antonin KMENT
Chairperson, Commission of the Environment of the Union of Towns and Communities.

Miroslav KOTASKA
Head of the Group for Foreign Contacts, International Relations Department, Ministry of the Environment of the Czech Republic.

Eva KRUZIKOVA
Executive Director, Institute for Environmental Policy

Radomir MATYAS
President, Czech Environment Management Center.

Bedrich MOLDAN
Director, Center for Environmental Scholarship, Charles University; former Minister of the Environment of the Czech Republic.

Ales SULC
Deputy Minister Responsible for Nature and Landscape Protection, Ministry of Environment of Czech Republic.

Josef VAVROUSEK
Chairman, Society for Sustainable Development; Director, Human Ecology, Faculty of Social Sciences, Charles University; former Federal Environmental Minister of Czechoslovakia

Ivan ZIKA
Environmental Advisor to the Management and Head of the Environmental Division, Spolana a.s. chemical plant.

Milan ZEZULKA
Landfill specialist, Waste Management Department of the Czech Inspection of Environment Protection.

HUNGARY
1st series (pilot study)

Arpad BAKAY
Chairman of the Board, Hungarian Power Companies Ltd.

Gyula BANDI
Scientific Director, Copernicus Environmental Law Program in the Danube Region, ELTE University Faculty of Law

Katalin CSORBA
Director, PHARE Program, Minsitrty for Environment and Regional Policy

Peter FARKAS
Chairman Environmental Committee, Christian Democratic Party

Zoltan ILLES
Adviser, Commission of the European Communities Delegation in Budapest

Laszlo JANOSZY
Environmental Manager, National Institute of Hygiene, Environmental Hygiene, Water Depoartment

Mihaly KADAR
National Institute of Hygiene

Sandor KEREKES
Co-Director Head of Department, Hungarian Center for Conflict Resolution, Training and Research

University of Economics

Robert KISS
Member of Parliament, Deputy Chairman Committee of the Environment Parliamentary Office

Vilmos KISZEL
Honorary President, Göncöl Alliance
Miklos KOLOSZAR  
Chief Counsellor for Environment, Ministry of Finance

Endre KOVACS  
Head of Department, Institute for Environmental Protection

Karoly MARIALIGETI  
ELTE University, Department of Microbiology

Miklos POOS  
Deputy Head, Department of Energy Strategy, Ministry of Industry and Trade

Nandor ROTT, MP  
Chairman, Committee of Environmental Protection

Harri SUOMINEN  
Managing Director, Tetra Pak Hungaria

Judit VASARHELYI  
Executive Director, Independent Ecological Center

Zoltan VERRASZTO  
Director Central Danubian Environmental Inspectorate

Elek WOYNAROVICH  
Project Officer, Ministry for Environment and Regional Policy, PHARE Environmental Unit

2nd series

Peter FATH  
Executive Director, American Chamber of Commerce in Hungary

Zsuzsa FOLTANYI  
Environmental Partnership

Peter KADERJAK  
Budapest University of Economics, Department of Business Economics

Attila KEMENY  
Permanent Secretary, Ministry of Environment & Regional Policy

Istvan TÖKES  
Head of the Department for International Cooperation & Information, Ministry for Environment & Regional Policy

Jozsef VARGA  
Director, Institute for Environmental Protection (KGI-KVI)

FORMER YUGOSLAV REPUBLIC OF MACEDONIA

Biljana ALEKSIJEVSKA  
Horticultural engineer in the firm "Parks and Vegetation"

Georgi CHEPUINOVSKI  
Economists specializing in environmental issues at the University of Skopje

Beba DJEKOVA  
Architect responsible for environmental protection on the Skopje City Commission for Urbanism, Traffic and Environment

Kostadin GREKOVSKI  
Doctor of medicine specializing in occupational health; currently a health and sanitary inspector for the Ministry of Health

Aleksandar GRIZO  
Chemical engineer, formerly a professor in the Technology Department of the University of Skopje
Ljupcho GRUPCHE
Biologist specializing in ecology; President of the Macedonian Society for Professional Ecologists; Expert Advisor to the Parliamentary Committee on the Environment

Ivan ILIEVSKI
Technical manager responsible for environmental protection at the cement plant "Usje"

Tomislav IVANOV
Geologist; formerly a professor in the Technology Department of the University of Skopje

Toma KARAMIHA
Forestry engineer at the Ministry of Agriculture, Forestry and Waters

Kostadina KORNETI
Medical doctor and professor at the University of Skopje

Aleksandar NASTOV
Senior Advisor for Ecology at the Ministry for Urbanism, Civil Engineering, Traffic and Ecology

Pece NEDANOVSKI
Economists specializing in environmental issues at the University of Skopje

Toma NICOTA
Mechanical engineer at the "IPIS" engine factory specializing in engine emissions

Liljana ONCEVSKA
Architect responsible for environmental protection on the Skopje City Commission for Urbanism, Traffic and Environment

Lazo PEKEVSKI
Physicist at the Seismological Observatory at the University of Skopje

Jaglka SILJANOVSKA
Civil engineer; sanitary and health inspector for the Ministry of Health

Vlado SPRIDONOV
Physicist specializing in air pollution modelling at the Hydro-meteorological Institute

Nikola SRBINOVSKI
Agricultural/forestry engineer; Deputy Minister for Ecology at the Ministry for Urbanism, Civil Engineering, Traffic and Ecology

Mihail TOKAREV
Architect at the University of Skopje specializing in the protection of the cultural and historical environment; Expert Advisor to the Parliamentary Committee on Environment; former President of the Macedonian Ecological Movement

Josif TANEVSKI
President of the Macedonian Ecological Movement; owner and manager of a laboratory and pharmacy supply firm

Trajko TRAJKOVSKI
Architect specializing in noise and heat isolation; creator of several television programs on energy efficiency

Gordan VELJANOVSKI
Deputy Minister for Forestry in the Ministry of Agriculture, Forestry and Waters

Milos ZMEJKOVSKI
Hydrologist and professor of ecology at the University of Skopje; Vice President of the NGO "Opstanok".

POLAND

Leszek BANASZAK
Director, Foreign Cooperation Department of the Ministry of Environmental Protection, Natural Resources and Forestry.
Wojciech BEBLO
Director, Katowice Province Department of Environmental Protection; member of the European Bank for Reconstruction and Development's Environmental Advisory Council; member of the Katowice City Council.

Przemyslaw CZAJKOWSKI
Board Member, Center for Environment and Development.

Radoslaw GAWLIK
Member of the Polish Parliament since 1989; Vice-chairman, Parliamentary Commission for Environmental Protection; Chairman of the Democratic Union's Ecological Fraction.

Maria GUMINSKA
Professor of Bio-chemistry, Medical Academy of Jagiellonian University; Vice-President, Polish Ecological Club; Member of Poland's Presidential Environmental Advisory Council.

Andrzej KASSENBERG
President, Institute for Sustainable Development Warsaw; Chairman of Poland's Environmental Impact Assessment Commission; Member of Poland's Presidential Environmental Advisory Council; Member of the Polish Ecological Club.

Stefan KOZLOWSKI
Environmental Advisor to the President of Poland; former Minister of Environmental Protection, Natural Resources and Forestry; Professor, Institute of Geology in Warsaw.

Maciej NOWICKI
President, ECOFUND Foundation; former Minister of Environmental Protection, Natural Resources and Forestry.

Grzegorz PESZKO
Cracow Group of the Green Federation, Doctoral student at the Cracow Academy of Economics.

Tomasz ZYLICZ
Professor of Environmental Economics, Warsaw University; Advisor to Poland's Ministry of Environment; Member of the ECOFUND Supervisory Board.

ROMANIA

Nicolae BOTNARIUC
Professor of Ecology at the Romanian Academy; President of the Nature Conservation Commission

Mirea CIUMARA
President of the Parliamentary Commission for Ecology; Director of the National Institute for Economic Research

Valentina ENE
Industrial chemical engineer responsible for environmental issues at Celulosys and Paper Company

Klaus FABRITUS
Vectors Control Unit Chief at the Hygiene and Public Health Institute; Vice-President of the NGO "Environment and Nature Protection Association"

Dan FLORESCU
Director of the Currency Operations Division of the National Bank of Romania

Ica GIURGIU
Vice-President of the National Youth Tourist Club

Lascu ILIE
Prefect of Braila County; Member of Parliament

Cristina IOAN
Expert in the Ecological Research and Development Division at the Ministry of Industries

Ioan JELEV
Secretary of State, Department of Environment Protection
Paul LIZAC  
Director of the Bucharest Environmental Protection Agency

Gheorghe MANEA  
Environmental specialist at the National Institute for Economic Research; member of the academic NGO "Romanian Association for Ecological Management and Sustainable Development"

Dan MANOLELI  
Associate Professor of Taxonomy at the Faculty of Biology; President of the "Ecological Group of Cooperation," and Expert Advisor to the Parliamentary Commission on Environment

Bogdan PARANICI  
Coordinator of the NGO Danube Forum; Program Manager for the Ecological Youth of Romania

Istvan SIDO  
Environmental section coordinator for the AIDRom Foundation; Vice-President of the NGO "Rhododendron"

Nicolae TONIUC  
Senior Researcher at the Institute of Biology; Scientific Secretary of the Nature Monuments Commission

SLOVAK REPUBLIC

Mary ARNDSTEN  
Legal Advisor, Ministry of Environment of Slovak Republic.

Peter BENUSKA  
Deputy Mayor and Chief Architect of Bratislava; member of the European team of the International Council for Local Environmental Initiatives (ICLEI).

Miroslav BOHUS  
Department for Ecological Conservation, Comenius University.

Robert BRENAK  
Ministry of Environment of Slovak Republic.

Robert FICZO  
Member of the Slovak Parliament; member of Constitutional Committee.

Daniel GEISBACHER, Alojz PETRIK, Roman BIEL, Mr. LOBODA  
Responsibles in the Departments of Water Pollution and Air Pollution, Slovak Inspection of Environment.

Mikulas HUBA  
Researcher, Institute of Geography, Academy of Science; Chairman, Society for Sustainable Living in Slovak Republic; former member of the Slovak Parliament and Chairman of the Parliamentary Committee for Environment.

Lubos HRIVNAK  
WWF Environmental Education Programs Coordinator, Strom Zivota Bratislava.

Ladislav MIKLOS  
Landscape ecologist, Academy of Science, Bratislava; member of the External Advisory Board of the President of Slovak Republic; member of the presidium of the Slovak Commission of UNESCO; former Deputy Minister of the Slovak Commission for Environment.

Vlasta PASTUSAKOVA  
Air Protection and Wastes Manager, SLOVNAFT chemical factory, Bratislava.

Jozef SKULTETY  
Head of the International Relations Department, Ministry of Environment of Slovak Republic.

Elena VARTIKOVA  
International Coordinator of GREENWAY.

Lubomira ZIMANOVA  
State Secretary, Ministry of Environment of Slovak Republic.
SLOVENIA

Bostjan ANKO
Biotechnical Faculty, University of Ljubljana.

Fedor CERNE
PRO-ECO, Management Consulting, Ljubljana.

Jorg HODALIC
Director, Institute of Environment and Water Management, Ministry of Environment and Regional Planning.

Andrej KLEMENC
Slovenian E-Forum, Ljubljana.

Mojca LOGAR
Adviser of Kamnik, Secretariat for Environmental Protection and Urbanism.

Andrej LUKSIC
Researcher, Center for Political Science, University of Ljubljana.

Zarko PREGELJ
Chairman, Parliament Comity for the Environment.

Joze SAMU
Chief Inspector, Inspectorate of Health.

Leo SESERKO
Member of Parliament.

Jernej STRITIH
Deputy Minister of Environment, Ministry of Environment and Regional Planning.

Stojan TRAMTE
Junior Legal Adviser, Agency of Privatisation.

Gorzad TRPIN
Director, Institute of Public Administration, University of Ljubljana.
Appendix 2: Questionnaire

Political, Economic and Social Impacts on Environmental Protection at the Spring of 1994

1. Which political, economic and social changes in the past five years have been crucial in influencing the state of the environment in your country?

Assessment of Environmental Assets and Damages

2. Can you give concrete examples where it is currently a priority to protect environmental assets and natural capital in your country? What are the foremost environmental threats endangering economic development, human health and living conditions (respectively)?

Priority Environmental Problems

3. Based on your personal expertise and experience what would you list as the priority environmental problems facing your country?

Critical Steps to Start or Continue Environmental Improvements

4. What are the most important areas to be strengthened in order to solve the priority environmental problems mentioned above (i.e. environmental policy, management, law and enforcement, training, education, technology, services, others)?

Driving Forces for Environmental Improvement and Degradation

5. What currently are the driving forces for change in the state of the environment in your country?

Integration of Environmental Protection and Economic Development

6. What are the main obstacles to integrating environmental protection and economic development? Are measures planned to make improvements in these areas?

Financing Environmental Improvements

7. Can you give a short overview of existing and proposed financial mechanisms for environmental protection in your country?

International Cooperation

8. Have there been environmental successes in your country where CEE cooperation was instrumental? Could you list issues where CEE cooperation would be very helpful?

Western Assistance

9. Have there been successes in environmental protection in your country where foreign assistance was instrumental? Do you know of negative experiences with western technical and financial assistance in the environmental field in your country? What form should western assistance take?

Interest Groups in Environmental Protection

10. Which of the following: national / regional / local governments, legislative bodies, businesses, scientists, NGOs, the media, or others, is having the largest impact on environmental decision-making in your country?
As the countries of Central and Eastern Europe progress through fundamental political, economic and social changes, their citizens face an unprecedented period of transformation and uncertainty. It is clear, however, that the prospects for successfully adapting to these changes and for achieving economic prosperity and social welfare rest squarely on the shoulders of these same citizens. Similarly, the task of creating and maintaining a natural environment that can sustain such prosperity and welfare must be undertaken by those people who actively use and are directly affected by the environmental conditions of the region. This Strategic Environmental Issues Report brings together and illuminates the perspectives, experiences and outlooks of many of those individuals from the region who have made strong personal and professional commitments to shaping its development.