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Sustainable development and ENVIRONMENT TOWARDS EUROPE in 95+ steps

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Introductory notes

The monograph **" Sustainable development and Environment towards Europe in 95+ Steps"** in Serbian language is an addition to the Symposium **"Environment for Europe",** June 2005 (EnE05), Belgrade. The English version has certain supplements and it is prepared for EnE06 Regional "Environment for Europe Conference" (Belgrade, June 2006). The monograph is the result of the author and her team's devotion in the area of environment in the past ten years. This work has been developed on several levels: national, scientific, professional and international, followed by the inevitable political expertise. Since a huge task of approximation to the EU, this monograph has been published at the time that will have pointed to the significance of this sector, of the profession and the steps that should be undertaken by countries in transition. This especially applies to Serbia. Although the monograph relies on several analyzed and cited documents, adopted on the international level, and several ministries have supported its publication, it is not the official document of the Government of Serbia. It is rather scientific and professional contribution to a more efficient approximation to the EU. The monograph has been organized in a manner that supports interdisciplinary approach and management policy. Therefore, it does not deal with details belonging to the sciences of law, economy, technical or other professions. It rather leans on the publications from these areas, where there is still space for specific reviews. Since it is the first publication in Serbian language (2005), the author has limited herself in advance to one hundred pages. Since the assignments in this area gain new momentum in the years to come, a revised edition is made in 2006 (in English). It is the wish of the author to inspire with this monograph, to enliven the need of constant *moving forward*.

The citizens of Serbia and the region do deserve clean, healthy and sustainable environment!

The monograph aims to become additional textbook, to all students who find its contents valuable. Among them are the students of the Faculty of Technical Sciences of the University of Novi Sad, at the Department of Environmental Engineering, where the author is the professor. It may also be applied in other faculties, where the author of the monograph lectures by invitation, at courses and programs.

I wish to thank my associates, members of the team and reviewers of this monograph for their continuous support.

I acknowledge a special debt to my precious family, my children Ana and Filip and my parents. Without their support, love and understanding I would not have been able to pursue my profession, to which I have been dedicated.

Reviewers view

In a concisely written and yet rich monograph, **"Sustainable Development and Environment towards Europe in 95+ Steps"**, Professor Mrs. Andjelka N. Mihajlov has offered her readers a deeper insight into the issue of adaptation of environmental sector to the practice of EU member countries. The text has ten interrelated, consequential units, which lead the reader through the complex issue of the origin and development of legislation in the area of sustainable development in Europe and the world.

The author has successfully analyzed international legal and institutional aspects of the issue to an extent that she had found sufficient. In order to understand this monograph better, it is worth mentioning that the author herself had placed certain limitations onto her engagement saying that, "She had not wanted to go into details of legal art".

The monograph has about 150 pages. The text is organized in ten units- chapters. The book contains introductory notes, preface, table of contents and literature, with 160 entries (123 listed at the end, and 37 within text as footnotes). Out of the total number of entries, professor Mihajlov is either author or co-author of 33 publications.

The monograph analyzes environmental issues in the context of harmonization of the Serbian legal base with that of the European Union. The book encompasses the following items:
Unit One: Significance and development of the system, from environmental protection to sustainable development. The author analyzes correlation among economic growth, trade, competition, security, health and the environment, Millennium Development Goals and the environment, as well as fundamentals of strategic planning.

- Unit Two: The EU environmental values and their advantages.
- Unit Three: Horizontal inclusion of the environment into other sectoral policies: horizontal EU environmental legislation.
- Unit Four: Analysis of the EU environmental legislation by each medium, with an overview of most significant directives in each medium and their short content.
- Unit Five: Ratified international agreements relevant to Serbia.
- Unit Six: Institutional EU environmental framework
- Unit Seven: Vision for the future, proposal of the steps towards success. Analysis of the

targets (international, regional and foreign aspects). Analysis of the first 10+ steps.
- Unit Eight: National framework to support implementation of the relevant EU legislation: laws and regulations to be transferred; institutions, human resources and financial means.
- Unit Nine: Review of more than 95 steps towards approximation to the EU in the environment.
- Unit Ten:. Towards EU and the review of conclusions of the Feasibility Study and of other relevant documents.

I would like to turn your attention to the Unit Nine. It contains the focus of the author to define a clear and efficient scenario for the measures Serbia needs to undertake in order to join Europe in the area of environment. The scenario, dubbed "Steps to be made", lists the necessary phases in a much- valued timeframe. Experiences of other countries in transition have proven the significance of the timeframe. We are quite certain that a policy will have been successful if it has an adequate timeframe. Moreover, it is equally important as the choice and articulation of the very measures proposed. That is why the Unit Nine has a special value within this unique monograph. All policy- makers and solution- seekers in the area of environment in Serbia (and in Region) will have consulted this monograph as a guide- book.

We find certain issues very relevant, especially in this moment in Serbia: The moment when we are in the process related to the EU Feasibility Study on negotiations with Serbia and Montenegro concerning Stabilization and Association Agreement.

It is very important that the author, professor Mihajlov has covered in her monograph a wide array of themes in the area of environment, showing and analyzing to the reader the relevant principles and legislation of the EU. By doing this, she also has offered the vision of the steps Serbia should undertake in order to fulfill the conditions for association with the EU. The issue has been covered in detail, with relevant, state- of the- art details and information, gathered due to the author's international, national and personal experiences. It gives this publication a special value and credibility, making it useful and practical.

The book is very easy to read and consult further. It is interesting for the wide and diversified audience, making a contribution to the understanding of environmental issues. What we find especially precious is that it emphasizes, teaches and explains to the reader the problems related to the environment in Serbia, offering solutions for them and supporting the professionals in overcoming them in the times of transition.

Besides the overview of environmental issues, the monograph presents a series of published papers of Professor Mihajlov. I sincerely believe that her book will be an example and that it will provide the stimulus for other authors in the related areas to produce such publications. My personal belief is that books like this are very useful in helping us understand the process of approximation of Serbia to the EU.

The author's huge experience in defining and carrying out of this policy, in the most dynamic period of Serbian history, gives this text a special value. There are moments when it resembles a diary of one of the most outstanding policy- makers, the one who is in the very focus of political events, the one who uses her personal commitment to contribute a great deal to the fundamental changes for the better in Serbia. At the same time, it is a valuable textbook for all those who are strong enough and determined to follow in her steps and attain more.

These could be extended to the citizens of Region, as well as to other in transition countries.

The monograph **"Sustainable Development and Environment towards Europe in 95+ Steps"** shows that our science pursues a specific type of applied research, besides basic and applied research. It defines a policy, a type of management and understanding of an area (in this example- the environment), using multi- faceted approach. That is why this monograph is a valuable tool in scientific community: it introduces in scientific expression a multidisciplinary and interdisciplinary approaches, having respected the application of fundamental, applied sciences.

The author has numerous professional and research references in the area of understanding and defining of the regulatory system. They make her superbly competent for this monograph. Professor Mihajlov's assignments were:

- First president of the Council for Sustainable Development of the Government of Serbia (2003/ 2004);
- Head of Yugoslav Delegation on the Summit on Sustainable Development (Johannesburg, 2002), as well as to Ministerial conferences on environment, forests and agriculture;
- Member of the Serbian Council for European Integrations and th e Serbian Commission for coordination of the EU- association process (2002/ 2004);
- Responsible for the chapter *"Environment"* in the document of the Serbian Government defining the Serbian- EU approximation strategy (2004- 2005, approved by Government in 2005);
- Expert of the EU and UN for sustainable consumption, production, sustainable develop-

ment and environmental security.
- professorship and a degree in sciences.

The manuscript titled **"Sustainable development and Environment towards Europe in 95+ Steps"** is relatively small in volume but covers a wide scientific realm and has multidisciplinary character. It discusses and analyzes such a large number of themes that it has managed to "cover" the whole area of environmental protection and sustainable development. That is why this review deals primarily with certain aspects of international legislation and governance. Other reviewers will give their esteemed opinion on certain other aspects of this monograph, according to their relevancies.

Special contribution of this book is the fact that the author herself, thanks to her position and role, was able to understand and participate in the work of several international organizations having a crucial role in organizing international cooperation in the area of environment. Her expertise has enabled the author to monitor closely the developments in country in the area of environment and especially legislative steps that our country undertakes to apply certain international conventions and other commitments. Professor Mihajlov has paid special attention to the role of EU and the importance of harmonization of legislative framework to the one of EU.

In the Faculty of Technical Sciences of the University of Novi Sad, i.e. in Institute for Energy, Process and Environment Engineering (Department for Environmental Engineering) this publication will be a valuable tool, a textbook in the courses lectured by the author: Sustainable Use of Natural Resources and the System of Environmental Protection; Waste and Hazardous Waste Management, and Environmental Projects.

The book of Professor Mihajlov is a useful one, primarily for the students. It will have its reading public in other enthusiasts working in the area of environment, with the major goal of guidance through the process towards environmental sustainability.

Foreword

This monograph is a continuation of the Mission for a cleaner, safer and more active European Serbia. That is why we present, instead of the Introduction in the unchanged text, a part of our Exposé (1):

> **In the year 2000, we had a complete discrepancy in relation to the legislation of European Union** and uncontrollable use of natural resources. Furthermore, we have inherited a series of environmental "hot spots". There have been two reasons for those spots. First, the environmental consequences of bombarding a more of hundred industrial facilities that had suffered the consequences. Four of them were most prominent: Novi Sad, Pancevo, Bor and Kragujevac. Other, environmental hot spots are the result of historical industrial development that had been going hand in hand with contamination, disrespect for the environmental legislation. Spatial planning, i.e. the adopted Spatial Plan, had not anticipated any location for a municipal landfill, no locations for a storage, no locations for a hazardous waste landfill. Simply, we had to start-up the process because of the Serbian population.
>
> In the year 2001, I am practically talking about 500 workdays of the Directorate for Environmental Protection and 500 workdays of Ministry for the Protection of Natural Resources and Environment, when we started our assignment, we understood that there were no reports concerning environmental situation in Serbia to enable us get an overview of the future steps and goals. I am honored that the Prime Minister Zoran Djindjic has drawn me with his intellect to use all my energy and knowledge **to make this sector a part of reform process in Serbia.**
>
> Now we have been building a foundation for the house of future. The better position of our house within the system- based concept that has been laid down, the better our future will be. The future without the "environmental leg" in a chair of sustainable development is not acceptable, is not sustainable. **The issue of our work is to attain genuine approximation to environmental standards of developed countries. It will be gained through patience, devotedness, expertise, transparency and constant reminding that each of us must be a partner in realization of the Serbian Government Environmental**

Policy.

Since specific circumstances have slowed down the process itself, the results have been somewhat delayed, although we have built our energy and efforts in it. When I say "we", I mean the team within the Ministry. As a Minister, I have been leading a successful team. Now when the drafted Law on the Environment had not even begun its "life", we have managed to intensify our cooperation with other countries to a significant extent. We have managed financial assistance. Let me stress another activity- my initiative that has gained international approval and support, **the much- needed initiative to create environmental cohesion among the Balkan countries along the process of association to the European Union.**

From January 2001 to May 2002, in the first five hundred days, we have defined the state of environment; we have produced a detailed report for the year 2000. For the first time in eight years, our Government has given us a framework and priorities for the year 2001 and other years to come. Again, I would like to stress our priorities:

- To create an institutional and legislative framework in Serbia and ease approximation to the standards of developed countries in the area of environment;
- To build capacities to respond in chemical accidents;
- To solve the issues of environmental hot spots;
- To solve the issues of waste and of wastewaters;
- To protect the nature, and
- Environmental education (initiated by the members of the Parliament as a priority).

We have managed:

- To attain cooperation with the international community;
- To establish a system of public participation in decision- making process. (Let me remind you that, in drafting the Law on the System of Environmental Protection, we had had thorough discussions, canvassing the towns of ?a?ak,U□ice, Šabac, Valjevo, Pirot, Niš, Zrenjanin, Novi Sad, Sombor, Subotica, Sremska Mitrovica, some forty locations. The citizens of Serbia have participated in creation of a concept based on their own needs, as well as harmonized with European Union legislation. As the Minister, I simply had the honor of presenting that concept as reform- oriented at the Aarhus Convention Ministerial meeting. The concept reflected a positive inclusion of the citizens in the process of important decision-

making, on the national level.

- **To draft the law on the system of environmental protection in such a manner that it corresponds to EU norms and satisfies Serbian citizens.** We have managed to define all environmental media.
- To found the first eco- toxicological mobile unit for chemical accidents.
- To strengthen cooperation with NGOs, local self-governments, Parliamentarians and attain transparency. I say *Parliamentarians* because everything that this Ministry, i.e. the Directorate has done has been accepted at the Committee for Environmental Protection in the Serbian Parliament. We have not agreed at all times, we had opposing attitudes but have been constructive. I think that all this only improved the performance of the Ministry and Sector within the teamwork in the Serbian Government.

In the second stage, in the following five hundred days, namely, the first five hundred days **of the real Ministry** for the Protection of Natural Resources and Environment, founded on May 23, 2002, **the environment was stressed as priority in supporting economic reforms, privatization and infrastructure projects in the process of approximation to the EU.** It was all happening along the preparation of the World Summit on Sustainable Development. Such dedication of our state helped us obtain significant financial support and other types of recognition of international community for this sector.

Most significant activities in this period were system- related integral natural resources management, **intensive activities on approximation of the Serbian legislative framework to the EU environmental legislation**, contribution to the program of economic development through inclusion of environmental principles; restoration of *environmental hot spots* and introduction of cleaner technologies to Serbian economy.

Within the assignments of creating legal framework, the Government has founded Council for Sustainable Development, confirming again that it is dedicated to the notion that the environment is a primary support to the country's economic development.

The Government adopted National Waste Management Strategy, as the one among strategies with the program of inclusion to the European Union.

We have initiated a successful international cooperation and **defined a preparatory document for association to the EU. We have participated at the Summit on Sustainable Development; our country has been (initially) accepted into the system of European Agency for the Environment. We have numerous projects with foreign funding.** To illustrate this, let us stress that the international financial assistance in environmental sector, realized through the Ministry, in 2003 was ten times as high as in 2002. For the year 2004, we have provided nominal foreign funding which is twenty times as high as in 2002- when we received one million euro as foreign assistance.

Our priorities are regulations and initiation of a series of other laws aimed at approximation to the EU. In the year to come, we shall define the **National Action Plan for the Environment; prepare the National Strategy of Sustainable Development** and other strategic documents; strengthen further inter- sectoral cooperation with all relevant ministries. We shall build partnerships with all interested **in the creation of a better, cleaner Serbia- for the benefit of its citizens**.

That is why people have recognized us as the reform- oriented government. **We have been honored to host the Ministerial Conference "The Environment for Europe", to be held in Belgrade in 2007.**

In the very end, let me point out: **the environment does not recognize any borders; it does not know of any divisions; it has no price**. I strongly support the attitude that the **expertise, partnership and performance** of this team of professionals, to which I belong, **have no alternative**.

1. Development of the System of Environmental Protection: Chronology

Environmental protection does not equal the environment (the system environmental protection). Sustainability (financial) does not equal sustainable development. When one understands the chronology of development of the environmental management pattern (2), these differences become clear.

In developed countries:

In the seventies (1970+) of the XXth century- The concept of POLLUTION CONTROL of the environment, independently by each environmental media (environmental media are: the air, water, soil, flora and fauna).

In the eighties (1980+) of the XXth century- The concept of PROCESS INTEGRATION and the COMPREHENSIVE monitoring of the environment, through all the media: the air, water, soil, flora and fauna.

In the nineties (1990+) of the XXth century- The concept of PLANNING OF ENTIRE PLANT (besides the release of pollutants into the air, water, soil, flora and fauna, attention paid to ENERGY AND WASTE BALANCES).

The year 2000 (2000+)- The concept of INDUSTRIAL ECOLOGY (besides the release of pollutants in the air, water, soil, flora and fauna and the ENERGY- WASTE balances, the balances of MATERIALS- RAW MATERIALS- RESOURCES have been observing).

Towards sustainable development (2010+/-) - the concept of SUSTAINABLE DEVELOPMENT. Besides the concept of industrial ecology, it includes the flow of capital (including natural resources), workforce and the social component.

Developing countries and countries in transition remains developed countries for about 25 to 45 years (3, 4, 5). That is why it is of utmost importance for them to understand the process, strategic steps and continuum of political determination towards the achievement of sustainable development.

1.1 Economic Growth and the Environment

Developing countries or these in transition may opt for at least three scenarios of development (6):

1. *"Business as Usual"*- Economic growth is an absolute priority, followed, as a rule, by worsening of environmental conditions, higher economic and social costs;

2. *"Economic development along with decrease of impact to the environment"* – Application of cleaner technologies and minimization of waste but without essential changes in "economic" way of decision- making (7, 8);

3. *"Sustainable development"*- *A* continuous economic development followed by a significantly reduced impact on the environment; with full respect for the environment, with system- based solutions. Accordingly, respect for social policy, in the area of decision- making and the way of thinking (9).

European Union is strategically determined towards *sustainable development*, so that the process of approximation to it is, at the same time, the process of approximation to sustainable development (10).

There are some of the obstacles about barriers of approximation to sustainable development (11):

- lack of legislation and policies that support results of protection and promotion of the environment;
- inexistence of independent and effective judicial trials, especially when the citizens have damage claims;
- lack of execution mechanisms in existing legislation and the policies which support prevention of pollution;
- strong opposition demonstrated by business firms to carry out long- term strategies of development;
- lack of scientific arguments in favor of economic value of the environment and the services it provides; due to the fact that methodologies for monetary assessment of the environment have not been widely applied in the countries in transition in our region;

- weak political will to solve environmental issues in the area simultaneously with economic ones. The decision makers are occupied by current political and economic goals;
- poor level of awareness and capacities, i.e. the decision makers show lack of experience in application of methodologies for economic assessment of the environment;
- lack of necessary financial resources because of primary investments, characteristic to the current period of economic activity, related to transition;
- focus of donors and other regional or international organizations on support of relatively short programs and projects.

Certain specific issues of protection are best solved by combining economic instruments with other relevant ones (12, 13).

1.2 Millennium Development Goals and the Environment

At the United Nations Millennium Summit (2000), countries adopted Millennium Development Goals. They deal with decrease of poverty, education, health care, environmental sustainability and global partnership for development. A majority of these goals should be attained by 2015.

Target Seven should ensure environmental sustainability:

- By 2015, the number of people who do not have sustainable access to healthy and safe drinking water and basic sanitation should be halved;
- Principles of sustainable development should be integrated into the countries' policies and programs. The process of natural resource loss from environment should be reversed (most significant measures for this goal to be attained are related to institutional reforms in view of a country's natural resources management);
- By 2020, attain significant improvement of life for at least 100 million poor inhabitants of savage settlements;
- Relate indicators of the Millennium Development Goals in the area of environment to these related to health and poverty reduction.

There is a close and very complex connection between the use of natural resources and living

standard in rural (village) communities. Poor rural communities often live in the mountains and afforested areas, including these with high degree of biodiversity. Their means for living may depend on the natural resources. The impoverished have fewer options to overcome the impact of loss of natural resources. In some circumstances, poverty may worsen the state and quantity of natural resources.

According to the *Koutzen Line* (World Bank), the relation between pollution and poverty, i.e. income, points to the following conclusion: if the per capita income is higher than USD 10, we may move from pollution towards prevention and decrease of pollution (by increasing daily per capita income, from less than USD 1 to 10, we observe increase in pollution trends; daily per capita increase from USD 10 to 100 has an impact on pollution decrease).

Indicators for the Millennium Development Goals in the environmental sector are significant, not only as the measure of its sustainability but also as a contributing factor towards the goals in the areas of health care and poverty decrease. Attaining the Millennium Development Goals in the environmental sector will be very difficult (14, 15, 16).

In order to attain progress, a close cooperation among the governments, members of communities, donors and national and international organizations is needed..

1.3 Strategic Planning: Sustainable Development

It is much easier to define unsustainable than sustainable development. The former one is characterized by ever- increasing poverty, destruction of natural resources, pollution that significantly deteriorates human health, etc. Therefore, it is not easy to define postulates of sustainable development.

There are people who say, *Let's first get rich and then we shall have the time to clean what we had polluted*. Such an attitude is often mentioned in discussions among developed countries (who had done exactly the same thing in the past) and developing ones (whose own development, at present, is hindered and at the same time made possible by such an option). However, the countries – developed, developing or in transition- do not have much liberty in the manner in which they use natural resources. The issue of their utilization is closely related to survival: sustainable development is the only option that is not self- centered and of short- term nature.

Signs of unsustainability (IUCN/UNEP/ WWF, 1991) are:

Rising human numbers and consumption of resources**:** Since the industrial revolution, human numbers have grown eightfold. Water withdrawals have grown from 100 to 3600 cubic kilometers a year. The 5.3 billion people now on the Earth use 40 per cent of its most elemental resource: the energy from the sun made available by green plants on land.

Poverty**:** More than a billion people live in absolute poverty. One person in five cannot get enough food to support an active working life. One quarter of the world's people is without safe drinking water. Every year millions of children die from malnutrition and preventable disease.

Resource depletion**:** In less than 200 years, the planet has lost six million square kilometers of forest. An estimated 60,000–70,000 square kilometers of agricultural land is made unproductive by erosion each year. The sediment load from soil erosion has risen threefold in major river basins and by eight times in smaller, more intensively used ones.

Pollution**:** Human inputs of nutrients into coastal waters already equal natural sources. Human-caused emissions of many heavy metals now range from double those from natural sources (for example, arsenic and mercury) to five and even 18 times higher than natural concentrations (of cadmium and lead, respectively); Global climate change**:** The climate regimen, to which people and other forms of life have long been adapted, is threatened by human impact on the atmosphere. Since the mid-18th century, human activities have more than doubled the quantities of methane in the atmosphere, increased the concentration of carbon dioxide by 27 per cent and significantly damaged the stratospheric ozone layer.

Debt**:** The combined cumulative debt of lower-income countries is more than one trillion USD, and interest payments alone have reached 60 billion USD per year. As a result, since 1984 there has been a net transfer of capital from lower-income to upper-income countries. Nonetheless, many upper-income countries also run substantial deficits.

The concept of sustainability is a wide approach everybody is talking about in a period when environmental problems caused by various human activities are requiring serious solutions. One of the first definitions of sustainable development appeared in "World Conservation Strategy" in 1980 (17):

> *In order for a development to be sustainable, it must take into consideration social and environmental factors, economic factors as well, respecting human and natural resources and long- term and short- term goals and negative aspects of alternative activities.*

Starting from a 'pure' ecologically based concept in the 1970s and the World Conservation Strategy, it transformed very quickly into a more comprehensive socio-economic approach. The Commission was asked to look at the world's environmental problems and propose a global agenda for addressing them. The result of the study was that there was not one environmental issue that was first in peoples' minds. People talked about living conditions, resources, population pressures, international trade, education, and health. Environmental issues were related to all of these, but there was no hard and fast division separating environmental issues, social and economic issues. All the problems were intertwined. There were links among the environment, the economy and society that caused problems in one of these areas to affect the other areas.

The definition in the Brundtland (the head of the Commission and formerly the Prime Minister of Norway). Report of the World Commission on Environment and Development is as follows:

> *... Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*
>
> *... In essence, sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations.*

Within the Brundtland Report, the aspect of *development*, to be distinguished from *growth* (which also is not questioned in the concept as such) increased in importance focusing on getting *better* rather than getting *bigger*. The idea was to have a *qualitative concept incorporating ideas about improvement and progress and including cultural, social and economic dimensions*.

To understand what the concept of sustainability means for the work within the network, we have to look on the characteristics of this paradigm. Two main characteristics are (ibid.):

1. Sustainable development is *people-centered* in that it aims to improve the quality of human life and it is *conservation-based* in that it is conditioned by the need to respect nature's ability to provide resources and life-support services. In this perspective, sustainable development means *improving the quality of human life while living within the carrying capacity of supporting ecosystems*

2. Sustainable development is a *normative concept* that embodies standards of judgment and behavior to be respected as the human community *the society* seeks to satisfy its needs of survival and well-being, (emphasized in original).

To arrive at a more operational concept of sustainability necessary for recommendations regarding daily life the detailed consequences of these first and very general definitions have to be understood.

The key elements of sustainable development are equitable distribution of resources, both for existing people and people not yet born, and not using more than the ecosystem is able to continue providing. Sustainable development is not the same as sustained growth.

The nine principles[*] of a sustainable society are:

- Respect and care for the community of life
- Improve the quality of human life
- Conserve the earth's vitality and diversity
- Minimize the depletion of non-renewable resources
- Keep within the earth's carrying capacity
- Change personal attitudes and practices
- Provide a national framework for integrating development and conservation
- Create a global alliance

The term *sustainability* is defined in many ways. Different definitions of sustainability are just verification that the populations have an impact on the planet and that is necessary to provide that the activities of today should not jeopardize economic, social and *environmental* capital, so that the future generations may satisfy their needs. Therefore, sustainable development is defined as responsibility toward the environment, future generations and intensity of satisfaction of the needs.

There are several definitions of sustainable development:

- Sustainable development demands a healthy environment, economic prosperity and social equity *Earth Council*
- Sustainable development includes simultaneous dealing with economic prosperity, quality of the environment and social equity *The World Business Council for Sustainable Development*

[*] IUCN/UNEP/WWF: "Caring for the Earth", 1991

- Sustainable development means implementation of the process that integrates environmental, economic and social analyses in decision- making *Environment Canada*
- The development which provides that present utilization of resources and environment do not hamper the perspective for the future generations to use them *Canada's National Task Force on Environment and Economy*
- The development that satisfies the needs of present generations without ruling out the possibility for the future generations to satisfy their own needs *Bruntland Report, Our Common Future*
- Improving the quality of living within the capacities of the surrounding eco- system *Caring for the Earth*
- A community is unsustainable if it spends its resources quicker than they can recover, if it produces more waste than the natural systems can accept or if it is dependent upon distant resources *Sustainable Community Roundtable.*

Undeniably, many economic activities have a negative impact on the environment and human health. Relieving or mitigating environmental degradation to an acceptable level (expressed as *capacity* and *critical load*) obviously needs concrete action. However, many politicians, economists and industrial representatives claim that the strict enforcement of regulations concerning the environment and application of expensive measures in an environment, will only restrain economic growth and increase unemployment. Such an assumption originates in low level of knowledge. On the other hand, ignoring the real or potential problems of the environment leads to additional externalities and investment for individual, responsible players. It is wrongly assumed that products and services of the environment are *free gifts of nature*. The expenses related to their consumption are often not transparent and are not taken into consideration in analyzing costs and benefits of certain activities.

It is true that investing in mitigation or prevention of environmental degradation does yield financial, i.e. economic benefit to both the companies and the society as a whole. All planners of economic activities (not only environmental ones) must understand that the more pollution is generated, the more means should be spent to regain the well- being of a society, and the pre- pollution level.

It is well- accepted today that **sustainable development represents integration of social, economic and environmental dimensions in a corporate public decision- making**, to the limits that provide full participation and contribution (18).

It is widely accepted that **sustainable development has three pillars:**

1. economy, with creation of standards
2. social justice, through elimination of poverty and improvement of quality of living
3. the environment that provides preservation of natural resources for future g0Ltfok,0IaW0fo-0fos)-0g0

The principles of strategic planning for sustainable development are**:**

• *People centered*: While many past strategies have been about development, they have often had mixed effects on different groups. More should be done to ensure that all strategies have long-term beneficial impacts on disadvantaged groups and the poor. Furthermore, the ways in which policies affect the poor and how they can be made more pro-poor and address inequalities needs to be much better understood.

• *Process and outcome orientated*: Strategic approaches to date have been dominated by a focus on delivering a document, often prepared by officials and/or consultants and based on insufficient, weak or dated analyses. This has resulted in inadequate processes for building consensus on agreed ways forward. A commitment to the quality of the process, and a focus on outcomes and looking forward rather than back, is required.

• *High level political commitment and influential lead institution*: Preparation and implementation of an effective strategy requires strong leadership - the need for participation (ideas from 'below') does not dilute the requirement for leadership from above. By definition, strategic processes for sustainable development may require hard choices, especially in the face of the institutional inertia of government and resistance for change by established elites and structures. If difficult political choices must be made, or major resources are required, then commitment from the Head of State and senior ministers, as well as the more influential government departments will be required. Linking donor resource flows to an assessment of Government commitment to sustainable poverty reduction may be helpful in reinforcing the incentives for Government to give the issue priority. However, this can be at odds with some of the other criteria (for example, country ownership and participation).

• *Country leadership and local ownership*: Past strategic planning processes have often resulted from external pressure and donor requirements. Externally driven strategies are rarely implemented. It is essential for countries to take the lead and initiative in developing their own strategies. Country leadership also implies a pace which makes sense for the country and its decision-making process.

• *Building on existing processes and strategies*: Any strategic planning needs to take into account of what already exists in a country. Similarly, a strategy for sustainable development is not intended as a new planning process to be undertaken from the beginning. Most countries have a plethora of existing domestic planning processes in addition to the ones related to international conven-

tions and multilateral requirements. A sustainable development strategy seeks to build support for mechanisms that can strengthen synergy and coherence between them; address conflicts; and identify gaps and priorities for action.

• *Comprehensive and integrated*: Rarely have strategies been comprehensive. Integration of economic, social and environmental objectives is very difficult to achieve. If gains in poverty reduction are to be maintained, and poverty elimination achieved in the longer term, issues of environmental sustainability need to be an integral component of the decision-making and policy process. Better ways of working are needed to enable informed debate and communication amongst stakeholders, to allow the building of consensus on where this integration can take place, and to facilitate a balanced negotiation of the trade-offs when such integration is not possible.

• *Participatory*: Most strategies have been prepared with only limited participation. Clearly central government must be involved (all key ministries). However, local authorities should also be included (especially local communities with developed and/or process of developing of Local Sustainable Development Strategy). Both the private sector and civil society groups need to be engaged (e.g. trade unions, NGOs) as well as marginalized groups (such as the poor, people in remote regions and certain ethnic groups). There are often constraints of time and resources, as well as fears over losing control of the process. Five steps were identified in the consensus building process: convening, clarifying responsibilities, deliberating, deciding, and implementing agreements

• *Targets and priorities*: There is a need to set priorities that are based on sound diagnosis, recognizing economic and political constraints, and limited institutional capacity. Governments, civil society and donors need to know which issues are worth pursuing. The strategy needs to be fully integrated into the budget process to ensure that plans have the financial resources to realize their objectives, and budgets are informed by meaningful planning. Strategies not linked to budgets tend to be unrealizable wish lists, while budgets not linked to plans perpetuate spending programs long after their rationale has finished.

• *Monitoring, learning and improvement*: Strategy formulation and implementation should be an iterative process. Monitoring and evaluation needs to be built into strategies to distil lessons. These should feed back into the strategy and allow interventions to be improved. Too often interest falls away once the first version of the strategy has been finalized. Results tend to be poorly monitored, and future strategies often fail to build on past lessons.

• *Capacity*: Many existing strategies have failed as countries have lacked the human resources and skills to implement them. Those responsible for the development of strategies must be aware of the human constraints to implementing them, and make provision for developing the necessary capacity.

• *Future needs*: Although vision statements may have a clear view of where the country wants to go, few have developed and considered alternative scenarios that consider developmental goals and conditions for the future. Many strategy processes have tended to base their policy recommendations on an assessment of past and current trends and on current needs and deficiencies.

While the relationship between economic growth and sustainable development is complex, it is clear that the former is a precondition of the latter. Neither the scope of human freedoms, environmental equality, nor protection against insecurity is likely to improve when incomes and consumption are shrinking. Of course, economic growth does not automatically translate into poverty alleviation and sustainable human development. However, without economic growth, the prospects for achieving the Millennium Development Goals through improvements in human development are bleak.

On the World Summit on Sustainable Development (WSSD) in 2002, an important decision was made in the area of sustainable development. It was **the Johannesburg Declaration on Sustainable Development** - "From our Roots to our Future". Globalization only added a new dimension to those challenges. Speedy market integration, mobility of the capital and significant increase of investment flows throughout the world have opened new challenges and options for realization of sustainable development. However, the benefits arising from globalization and its expenditures have been unevenly distributed. Developing countries have been facing special difficulties in response to this challenge.

Consensus- reaching is an essential part in the process of attaining sustainable development. Public participation and working with interested parties is an unequivocal part of social aspect in the sense of decision- making. That is why it is necessary not to have bias on either side. Consensus- making is a practical procedure that harmonizes imperatives of the needed measures and democracy, which are an inseparable part of the moral and technical complexity in solution-seeking and defining, in harmony with sustainable development (26).

The states, which participated in the Johannesburg Summit, have committed themselves to strengthen and improve management at all levels, in order to apply effectively the Agenda 21, the

Millennium Development Goals and the Johannesburg Conclusions. They have been unanimous in re- confirming that there was an array of commitments and targets, action plans they had to fulfill in order to attaining the prerogatives of sustainable development.

These are basic agreements from Johannesburg:

Eradication of poverty- By 2015, halve the number of people in the world whose daily income is below USD 1, and the number of these who are starving (*re- affirmation of the Millennium Development Goals*). By 2020, attain a significant improvement of life in at least 100 million people living in poverty(*re- affirmation of the Millennium Development Goals*).

Water and sanitation By 2015, halve the number of people without access to safe drinking water *(re- affirmation of the Millennium Development Goals*). By 2015, halve the number of people with no access to basic sanitation.

Energy- *Renewable energy* Expand energy supply and significantly increase global participation in switching to sources of renewable energy, thus increasing contribution to the total energy supply. *Access to energy* Improve access to reliable, available, economically viable, socially acceptable and *environmentally* correct services and resources, sufficient to attain the Millennium Development Goals, including in this the goal to halve the number of people who live in poverty by 2015.

Energy markets Lift market discrepancies, including restructuring of the taxes and gradual elimination of non- efficient subsidies. Support efforts aimed at better functioning, transparency and information on energy markets in view of supply and demand, with the aim of creating greater stability and providing better consumer access to energy- related services. *Energy sufficiency* Establish national programs for energy sufficiency, with the support of international community. Speed up the development and expansion of energy efficient and energy- saving technologies, including promotion of research and development.

Chemicals Make efforts that, by 2020, chemicals are used and manufactured in such a manner that it does not significantly harm human health and the environment. Reconfirm dedication to sound chemical and hazardous waste management throughout their life cycles. Promote ratification and implementation of the relevant international instruments in respect to chemicals and hazardous waste, including the Rotterdam and Stockholm Conventions. Further, develop strategic access to international chemicals management, based on the Bahia Declaration and Action

Priorities from 2000 to 2005. To stimulate the countries to start applying new, globally harmonized system of classification and labeling of chemicals as soon as possible and enable it to become fully operational by 2008.

Natural resources management- *Water* Develop integrated water resources management and plans for effective utilization of water by 2005. Fishery Urgently, where applicable by 2015, maintain and improve fishery to the level that can produce maximum sustainable yield. Enact international action plans (UN Food and Agriculture Organization) and relate them to certain schedules: capacity managements for fishery by 2005; preventing, discouraging and eliminating illegal, unauthorized and unregulated fishing, by 2004.

Atmosphere Improve progress of the Montreal Protocol, i.e. phasing- out of the ozone- depleting substances according to the agreed schedule, through provision of sufficient resources in the fund by 2003/ 2004. By 2010, enhance access of developing countries to alternatives for these substances that deplete the ozone layer and assist them in acting according to the phasing- out plan for these substances, based on the Montreal protocol.

Biodiversity- By 2010, attain significant decrease of the current rate of biodiversity loss. *Forests* – Make haste in carrying out the action proposals (Intergovernmental Forests Panel/ Intergovernmental Forests Forum) of the member countries and Partnership Cooperation concerning forests. Intensify efforts concerning reporting to the UN Forests Forum in order to make contributions for the estimate of progress in 2005.

Corporate responsibility Actively promote corporate responsibility and the transparent work. This will be achieved through full development and purposeful implementation of intergovernmental agreements and measures, international initiatives and partnerships among public and private sector and relevant national legislations.

Health Improve education for health, aiming at better health- related literacy on the global level, by 2010. By 2015, decrease by two thirds the rate of infant mortality and children under five; decrease the mortality rate in new mothers by three fourths (in relation to the 2000 rate), reaffirming the Millennium Development Goals. In the countries of the world worst hit by HIV epidemic, decrease by 25% the prevalent number of HIV cases in the population of males and females in the 15- 25 age group. This goal should be attained by 2010. By 2010, fight malaria, tuberculosis and other devastating diseases.

The ways to attain these goals are

- Provide that by 2015 all children be given the opportunity to complete primary schooling. Girls and boys should have equal access to all educational levels; according to national needs (*re- affirm the Millennium Development Goals*).
- Eliminate gender disparities in primary and secondary education by 2005 (re- affirmation of the Dakar Framework for Action on Education for All).
- Recommend to the UN General Assembly to consider promotion of the decade of education for sustainable development, starting from 2005. (It was done and **in 2005, we witnessed the beginning of the Decade of education for sustainable development!**).
- Adopt new measures to fortify institutional arrangements for sustainable development, on international, regional and national levels.
- Strengthen the role of Commission for Sustainable Development, through analyses and monitoring of progress in realization of Agenda 21 and through stimulating of coherent application, initiatives and partnerships.
- Undertake immediate steps for the progress in formulating and defining national strategies for sustainable development. Start applying them by 2005.

At the UN Summit in New York, held in 2005 (i.e. five years after the adoption of Millennium Development Goals and sixty years since the founding the UN), we have been witnessing:

- reaffirmation of the Millennium Development Goals (among which is *environmental sustainability*), Monterey and Johannesburg Action Plans
- reaffirmation of fundamental values, such as human rights, respect for the nature and shared responsibility.

The agreed UN engagement basis in the future will be made of peace, security, human rights and development. The Document re- affirmed ECONOMIC DEVELOPMENT, SOCIAL DEVELOPMENT and ENVIRONMENTAL PROTECTION, in one word- sustainable development.

Within the dedication to pursue sustainable development, most important activities, within the Johannesburg Action Plan relate to the following areas:

- Promotion of sustainable expenditure and consumption, development of recycling process as economic model,
- Climate changes and promotion of *cleaner* energies and technologies, including the Kyoto Protocol, fight against droughts, promotion of energy efficiency, aid to developing countries to integrate those global issues into their national strategies of sustainable development;

- promotion of the UN Decade “Education for Sustainable Development” and International Decade “Water for Life”
- Support to the Convention on Biodiversity protection, the Carthagene Protocol on Biosafety, in view of the Bonn instruction, related to international regimen on safe and fair use of genetic resources;
- Aid to developing countries in preparation of an integrated plan of water resources management, as a part of their strategies of (sustainable) development;
- Aid to developing countries in sustainable use and management of forests;
- Aid to developing countries in the management of chemicals and transfer of cleaner technologies;
- Support to the creation of a global system of early warning for all natural disasters, based on the relevant existing regional and national capacities; support to the application of the Hyogo Declaration for the 2005- 2015 activities. It was adopted on the World Conference on Disaster Reduction and relates especially to dedication to aid the developing countries exposed to different accidents, including aid in risk management and removal of the consequences of accidents.

The UN Summit 2005 Document lists the environment- targeted goals: before all, prevention of climate changes and incapacitation for early warning. Protection of natural resources was stressed as a base for development aid. The Document defines what each country must do:
take the responsibility for own development;
harmonize national strategies with achievements of sustainable development.

National strategy of sustainable development should simultaneously contain economic, social and environmental aspects (27).

> *National sustainable development strategies should be seen as a voyage and not as a harbor.*[°]

National sustainable development strategies are needed to: - provide a forum and context for the debate on sustainable development and the articulation of a collective vision of the future; - provide a framework for processes of negotiation, mediation, and consensus building; and to focus them on a common set of priority issues; - plan and carry out actions to change or strengthen values, knowledge, technologies and institutions with respect to the priority issues; and - develop organizational capacities and other institutions required for sustainable development.

[°] Partnerships for Change Conference, Manchester, 1993

The Swedish national strategy of sustainable development contains, for example, the following thematic areas: - the future of environment, - limitations of climatic changes, - number of inhabitants and public health, - social policy and security, - employment and learning in a knowledge-based society, - sustainable economic development and competitiveness, - regional development and regional conditions, - development of sustainable planning of municipalities and cities.

National strategy of sustainable development of Great Britain is based on the following principles: - citizens- oriented approach, - have in mind long- term development, - take into consideration expenditures and benefits, - create open and stable economic system, - decrease poverty and social isolation, - respect the limits (capacities) of the environment, - apply preventive approach, - apply research results, - respect for openness (transparency), being informed, participation- partnership and access to justice, - apply the "polluter pays" principle. Strategy of sustainable development should be comprehensive, integrated, defined with clear budget priorities, built on the existing processes and strategies have strong support by the government and leading institutions, defined to link national and local levels.

Some of the *goals* of the strategy of sustainable development are - social progress that recognizes everyone's needs, - effective environmental protection, - responsible use of natural resources, - maintenance of stable economic growth and employment (28, 29, 30).

The list of priorities in the Sustainable Development Strategy contains: - investing more in people and technologies for competitive economy, - decreasing the level of social discrepancies, - promoting the system of traffic and transportation that has least harmful effects on environment and health, - improving living conditions in the cities, - directing development and agricultural practices so that they protect rural environment and wildlife, - improving energy efficiency, - solving the issue of waste (from the standpoint of environment, economic and social policy) and of hazardous waste (competitiveness), - cooperating regionally and internationally in the function of sustainable development.

Key points in attaining sustainable development may be:

- progress towards the Kyoto Protocol targets, i.e. in reducing greenhouse gas (GHG) emissions and switching to renewable, environmentally friendly energy sources;
- adherence to integrated control and prevention of pollution (IPPC Directive), primarily for industrial facilities,
- new strategy of chemicals management

- Consistent application of different strategies, such as the waste management strategy.

Most frequently cited **indicators of sustainable development** are reducing GHG emissions, global average temperature increase, - sea- level increase, - carbon dioxide emission by end-users, - decrease of fossil fuel reserves, - energy from renewable sources, - situation with nuclear energy facilities (if any), - quantities of radioactive waste, - concentrations of persistent organic pollutants (POPs), - presence of hazardous substances in the water, - bird populations, - landscape values, - accessibility of rural areas and quality of life in them, - action plan to conserve or protect biodiversity, - endangered species, flora and fauna, - decrease of recreational areas, - concentration of organic substances in the arable land surface layer, - fish stocks, - number of days with exceedances of air quality limit values in urban areas, - concentrations of air pollution by selected pollutants, - acidification, - ozone depletion, - sulphur dioxide and nitric oxide emissions, - rivers with good water quality, - availability of water as a resource, - water losses, - nutrients in the water, - forestation, - area of remediated land after exploitation of minerals, - substitution quantity for mineral and resources with other materials and preservation of geologic resources, etc. (18, 31, 32, 33).

Many states pointed out that indicators of sustainability directly reflect the state of environment and that they influenced the increase of *environmental awareness*, leading to better understanding of the concept of sustainable development (34). Implementation of BAT (best available techniques) and BEP (best environmental practice) must be compatible with goals of sustainable development (35).

Measuring sustainable development is among the greatest challenges faced by theorists. The first question relates to the choice of conceptual framework, the one between “pressure- state-response” model and the one that rests on national accounts.[1]. Insisting that economy adapts to the environment has resulted in environmental harmonization and imposed the obligation of choosing the adequate conceptual framework. New indicators of economic and total social development are far from ideal instruments and it is not realistic to expect their mass and swift application. However, the use of integrated economic indicators is comprehensive and it offers a more realistic picture of development. It is a good basis for choosing adequate development policy. Environmental social indicator is most sensitive measuring tool of the realistic growth, in case that all values are expressed on the socially optimal level. The drawback of this indicator is the fact that calculations are based on information that can be collected only by a small number of most developed countries. A more intensive application of this indicator depends on the options of collection of the necessary data. In order to present development in a true manner, first it is

necessary to correct the values of GDP by capital depreciation in order to obtain net value of the NDP (*Net Domestic Product).* NDP should be further corrected by depreciation of the natural capital, in order to obtain the value of environmentally- adjusted revenue and the relevant national accounting procedure. This is the way we may obtain *environmentally* adjusted national product (*Environmental domestic product- EDP*). *Environmentall* domestic product may be good indicator of sustainable development, when:

- all elements of the national product have been adequately validated,
- market prices reflect future shortages of natural capital,
- the total depreciation of natural capital has been evenly distributed to all members.

It has been confirmed that some subsidies are environmentally un- productive. The Sixt Environmental Action Program defines general guidelines of the EU environmental policy by 2012 and plans to define the list of harmful subsidies *with the aim of gradually eliminating them*. The program also demands *promotion and instigation of utilization of fiscal measures such as environment- realted taxes and other incentives*. A majority of experts (mostly from the OECD countires) still hold that (in 2005) economic instruments and substitutions reforms play a decisive role for the governments to carry out sustainablilty. However, the interest of economic sector to understand sustainable development has been constantly growing.

1.4 Trade, Competition and the Environment

International trade legislation, kept by the World Trade Organization (WTO), is one of the strongest and best supported international legislative and political regimens. Therefore, all other issues related to globalization, including utilization of resources and environmental issues, have been crossed with trade.

General Agreement on Tariffs and Trade (GATT), concluded in 1948 in order to promote liberalization of international regulations- based commerce. Another purpose of this organization was to limit harmful disruptions of international economic development, caused by firmly protected domestic markets. After several rounds of new negotiations, during which the GATT membership grew, the Uruguay Round (1986- 1994) has completely re- defined the scope and rules of international trade. It has been dealing with numerous sectors and *non- custom barriers* imposed to trade that had been outside the original GATT scope. Besides, GATT gave mandate to the WTO to have arbitrary role in commercial disputes, oversee developments in international trade and

deal with future negotiations related to trade. Essential differences between GATT and WTO encompass stronger and more up- to- date mechanisms of dispute- settlements and sanctions given by WTO, inclusion of agreements on intellectual property and services trade (beside the goods, which had been in the GATT focus) within the WTO and a stronger focus on **non- tariff trade barriers**. The existence of a firm set of rules and mechanisms for international trade is useful **in promoting sustainable consumption** in many ways.

The expression *non- tariff trade barriers* also encompasses environmental management standards.

The expression *sustainable expenditure* also explains consumer behavior related to economic demand and *expenditure* of the resources for the satisfaction of the demand.

Besides sustainable use of natural resources, attainment of sustainable development is influenced by a degree of **sustainable production and consumption**. The issue of sustainable consumption was first raised in the Rio Summit in 1992. It was defined as one of key challenges of sustainability.

Sustainable consumption is a gathering of needs of the present and future generations for goods and services which are economically and socially sustainable. They should also be viable in the environmental sense. Responsibility for sustainable consumption is divided among all subjects and institutions of a society: consumers, governments, assignments, workers' organizations and organizations for the promotion and protection of the environment. In 1995, the UN Commission for Sustainable Development (CSD) has formally adopted the working definition of sustainable consumption which says:

> Utilization of services and related prodicts which suits basic needs and results in better quality of life, simultaneously utilizing natural resources and toxic substances as little as possible, reducing emissions of waste and pollutants, during their life- cycles, so that they do not jeopardize the needs of future generations.

A key point for sustainable production is that the company's overall success cannot be dependent upon unsustainable consumption patterns. A product's life cycle begins with the mining or harvesting of the raw materials, ends when the product is finally disposed of, and includes all the points in between transporting raw material, the manufacturing process, transporting to the vendor, and actual use by the consumer.

Products and services must use appropriate materials and energy. Depending on the product or service, they should be durable, repairable, recyclable, compostable, and use minimal and appropriate energy, material and packaging.

Sustainable production includes processes that are environmentally sound, preserve resources and energy, but also embodies a company mindset that places high value on employees and communities.

The **Integrated Product Policy** has resulted from the life cycle assessment – life cycle analysis. The integrated product policy aim is to make the market *green*, and this applies to purchase, consumption, and utilization, as well as the supply – the product development by means of the integrated application of the policy instruments in the environmental field..[☒]

Sustainable consumption is possible indeed. However, it requires changing- and changes may be positive, new experience. **In order to carry out those changes**, we need (adequately) **educated and dedicated individuals, at all levels of decision- making processes**.

Significant contribution governments may make to the notion of sustainable consumption within the international context is promoting of sustainable international trade, useful to all its players. In this context, information- sharing about best practices and the general attitude of exchanging experiences might be very constructive.

However, the WTO rules may also pose a barrier for the ways leading to sustainable consumption. An argument that is generally heard against WTO is the fact that by overthrowing the *trade barriers*, the organization decreases the capacity of developing countries to strengthen their own young industries before they have been given the opportunity of full- fledged competition on the world market. As for sustainable consumption, there are serious disputes as to the role of environment in relation to trade and the position of multilateral environmental agreements (MEA) in relation to the WTO rules. These are some of numerous issues that tackle the questions related to society and environment, on the one side, and international trade system, on the other. Progress of negotiations on services and other sectors will show whether trade liberalization can completely be related to sustainable consumption. In any case, the trade issues will probably pose a certain challenge before the creators of environmental policies and social conditions and will strengthen the conditions for **product competitiveness on the market.**

[☒] Jovanovic, Dj. Et al. , Proc.2nd Regional Conference "Environment for Europe" (2006)

Sustainable development is *a concept* and does not have single, simple, clear and universal formula. (36)

Sustainable development is a philosophy of environmental management and development and the way of thinking and perception. (36)

Sustainable development is characterized by solidarity among generations and nations. (36)

Sustainable development means changes in behavior and lifestyles (36)

In the contemporary production, basic **indicators of competitiveness** that should be attained in order for a product to be successful on the world market are price, functional effectiveness, quality, environmental production conditions and impact of the process and product on the working and living environment. To attain those indicators, in all stages of the production chain, it is necessary to have a synchronized and constant process of innovations, improvements, increase of the added value and productivity and a constant decrease of negative impact of the production and the products to the working and living environment (113). More than one fourth of the world trade goes for the products that are obtained directly from natural resources, which are the base of economic development. In such circumstances, international trade exerts a powerful impact on global base of raw materials.[2]

For an enterprise, sustainable development will mean adapting of its business strategy and activities so that it can satisfy its own and its partners' needs. It is achieved through protection, maintenance and enrichment of human and natural resources that it will need in the future. Special attention in industrial competitiveness is given to three key factors: knowledge, innovations and enterpreneurship (37).

1.5 Diplomacy and Environment

International relations in the XXIst century are characterized by fundamental values: freedom,

[2] V.Drljan. Proc.2nd Regional Conference "Environment for Europe" (2006)

equity, solidarity, tolerance, respect for nature and shared responsibility. In managing all living species, we must be wise, and act in accordance with principles of sustainable development. It is the only way that immeasurable richness of our planet, in the form of natural resources, can be preserved and given over to our successors. The existing, unacceptable, untenable patterns of production and consumption must change, in favor of the future benefit, of our successors and ours.

We assume that state- of the- art, **environmental diplomacy** of today has its beginnings in 1972, on the UN Conference on the Environment, held in Stockholm. Another turning point in environmental diplomacy, a great effort to change influence of human social and economic activities on environment, and vice versa, occurred in the Rio World Summit (UN Conference on the Environment and Development, held in 1992). Ten years after Rio, in 2002, the World Summit on Sustainable Development was held in Johannesburg. It reaffirmed sustainable development as the focal element of international working agenda and gave new inspiration to ongoing world efforts to eradicate poverty and promote environment.

The instrument of environmental diplomacy- the notion of **international environmental diplomacy** is basically getting to know the essence and application of multilateral environmental agreements (MEA). It is especially so where the environmental challenges are of transboundary nature (such as common waterways or biodiversity). The states of the world cooperate in order to attain harmonization of environmental standards and to make international trade in goods and services easier. Their cooperation is a part of a more profound process of economic or political integration (one of such examples is *Aquis Communautaire*).

Regional Environmental Cohesion of the Balkan Countries was initiated (38) on the ministerial meeting in Skopje in 2003. It was seen as the possible instrument of a quicker inclusion of the region to the EU and Partnership for Peace. Within this context, expressions were introduced, such as ***environmental integraton key*** and ***downstream countries rule,*** which means that the countries in transition are slow and have more problems and costs in the process of transformation and accession and /or downstream/more polluted countries are having more difficulties..(36, 38).

States also work together on formulating supranational policies, developing international strategies, programs and plans, in order to coordinate environmental management and sustainable use of resources. That process creates a framework for development of national environmental policies and of relevant instruments for their implementation.

On the level of enterprise and company, a growing significance in business success is given to environmental diplomacy at company level - **business environmental diplomacy (**or **corporate environmental diplomacy)** (36)**.**

1.6 Security and Environment

Environmental security is the term used for issues related to the conditions in an environment and interests of national security. Threats to a national security include problems with resources and environment. Environment- related problems become significant only in case of serious economic and political misunderstanding among the states. Greatest international problems originate from upstream- downstream conflicts, and are related to water consumption (agricultural activities- downstream; hydroelectric power stations- upstream). Security of the environment encompasses improvements related to scarcity of resources, environmental degradation and biodiversity threats that may result in conflicts. Methods of improvement encompass environmentally-friendly technologies, sustainable policy development, etc.

The EU Legislation encompasses certain aspects of environmental security- COM (2001) 139 Final. UNEP with OSCE is developing and implementing EnvSec Initiative.

Threats and challenges with which environmental security will have to deal in near future include the following: population growth and loss of biodiversity, climatic change and global warming; water shortages and pollution (including contamination of ground waters); food safety; *environmental* refugees; deforestation; industrial contamination of the air and oceans; soil erosion and preservation; nuclear safety; ozone depletion.
Environmental security has been focussing on

a) prevention of environment- related conflicts;
b)satisfaction of the military requirements, related to environmental hazards, which pose a threat to the forces, and
c) remediation of damage in the environment caused by military operations.

Activities of the NATO and Partnership for Peace (39) contain the issue of environment.

1.7 Environment and Health

World Health Organization (WHO) identifies five major conditions for a **healthy environment**: clean air, sanitation and sufficient quantities of drinking water, proper and well- ballanced nutrition; safe and secure settlements and stable ecosystems in which people may lead high- quality lifes.

It is not so simple to establish the relationship between the environment and human health, because of a number of other factors that influence it. It is a complex task of linking mortality, incapacitation and morbidity with certain degradation or pollution. However, it is well- known that there is a strong correlation between certain conditions and air or water pollution. One such example is asthma or infections of the digestive system.

Air pollution, water and food contamination, noise and radiation are main causes of deterioration of human health due to the environment. Air pollution may have an impact on human health by direct damage of their respiratory system, through entering the blood or lymph systems. Strong correlation is usually seen between daily mortality rates and acute episodes of air pollution. A majority of pollutants has a negative impact on human health. It is especially so with nitric oxides (NO_X), volatile organic compounds (VOCs), ozone, particulate matter and sulphur- dioxide (SO_2). Population of great urban agglomerations is especially exposed to these pollutants.

In order to provide adequate assessment of causative factors, as is the case with assessment of the environment and health, we need relevant and precise data and information, including these for risk assessment. In order to make easier monitoring of the changes and health status- related changes, basic ***indicators of environmental health*** have to be applied**.**

1.8 Environment, Agriculture and Food Safety

Improving the conditions and standards of living has been related to measures that provide constant and sufficient quantities of food. It has also been related to improving the standards of liv-

ing for rural populations. Contemporary agricultural reforms pay great attention to the environment, safety of foods and development of poor rural areas. As a part of **Agenda 2000** and the 2003 Luxembourg Areement**,** EU initiated the term *cross compliance* of agriculture and environment. The term means the responsibility of member- states not to turn agricultural, forest and other semi- natural and natural land from being taken for urban and other artificial land development. Farmers are encouraged to undertake actions which are in favor of maintaining of the certain sorts of lands and get reimbursed (40).

Safe food should be provided for the populations. Content of toxic metals and pesticides demands constant monitoring (41).

Practice of other countries showed that microbiologic contamination at farms should be reduced. It is necessary to apply every possible resource to enhance the understanding of hygiene of all these who handle food, and to educate and train them towards food safety. Application of **hazard analysis and critical control points** (HACCP) represents a preventive approach and a more efficient control measure than it is inspection of ready- made products. The HACCP approach is also applied to prevent food contamination. It should cover all stages of production, processing, storing and distribution of food, from the farm to the consumer. All those segments are closely related to the situation in and understanding of environment (11).

Nutritional aspects and conditions in environmental management are closely related.

1.9 Environment and Socially Responsible Behavior

It is the company's duty to act in a responsible way, respectful of its internal and external stakeholders, and to consider — in line with its business management — the consequences of its activities on present and future generations. Otherwise, its license to operate could be withdrawn by society. Unfortunately, for some companies, the terms of **social responsibility** are hard to accept. They ultimately prefer the ambiguity of the terms *sustainable development*, stressing especially the second word and sometimes keeping the confusion going on between business and human development.

In the context of standard human relations procedures or of contract making, the integration of all this into a company's strategy includes:

- Identifying ways to develop company members, as well as their families, in particular through work/life balance, to encourage the progress of subcontractors, and their stakeholders in general; and
- Reconsidering the product portfolio and research, choosing to encourage innovation in fields that prove to be helpful to society, to the development of the people, to health, to mobility, to feeding, etc., accordingly to the company's core business.

Priority reforms aim at enabling the company to reach the external market. They are based on modernization of standards and technical rules, aimed at reaching competitiveness with international standards. For example, analysis of the market of technologies that produce electrical energy shows that, in 25 years from now, the prices of energy (as measures) will have greatest share. Rating second are new technologies (cleaner production), legislation, *green taxes* and redesign of substitutions, *green* social values and *green consumption*, carrying out of the global convention on climate change, etc. One of the recommended instruments is *green purchases*. Basic ties that responsible business behavior has with the environment are sustainable development, impact of environmental policy on the market and trade, and impact of international processes and contracts (such as these on the UN level- PRTR- Pollutant Release and Transfer Register).

Incorporating environmental management in their business practices, companies are in the position to have a wide scope of options to design (or re- design) the products, services, the very production and maintenance.

In a majority of cases, it is obtained through:

- impact analysis in relation to climatic changes (if it is applicable to trade with emissions of pollutants; utilization, or inclusion in the use, of renewable energies)
- improvement of energy efficiency
- limiting- optimization of transport
- sustainable utilization of forest resources
- *green/ environmental* construction
- management of supplies in accordance with demands of the environment
- sustainable business practices (taking into account sustainable development)
- reduction and management of the wastes (including packaging waste) and sustainable utilization of resources (water, energy, etc.)
- decrease in use of hazardous substances
- transparency in business operations related to the environment- reporting, good communication with end- users/ consumers and confidence
- development of volunteer initiatives in industry

- responsible behavior of a company through acceptance to have a product returned due to the dissatisfaction of the buyer
- responsible reporting of the consumers in case of genetically modified organisms.

Leading international and domestic companies are managed by people with vision and values, serving the consumers with vision and values. Carrying out environmental protection and the concept of sustainable development enables companies to attain greater competitiveness, more stress-resistant, more skilled and resourceful in an ever- changing world. They become ever- attractive for potential clients, buyers and best for their own employees. In the end, companies that do not reflect visions and values of such people will become extinct on the market. The policy of sustainable development may be very profitable but dealing with its postulates is not, and must not be, based on solely financial returns.

It is necessary to enhance the knowledge of the public in relation to irresponsible *environmental* and social business behavior. The company should have internal support. The knowledge of all employees and managers should be constantly enhanced and supported, partnerships provided. Management should make a plan of activities, and should not miss the opportunity of influencing business policies. Success should be celebrated and awards given. Improved results should be shared with business partners and interested companies, as well as the experience. Publicly announced level of environmental pollution has great impact on sustainable development as well as environmental legislation (and its enforcement). The legal framework that regulates social (and environmentally) responsible business operations has three levels - rules and regulations on: a) international, b) national and c) company level.

Monitoring competitiveness may include investor relations and **corporate social responsibility** (CSR) by the companies[⊗] . **Environmental management systems** (ISO 14001) and EMAS could be taken in the context of organizations response to the challenge of sustainable development[◊]. There is an ever- growing significance of volunteer initiatives in industry. Its aim is to increase competitiveness. In this context, it is necessary to explain the **standards** for environmental management. International Standardization Organization (ISO) promotes international cooperation and development of wide- scale standards from the ISO 14000 series. Such is adopting the environmental policy and establishing of the system of environmental management on the company level. Standards in this series are volunteer- based. However, progressive companies find it useful in the process of certification. Eco- labeling of products and services also contributes to socially responsible business.

[⊗] Geoffrey Mazullo, Proc.2nd Regional Conference "Environment for Europe" (2006)
[◊] Magdalena Rybaczewska-Blazejowska, Jorg Becker, Proc.2nd Regional Conference "Environment for Europe" (2006)

Socially Responsible Investing, or SRI, is the practice of using investment funds to positively impact society. Of course, because each individual has a different definition of social responsibility, one should not be certain that a fund meets your social objectives just because it is labeled SRI.

1.10 Environmental Insurance

Environmental insurance is a tool used to quantify and transfer risks related to cleanup costs and liability from project stakeholders to an insurance company. Environmental insurance can assist in managing the risk and exposure to environmental liabilities, which can often emerge as part of the sale and purchase due diligence process associated with almost any corporate or commercial transaction involving land and/or property. Environmental concerns bring with them complex technical, legal and financial considerations and specific long-term liabilities that can be a significant impediment to the completion of a transaction.

The most common types of environmental insurance policies available for remediation and clean up of polluted sites include:

Pollution liability - Protects an insured against on-site cleanup costs of unknown, pre-existing pollution and current pollution from ongoing operations, and third-party claims arising from pollution conditions (e.g., bodily injury, property damage)

Cost cap - Protects against cleanup costs exceeding the anticipated cost.

Secured lender - Protects a lender in the event that a borrower defaults on a loan and the default is associated with a pollution condition.

Anyone causing damage to the environment in the European Union will have to pay for the cost of decontamination and restoration. Going by the “polluter-pays” principle, anyone professionally carrying out or stipulating any operations affecting the environment will be liable under public law for the costs of prevention and/or cleanup and/or restoration of the environment.

1.11. Women and sustainable development

In the process of performing gender equity,women are protecting our common goods (climate, water and biodiversity among others) and addressing problems. Through “learning by doing” experience, women identify realistic strategies and/or inplement the actions towards sustainable development. Women have essential roles in natural resources access, planning and management, as well as environmental management.

Sustainable development requires gender- sensitive strategies.

Women over the world are contributing to environmentally sustainable and secured well-being development patern. In recent years, on the world stage, women have “matured” to fight in the mission of keeping the safe environment and providing sustainable development. They have acquired their full confirmation through it The UN Environmental Program has issued a publication “Women and the Environment”, emphasizing certain advantages of the women in realization of the Millenium Development Goals. In the presiding body of the UN Council for Sustainable Development, participation of women is about 40% in the past decade. The women- ministers for environment founded in 2002 the Network of women- ministers for the environment. The Network contributed in a specific way to “the shift in men- made decisions on the world level». The decisions, once regulated and adopted by men on the global level, suddenly started to include the views of the women and reflect their attitudes. The women- ministers organized themselves in such a manner that they applied a more comprehensive approach to problem- solving in realization of sustainable development, on which we all depend. The network of women- ministers for the environment has been included in the Council of women- leaders of the world (established in 1995). Besides this environmental network, there are others: network of the women- ministers of finance, economics and development and health and networks for the gender issues .

The role of young people* and other representatives of citizens is very important for the adoption of principles of sustainable development in practice.

Greater gender equity will contribute to building peaceful, democratic and prosperous societies. Just do the simple math: equity means 50% men and 50% women (36).

* Pandovska A., Proc 2nd Regional Conference "Environment for Europe", Belgrade 2006

1.12. Education for Sustainable Development

Education for sustainable development is both inter- and multidisciplinary. It must be long- term and well- planned. **Education for the Environment and Sustainable Development**, as was stated in Chapter 36 of the **Agenda 21** (1992) and confirmed ten years after, in Johannesburg (2002), is in the function of survival. That is why it is a prerogative for all inhabitants of the Earth. Education for Environment and Development should enable redefining of the man's attitude towards the nature; it should change his behavior by showing respect for the laws of nature. This type of education does not only mean getting to know arts and sciences, indispensable in understanding environmental issues and solving them; it also presumes further strengthening of moral principles and formation of the new system of values of the man/women in relation to his environment and nature. The prevailing anthropocentric approach must be replaced by bio (eco) centric one. Precondition of such a new relation of man/women toward nature, new philosophy of living and new model of sustainable development is the creation of a new environmental consciousness, behavior and development of environmental ethics and culture. It is necessary to provide inter- and multidisciplinary approach in this pedagogical and educational process, in order to understand the essence of the "human being- society- techniques- nature" relationship, i.e. the wholeness of environmental, economic, social, technological, cultural and esthetic aspects. Complete manners of presentations and working must aim at developing individuals capable of participation in decision- making, in full harmony with principles of environmental ethics and sustainable development. Education for environment and sustainable development must encompass all stages of teaching and training, from pre- school age, through primary, high and vocational schooling; university, post- graduate and permanent levels. It should be an inseparable part of all curricula, out- of school- activities, students' organizations. Education for environment must continue through working years and be an indispensable part of professional training and empowerment, with one aim- to minimize the chances of harming the environment along the work process. This sort of education cannot help people perform passive protection but rather directing them to take an active role toward their environment, making them apt to plan its development, fully respecting natural resources. The human knowledge and understanding of environment must be part of all curricula: the world around us, nature and the society, biology, chemistry, geography, mother tongue, foreign languages, arts and physical culture...Such an education is multidisciplinary and intersectional by its essence. It enables application of the very intersectional approach in education and teaching process. In order to realize those targets, it is necessary to

have national strategies and harmonize education/ teaching (at all levels) with principles and postulates of environmental ethics and sustainable development, based on international documents.[⊗]

Having exactly in mind the goals and character of education for the environment and sustainable development, also termed "education for survival" (because it is global by its essence, dedicated to all inhabitants of the planet and at the same time, education for peace, democracy and tolerance), reform of the schooling system is the right place to implement this principle. Another reason for doing so is that this approach gives an excellent opportunity to avoid one- tracked education. It also represents a good starting point toward integrated education, capable of encompassing the whole matter, by intertwining different subjects, issues and curricula.[□]

It is inadequate and inappropriate to place eco- education in the group of alternate- optional curricula in primary schools. [Δ]

Environmental communication emphasizes the need of educating and informing the population about environmental issues. It is the importance of raising population's environmental awareness and sufficient level of knowledge among civil servants in managing environmental issues. Civil servants, working for central and regional environmental authorities, should be trained to implement awareness campaigns. They should be able to transfer their knowledge to the colleagues (on the local level) and to other relevant stakeholders. The final target is to inform and educate the population towards environmental- friendly behaviour.[ϖ] It is important to educate the public and raise awareness of the complete population. [∀]

[⊗] International Educational Program for Environment ,UNESCO-UNEP,1993.

[□] Brun G. Proc.2nd Regional Conference "Environment for Europe", Belgrade 2006

[Δ] Petrovic Gegic A. et al. Proc.2nd Regional Conference "Environment for Europe", Belgrade 2006

[ϖ] Sinisa Vukic,Delia Neagu, Dick Legger , André van Amstel, Proc.2nd Regional Conference Environment for Europe", Belgrade 2006

[∀] Mladenovic I, Proc.2nd Regional Conference "Environment for Europe", Belgrade 2006

2. ENVIRONMENT AND EUROPEAN UNION:
Environmental EU Values

Acquis of the Community (*Community Acquis- Acquis Communautaire*) is a compilation of all common rights and commitments that connects member countries. The Union is dedicated to maintenance and further development of the *Acquis*. The candidate countries must accept *Acquis* before they become full members. Derogations of the Acquis are an option only in extraordinary situations and are of limited scope (42, 43). **The countries applying for membership in the EU ("candidate countries") must transfer Community Acquis to their national legislations.**

At least one authority on national level must assume overall responsibility for the implementation of EC laws in the field of environment. **Competencies might be divided** among institutions of the same or of different level. Because of the particular nature of the Community environmental legislation, we should be certain that there are skilled professionals at all relevant levels, ranging from environmental scientists, engineers and ecologists to environmental law experts. There is an **absolute need** for strong and committed **environmental inspectorates** (at **central** and **regional/local** levels) with adequate **resources**, systems of **fines** and **penalties**. Provisions for **criminal liability** for serious violations should be in place. As a general rule, competent authorities in the various domains should have the means to obtain the necessary **information** to fulfill their tasks (the means originating from private or public sources). Where required, they should be able to duly report to the Commission.

There are over 200 EU directives, communications, recommendations and decisions that should be transferred to the national legislation(s). For clarification purposes, it should be appointed that the EU legislation is consisted of:

- **Provisions:** legal norms that are directly applied in all countries and that replace national ones, so that there is no need of transferring them to the national legislation.
- **Directives**: they are not directly applicable but are binding for member- states. They must be transferred to the national legislation(s).
- **Decisions**: they relate to specific issues and are legally binding for the institutions to which they relate.
- **Recommendations and opinions**- they are not legally binding. However, these legislative texts provide directions to institutions and EU member- states.

European Union, the term "ENVIRONMENT" means the following:

1. <u>General (horizontal) system- based assumptions as</u>: availability of information and data, environmental impact assessments, sustainable use of natural resources, sustainable development, production and consumption; inclusion of environmental policy in other sectoral policies...)

2. General provisions and programmes (Environment and Monitoring)

- **2.1.** Nuclear safety and radioactive waste
- **2.2.** Water Management and Protection
- **2.3.** Atmospheric Pollution Monitoring (air- climate- Ozone layer)
- **2.4.** Noise pollution prevention
- **2.5.** Chemicals, industrial risk and biotechnology

3. <u>Space, environment and natural resources</u>

- 3.1. Management and efficient use of space, the environment and natural resources
- 3.2. Conservation of wild flora and fauna
- 3.3**.**Waste management and clean technologies

4. <u>International Cooperation</u> (International agreements an their implementation)

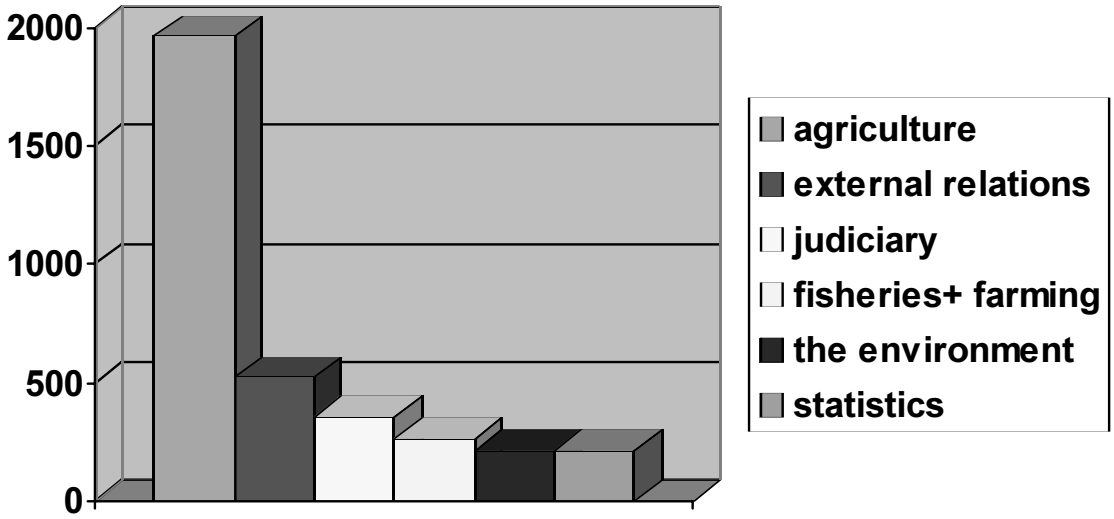

Figure 2: Number of EU Regulations by Sectors

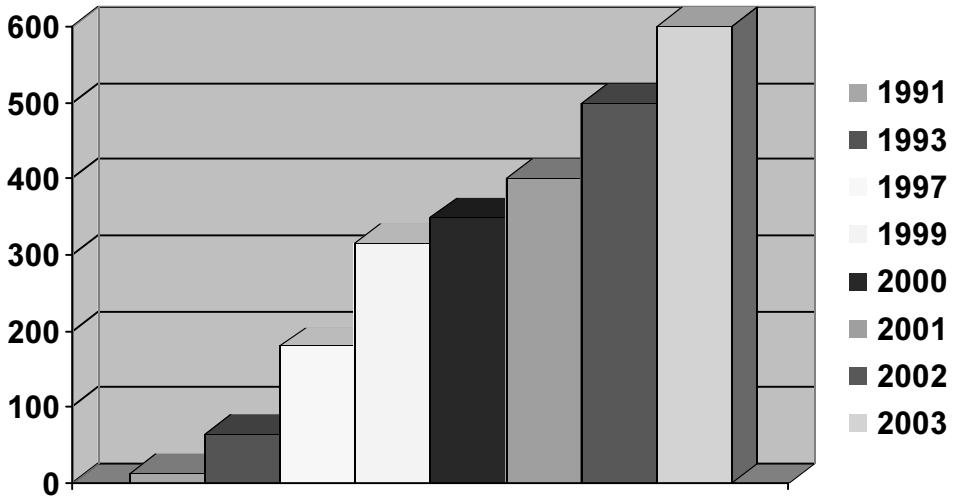

Figure 3: Number of EU Environmental regulations, by years

Generally, the number of regulations in the EU in the area of environment has been increasing daily. This monograph will not list them all. An overview of the major ones is given.

Advantages of the EU Values

Most frequent discussions concerning the EU advantages have been focused on adapting costs and difficulties in seeking financial support (6) for the necessary investments. There is a lack of precise discussions concerning the advantages brought upon the candidate countries by applying EU directives.

Lower product value, the result of lower environmental standards, represents hidden economic losses.

Some of the basic challenges for the system of environmental protection that appear on the way toward Europe are:

- Improving and expanding water supply and distribution networks of safe drinking water, in all urban agglomerations;
- Improving and expanding wastewater collection and treatment facilities;
- Providing the decrease in ambient air pollutants originating from huge thermal power plants and other facilities;
- Improving air quality, especially in many urban agglomerations;
- Providing controlled release of hazardous chemicals from the facilities and minimizing the risk of accidents;
- Providing collection, treatment and storing of municipal, industrial and medical waste;
- Providing restoration of the negative, "historic" environmental heritage: contaminated soil and rivers of unacceptable quality;
- Providing the protection of ecosystems, habitats and species from the pressures of economic growth and changes of the environment;
- Providing decrease of ambient air pollutants from passenger vehicles and other transportation vehicles;
- Controlling the emissions of pollutants from large industrial complexes, mining and agricultural activities.

The above measures will:

- Result in improved public health, due to decreases in exposure to pollutants and number of cases of respiratory diseases and fatalities;
- Perform less damage to the forests, fisheries, geologic resources, agricultural areas, fields and waters intended for fishing, buildings and monuments, by decreasing acid rains and other forms of pollution. In the long run, this will result in greater economic benefits (such as durability of buildings and their facades);
- Decreasing the (irreversible) risk of hindering natural resources (such as the underground water systems);
- Improving the protection of natural ecosystems and (already protected) species;
- Promoting tourism in cleaner environment (forests, bathing waters, natural resources);

- Decreasing the risk of diseases caused by poor water quality and improving the quality of drinking and bathing water;
- Increasing economic performance and productivity as the result of introducing of state- of the- art technologies and supporting industrial competitiveness;
- Decreasing the production and maintenance costs due to availability of clean water, by decreasing the need for water pre- treatment;
- Decreasing the consumption of primary materials as the result of a more effective utilization and a higher- level of re- use and recycling;
- Supporting employment opportunities (by opening new plants for the treatment of waste and wastewater), enhancing local and regional development of facilities;
- Improving the cultural image of a country through better understanding of the environment and its risks and applying the approach of risk minimization, adequate and timely response in accidents;
- Supporting social improvement through wider and more comprehensive learning opportunities, awareness, inclusion and responsibility in environmental issues (e.g. social responsibility for actions and inclusion in the process of waste separation and recycling).

The benefit from the EU accession will depend on the decision made by the candidate country about her own development, including the economic path chosen to pursue. Analyses show that over a half of monetary benefits are related to benefits from decreasing air pollution (including industrial air pollution) (44).

Employment will be increased with investments in the area of environmental protection. This will result in additional social stability. Assessment of the impact made by applying EU to employment – related directives has been focused on increase of employment that is the result of environmental expenditures in line with the *aquis*. Certain estimates for Bulgaria, Cyprus, The Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovenia, Slovakia and Turkey show that the **total number of newly created employment posts** related to decreasing expenditures for environmental protection, might reach more than 1.8 million of such posts a year. Among these, 480 000 posts are related to capital investments, such as infrastructure. Those values present a clear message: **large number of employment posts might be supported by investing in environmental sector of the candidate countries** (44).

> On April 12, 2005, the European Commission gave a positive estimate of Serbia and Montenegro Negotiations- Feasibility Study concerning stabilization and association. Positive opinion only proves that Serbia and Montenegro is a pro-European and pro- reform- oriented. The Commission concluded that country has satisfied certain political and economic criteria. In this manner, the EU initiated negotiations, verified on April 25, 2005 by the EU Council in Luxembourg.

The strategy of Serbia and Montenegro for association to the EU is based on provision of optimal instruments and modes of cooperation to the mutual interest. Within this cooperation, priorities of country are:

* Institutional capacity-building (reform of the administration, judiciary and security, modernization of customs services and taxation);
* Economic development and market reforms in vital areas (education, health, environmental protection, energy resources, traffic and transportation);
* Projects (inducing of employment, development of a civic society and social structures);
* Regional development (underdeveloped regions: development and increase in employment rates; development of local management and infrastructure).

The EU priorities for economic assistance are made according to their significance in Serbia. These are:

- Projects that induce and alleviate employment,
- Inducing of entrepreneurship and privatization,
- Institutional capacity- building (state administration and civic society),
- Infrastructural improvements (telecommunications, traffic and transportation, energy supply),
- New technologies: development and application in production processes, and Improvement of economic legislation and harmonization with the EU regulations.

3. Horizontal Inclusion of the Environment to other Sectoral Policies

The **Lisbon Strategy**, adopted by the European Council in 2000, aims to make EU *"most competitive and dynamic, knowledge- based economy in the world, capable of sustainable economic growth"*. The Gothenburg Council added that the strategy of sustainable development (as an *"environmental"* post of advancement of the Lisbon Strategy) should be analyzed each spring within the EC, using a series of indicators.

There is a practice in the EU, confirmed through the Lisbon Strategy, to provide finances only for these activities that certainly contribute to sustainable development (sustainable use of natural resources and sustainable production and consumption).

One of the recommended instruments is called *"green"* public procurements. In March 2003, the EU ministers have adopted a position by which benefit from public purchases is limited only to contracting bodies. However, the coalition of environmental non- governmental organizations has convinced the Parliament that it should also take into consideration interests of the public. NGOs insist that the criteria for contracting the best tenderer (public procurements) should not be limited only to the "visible" ones (in relation to the products) but that they should also expand and encompass the production processes and methods. Such a practice would enable a public authority demand that the energy be produced from renewable sources or that the timber should have the mark of being produced in sustainable forestry, or that the paper has been bleached without use of chlorine.

It was also confirmed that certain subsidies are harmful to the environment. **The Sixth Environmental Action Program (6EAP)** gives general instructions for the EU environmental policy by 2012. It defines a list of certain subsidies *"with the aim of gradually eliminating them"*. The program also asks for *"promotion and encouragement of utilization of fiscal measures such as taxes that are related to the environment.* The **6th EAP**, adopted by the European Parliament and Council in 2002 and in force until 2012, requires that the European Commission should prepare **Thematic Strategies** for the seven areas:

- **Air Pollution** (adopted on 21/09/2005)
- **Prevention and Recycling of Waste** (adopted on 21/12/2005)

- **Protection and Conservation of the Marine Environment** (adopted on 24/10/2005)
- **Soil**
- **Sustainable Use of Pesticides**
- **Sustainable Use of Resources** (adopted on 21/12/2005)
- **Urban Environment** (adopted on11/01/2006)

The Thematic Strategies represent the next generation of environment policy. Each Strategy will thus help achieve the long-term goal of environmental sustainability while contributing to the Lisbon goals. All strategies take a longer-term perspective in setting clear environmental objectives (to 2020) and will thus provide a stable policy framework. They focus on identifying most appropriate instruments to deliver European policy goals in the least burdensome and most cost-effective way possible.

Preparation of the Seventh Framework Program (FP7) was announced; the environment (including pollution and risks, climate changes, sustainable resource management, technologies for the environment, monitoring and instruments for assessment) and energy (renewable sources of energy, energy efficiency, etc.) are among its priorities.

In the Brussels Summit (March 2003), leaders of the EU called for strengthening of the Cardiff process. The Economic and Financial Ministerial Council (*Ecofin*) was also asked to *"stimulate subvention reforms that have significant negative effects on the environment, incompatible with sustainable development"*. The Commission was asked to make an annual estimate of the Cardiff Process results and to review regularly, on each spring summit, its policy in relation to the environment. The Cardiff Process is still young, in view of its both content and institutional arrangements and implementation.

So, the inclusion of environment in other sectoral policies has been raised to the higher level by **the Cardiff Process** (cf. COM (2004) 394 *final*).

The following EU documents, among others, regulate this process:

- Sustainable **tourism** in developing countries COM/1998/563 final/2
- Integrating the environment in **energy** policy, 1998
- Strategy of integrating of the environment in **unified market**, 1999
- Strategy of integrating of the environment in **industry**, 1999
- Promotion of sustainable development in **non- energy extractive industries,**

- Introducing the environment to **economic policy**
- Integration of the environment to the policy of **fisheries**, 2000
- **"The 2000 White Paper"**- "the one who makes damage to the environment will pay remediation costs"
- Integration of the environment to **urban environment** (1411/2001/EC)
- Impact assessment of **effects of plans and programs** on the environment (2001/42/EC)
- Biodiversity Action Plan for **agriculture**, 2001
- Biodiversity Action Plan for **fisheries**, 2001
- Biodiversity Action Plan for use of **natural resources**, 2001
- Biodiversity Action Plan for **economic development and cooperation**, 2001
- Integrated **product** policy (IPP), COM(2003)302 final
- **Environmental Technology** Action Plan (ETAP), COM (2004)38 final; COM (2004) 38 final.

Standardization plays a part in the formulation of Community policies and the dissemination of technical knowledge. By encompassing environmental aspects, standards can contribute to sustainable development and the associated Community policies. European standardization makes it possible to apply harmonized technical standards among the Member States of the European Union. It facilitates trade in a single, unified market.

European standards are voluntary documents compiled by the European or international standards organizations. This work is based on a proactive process and consensus among the stakeholders. The process of compiling standards is conducted in view of the new approach to technical harmonization and standardization.

3.1 Horizontal Legislation and Strategies

Major **horizontal directives** are:

- **Council Directive 85/337/EEC on the assessment of the effects on the environment (EIA)** amended by 97/11/EC- Within the process of harmonization with this Directive, it is necessary to adapt the regimen of approval of impact assessments with the list of projects and procedures in the manner regulated by the Directive. Environmental impact assessment is predicting, characterizing and quantificating possible consequences (impacts) on the environment, of any project (objects or works) while still in the planning stage. The European EIA Directive from 1985 (amended in 1997) lists 35 types of objects and works for which it is necessary to have environmental impact assessment made. The EIA Study contains description of the object or activities, description of the current state

of the environment (on the concrete location or entire area that might be jeopardized), description and quantification of the magnitude and significance of potential direct, indirect, cumulative and long- term impacts on the environment, during normal operations and in possible accidents.

- **SEA Directive (Directive 2001/42/EC on the assessment of the effects of certain plans and programs on the environment)**: it introduces procedures for strategic environmental assessment. As the term, SEA is used to describe the process of environmental impact assessment by strategic actions and documents (policies, strategies, plans, programs, legislation, international agreements, etc.). European 2001 SEA Directive limits itself to plans and programs. According to it, (strategic) environmental impact assessment is consisted of preparation of the report on the state of environment; consultations, adoption of the report and consultation results in the process of decision- making and providing information and data concerning the decision.
- **Council Directive 90/313/EEC on the freedom of access to information on the environment**, amended by 2003/4/EC: it provides access to information relevant for public knowledge on the state of the environment. The directive became effective in June 2005. It relates to the access of the judiciary system to the issues of environment. Provision of data, monitoring and information systems represent an important segment of access to real information. Monitoring and analysis of parameters and processes in the environment are an important basis of this decision (45, 46, 47).

Major **horizontal thematic strategies** are:

- **Strategy of sustainable development – COM (2001) 264 final ("A Sustainable Europe for a better World: a European Union Strategy for Sustainable Development")**. It regulates long- term strategy in applying the policy of economic and social development and its simultaneous harmonization with environmental requirements. The strategy is a catalyst for change of opinion, behavior and policy and has three parts: a collection of proposals ensuring that the future policy is much more coherent and effective; a collection of central goals and measures ,and the steps for the implementation of the strategy and monitoring of its advancement. A large number of states has regulated (or is in the process of defining of) their **national strategies of sustainable development.** Bulgaria, Hungary, Czech Republic, Croatia and Slovenia are among them.
- **Strategy on the Sustainable Use of natural resources COM (2003)572**[V]: The postulates of the 6EAP approach this strategy. It covers several areas: environmental impact due to increase of resource use; lack of renewable resources such as the fish, forests and fresh water; care for the unrenewable resources; inequality in access to resources; lack of space, etc. The strategy connects different policies that make an impact on transparent use of resources; it applies integrated approach and regulates other strategies that can assist in holding unfavorable processes.

[V] adopted on 21/12/2005

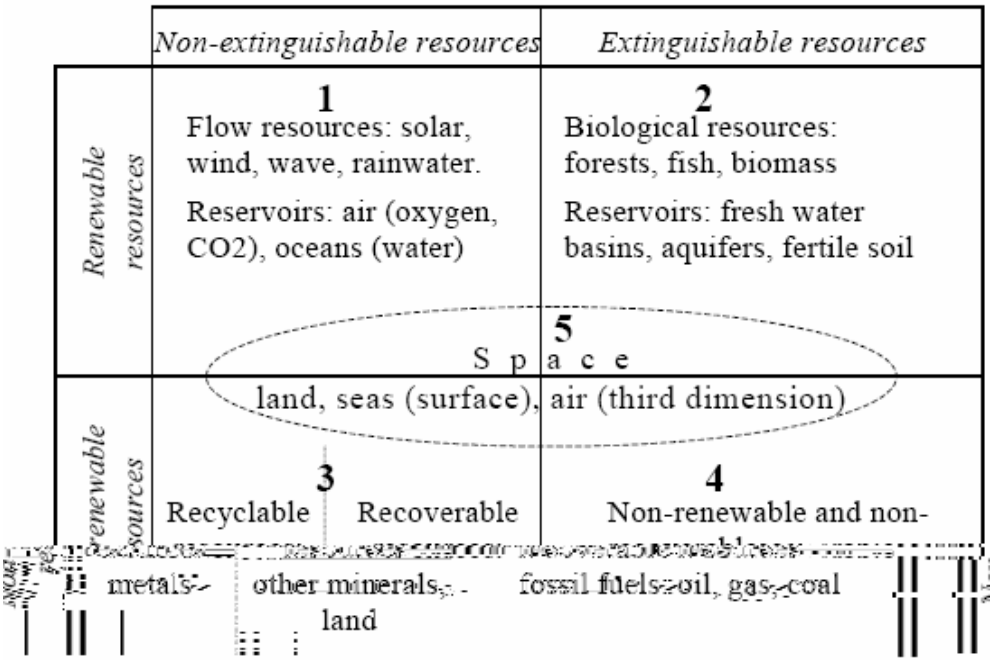

Figure 4: Classification of Natural Resources

An example of such strategic thinking is the action within thematic planning on the local spatial level, aiming at preserving the nature and resources. Planning of micro- locations would have a positive effect on socialization and environmental quality. The latter qualities are certainly essential for sustainable development (48, 49). The strategy points to the fact that the manner of utilization and managing of the soil and space are the sole cause of erosion, which is controllable and manageable. Improper use of soil is directly related to powerful erosion processes, known as "anthropogenic erosion". Counter- erosion measures are the solution that enables protection and increased production capabilities of the soil (50).

Sustainable development of natural resources of medicinal and aromatic plants is in direct relation to application and promotion of legislation and standards that need to be harmonized with EU legislation (51). Sustainable development of fruit- growing and the determinants of sustainable agriculture and the organic food production[!] are the examples of such analyses.

It is again worth mentioning that biodiversity and its preservation is an important resource, including its preservation in the protected areas (52) and the abundance of forests (53).

[!] Hojka Z. et al. Proc 2nd Regional Conference "Environment for Europe" Belgrade 2006

- Towards a thematic strategy on the urban development- COM (2004) 60 final[+] – it moves towards to the pattern and type of land use within the urban area. The thematic strategies of urban design refer, first, to the physical design and planning of the built environment (physical infrastructure, building complexes, spaces and urban areas in relation to the natural environment in and around built- up areas and, second,to the sustainable development of settlements. They aim at improving the quality of life and of urban zones and provide prerogatives to secure healthy environment for European urban citizens, reinforcing the significance of environment for sustainable urban development (which takes into consideration not only the environment but economic and social needs of the population). Priority issues are sustainable urban management, sustainable urban/ public transportation, sustainable building and sustainable urban planning.

Realizing those concrete goals will demand cooperation among stable industrialized societies and developing countries, aided by visionary and yet concrete programs on the level of international institutions and national governments. Sustainable consumption is the search for improved quality of life, in both developed and developing countries of the world.

The Integrated Product Policy (IPP) has resulted from the life cycle assessment – life cycle analysis[□]. Non-legislative approaches, such as the Integrated Product Policy (IPP), have been developed specifically to reduce the negative environmental impacts of products throughout their life cycle, including production, use and disposal. The integrated product policy aims to make the market „green", and this applies to purchase, consumption, and utilization, as well as the supply – the product development by means of the integrated application of the policy instruments in the environmental protection field. Integrated Product Policy is supplementing this approach by focusing on products and how they contribute to environmental degradation at the various stages of their life cycles. The EU mainly takes action on waste prevention through integrated and life cycle approaches. For example, waste prevention is an integral part of BAT and the BREF that have been developed in the framework of the IPPC Directive. The Environmental Technology Action Programme (ETAP) has identified numerous ways in which environmental technologies can reduce negative environmental impacts of production and consumption. The life-cycle thinking can be usefully applied across various policy fields. All these policies affect resource use and therefore need further to integrate resource use issues and their negative impacts in a coordinated way. Because standards regulate how a product is made, used, maintained and treated at the end of its life, they can have a substantial influence on the way products impact on the environment[*]. Environmental management systems (ISO 14001 and EMAS) could be discussed in the context of organizations response to the challenge of sustainable development [Ψ] The **Regulation (EC) 761/2001 of the European Parliament and of the Council allowing voluntary participation by organization in a Community eco- management and audit scheme (EMAS)** represents the superstructure of the system of environmental management that has existed within the series of international ISO 14001 standards.[•]

Although there are no universal criteria for the notion of "quality of life" for different people and cultures, common features do exist. Consumption should be oriented toward their improvement. In many countries in the developing world, standard of living and quality of life can be promot-

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□ Jovanovic Dj et al., Proc 2nd Regional Conference "Environment for Europe" Belgrade 2006

* Mihajlov A., Proc WASCON 2006 Conference , Belgrade (2006)

Ψ Magdalena Rybaczewska-Blazejowska, Jorg Beck, Proc 2nd Regional Conference "Environment for Europe" Belgrade 2006

" Savic Z, Kanacki Z, Kanacki L. Proc 2nd Regional Conference "Environment for Europe" Belgrade 2006

ed through increased but more efficient consumption. In the developed countries, however, where the demand is more than satisfied, a notion prevails that the quality of life may be decreased due to defects of other determinants (socializing, belonging to a community, individual health, enough leisure time, recreation and cultural activities). Without them, the consumption cannot effectively secure the quality of life. It is no more controversial to assume that the mere "material" consumption of goods and services is not sufficient for one's sense of well- being. The state of physical, natural, social and cultural context of a community- the environment- is crucial for true validation of consumer practices.

Thematic strategy on the prevention and recycling of waste (COM (2003)301)©: this long-term strategy aimed at helping Europe become a recycling society that seeks to avoid waste and uses waste as a resource. As a first step, the Commission proposed revising the 1975 Waste Framework Directive, in order to set recycling standards and impose on EU Member States to develop national waste prevention programs. The revision will also merge, streamline and clarify legislation, contributing to better regulation.

Thematic Strategy on Air Pollution (COM (2005) 446) ♦ - Clean Air for Europe was launched in March 2001 with a Communication (COM (2001)245)). It is a program for technical analysis and policy development that corroborated the development of Thematic Strategy on Air Pollution under the Sixth Environmental Action Program.

Soil Policy Development (in preparation) - Soil is defined as the top layer of the earth's crust. It is formed by mineral particles, organic matter, water, air and living organisms. Soil is an extremely complex, variable and live medium. Soil- the interface between the earth, the air and the water- is a non-renewable resource performing many functions vital to life: food and other biomass production, storage, filtration and transformation of many substances including water, carbon, nitrogen. Soil has a role as a habitat and gene pool, serves as a platform for human activities, landscape and heritage and acts as a provider of raw materials. These functions are worthy of protection because of their socio-economic as well as environmental importance. Soil is subject to a number of degradation processes or threats in the EU. In an earlier communication "Towards a Thematic Strategy for Soil Protection", the Commission identified eight threats to soil, namely: **erosion, decline in organic matter**, local and diffuse **contamination, sealing, compaction, decline in biodiversity, salinisation** and **landslides**.

The present Dutch approach is often addressed in Europe as an example of practical, innovative and cost effective soil management∏. During the last 25 years of finding the best practices, the

© adopted 21/12/2005

♦ adopted on 21/09/2005

∏ Natalia Y. Hoogeveen, Proc.2nd Regional Conference "Environment for Europe", Belgrade (2006)

soil clean-up policy evolved from a sectoral soil remediation program, (managed and financed mainly by the central government and provinces) towards an integrated contaminated sites management approach, managed by local and regional bodies, financed by tax money and private investments. The contamination perception evolved from very strict demands on "Full remediation" to the more pragmatic and practical concept of reducing or eliminating risks associated with contamination to the acceptable levels for humans and ecosystem, so-called "Risk based management". The environmental regulatory system is presently undergoing trough considerable modifications towards integrated risk- based management to satisfy the changing needs of the society and to correspond with the new European legislation as Water Framework Directive, Waste Directive and EU Soil Strategy.

Sustainable Use of Pesticides (in preparation) - Pesticides have been the center of controversy for a long time and are associated with risks to human health and/or to the environment. On the other hand, society accepts these risks within certain limits as there are also benefits linked to the use of pesticides, in particular in agricultural production.

4. ENVIRONMENT

4.1 Nuclear Safety and Radioactive Waste

As far back as in 1957, the European Community signed the Contract on establishing of European Agency for Atomic Energy. In the EU countries only, the segment of nuclear safety and security from radiation has been recently promoted. Adoption of the new regulation on protection from radiation, harmonized with the common and basic document, has been added to the above promotion. During negotiations, special attention is paid to the safety of nuclear plants (if any; Slovakia and Bulgaria have to modernize their nuclear power plants in Bohunice- V and Kozloduj, respectively, if they want to fulfill the association commitments). Moreover, they have to prove they can adequately manage the respective radioactive waste. The EU supports increase of nuclear safety by co- financing closing down of the nuclear units that cannot be modernized and by providing technical and other assistance in modernization of these plants. The financial assistance comes from the PHARE program, EBRD loans and contributions to the nuclear energy bill managed by EBRD. The most important EU regulations in this area are Convention on

nuclear safety and the 1994 Resolution on the nuclear waste management.

Since there is a moratorium on the construction of nuclear power plants in Serbia and Montenegro, special attention is given to the issue of defining and applying EU- based nuclear waste management programs.

The issues of radiation monitoring in the environmental media also relates to monitoring of activities in the area of nuclear safety and radioactive waste management but is not limited to it.

4.2 Water Protection and Management

Legislation has defined a detailed and comprehensive management system for water sources. It demands from member- states to establish adequate administrative structures, planning and monitoring. It also regulates general quality standards for surface and ground waters and for the special- purpose waters (bathing or drinking water); emission standards for certain pollutants (nitrates or hazardous substances) and standards for technology (urban waste- water treatment).

Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy aims at: preventing the worsening and supporting the improvement of the water- related ecosystems; promoting long- term protection of available water resources; providing progressive decrease of pollution of surface and ground waters; contributing to mitigation of results of droughts and floods. The first paragraph of its Preamble states, “water is not a commercial product, like others but a heritage that must be protected, defended and treated as such” (55).
In view of surface waters, the goals of Directive are:

- to prevent worsening of the state of all water bodies;
- to protect and renew the state of safe water in the manner regulated by Directive. It should be done in all natural water bodies by 2015;
- to protect and intensify good potential of the environment and good chemical composition of all artificial and strongly modified water bodies by 2015;
- to halt gradually the release of priority hazardous substances and progressively decrease the presence of other harmful substances in water bodies.

Directive impels that the management of surface waters be based on the principle of river basins, with an integrated approach in solving issues of pollution: by emission limit values and standards

of quality. Important directives for ELV are **Council Directive concerning urban waste- water treatment (91/271/EC)** and **Council Directive concerning the protection of waters against pollution caused by nitrates from agricultural sources (91/676/EEC)**. Important directives for water quality are **Council Directive concerning the quality of bathing water (76/160/EEC)** and **Council Directive on the quality of water intended for human consumption (98/83/EC)**.

EU Water Framework Directive embodies sustainable principles by introducing environmental, social and economical requirements. The rationale behind this is the fact that sustainable water management is an important contribution to the achievement of social and economic development that is linked to environment protection. Therefore, it requests quality in terms of effluent emission and water quality, but it also requests public participation and pricing of the water[v].

Directive of the Council concerning urban waste- water treatment (91/271/EEC) demands that the member- states provide collection and treatment of waste- waters in urban environments. General demand of the document is secondary treatment, except in cases of certain coastal areas, where primary treatment may be sufficient. The directive sets a deadline for application of the relevant collection and treatment systems. It will have to be applied first to larger cities and then to the smaller ones.

Wastewaters represent a huge problem in urban settlements (56).

Member- states are obliged to label sensitive areas- i.e. these with eutrophic water bodies, characterized by poor water exchange, or the ones used for separation of drinking water. In sensitive areas, demands are even stricter: the system of collection and treatment should be carried out at an earlier stage. It is also so with tertiary treatment. The directive imposes that industrial wastewaters entering the city purification systems, should be pre- treated. In such a manner, release from the treatment facility will pose no harm to the environment. The sludge can be re- used or safely removed.

Directive demands that member- states introduce relevant administrative and monitoring structures in order to enable authorities obtain approvals to for the release of city wastewaters.

Council Directive concerning the protection of waters against pollution caused by nitrates from agricultural sources (91/676/EEC) aims at preventing and decreasing this particular type of pollution. It demands that member- states should impose norms to obtain healthy agriculture, in respect to water pollution originating from agricultural sources. Although adherence to norms is voluntary, member- states should impose an educational program and train and supply relevant

[v] Stepanovic Vladan I Snezana Lekic, Proc. 2nd Regional Conference "Environment for Europe", Belgrade (2006)

information to the farmers in order to provide better understanding.

It is necessary to provide monitoring, enact full return of the expenses for water utilization services (including those for the environment and resources). By 2014, it is necessary to have a municipal wastewaters treatment plant (with secondary treatment). Sewerage systems should be improved and expanded, to enable re- use or disposal of sewage sludge.

The goals for ground water are:

- to prevent worsening of all ground water bodies;
- to protect and renew good condition of ground water, regulated by Directive concerning water bodies, by 2015;
- to decrease content of dangerous and harmful substances present in ground water as a result of man's activities.

In protected areas, objective is to harmonize all standards with EU Directives by 2015.

It is necessary to establish administrative units and relevant bodies for basins. The assignment of such authorities would encompass analyses of the basin features, monitoring of all man's/women's activities in relation to basins and economic analyses of water utilization. Measures and management plan for each basin should be designed, respecting the rules of transparency and public consultations.

The Directive anticipates that the EC make a list of priority hazardous substances and of other priority substances, to denote substances that pose a major risk to the water environment. In relation to water bodies, the release of such substances is subject to phasing- out or gradual decreasing.

4.3 Atmospheric Pollution

Air

Council Directive on ambient air quality assessment and management (96/62/EC) provides a general legal framework in this area. It aims at regulating the goals for ambient air quality, establishing the ambient air quality in EU, based on general methods and criteria, obtaining adequate information on ambient air quality. Finally, it should help make that information available to the public, maintain and improve the quality of ambient air. The Directive regulates the prin-

ciples and demands for monitoring and assessments.

In administrative sense, the Directive demands from member- states to establish adequate administrative structure for the control of air quality: relevant bodies for implementation of the Directive, air quality assessments, approval of measuring devices and of measuring precision, analysis of the assessment methods and coordination with the system of quality throughout EU.

Besides the framework Directive, there is a set of directives relating to specific issues. Their major goal is to review the ambient air quality standards, limited values and improve monitoring. These are:

- Council Directive on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations (99/13/EC),
- Council Directive relating to the sulphur content of certain liquid fuels (93/12/EEC),
- Council Directive relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air (99/30/EC),
- Air Pollution: fuel quality monitoring and phasing- out (2003/17/EC),
- Benzene and carbon monoxide in the air (2000/69/EC), and
- Ozone in ambient air (2002/3/EC).

The 2001 "Clean Air for Europe" (CAFÉ) Program has been set as the basis for thematic strategy on air quality.

Climate

Most important documents in this segment are certainly the **Kyoto Protocol** and Framework Convention on Climate Changes 2002/368/EC. The former regulates the procedure for decreasing GHG emissions.

Among other issues, the Kyoto Protocol regulates the *Clean Development Mechanism* (**CDM**), enables projects aimed at emission decrease, supporting sustainable development in developing countries. Those projects generate *Certified Emission Reductions* **(CER)**, which the investor may use for own needs. If a developing country wants to host the CDM project, it has to ratify the Kyoto Protocol, establish the *designated national authority* **(DNA)** that will have the responsibility to decide whether or not the activities within the CDM project assist in realization of sustainable development and the state agrees to participate in the project. Some projects fall in the following project categories:

- Projects related to renewable sources with maximum output capacity to 15 MW;
- Projects related to enhancing of energy efficiency, that decrease consumption in relation to supply and/ or consumption to 15 GWh/ a year;

- Other projects that decrease anthropogenic emission of the source and direct emission of less than 15 000 t of equivalent CO2 per year.

Ratification of the Kyoto Protocol and participation as Non- Annex I Member Countries does not result in any additional obligations for a country. However, it does create a possibility for access to additional financial means in order to attain sustainable development.

In response, international, regional, national and local initiatives are being developed and implemented to limit greenhouse gases (GHG) concentrations in the Earth's atmosphere (ISO 14064)[®]

Inclusion in the Regional Energy Market has been conditioned by ratification the Kyoto Protocol. **South Eastern Europe Energy Treaty, i.e. Treaty establishing Energy Community** (2005) is among most significant arrangements in the areas of energy and environmental protection. It imposes adoption of a series of measures for the signatory countries in order to help them manage their energy systems more effectively. The Treaty eases approximation of the SEE countries to the technical, legislative and other important standards of the EU. The targets to be attained by the SEE countries are rational and sustainable utilization of energy and promotion of alternate sources of energy. According to the Treaty provisions, the *Acquis* will be applied in the areas of environmental protection. Through the SEE Energy Community, signatory countries will be directly included into the EU power system (electric power and gas). The Treaty managed to create close cooperation among the countries of the region and EU, helping them to speed up the of SAA Process.[Σ]

Ozone layer

Although the repair of ozone layer will last for years, several measures have been undertaken so far to halt the process of its depletion. Most important documents in this area are the **Vienna Convention for the Protection of the Ozone Layer** (1985) and **Montreal Protocol on Substances that Deplete the Ozone Layer** (1987). The amendments of the latter are also of great importance. They represent instruments for decreasing, controlling, limiting and phasing out of the use of substances that deplete the ozone layer (EC- 2037/2000). Financial means from the multilateral fund have been directed to these activities as well. As a note, ozone depletion in the stratosphere may be caused by anthropogenic and natural sources. The latter have little or indirect impact. Anthropogenic sources are predominantly CFC and HCFC gases emissions. Emissions from aircraft engines also deplete the ozone layer, as well as the nitrogen oxides (NOx) emissions, unburnt hydrocarbons, carbon monoxide (CO), carbon dioxide (CO2) and sulphur dioxide (SO2).

[®] Đorde Jovanovic et al., Proc.2nd Regional Conference "Environment for Europe", Belgrade 2006
[Σ] Vukasovic Vid, Proc.2nd Regional Conference "Environment for Europe", Belgrade 2006

4.4 Noise Pollution

A major document in this area is **Directive related to assessment and management of noise** pollution (2002/49/EC). Some more specific ones deal with the noise generated by aircrafts, vehicles, home appliances, outdoor equipment, motorcycles etc.

4.5 Chemicals, Industrial Risk and Biotechnology

Chemicals

Major EU goal in relation to chemicals, is to provide a high level of protection of human health and environment, with simultaneous effective functioning of internal market and support given to innovations and competitiveness in chemical industry. Relevant regulations encompass the areas such as classification, packaging and labeling of dangerous substances, control of the risk posed by existing substances and decrease of marketing and use of certain hazardous substances and products.

Major drawbacks of the current regulations are reflected in issues such as general lack of knowledge on the characteristics and use of chemical substances, a slow ongoing process demanding engagement of many resources to estimate and qualify chemicals; difficulties in obtaining information on the usage and exposure of downstream users to certain chemicals, and other procedures by authorities that should bring decisions concerning risk management (reached by authorities in the process of establishing whether a substance might pose a serious risk). Results of analyses of most relevant legislative documentation dealing with the above issues are given in "**White Paper- Strategy of the Future Chemicals Policy"**. The EC adopted it in February 2001.

Council Directive on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labeling of dangerous substances (67/548/EEC) was adopted in 1967. After a series of amendments, it was shaped as **93/32/EEC**, offering a harmonized system of classification, packaging and labeling of dangerous substances. Since 1993, relevant authorities have been demanding risk assessment for each chemical in order to make an assessment of potential dangers it poses to human health and the environment based on exposure (EEC/793/93, for the existing chemicals and directives for new chemicals).

Council Directive on the approximation of the laws, regulations and administrative provisions of the member states relating to restrictions on the marketing and use of certain dangerous substances and preparations (76/769/EEC) was adopted in 1976. It regulates extraordinary cases, when it is not sufficient for the chemicals to be regulated solely by their classification and labeling. The substances, on which restrictions have been imposed, have been listed in Annex to the Directive, with restriction conditions. The ban encompasses category 1 and 2 of carcinogenic and mutagenic substances and of the substances toxic to reproduction. It has been applied based on the definitions for such substances, given in Council Directive 67/548/ EEC. Definitions have been regularly updated in light of *technical progress*.

There have been about 20 changes and addenda to this Directive. They imposed bans to about 40 substances or groups of substances (a total of 900 individual substances). New chemicals management framework has been in progress. It has been called "**REACH**" (registration-evaluation-authorization- restriction of chemicals). Good basis for this process is the document **COM (2003)0644 final (Proposal for a Directive of the European Parliament and of the Council amending Council Directive 67/548/EEC in order to adapt it to Regulation (EC) of the European Parliament and of the Council concerning the registration, evaluation, authorization and restriction of chemicals).**

To a large extent, chemicals management has been governed by the EU regulation related to **good laboratory practice** (GLP) (Directive of the European parliament and of the Council on the inspection and verification of good laboratory practice (GLP), 2004/9/EC and Directive of the European parliament and of the Council on the harmonization of laws, regulations and administrative provisions relating to the application of the principles of good laboratory practice and the verification of their application for tests on chemical substances, 2004/10/EC).

Industrial Pollution and Risk

Council Directive concerning integrated pollution prevention and control, 96/61/EC (IPPC) aims at preventing and decreasing environmental pollution in an integrated manner, covering the various media (air, water and soil) and applying the principle of the best environmental option. Based on the best available techniques, it sets emission limit values and lays down the general principles governing the basic obligations of operators or persons in control of the installations. It takes account of waste generation and energy consumption. The Directive lists in detail the descriptions to be supplied when applying for a permit and includes provisions for checking compliance with permit conditions. The permit should take into account monitoring conditions. For the listed industrial sectors, specified as the "Interested Groups List within the IPPC Directive"

conditions that are more complex apply (in the areas of applied production technologies and measures taken to provide safety of the environment). In other words, the IPPC Directive regulates conditions for obtaining an "environmental" permit. It regulates Best available techniques (BAT), regulated through BREF (reference books for certain industrial activities) adopted by the EU. Emission limit values and other conditions should be based on the BAT concept. Practically, BAT on the community level are regulated in the process of information exchange between the Commission, authorities in member countries and interested industries. Joint Research Center (JRC) based in Seville, Spain, has been nominated to organize BREF- Best available technology REFerence document, to offer guidelines for issues that are considered "BAT" within the EU.

Obligations arising from this Directive are related to installations: they should undertake all possible measures against pollution through applying BAT; they should take care not to cause major pollution; avoid generation of waste; be efficacious in energy consumption; undertake precautionary measures to prevent accidents and consequences of accidents, even after break of their activities. Finally, they should restore the installation location to be environmentally satisfactory level (i.e. before the initiation of work processes in the installation).

The assignments of relevant bodies have also been regulated: no new installation will start working without the permit; the existing installations will obtain the permit by harmonizing their performance with relevant regulations and requirements; they should have effective integrated approach toward the process of permitting, in cases a larger number of bodies is included in the process; installation permit regulates the conditions and the adherence to them is a guarantee of relevant legislation; they have to take into account developments in the area of BAT and results of monitoring. Furthermore, they will make those available to the public.

The Directive relates to six industrial sectors: energy, metal manufacturing industry, mineral industry, chemical industry, waste management and other activities (paper mill industry, textile, leather, slaughterhouses, food- processing industry, large- scale poultry rearing and pig breeding, surface processing with organic solvents, coal and electric graphite industry).

Member- states must provide that the operators in industry adhere to the conditions regulated in their permits. European Commission will keep a public register of polluters- EPER (European Pollutant Emission Register), founded by **Decision 2000/ 479/ EC on the implementation of a European pollutant emission register (EPER) in order to improve public information and participation**.

Council Directive 96/82/EC on the control of major accident- hazards involving dangerous substances (Seveso II Directive), aims at preventing major accident- hazards where dangerous substances are involved. It also aims at limiting the consequences of such events to the people and environment. Operators on installations are bound to have documentation and supply it to the relevant authorities on request. When adequately applied, such documentation represents a comprehensive system of major accident- hazards prevention.

It is necessary to form a good notification system when using (dangerous) chemicals in industrial and other facilities and the hazard risk management system.

The following documents are very important: **Directive 2001/80/EC on the limitations of emissions of pollutants of the same nature from large combustion plants; Council Directive 84/360/EEC on the combating of air pollution from industrial plants in relation to the release into the air of any of the polluting substances covered by the aforementioned Directive** (which was repealed by the IPPC Directive and the *"Eco management"* **Regulation 761/2001/EC (EU Eco-Management and Audit Scheme (EMAS)).**

Biotechnology

Council Directive 90/219/ EEC on the contained use of genetically modified micro- organisms regulates the manner of use of such organisms. Within the context of biotechnology and GMO, a document titled *"White Paper on Food Safety"* (adopted by EU in 2000). The consent (of February 2000) reached in Montreal related to the Cartagena Protocol on Biosafety. In relation to GMO, the EU applies the principle of prevention. The following documents are relevant for this issue: Directive 2001/18/EC of the European Parliament and of the Council on the deliberate release into the environment of genetically modified organisms; Commission Decision 2004/204/EC on detailed arrangements for the operation of the registers for recording information on genetic modifications in GMOs, provided for in the Directive 2001/18/EC of the European parliament and of the Council; Regulation (EC) 1830/2003 of the European parliament and of the Council concerning the traceability and labeling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms (amending Directive 2001/18/EC), and Regulation (EC) 1946/2003 of the European parliament and of the Council on transboundary movements of genetically modified organisms.

European biotechnology companies leave the old continent and place their research facilities in the USA or Canada. The differences culminated when the EU imposed moratorium on transgenic plants in June 1999.This also meant a ban on all transgenic products, like seeds, foods and feed from the USA to EU. The dispute reached WTO in the same year. Registering 17 new transgenic sorts to the EU common sort list at the end of 2004 was interpreted as *de facto* moratorium repeal. At present, there are two important issues related to legislation and transgenic plants and they both relate to labeling and co- existence (112).

Genetically modified organisms (GMOs) are such entities in which genetic material has been changed in the manner that does not correspond to natural multiplication (i.e. natural recombination). Through the process of genetic modification, the favorable genes may be taken from one species and placed into another. These species may be bacteria, yeasts, viruses, plants, insects, fish or mammals.

4.6 Management and Efficient Use of the Space, Environment and Natural Resources

Protection of the Wild Flora and Fauna

Habitats Directive" 92/43/EEC) contributes to the protection of biodiversity through creation of a system for the protection of the species, their habitats and localities. The Directive anticipates creation of a European network of special preservation areas, **Natura 2000**. It should provide that the species and their habitats maintain in favorable condition within their natural domains.

Waste Management and Cleaner Technologies

Basic principles underlying waste legislation encompass hierarchy of waste management (prevention, reuse, recycling, use as the source of energy and disposal); responsibility of the generator, vicinity of disposal and self- sufficiency of the EU in the issues of waste disposal (58).

Council Directive 75/442/EEC on waste, amended by the **Council Directive 91/156/EEC** (Pollution and Nuisances) aims at establishing the system of coordinated waste management in the Union and at limiting (i.e. preventing and decreasing) waste generation and its harmful impact. The document supports development of cleaner production technologies and better product design; development of adequate techniques for waste disposal, re-use and its use as energy source. It demands that the member states shall prohibit uncontrolled waste disposal and take measures so that it is reused (as the source of energy) and disposed of in an environmentally-friendly manner. Member states shall create a network of waste disposal facilities. Costs of waste disposal shall be borne by the owner or generator of waste.

The Waste Directive regulates basic terminology related to the issue of waste; establishes a unique system of classification in the EU countries (European Waste Catalogue); regulates measures that relate to all substances or items that the operator disposes or has the obligation of disposing according to the national permits (in force in member countries); regulates strategies of waste management in the EU, prohibits uncontrolled waste disposal; regulates hierarchy in waste management (with strong support of prevention, recycling and conversion in order to reuse the waste; promotion of cooperation among member states, aimed at foundation of an integrated network of disposal installations that will be working based on BAT); regulates the obligation of issuing permits for all subjects involved in the treatment, storing and disposal of the waste and permits for treatment facilities; introduces the "polluter pays" principle; oblige member states to establish a supervising authority to monitor the application of the above measures. The authority is obliged, by the same Directive, to regulate at least one Waste Management Plan and analyze the types, quantities and origin of waste that should be treated or landfilled. The competent authority is obliged to regulate general technical requirements, treatment of special types of waste, find suitable location and treatment facilities.

Council Directive 91/689/EEC on hazardous waste, amended by the **Council Directive 94/31/EC**, establishes the management, utilization and proper disposal of hazardous waste and amends the waste framework. It regulates hazardous waste and introduces stringent demands for managing it. Hazardous waste must not be mixed with other sorts of waste and should be separated, wherever possible. It must be properly packaged and labeled during the process of collection, transport and storing. Directive regulates that facilities that generate, keep or dispose of hazardous waste shall submit the relevant data on the waste (data from the waste registry) to the authorities on demand. **Council Decision 94/904/EC** establishes a list of hazardous waste pursuant to **Directive 91/689/EEC**). It also regulates an authority responsible for definition and announcement of hazardous waste management plan. Member states are obliged to identify hazardous waste, keep a proper record of it, take care not to mix it with other sorts of waste and with non- hazardous waste. The document imposes adoption of plans for removal of types of hazardous waste; demands that the authority publishes hazardous waste management plans; regulates and imposes measures and conditions to treat hazardous waste in all operations of storing, returning, collecting and transporting it in order to prohibit uncontrolled disposal of the types of hazardous waste and their forbidden transport. The Directive imposes that generators of hazardous waste shall keep records and identify quantities of hazardous waste and that they shall be submitted to periodical check-ups. It demands from the national authority for hazardous waste to keep the register on the types of the waste, treatment manner and records and control of the relevant treatment facilities. The document imposes procedure for obtaining the permits related to the hazardous waste treatment plants.

Council Directive 99/31/EC on landfills of waste aims at introducing more stringent technical requirements in order to reduce negative effects on the environment of landfilling of waste. It especially relates to the soil, ground and surface waters and population health. The document regulates various categories of the waste (municipal, hazardous, non- hazardous and inert), landfill classes (above the ground or under it): landfill for hazardous, non- hazardous and inert waste. It imposes treatment of the waste prior to landfilling (pre- treatment) and prohibits landfilling of untreated waste; prohibits landfilling of liquid, flammable and extremely flammable waste, explosives, infectious medical waste, old tires and of other sorts of waste that do not fulfill the criteria regulated in Annex II. The document demands minimization of the quantities of biodegradable waste disposed on landfills: the total quantity of biodegradable waste generated in 1993, should be decreased to 75% by 2002; in 2005, the decrease should reach 50%; by 2010, it should achieve 25% of the total quantity generated in 1993). It prohibits co- landfilling of inert, municipal and hazardous waste; establishes the system landfill permits.

The Directive regulates criteria for intake of the waste on landfills in order to prevent the risk and to follow: use of hazardous waste landfills only for hazardous which do meet the demands outlined in Annex II of this Directive; use of municipal waste landfills only for municipal waste and the waste other than hazardous waste; use of inert waste landfills for disposal of inert substances.

Directive has several general criteria for choosing the landfill locations and measures of protection of the water, soil and air (through the processes of collecting and treating leachates and collecting and utilization of the landfill gas with other renewable energy sources.

Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of waste and landfills regulates obligations of member states in relation to acceptance of waste, respecting the **Directive 99/31/EC**. It regulates acceptance criteria, provided that the conditions of acceptance for relevant landfill of a certain class have been met (as regulated in Part 2 of the Annex). The Annex performs uniform classification of the waste and of the procedure for acceptance, pursuant to Annex II to Directive 99/31/EC. Member states may regulate even stricter criteria and protective measures than these proposed in Annex II, provided they are compatible with the EU policy. The EU must be informed of such measures. Part 1 of the Annex regulates the acceptance procedure for landfills. It consists of basic waste characterization, tests and on- site verification, as regulated in Part 3 of the Landfill Directive Annex. Part 2 of the Annex regulates acceptance criteria for each landfill class; waste may be accepted only if it satisfies the relevant class criteria (as regulated in Part 2 of the Annex). Part 3 of the Annex sets the methodology for sampling and testing of waste. Appendix A regulates safety measures that must be adhered to in case of underground storing procedures. Appendix B gives an overview of landfilling options according to the Directive requirements and examples of possible sub- categories of landfills of non- hazardous waste.

Council Directive 2000/76/EC on the incineration of waste strengthens the existing legal framework and enlarges its scope. It replaces the following documents: Directives 84/429/EC, 89/369/EC and 94/67/EC. Their purpose was to set emission limit values for pollutants (including mercury, cadmium, dioxins and heavy metals) contained in wastewater resulting from the cleaning of exhaust gases before being discharged to the aquatic environment by hazardous-waste incineration plants. In accordance with Directive 94/67/EC, these limit values are intended to ensure compliance with the principle of preventing the transfer of pollution from one medium to

another, in this case from air to water. The incineration or co- incineration of municipal waste has to be performed in such a manner to prevent and/ or reduce pollution of the environmental media (air, water, soil) and prevent health- related risks.
Directive introduces an integrated approach to the issue of waste incineration. ELV for water have been analyzed in conjunction with ELV for the air. The Directive applies not only to the installations that exclusively perform incineration (" dedicated incineration plants") but to these that perform co- incineration (the plants whose major role is to produce energy or material products and that use waste as regular or additional fuel.. Directive does not encompass experimental plants, plants for treatment of agricultural and forestry waste, the one made in food- processing industry, pulp and paper waste, forest waste, radioactive waste, animal carcasses, waste originated as the result of oil and gas exploitation and that is usually incinerated at *"offshore"* plants).
Directive regulates that all incineration and co- incineration facilities/ plants shall be authorized and shall have a regulated waste list that can be treated in them. Before the treatment of hazardous waste, operators in incineration or co- incineration facilities shall have available data on the waste generated process, -information on physical and chemical features of the waste, -on technical conditions, -on process temperatures and time of gases remain at certain temperatures, -on utilization conditions for released heat, -on ELVs from the facility to ambient air (Annex V), - on ELV for co- incineration (Annex II),- on effluent release conditions after the process of gas purification, - on monitoring conditions, - on permitting conditions and on public information process.
Council Directive 94/62/EC on packaging and packaging waste amended by **Directive 2004/12/EC** (regulating that the acceding states should be given more time to meet the targets of the packaging directive) implements the EU strategy on packaging waste. Its purpose is to harmonize national measures in the area of packaging waste management, minimize its impact on the environment and avoid trade barriers in the EU that might prevent competitiveness. The Directive treats all packaging on the EU markets, as well as any packaging waste, regardless of its origin: industry, commerce, stores, services, households and divides it by materials used for packaging. It imposes measures to prevent occurrence of packaging waste (that must be set as national program stimulating reuse of package and packaging materials. It enforces that member countries shall introduce the Deposit system of return of the packaging and/ or collecting it, with the aim of direct return of packaging to the manufacturer (50-60%) and recycling (25-45%) with minimum 15% weight. It regulates packaging content and promotes definition of a European standard in accordance with the above demands. It regulates that a system of guarantee shall be regulated for return of used packaging and/ or packaging paper. It imposes a creation of a database concerning packaging materials and waste and criteria for collection and harmonization of the data aimed at providing conditions to carry out monitoring in all member states.
Council Directive 91/157/EEC on batteries and accumulators containing certain dangerous

substances introduces disposal and control measures aimed at decreasing of pollution by heavy metals (used in the manufacturing of the above products). Directive imposes reuse and controlled disposal of used batteries and accumulators that contain certain quantities of mercury, cadmium and lead. It demands that measures shall be introduced to control disposal of the above items that contain dangerous substances, - it demands that marketing of certain batteries and accumulators that contain more than 0.0005% weight of mercury after 2000. The Directive imposes on member states to create programs contributing the reduction of heavy metal content in batteries and accumulators and to stimulate separate collection of those two products in order to dispose of them in best way possible. Batteries and accumulators that are inseparable from certain devices shall be labeled separately for collecting and recycling.

Council Directive 86/278/EEC on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture regulates the use of sewage sludge, originating from wastewater treatment plants. Its aim is to prevent contamination of the soil, or posing a hazard to human health or to the environment. Sewage sludge that originates from urban facilities has favorable characteristics. Therefore, it can be used in agriculture. This kind of sludge may be used as additive in plant- growing industry and agriculture. Special arrangements should be made to ensure that man, animals, plants and the environment are fully safeguarded against the harmful effects arising from the uncontrolled use of sludge. The Directive aims at establishing certain initial Community measures in relation with soil protection. It defines the terms of "sludge, treated sludge, agriculture, use"; regulates the conditions under which sludge may be used; establish limit values for heavy metal concentrations in the soil (Annex I A), limit values for heavy metal concentration in sludge (Annex I B) and imposes monitoring of the limit values for the quantities of metals introduced in the soil as set out in Annex I C. The Directive prohibits use of the sewage

hibits treatment of used oils that may result in atmospheric pollution exceeding the defined limits. It imposes provision of a safe and effective system of collection, treatment, storing and disposal of waste oils. Highest priority is given to regeneration of waste oils, incineration (with energy utilization) and latest- to their destruction or controlled storing. It prohibits disposal of waste oils into all inland surface and ground waters and sewage and drainage systems. It prohibits disposal of and/ or/ storing of these waste oils with harmful impact on the soil. It prohibits uncontrolled disposal of waste sludge which is result of used oils processing (re- use, regeneration, incineration). It imposes the system of permitting for treatment facilities and disposal of waste oils (issued by competent national authorities in member states). It imposes that member states shall release to the public relevant information and carry out promotive campaigns in order to improve the process of adequate collection and disposal of waste oils.

Directive 2000/53/EC of the European Parliament and of the Council on end- of life vehicles: it defines preventive measures in generation of this waste by stimulating collecting, re- use and recycling of the vehicle components in relation to environmental protection. It defines "end-of life vehicle" as waste, falling to M1 or N1 categories, such as two- or three- wheel vehicles and their components. The Directive gives priority to prevention of generating of this sort of waste. It imposes that manufacturers of vehicles, materials and equipment shall make an effort to decrease use of hazardous substances in their processes and to design such vehicles that can easily be disassembled in order to be further used or recycled. It imposes the system of measures to collect all end- of life vehicles and transfer them to authorized facilities for further treatment. It requires initiation of the "free take- back principle". It imposes that storing and treatment of such vehicles shall undergo strict control, pursuant to Directive 75/442/EEC (on waste), prioritizing reuse and recycling of the vehicle components (batteries, tires, oil). It imposes that member states shall provide for manufacturers materials coding standards in order to facilitate recycling.

Regulation 259/93/EEC of the Council on the shipment of waste to and from EU. It defines shipment of waste among member countries and among third countries, in cases that transportation routes lead through one or more EU countries. The countries adhering to this regulation must determine relevant authorized waste shipment organizations. This makes clear distinction between waste for disposal (landfill or incinerator) and waste for reuse (recyclable waste). In case of recycling, there are distinctions between transporting conditions, between the waste categorized in the "green", "amber" or "red" list, including the waste that contains PCB, PCT (Annex IV) and the waste not categorized above. It imposes the system of labeling and reporting obligation, obligations in relation to contracting and sub- contracting in different operations along the shipment procedure. It defines authorization of the interested parties, manner and conditions of

shipment, transportation and accepting, export manner to third countries, obligation of return of the waste and its disposal in an environmentally acceptable manner (in case that the shipment cannot be executed). It prohibits import of waste for reuse, except from the countries signatories of the Basel Convention or from the countries with which member states have bi- lateral contracts. It imposes that member countries shall undertake necessary steps to perform inspection, sampling and monitoring procedures of the waste on its shipment from a country.

Council Directive 2002/96 on waste electrical and electronic equipment (WEEE) promotes re- use, recycling and other forms of utilization of those goods, with the aim of reducing of quantities of such waste. The EU legislation introduces restrictions on utilization of electronic equipment and electrical appliances. The Directive defines the following categories of WEEE: large household appliances, small household appliances, IT and telecommunications equipment, consumer equipment, lightning equipment, electrical and electronic tools, toys, leisure and sports equipment, medical devices, monitoring and control instruments and automatic dispensers. It imposes that consumers should be encouraged to return WEEE. For this purpose, convenient facilities should be set up for the return of WEEE, including public collection points, where private households should be able to return their waste at least free of charge. Producers should finance collection from collection facilities, and the treatment, recovery and disposal of WEEE. The treatment must include fluids removal and selective treatment, in accordance with Annex II of this Directive. Treatment of WEEE is regulated by a system of special permits issued by relevant authorities. Conditions must be met to enable access to information and public participation in decisions related to taking back and recycling of this equipment and of the manner of marking of WEEE. Member states must inform the EU Commission on the quantities and quality of the collected and recycled electrical and electronic equipment on the market. In order to prevent the generation of hazardous waste, Directive 2002/95/EC requires the substitution of various heavy metals (lead, mercury, cadmium and hexavalent chromium) and brominated flame retardants (polybrominates biphenyls, or PBB) or polybrominated diphenyl ethers (PBDE) in new electrical and electronic equipment put on the market from 1 July 2006.

Directive 96/59/EC on PCB and PCT disposal aims at defining a controllable manner of treatment and elimination of polychlorinated biphenyls (PCB) and polychlorinated terphenyls (PCT) and decontamination of the equipment in which they had been as well as the manner of disposal of the equipment contaminated by PCB (on which no decontamination has been done). The Directive defines the following: PCB: polychlorinated biphenyls, polychlorinated terphenyls, mono methyl tetrachlordiphenyl methane, mono methyl dichlordiphenylmethane, mono methyl dibromdiphenyl methane. Equipment: all equipment containing PCB or contaminated with PCB, on which no decontamination has been performed. The equipment is considered hazardous and

PCB- contaminated waste so that it should be submitted to final disposal or treated under special regimen, in licensed facilities. It defines the manner and conditions under which PCB- related data and data concerning the contaminated equipment are collected. It defines the manner of labeling and making inventories. It imposes that final treatment and disposal of the equipment and materials containing PCB must be undertaken under supervision of relevant authorities and treated in licensed facilities. Phasing out of the use of equipment contaminated by PCB is 2010. The relevant authority shall define conditions and issue permits for the facilities that are used for the treatment, disposal or temporary storing of PCB- contaminated substances and equipment. Transformers that have not yet been eliminated or these that have been contaminated or submitted to final treatment or disposal must be professionally supervised in order to prevent their malfunctioning or leaking of PCB. It is prohibited to burn PCB on board of ships. In the process of decontamination of transformers that contain more than 0.05 mass percentages, the following conditions shall be adhered to:

- after decontamination, the decontaminated object shall contain less than 0.05 mass %, optionally not more than 0,005 mass % of PCB
- the fluid that replaces PCB shall adhere to regulations so that it does not pose any threats to the environment;
- the exchanged PCB shall be deposited or treated.

Member countries shall make plans for decontamination and/ or disposal of the PCB- contaminated equipment.
In the process of waste management, the principles of a *product's life cycle* and *analysis* have been applied (59).

5. International Cooperation (Selected Multilateral Agreements and their Enforcement)

As a rule, each country has ratified a large number of international agreements in the area of environment. The situation in our country is similar to other developing countries/ countries in transition: there are a large number of international legislative instruments – multilateral environmental agreements (MEA) we have to enforce.
There is an urgent need to integrate international obligations, which are coming from ratified

international treaties, into a wider context of environmental management . [θ]

By the end of 2001, country ratified numerous international agreements managing environmental protection. They have been enforced through national legislation. After almost a decade of UN and international economic sanctions imposed on our country (introduced in 1992), in some of those legislative instruments we have stopped to be a member due to our membership has not been renewed.

A part of those international legislative arrangements has started to apply but only at the time when Yugoslavia was divided to several internationally accepted states (within the borders of former Yugoslav republics). Therefore, the institutions that have been coordinating Yugoslav and foreign cooperation have weakened or even disappeared. A number of agreements and other instruments have never been assigned to relevant authorities so that certain obligations of our country remained "just on paper".

Let us mention some of those agreements directly related to environment :

- Agreement on Fishing in Danube waters between the Governments of the Federal republic of Yugoslavia, Romanian people's republic and the Federation of Russian republics (1958)
- Agreement on the protection of the Tisa River and its tributaries from pollution (1990);
- International Convention for the protection of Birds (1973)
- International Plant protection Convention(1955)
- Convention on the establishment of the European Plant protection (1957);
- Convention on Wetlands of International Importance especially as Waterfowl Habitat, "the Ramsar Convention" (1977);
- Convention concerning the protection of the World Cultural and Natural Heritage (1974);
- Convention on the Protection of Cultural Goods in the Event of Armed Conflict, "the Hague Convention", (1955);
- Convention on Measures to Ban and prevent Illegal Import, Export and transfer of Cultural Goods Ownership (1972);
- European Convention on the Protection of Archeological Heritage (1990);
- Act on the prohibition of Nuclear Weapon tests in the Atmosphere, Outer space and Under Water (1963);
- Agreement on the Prohibition of nuclear and other weapons for mass destruction in the sea and oceans (1973);
- Ratification of the Vienna Convention on Civil Liability for Nuclear damage (1977);

[θ] Todic D., Proc.2nd Regional Conference "Environment for Europe" Belgrade 2006

- Convention on Early Notification of a Nuclear Accident (1988);
- Convention on the Physical protection of Nuclear material (1985);
- Convention on Long- Range Trans- Boundary Air Pollution (1986);
- Convention on Long- Range Trans- Boundary Air Pollution, on Financing of the Co-Operative Program for Monitoring and Evaluation of the Long- Range transmission of Air Pollutants in Europe (EMER) (1987);
- Vienna Convention on the Protection of Ozone Layer (1988);
- Montreal protocol on Substances Depleting the Ozone Layer (1990);
- Convention on the Ban of Use of Lead Whitener in Dyes (1929);
- Convention Concerning protection Against Hazards of Benzene Poisoning (1976);
- Convention on Prevention and Control of occupational Hazards Caused by Carcinogenic Substances and Agents (1977);
- Convention on the protection of Workers against Occupational Hazards in the Working Environment due to Air Pollution, Noise and Vibration (1982);
- Convention on Occupational Safety, Health and Working Environment (1987);
- Convention on Safety in the Use of Asbestos (1989);
- Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological and Toxic) Weapons, and on their Destruction (1973), etc.

It is interesting that we have ratified certain conventions while the UN sanctions to country were in power. We have even become members of certain organizations in the same period. The examples of such documents are:

- Framework Convention of the UN on Climate Change (1997);
- Convention on the Ban of Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (2000);
- Basel Convention on the Control of trans- Boundary Movement of Hazardous Waste and its Disposal (2000).

The following is a summary of selected international environmental agreements :

- **Convention on Trans- Boundary Long- Range Air Pollution**: It is among most important international agreements that relate to air pollution and acid rain. The Convention was adopted in 1979 and became effective in 1983. Until now, it has been amended by eight protocols that identify specific measures and obligations of the signatory countries. Besides international cooperation in decreasing air pollution, the Convention provides institutional framework for cooperation among scientific facilities and administrative, governing and political structures in order to develop policies and strategies based on scientific knowledge. It has initiated several protocols that should ease its application.

- **The Espoo Convention** on the assessment of environmental impact in trans- boundary context was signed in 1991 in the city of Espoo, Finland. It is obliged for the countries which ratified the convention to perform impact assessment for certain activities, in early stages of planning and engineering. It is also obliged for the countries to share information and consultations in cases of major trans- boundary environmental impacts. The Convention became effective on September 10, 1997.

- **The Ramsar Convention** deals with wetlands of international importance especially as water birds habitat. It was signed in 1971 and became effective in 1975. It was among the first international agreements that dealt with environmental issues. It is also unique in protecting a specific sort of ecosystems, the wetlands, on the global level. The wetland areas of our planet have an important role in water purification and as source of food and fuel. They provide habitat and/ or spawning places for numerous birds and animals. Today they are threatened by pollution or are drying out as the consequence of man's activities. Each country is obliged to determine at least one wetland as a protected area. In case of its destruction, the country is bound to proclaim protected another wetland of equal importance. The Convention protects more than 500 wetland areas throughout the world. The World Wildlife Foundation (WWF) and International Union for Care of the Nature (IUCN) are among responsible institutions for the enforcement of the Convention.

- **The Aarhus Convention** on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters introduced in Aarhus, Denmark in 1998. It is a new type of international agreements on the issues of environment. It deals with the right to healthy environment as a human right. It also places environmental protection under the responsibility of a government and regulates relations between the public and public administration in a democratic context. The Convention creates new mechanisms of public participation in negotiations and application of international agreements. It guarantees the public rights to information access and imposes on signatory countries such obligations. It defines the right of the public to legal assistance. Decisions of Aarhus strongly contribute to the development of regulations in the area of environmental protection as against public participation. Moreover, the document regulates three important, interrelated issues in the area of environment and human rights. It became effective on October 30, 2001. In the same month, in Lucca (Italy) there was first meeting of the Aarhus Convention signatory parties. A series of decisions was adopted after the meeting, relating to the further advancement of the Aarhus process. The Convention was ratified by over 30 countries so far, including the EU. At the Kyev Ministerial Conference in 2003, a Protocol on the registers of emissions and transfers of pollutants was adopted.

- **Framework Convention on Climate Change** aimed at reaching the "stabilization of concentrations of GHG gases, on such a level that would not result in hazardous anthropogenic impacts on the system of climate". In order to attain this goal, the Convention calls for industrialized countries (Annex I) to apply action plans and measures to decrease emissions of the *"greenhouse" gases* (GHG) and provide finances and technology transfers for developing countries. Carbon monoxide (CO2), methane (CH4), nitrogen- suboxide (N2O) and industrial gases in the HFC, PGC and sulphur hexafluoride (SF6) are in the group of greenhouse gases. The Kyoto Protocol was enforced in February 2005. It created three flexible mechanisms, with the aim of assisting developed countries (Annex I Members) decrease costs of attaining target emission of GHG (first between 2008 and 2012) by decreasing emissions in other countries where such costs are smaller. Those are:
    - International emission trading (IET): it enables the countries to transfer a part of their own "assigned amount units (AAU)".
    - Joint implementation (JI): it allows the countries use of "carbon credit" to maintain their obligations toward the Protocol. This credit is created through decrease of emission by investing in other industrialized country. It results in transfer of certain sums of "emission reduction units- ERU" among the countries.
    - "Clean development mechanism (CDM)" allows for decreased emission projects, supporting sustainable development of developing countries, to which developed countries generate "certified emissions reductions (CER)" and which the investor may use for own needs.

Thinking of the post-Kyoto period (i.e., after 2012), these are approaches that could take place (in terms of their likely effectiveness in providing global solutions to climate change) (36): - Developing new science and technology (e.g., that increases energy efficiency, reduces GHG emissions, or captures CO2, etc.); - Public education and persuasion (e.g., social marketing to encourage conservation, technology adoption, etc.); - Regulatory approaches (e.g., requiring improved energy and emission performance, the development of climate- friendly energy sources, more nuclear power, etc.); - Economic instruments (e.g., emission trading permits or tax measures that encourage improved energy and emission performance, the adoption of cleaner fuels, etc.); - Improved diplomacy and international cooperation that encourages developing countries and a greater number of industrialized countries to make more significant reductions of GHG emissions.

The **Basel Convention** on the control of transboundary movements of hazardous wastes and their disposal is an international multilateral agreement that regulates the norms of treatment and criteria for management of wastes in the manner acceptable for the protection and promotion of the environment. It also regulates the procedures in trans- boundary movement of hazardous and

other wastes. The issue of waste management was defined using integrated approach that encompasses control of generation of hazardous and other sorts of wastes; storage, transportation, treatment, reuse, recycling, renewal and final disposal of the wastes. Trans- boundary control system is based on prior notification and permitting process. The Convention was adopted in March 1989 and became effective in 1992. It has been realized within the UN Program for the Protection of the Environment (UNEP). The 1995 Amendment prohibited export of hazardous waste to the countries that have no capacities for the treatment of such wastes, i.e. outside the EU, OECD and Lichtenstein. The method of classification and characterization of the waste was adopted. It became effective by the signatory countries in 1998. Along with the Convention, in 1999, the signatory countries adopted the Protocol on responsibility and compensation (for the damage caused by accidental spills of hazardous waste during export, import or treatment activities). In 1999, a set of technical guidelines for the treatment of certain kinds of waste was also adopted. It is based on the 1999 Ministerial Declaration. Strategic Plan for the application of Basel Convention was also adopted (by 2010). It contains active promotion and application of cleaner technologies in production processes; further decrease of movements of hazardous and other types of waste, prevention and monitoring of illegal transportation; improvement of institutional and technical options and further development of regional and sub regional centers for training and technology transfer (60).

Other major environmental conventions have been analyzed in reference 11.

6. Institutional framework

It is often cited that EU has institutional organization with three pillars:

- The first pillar: 16 specialized agencies. **European Environmental Agency (EEA)**, established in 1990 **(Council Regulation 1210/90/EEC on the establishment of the European Environmental Agency and the European Environment Information and Observation Network)** is among them;
- The second pillar: European Institute for Safety and EU satellite centers, and
- The third pillar: *Europol* (the police) and *Eurojust* (the judiciary) and their cooperation in resolving criminal matters.

Basic segments of EEA are quality of the air, water, state of the soil and flora and fauna, land and natural resources use, waste management, noise emissions, chemical substances, protection of

urban areas and of the sea. The document **COM/ 95/ 325 final (Communication from the Commission to the Council and the European Parliament)** defined new EEA commitments that help create, develop and improve environmental information infrastructure through a network. As far back as in 2001, the EEA signed participation agreement with the Czech Republic, Poland, Romania, Slovenia, Hungary, Lithuania, Bulgaria, the Slovak Republic, Estonia, Cyprus and Malta. **COM (2002) 524 final (Communication on accession strategies for environment: Meeting the challenge of enlargement with the candidate countries in Central and Eastern Europe)** established an "open list" of environmental indicators. (Our country has demanded inclusion to EEA, by the joint regional application letter, signed in Zadar, Croatia in 2003).

Among the EU institutions, a significant role is given to the **Commissariat for Environment.**

6. Institutional Framework for the Accession/ Transition Countries

Each careful reading of the EU regulations verifies that **a majority of directives and regulations contains necessary institutional arrangements for their enforcement**. Adoption or transposing of certain directive, to national legislation means simultaneous accord of a country to strengthen her institutions. For example, there is a set of minimum criteria that environmental inspection should comply.

Candidate countries should define and start implementation of realistic national strategies, including **institutional strengthening of administration that imposes the policy of environmental protection and promotion**- as defined in **COM 998 (294) final**.

How the sustainable development strategic commitment can be applied in transition countries is one of most important research topics. In addition, transition to a market economy, as it takes place in the Central and Eastern European countries, affects other institutions and instruments. In a comprehensive approach, the following groups of mechanisms are relevant:

1. Fundamental formal and informal institutions: property rights on nature and social and ecological values;
2. Institutions of the learning society: strategies for reflexivity, interest harmonization and conflict regulation, reinforcement of self-organization, participation and innovation;
3. Instruments of public policy: environmental and regional policies;
4. International policy instruments and institutional arrangements: EU regulations, international agreements. (114,115).

Optimal pollution-approach,including pollution reduction costs and external cost (environmental damage). as well as marginal cost, damage and optimal environmental pollution could be presented in an understandable manner [N].

Without sophisticated decision-support tools, successful implementation of genuinely sustainable policies is virtually impossible[x] Complexity of sustainable development points to balanced, equitable and homogenous unification of goals [H].

On the present stage of transformation, the impact of privatization of **property rights** should receive major attention. A crucial element of the transition process is redefinition of property rights with regard to the use of natural resources. While in developed countries property rights have been defined over decades and while it seems politically difficult to change some of these rights to obtain fewer environmental changes, such rights could - theoretically - be defined in a more "environmentally sound" way in the transition countries, e.g. prohibiting any contamination of natural resources harmful to future generations. However, redefined property rights alone will not guarantee less contamination unless institutionalized mechanisms for controlling implementation are established. If sustainability is only demanded for the area of natural resources and environmental protection, this may lead to non-feasible concepts because options to achieve environmental progress may be non-feasible from an economic, social or political point of view or may even be destructive in these areas. Rules for sustainability and corresponding environmental policies appear to be unnecessary in the short term, although they will be urgently needed in the long term.

However, possible mistakes in the short term, could lead to "big price of corrective measures" (36), sometimes not easy/ impossible to correct.

6.2 Technical Capacities and Human resources

In order to provide strategic support to the EU accession, it is necessary to provide the adequate technical, human and institutional capacities:

- through harmonization between national and EU environmental legislation;
- through provision of their enforcement.

[N] Alibasic H. , Proc.2nd Regional Conference "Environment for Europe" Belgrade (2006)

[x] Lekic Snezana, Proc.2nd Regional Conference "Environment for Europe" Belgrade (2006)

[H] Munitlak Ivanovic O, Vojinovic Miloradov M, Proc.2nd Regional Conference "Environment for Europe" Belgrade (2006)

6.3 Environmental Inspections: Minimum Criteria

In order to provide greater competency and harmonization in enforcement of legislation, the **Recommendation 2001/331/EC (providing for minimum criteria for environmental inspections in the Member States)** solves the dilemmas in this area. Based on the document, a set of minimum qualifications for inspectors is under way.

Inspectors should:

- monitor installations and check whether they are in accordance with environmental demands as defined by law;
- be able to define monitoring of the installation environmental impact;
- perform field assignments and monitor the adherence of an installation to quality standards; review all reports and documents; examine the working conditions and of the installation on the site, and examine management adequacy in the installation in relation to the environmental demands and by studying relevant archives.

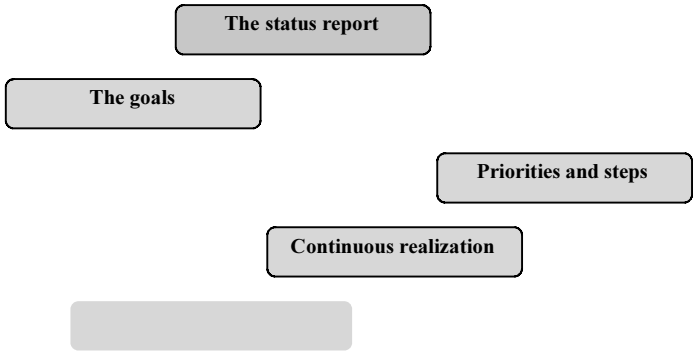
Member states should:

- provide a high level of environmental protection in organizing the performance of an installation and its further inspection. There should be a plan of inspection checkups (visits), whose records should be made public (in accordance with **Council Directive 90/313/EEC on the freedom of access to information on the environment**);
- cooperate with other countries, on administrative level, in enforcement of rules and recommendations.

Additional demands for inspectors relate to their education and training to react adequately and promptly and impose risk- protective measures in both ordinary and extraordinary situations (accidents and hazards).

7. The Vision with Steps anticipated as Successful

Strategic determination of a country **to build its future based on sustainable development** demands the following schedule of activities (36):

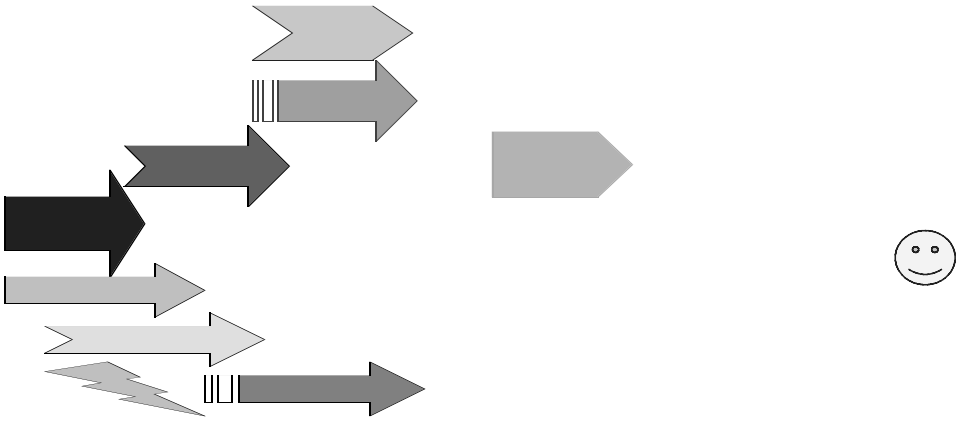


It is equally important that the movement (desirably, forward) goes along the tracks defined below (36) and that is as harmonized as possible (i.e. that there are no major aberrations; or that the aberrations are acceptable from these who who take these tracks in approaching their goals).

International and regional cooperation
Adoption of strategic documents
Making of modern legislation
Political continuity in relation to strategic
documents and their enforcement
Application of current regulations and measures
Adequate authorities (Ministry, Agency etc. on national, provincial and local level)
Human resources
Partnership with relevant stakeholders
Providing financial funds
Other- identified in the first stage as “relevant”

Scheme: Minimum tracks to be followed in the way towards environmentally sustainability (36)

It is very often the case that the scheme looks different in countries in transition. Going along the tracks is not harmonized and the scheme might look somewhat different:



Such discrepant moving does slow down the process of development. That is why it is important to have a constant guiding vision and a certain number of people that understand the process in a systemic way, its stages and governance. Environmental sustainable future and walking towards sustainable development are challenging tasks, especially for countries in transintion and/or candidates for EU accession.

7.1. Transition to sustainable development

Sustainable development is primarily a legacy issue. Many activities, problems and solutions in the field of sustainability are interconnected (114,115,116). Since many theories and practice related to sustainability are new or still evolving, there is a need for sites to exchange information, research and insights. This need has been met in an ever- improving manner.

Implementation of legislation in light of sustainable development, to establish the adequate legal climate and stimulating financial and economic mechanisms becomes urgent. The principle of "polluter pays" should be supplemented with tax privileges granted for waste-utilizing production and for other environmentally- oriented initiatives, long-term loans for those who introduce environmental protection equipment and environmentally safe and appropriate technologies.

Sustainable development proposes a new paradigm of decision- making for all sectors of society. For sustainable development, there is great need to integrate:

1) Environmental policies that should be socially and economically feasible;
2) Social policies that are environmentally and economically feasible; and
3) Economic policies that are socially and environmentally feasible.

It entails a new perspective on present-day issues and challenges, and requires a better appreciation of the complex interconnections between the economic, social and environmental aspects of current challenges.

The imperfect and ongoing nature of reforms and their implementation mechanisms makes the public so far mainly the negative impact of transformation, accompanied by drastic decline in the living standard of population, mass unemployment, social polarization, impoverishment of the majority of the population, the deterioration of the demographic situation and the level of migration. It should be expected that the social cost of any economic and social reforms and of their consequences turned out to be very high. Viewing issues through the sustainable development lens also reveals real costs that were previously hidden. These costs eventually can be addressed efficiently, as illustrated by the problems of lost fisheries, Brownfield, ozone depletion, global climate change, hazardous waste sites etc. Lack of financial state resources and absence of environmental target funds does not allow practicing theory of subsiding and financing of development clean technologies and sustainable use of resources, represent the solution of current environmental problems. Strategy on Sustainable Development should develop under these main issues: economic efficiency, environmental protection and workplace safety. Economic instruments that can be used are tax charge, tradable permits, subsidy on activity to be encouraged, insurance, premium reduction etc. Tax charges are levied either directly on the activity that policy makers find should be reduced (e.g. emissions of wastewater) or on a surrogate product the consumption of which is associated with an activity to be discouraged (e.g. lead content of fuels). The “polluter pays” principle suggests that polluters should pay for the pollution they cause. Tradable permits involve creating a quantitative restriction on an activity (e.g. emissions of sulfur) and allowing firms to trade these restrictions among themselves to ensure that compliance occurs at the least cost to the economy as a whole. Subsidies are a common means of encouraging beginning activities and have the effect of reducing the cost of carrying out a socially responsible activity. These may take the form of capital subsidies, low-interest or interest-free loans or exemptions on taxes. An example might be government subsidies on insurance premiums for firms with good health and safety records.

Sustainability requires feedback systems that allow all three of its core elements - environment, economy and society/community - to be tracked simultaneously.

Adopting a sustainable development perspective amounts to looking at current problems through a new lens/ glasses that broadens vision from a singular focus on only the economic or environmental or social aspects of an issue; to an integrated consideration of all three. The sustainable development lens also focuses attention on the horizons of the future as a way of seeing approaches that are more desirable to the problems of the present. The systems for monitoring, auditing and evaluating decisions in this triple manner are now emerging. Governments can find numerous opportunities for win-win policies that are economically sound, environmentally friendly and socially responsible. Governments are the custodians of the public interest, the stewards of the public domain. It should take actions that will safeguard the legacy. The challenge of sustainability reporting is to cluster all the relevant information on various issues and demonstrate the connections between apparently different factors.

7.2 Proposal of the Steps for countries in Transition: Serbia°

Strategic determination of Serbia is to **build its future based on principles of sustainable development**- in harmony and accordance with environmental, social and other policies (Rio Declaration, Agenda 21, MDG- especially goals 7 and 8,

Realization of the Johannesburg Summit Conclusions).
A major turning point occurred in June 2002, with the message of Prime Minister Zoran Djindjic in the year of the World Summit on Sustainable Development. Mr. Djindjic has said "**The environment is a priority in supporting economic development**" (61, 62). This was a basis for targeted development toward cleaner production and technologies, adoption of the quality and of environment- related standards on the level of enterprise (as the prerogative of market competitiveness, sustainable production and consumption and sustainable use of natural resources and energy).

Serbia declared itself to continue gradual "construction" of a system that will make it possible to move from environmental pollution control, over integrated approach, toward prevention control, industrial *ecology* and sustainable development. It promised to meet the Amsterdam principles, to respect the Maastricht Agreement, Lisbon Strategy and the Cardiff process.

° at the time this monograph shall have been released (April 2006), Serbia is a republic within the State Community of Serbia and Montenegro; Possible separate state of Serbia after referendum in Montenegro in May 2006 is not influencing the subject of this book (competency for the sector Environment is already on the republic level)

One of the challenges towards reaching this true integration to the EU is the inspiration of our society by a vision of peace and international cooperation in the area of environment. Horizons are being widened, dedicated to the environment through the promotion of ethics in the area of environment as an inseparable part of any man's activity. Introduction and development of "biopolitics" gives basic framework for each sector in a society and each profession if they want to take care of the environment (63).

7.2.1 Analysis of the Current Situation

Between 1990 and 2000, a decreased volume of investments in the environment has shown negative effects in relation to the options of environmental management. The existing problems of polluted air, soil and water, stockpiles of communal and hazardous waste, endangerment of forest resources and biodiversity have only increased. The more severe poverty has increased the need for firewood and caused illegal cutting of trees. Impoverished economy has influenced environmental degradation, due to its lack to follow state- of the- art technology and technical solutions. On the other hand, decreased industrial production and monetary difficulties that farmers had been facing and the lack of chemicals for agricultural purposes have significantly reduced their use and resulted in decreased pressures posed on the environment by economy. (117).

Adopting the recommendations of the Rio Conference, FR Yugoslavia adopted the following strategic documents as far back as in 1993: Resolution on the Environmental Policy and Resolution concerning the policy of maintenance of biodiversity in the FRY. By adopting them, Yugoslavia has adopted the concept of sustainable development. However, due to the aforementioned reasons, until the beginning of reforms and transition, little has been done in realization of those documents (117).

For the time being, a set of laws approved in the nineties of the 20 century, has been still effective (119):

- Law on Waters (1996)
- Law on National Parks (1993)
- Decree on the Control of Usage and Trade of Wild Flora and Fauna (1999)
- Law on Handling of Waste (1996)
- Regulation on the Handling of Waste Products (1995)
- Rulebook on the criteria for determining the location and organization of waste disposal

(1992)
- Regulation on the trans-boundary movement of hazardous and other wastes (1999)
* (collection, transport and final disposal of radioactive waste are regulated within the relevant Law (1996), with six complementary decisions on nuclear safety and eleven on the protection from radiation)
- Law on the Transportation of Hazardous Substances (1990)
- Law on the Production of and Trade with Poisonous Substances (1995)
- Regulations on the methodology for risk assessment of accidents caused by chemicals (that cover the estimation, preparatory measures and measures for elimination of consequences of accidents (1994)
- Law on Ionizing Radiation and Nuclear Safety (1996)
- Law on the Prohibition of Construction of Nuclear Plants (1995), etc.

Providing remediation, protection and promotion of the environment (and its media: air, water, soil, flora and fauna) and sustainable development, sustainable utilization of natural resources (water, air, geology, minerals, the fish, forests, renewable energy sources, etc.) and (gradual) inclusion of the environment to all sectoral policies, does demand a wide scope of measures, in relation to the initial status of the environment in the beginning of transitional period.

Reforms in environmental sector in Serbia began simultaneously with democratic changes, in October 2000. By defining six national priorities in environmental sector, the new Serbian government has expressed its political intention to lead the country along the path of *environmentally* sustainable development (65).

In the first stage of transition that began in the Environmental Sector in 2001, **reports on the state of the environment and natural resources**, with framework priorities, proposals of legislative, institutional and technical organization and promotion (5, 16, 39, 62, 66, 67, 68, 69) were prepared.

AGRICULTURE and ENVIRONMENT have greatest number of regulations that should be harmonized with EU legislation. Their implementation should be gradually provided.

Legislation in this area consists of over 100 regulations (of which several have been cited in the above text): forests and water utilization, geologic examinations, fisheries, hunting, waste management, noise, air quality, climate change and protection of the ozone layer, protection of waters, forests, soil, nature and biodiversity, industrial accidents risk management, chemicals manage-

ment (dangerous and toxic substances), genetically modified organisms, protection from radiation, nuclear safety and a set of legislations ratifying numerous international agreements. After the Constitutional Chart of State Union of Serbia and Montenegro at the begining of 2003 has been adopted, legislation in this area has completely been transfered to the republic level.

In view of the chronology of development of the environmental system (cf. Chapter 1) and remaining behind of our country, in 2001 we have *initiated* the process of harmonization of our legislation with the EU regulations.

7.2.2 Analysis of Goals- International, Regional and Foreign Affairs Aspect

The environment has been explicitly defined as sectoral policy (as one of the six sectoral priorities) in the Partnership Document (64). It is also indirectly contained in other chapters that relate to:

- Human rights, because *the right to a healthy environment* is one of basic human rights;
- Movements of goods (within the environmental sector regulations encompass movement of waste, endangered and protected species of wild flora and fauna; their development forms and parts; chemicals (toxic and dangerous substances); ozone- depleting substances and sources of ionizing radiation);
- Market economy and structural reforms (in the process of privatization, for example, and especially in relation to historic pollution, policy of increase of competitiveness; defense strategy in relation to *environmental* safety, etc.), and
- Regional and international cooperation (Huge number of international agreements in this area and their significance).

The goal of activities and measures in the environment is to create preconditions for adapting the structure and dynamics of economic and other activities to the structure and dynamic of conditions, i.e. processes in the environment so that satisfying the needs of current generations does not stop the right of future ones to healthy environment, on the same or even improved level.

7.2.3 First 10+ Steps (2001- 2003): Walking through the Documents

Transformation, which began between 2001 and 2003 in Serbia was based on the principle "Two *simultaneous* tracks: a) from international and national toward local, and b) from local toward national" (30). In this context, let us point to the "baloon effect": establishing the strongest- most significant impact on the environment and limiting the time and money to minor effects (36); in other words, it is important to "see the forest as a whole instead of looking at each individual tree".

> In 2001, the Serbian government approved the 2000 State-of-the Environment-report. Based on this, the National Parliament adopted a range of **priorities** to be tackled in the next years (119)

International and Regional Cooperation

There is a clear political interest in developing an effective environment management system in Serbia and Montenegro, which is member of over 50 international agreements in the area of environment (65). Coordination of legislations and policies between the republics has begun. Cooperation between the governments seems to be functioning well. International introduction of the State Union (in which the republics change places and which also depends on the issues of environment) seems to be functioning relatively well in practice (104). In order to improve coordination of laws and policies within the state as well as full implementation of international commitments undertaken by Serbia and Montenegro, the two republican environmental ministries signed an Agreement on Cooperation on 12 July 2002. (119). Pragmatic approach of both ministers in these matters is of great help. Serbia and Montenegro was also active participant in defining International Convention for the Protection of Danube Basin, ratified in August 2003 (76).

> Serbia and Montenegro has also joined The Black Sea Economic Council for Cooperation, in April 2003. Final conference of the Danube Countries was held in October 2003. A Framework Agreement was signed on the utilization of River Sava (76). Significant results in regional development were achieved within the REReP Program (Regional Environmental Reconstruction Program in South- Eastern Europe within Stability Pact) (76).

A National report was prepared dealing with how the Convention on Sustainable Use and Protection of the Danube River Basin (2003) has been carried out. Data were prepared for the 2004 umbrella report.

Strategies

> Work on Feasibility Study on opening SAA negotiation with Serbia and Montenegro commenced during the second half of 2003. However, the feasibility study was postponed after parliamentary elections and the establishment of a new government (119). [⊗]

The Waste Management National Strategy with the program of EU approximation (68, 79, 80, 82, 83, 84) was adopted in 2003.

> The handling of waste has become a political priority following the State of the Environment report in Serbia in 2001. A first national strategy for waste management was adopted by the Serbian government in 2003. The waste strategy introduces for the first time waste hierarchy in accordance with the EU waste policy and promotes efforts to prevent waste generation, achieve a maximum recycling and recovery of materials, an optimal thermal recovery of energy contents in waste and a minimum use of landfills (119). Hazardous and Medical Waste Feasibility Study was prepared. It was financed by European Agency for Reconstruction, which also provided funds for the Stage One of facility for the treatment of hazardous waste (4, 119).

The authorities of State Union have undertaken essential reforms, aided by EU, in the area of technical standards and norms (76).

By the end of 2003, the Poverty Reduction Strategy was adopted. Other strategies relevant to key segments of MDG (Annex 2). were prepared for adoption. The former one is completely harmonized with MDG and its realization has been monitored through them (117).

Within the National Poverty Reduction Strategy (74), its integral part relates to the environment (better living conditions, rural development, health and especially the issues of wastewaters and waste). Within the Reform Agenda II, the environment, as one of the priorities, has been included in infrastructure (primarily the issues of municipal and hazardous waste, wastewaters, capacity- building in institutions (the Ministry and agencies); the issues of municipal and hazardous waste management have been additionally defined as urgent. Within infrastructure priorities,

[⊗] On April 12, 2005 the feasibility report assessing the readiness of Serbia and Montenegro to negotiate a SAA was approved by European Commission

issues of reconstruction of the traffic and transportation infrastructure/ network have been listed. All these have been closely related to environmental issues. Serbia has declared itself to support *"environmentally- friendly privatization"*- 2002 (75).

> Political changes in Serbia and lifting of the sanctions imposed by international community have caused new activities. Defining the Strategy to preserve Biodiversity and Strategy of Introducing Cleaner Production (117) is under way.

Government supports the development of the concept and strategy of cleaner technologies and sustainable consumption (2003). The agreement was reached to initiate founding of the Center for clean technologies.

A mini- environmental action sectoral plan of approximation to the EU was adopted. It contains the list of (twenty- six) international agreements that should be ratified. The list is an inseparable part of the adopted action plan (2003) for Serbian EU accession.

Through the EAR- funded project "Environment Capacity Building Programme 2003" (119) the Government started defining the National Environmental Action Plan (NEAP), finished in 2005 and approved by the competent Ministry. A series of LEAPs and Strategy of Sustainable Development are under way (9,90).

Starting from 2001, a series of Local Environmental Action Plans (or LEAP)- documents and processes, were initiated.

National (encompassing International) Level

Local Level

Fig.6. Double- Track: From the National toward Local Level and Vice Versa

In case of the Zrenjanin LEAP, for example, we have managed to provide public participation in decision- making, team work, self- reliance, political consensus and creation of partnerships on the local and international levels (91).

Development index for ecoagglomerations, in the example of area belonging to the Juzna Morava River, as indicator of sustainable development sends a clear message: if a trend continues of general lack of effectiveness (for all production and economic factors, aided by irrational and unpurposeful spending of water and its pollution) we may expect serious consequences in the future in the environmental sector (92).

Indicators of sustainable development and level of development sustainability have been analyzed for Serbia and especially for Vojvodina. The results have been compared to the level of sustainability in the countries of the region⇦(93).

The strategy of first stage of transition encompassed the assignments of cleaning-up of contaminated sites (70,71,72,73). Funds were obtained to clean the Pancevo Canal and perform decontamination of the spots where ammunition with depleted uranium has been used in 1999. Remediation of the Backa Canal and of the Danube (near Vrbas), the landfill in Gornji Milanovac, etc, were started Establishment the system of early response in chemical accidents (Mobile Unit for Ecotoxicology) was managed.

In 2003, the National project to establish indicators of sustainable development was initiated; the Study of sustainable water resources management and a General Serbian Wastewaters Strategy was copleted; Preliminary Feasibility Study for Emission of Pollutants from Thermoelectric Power Plants using coal, was completed too..

Rules and Regulations

Country ratified the Convention on Biological Diversity on November 5, 2001 (119).

> On the EU level, the Law on **Genetically Modified Organisms** (2001) addresses the conditions of the contained use, introduction in production and trade of GMO and products made of GMO and the conditions and measures for the prevention and elimination of undesired effects of contained use. Significant progress has been made in the regulation of this field within the framework of the agricultural sector, since the adoption of the Law in May 2001. (119)

⇦ Bacanovic D., D. Tomic, Proc 2nd Regional Conference "Environment for Europe" Belgrade 2006

The adopted Regulation on conditions and methods of classification, packaging and storage of secondary raw materials (2001) contains lists of **wastes** and the catalogue of wastes coordinated with EU documents (119).

In 2003, the Law on ratification of the Convention on the Protection and Sustainable Use of the Danube was adopted. For the first time, in Penal Code, we have introduced the definition of act against the environment as criminal offence (2003).

A convention was signed on persistent organic pollutants (POPs); Convention on the protection of the Carpathians; Protocol on the Strategic Environmental Assessment (SEA) and Pollutant Release and Transfer Register Protocol (PRTR).

A draft of the Law on the protection from non- ionizing radiation was confirmed by the Government in 2002. Until the end of 2003, it had been waiting to be put on the Parliament agenda.

In 2003, the following drafts were initiated: of the law on ratification of the convention on impact assessment within the trans- boundary context; ratification of the convention on preservation of migratory wildlife; ratification of the Convention on preservation of the European wildlife and natural habitats. The following laws were prepared: on waste and chemicals management and protection from ionizing radiation. as well as over twenty sub-legal acts. Law on Waters, in accordance with the EU Framework Directive, was in the stage of preparation.

> A first draft of the new waste law was prepared under EAR/SCEPP (Policy and Legal Advice Center)- supported project in 2003. A version was agreed upon by several ministries and finalized in January 2004. A final draft waste law is being prepared. (119).

A protective part of legislation in the area of fisheries, in power in 2003, has been completely harmonized with international ratified documents (Convention on Biodiversity, CITES Convention, Convention on the Wetlands- the Ramsar Convention) and with international documents that should be signed and ratified (Convention on Migratory Species- the Bonn Convention; Convention on the Endangered Flora and fauna- the Bern Convention). At present, legislation in the area of fisheries is very contemporary. It is even better than the legislation defining the framework of nature protection (at least in respect to fish species). For a long time we have been waiting for it to be modernized. The policy toward users of fishing areas, that has been carried out in

2001 and 2002 by the Ministry for Agriculture, Forestry and Water Management, and particularly the one pursued by the Ministry for the Protection of Natural Resources and the Environment between 2002 and 2004, has provided introduction of the criteria of assignment evaluation of users of fisheries areas and meeting their legal (manpower, finances), program- based (annual and mid- term programs) and managerial (professionalism in performing duties and control of fisheries) assignments. In the end of 2003, first assignments began, related to the Strategy of sustainable use of fish as natural resource in Serbia. Within it, we were supposed to make a detailed analysis of the situation in the area of fisheries in Serbia and determine further major development directions. They have been transformed to the text of future Law on Fisheries (89).

> The introduction of forest health monitoring started in 2003. The country uses ICP methodology (International Cooperation Plan for the Assessment and Monitoring of Effects of Polluted Air on Forests) in over 100 bio- indication points (117).

Reform of the Serbian education system introduced important innovations. Education for environment has become mandatory in the pool of elective subjects (2003).

> In this period, the government has been intensely working on *preparation* of the ***Law on the System of Environmental Protection.*** Its draft was made in 2002. It was then harmonized with representatives' opinion in the Parliament; resulting draft submitted in 2004. The Ministry has proposed a draft of the Law on the System of Environmental Protection and submitted it to the Parliament (76). The new law (on environment) was adopted fist time on 17 May 2002 by the Serbian government and then passed on to the Parliament for deliberation. The parliamentary debate began in November / December 2002, and by December 2002, more than 72 (!) amendments were attached to it. The number of those amendments did not benefit the law much, as its meaning has become to a large extent declaratory (119).
>
> The draft of the new Law on the System of Environmental Protection was (2003) in Parliamentary procedure and is to replace the existing one on environmental protection. It will become a basic law and a general framework for the new or amended sector laws in the future. The law is of utmost importance, not only due to its modern approach to international standards and agreements, but also because of its truly pioneer task marking a successful beginning of approx-

> imation and harmonization with the EU regulations in the area of environmental protection. Giving the importance of the Law for the approximation to the EU Environment Legislation, it is worth mentioning that the main elements of the EU Council Directives, Recommendations and Regulations were considered and included in the provisions of the above law (120).

The Serbian Ministry, founded in 2002 (104), was initiating ambitious legislative programs in 2004 in the area of environment. The environmental awareness in Serbia and reformist approach of the new Government, together with the influence of international conventions, EU Directives and standards of more developed and transitional countries in the field of the environment have been direct promoters and inspirations of the new law. Because of an intensive reform of Serbian Government and its strategic vision of the importance of the environment, this Law represents a good achievement of local experts and their knowledge, as well as an example of successful cooperation between local specialists and international and EU experts (120).

The project "Development of Environmental Legislation in the FR Yugoslavia" - bilateral assistance project of Finland (2002-2005) contributed to the overall objective that environmental legislation, compliant with relevant EU legislation, is in place and enforced. The project has been tackling harmonization of environmental legislation of the Republic of Serbia with that of the EU in regards to EIA, SEA, IPPC, Access to Environmental Information and Public Participation in Decision- Making. (119). Unfortunately, implementation and law enforcement are general problems of the legal system in this country – therefore, such a warning would be useful in every area of economic and social life. Environmental protection cannot be exception from the general situation, bearing in mind that environmental rules have not existed so far or have not been adhered to adequately, not to mention that environmental awareness in Serbia has been at a very low level (120). EAR- funded project "Environment Capacity Building Program 2003" aimed at supporting the environmental sector in facilitating effective implementation and enforcement of environmental protection legislation throughout Serbia, in the perspective of forthcoming institutional and legislative reform. (119).

Population and NGO participation was attained in preparations of legislative and strategic projects. They managed to a decision-making process (a positive example is defining of the text of the Draft of the System on the Protection of the Environment in 2002). At the first meeting of Aarhus Convention countries, for the first time in Pan- European Ministerial Conference "The Environment for Europe" (in 2003 in Kiev), representatives of the NGO sector were member of the official delegation.

Process of harmonization of the existing environmental legislation and other regulations essential for information access, paricipation of the public and access to the judiciary system in accordance with the provisions of Aarhus Convention, has started as far back as in 2000. The first comparative analysis of our legislation and the demands of Aarhus Convention was prepared (Serbia, Montenegro and FR Yugoslavia) Within the REReP, a project was initiated "Support to Development of the Stretagy for the Application of the Aarhus Convention". Based on it, in 2001, a description of needs of Serbia and Montenegro (needs assessment) was made. It defined basic legislative, institutional and other requirements of the governmental and non- governmental sector. They were defined as presumptions for successful application of the Aarhus Convention (98). Within the Aarhus Convention Working Group on public participation (the issue of GMO), the Ministry for Protection of Natural Resources and the Environment prepared in 2003 a report. It contained a brief description of Serbian and Montenegrin legislation that relates to access to information, public participation and availability of the judiciary in the area of environment, with special attention being given to public participation in decision- making in the area of GMO and GMO products (99).

Institutions

Institutional framework has not shown a continual and long- term concept; from 1992 there existed (an inadequate) Ministry for Environmental Protection (with a majority of jurisdiction in the area of air protection). In 2001, it was renamed to Directorate for Environmental Protection (within the Ministry for Health and Environmental Protection). In a reform- based stream in 2002, stating that the environment is a priority in supporting economic development, a Ministry for the Protection of Natural Resources and the Environment was founded. It had sustainable use of the resources, including forests, under its jurisdiction. It reflected willingness of the government to attain central coordination over natural resources and environment from a single Ministry.

> In 2002 a new Ministry of Natural Resources and Environmental Protection was established (119, 65, 76).

In December 2003, an Agency for the Protection of the Environment was founded (118), based on a government Decree, as a separate institution.

In 2003, the **Sustainable Development Council** was founded. Under recommendations and practices of the international community, the performance of the national body for sustainable development has been coordinated by the relevant ministry for the environment. Major assignments of

the Council were coordination of activities aimed at definition and realization of a series of strategic documents (such as National Strategy of Sustainable Development- NSSD, National Environmental Action Program -NEAP) (117).

Inclusion in European Agency for the Environment began in 2003; inspection services on the border began to function. They controlled the items belonging to the jurisdiction of the Environmental Sector (2003).

Other relevant issues

Strategic plans were adopted for the development of public enterprises- national parks (2003). The Government, in partnership with the workers' union and business enterprises, successfully adopted the reconstruction plan for the "Srbijasume" Public Enterprise.

A project dedicated to the decrease of pollution of the Danube from industrial plants in Serbia was initiated. It was included in the GEF Project in June 2003, with the aim of expanding and promoting the practices that do not endanger the environment (environmentally- friendly practices). It was initiated in the facilities- generators of pollution along the Danube Basin, on the Serbian territory. The aim of the project was to decrease the pollution caused by animal farm nutrients (originating from pig and cattle breeding), manufacturers of fertilizers and from meat- packing plants.

Although FR Yugoslavia ratified the UN Framework Convention on Climate Change (UNFCC) in June 1997, it was not the case with the Kyoto Protocol. The First National Communication for UNFCCC has not been prepared yet, which also means that we have not made the GHG Inventory (95). The first communication with Framework Convention for the Protection of Climate has been initiated (as far back as in 1999/ 2000, it started in the then Federal Institute for Hydrometeorology- the facility that coordinated the process. The assignment was re- instated in 2003, within the Serbian Ministry for Natural Resources and Environment. The latter took over the employees from Federal Institute for Hydrometeorology and they continued the assignments on GHG Inventory). Analysis of tendencies was made of annual air temperatures and annual precipitation in Serbia and Montenegro (for the period 1951- 2000) and an estimate of climate changes in the region (94).

Documentation basis was made for biodiversity convention and the convention on persistent organic pollutants (2003). We have been granted with funds from GEF (Global Environmental Fund) for these assignments.

In that period, introducing the system of environmental management in processing plants, companies and other facilities in Serbia and Montenegro started. It is very important to found a sound system of environmental management on the level of an enterprise (85,86,87).

For comparison, let us view the following:

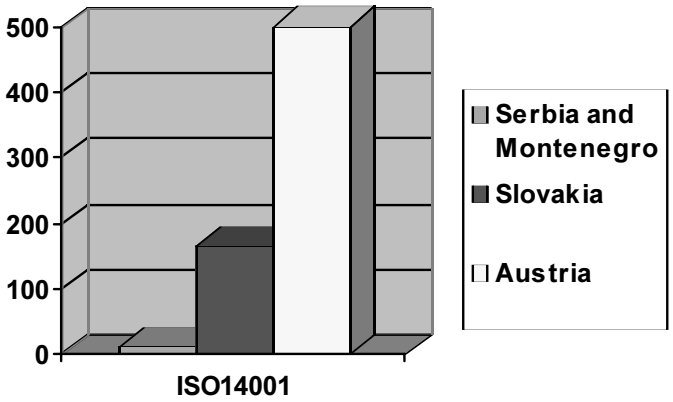


Fig. 5 Number of obtained ISO 14001 certificates (by December 31, 2003)

In order to enable Serbian companies gain competitiveness on external markets, they first have to satisfy the reform priorities: modernization of the standards and technical regulations with the aim of achieving the EU competitiveness and international standards (88). It is important to enhance the production manner (88).

The international community has offered to Serbia and Montenegro cooperation and project grants (101, 102). They have been implemented and carried out efficiently. From the comprehensive program, from 2000 to 2003, some 89% have been contracted and 63% of the funds have been paid by December 2003. In 2003, our country has been given approximately € 255 million to be implemented in Serbia and Montenegro. The sum of € 15 million was allocated for Montenegro and € 240 million – for Serbia and the State Union institutions. The aid has been focused on management (reform of public administration, with special atention given to public finances, judiciary and internal affairs, customs services and taxation system), economic recovery and reforms (energy, transport, the environment, business organizations and municipalities development); social development and civic society (university and professional education, civil society and the media) (76).

An important issue is “capacities for receiving international aid”; its trend will influence (possible) investments. In other words, if not able to spend the money have been given by international community in a given area, than have to be effective in building capacities aimed at these goals. The EAR funds are an excellent example for the situation in the environmental sector (36, 62, 81). In 2002 and 2003 we have undoubtedly witnessed an increasing trend in provision of the funds for the years to come, respectively, with a high degree of realization/ consumption of the approved funds.

The experience of other countries shows significant, increasing trend of international investments in environmental sector.

In 2002, EUR 50,000 was allocated for capacity building in the environmental field; in 2003, EUR 8 million, and for 2004 Programme, EUR 14 million was allocated for environment for supporting the hazardous and medical waste treatment facility through design and construction of a physical-chemical treatment facility; design and construction of a class I landfill; design and construction of a hazardous waste storage station; and further capacity building. In Serbia, the World Bank has supported governmental efforts to integrate environmental concerns into privatisation, and plans to focus on environmental and social considerations of the mining industry in the Bor region. The World Bank also supports programmes to reduce livestock-based pollution of the Danube, improve drainage and flood management, and promote agro-biodiversity in the south. EBRD activities in Serbia and Montenegro increased. The bank’s approach to supporting environmental improvement within Serbia and Montenegro is twofold. First is the ensuring, through support of specific environmental projects, that key environmental concerns are addressed. For example, the city of Subotica municipal project addresses the pollution of Lake Palic on the outskirts of that town. Secondly, all EBRD operations in Serbia and Montenegro are subject to the bank’s environmental policy and incorporate, where appropriate, environmental action plans in legal documentation in order to address issues raised during environmental due diligence.*

* Environmental Snapshot of South Eastern Europe REReP Country Profiles: Environmental Snapshot of South Eastern Europe , REC, Szentendre, Hungary, March 2006

Milestones in environmental sector in Serbia (from the standpoint of EU approximation)- First 10+ steps

2001	- The 2000 State of Environment- defined - FRAMEWORK PRIORITIES OF ENVIRONMENTAL SECTOR- defined - INTERNATIONAL COOPERATION IN ENVIRONMENTAL ISSUES- established - Accession to Global Environmental Fund (GEF)
2002	- COUNCIL FOR EUROPEAN INTEGRATIONS- founded (Government level, with necessary commissions) - MINISTRY- founded (for the protection of natural resources and the environment) - DRAFT LAW ON THE SYSTEM OF PROTECTION OF THE ENVIRONMENT- defined; DRAFT LAW ON THE PROTECTION FROM NON- IONIZING RADIATION- defined - Participation of country on SUMMIT ON SUSTAINABLE DEVELOPMENT. The country is decisive to support the environment as priority in economic development - Inclusion in regional cooperation related to the Sava River
2003	- NATIONAL STRATEGY OF WASTE MANAGEMENT WITH THE PROGRAM OF APPROXIMATION TO THE EU- adopted - STRATEGY FOR THE POVERTY REDUCTION AND REFORM AGENDA II- adopted - The Government founded COUNCIL FOR SUSTAINABLE DEVELOPMENT - Law on Ratification of the Convention on the Protection and Sustainable Use of the Danube- adopted - Convention on Persistent Organic Pollutants (POPs)- signed; The Carpathian Protection Convention signed; SEA Protocol signed and PRTR (Pollutant Release and Transfer Register)- signed; - the Government founded SERBIAN AGENCY FOR THE ENVIRON-

2003	MENT, based on projects funded by EAR (100) - A letter of intent to be included to EUROPEAN AGENCY FOR THE ENVIRONMENT- delivered - NEAP and Strategy of Sustainable Development- initiated - Government adopted THE 2002 REPORT ON THE STATE OF THE ENVIRONMENT AND NATURAL RESOURCES - Draft laws prepared on: Ratification of the Convention on Environmental Impact Assessment within the Trans- Border Context; Ratification of the Convention on the Preservation of Migratory Species of Wild Animals; Ratification of the Convention to Preserve European Wildlife and Natural Habitats - Prepared drafts laws related to: waste management, chemicals management, Ionizing radiation, fisheries, and over 20 regulations; - The Study of Sustainable Management of Water Resources was made; General Serbian Wastewaters Strategy ; Pre-Feasibility Study for the Control of Emission of Pollutants from Thermal Power Plants that Use Coal; Feasibility Study for Hazardous and Medical Waste Management; First Communication initiated along the Framework Convention for Climate Protection; documentation basis was made for the Convention on Biodiversity and on Persistent Organic Pollutants. - Have been included as full member in Cooperation of the Danube Basin (ICPDR) - Have defined potential site for the Chemical Waste Treatment Center - Established priority in CLEANER PRODUCTION AND TECHNOLOGIES - UNECE decided to entrust Serbia and Montenegro with organization of the Sixth Ministerial Conference "Environment for Europe" to, to be held in Belgrade in September/ October 2007

7.2.4 Some more steps (2004-2006): Continuation of Walking through Documents

General

There has been some **limited progress** in Serbia and Montenegro's efforts to approximate European standards in the environmental area (121). Serbia seems on a **comparably good way** as concerns its progress towards legal approximation in recent years (119).

International and regional cooperation

Serbia and Montenegro participated in numerous regional initiatives, including SECI, Central-European Initiative, Adriatic- Ionian Initiative, International Commission for the Protection of Danube River and Black Sea Economic Cooperation Council (104).

Serbia and Montenegro participates in different regional initiatives related to the environment, promoted by the European Commission. One of such initiatives is REReP and the Balkans network for Harmonization and Realization of Regulations in Environmental Protection (BERCEN). Serbia has not yet accessed these meetings with the same desire for open and constructive participation, as was shown by other participants (104).

Strategies

The Serbian National Parliament adopted the Resolution on the EU Accession on 14 October 2004. National Strategy on the EU Accession was also adopted (2005).

Serbia **continued to implement** its **Waste Management Strategy** adopted in 2003 (121). In the field of waste management, Serbia is pressing ahead with its legal reform program on issues such as packaging waste and hazardous waste export. (121).

Both Republics have succeeded in **integrating the environment into** other policies in **energy** field. By adhering to the Energy Community Treaty signed in October 2005, Serbia and Montenegro both agreed to respect EU environmental legislaion and requirements relevant to the energy field (121). The Treaty was signed for South Eastern Europe in 2005, between EU and Albania, Bulgaria, Bosnia and Herzegovina, Croatia, FYR Macedonia, Romania, Serbia and Montenegro and UNMIK . Although it is primarily directed towards energy, the Treaty is of utmost importance to the area of environment. It is completely in accordance with EU legislation

in both areas. The Treaty anticipates adoption of a series of measures in order to more efficiently manage energy systems of the signatory countries and ease approximation of technical, legislative and other standards in the countries of South Eastern Europe to the EU standards. That is why an Energy Community was founded between the EU and SEE countries. The Community was entrusted with a series of activities in the areas of energy and **environmental protection** It is anticipated that the signatory countries access to the Kyoto Protocol and immediately (right after the adoption of the Treaty), or in anticipated time, apply a series of EU directives. Certain regulations have a longer application timeframe, of 12 years. Instructions to immediately apply the EU regulations will accelerate the harmonization of national environmental legislations with the EU legislative framework It will also result in raising of relevant standards to the European level. This will help the two areas (energy and environment) *de facto* and *de iure* enter the EU system.[X] The environmental audits on energy plants are ongoing and the issue of the worse polluters starts to be addressed (121).

With the assistance from EAR, National Program for the Protection of Environment (NEAP), a basic document in the process of integrated planning and management of the environment was drafted. It will have been submitted to the National Parlament for adoption by the end of year (for the ten- year period) (118). So far, the document has been adopted by the Ministry. Its adoption is anticipated in the Government and the Parliament.

The issue of hazardous waste, waste in general and of wastewaters has remained priority (96). EU assistance will be concentrated to the environment- i.e. assistance to maintain its natural advantages and avoid irreversible losses, protect population from health risks, assist in improving treatment of solid waste and wastewaters and in approximation of national environmental norms to the European ones, in accordance with international agreements (97).

LEAP Drafts were made or the very local environmental action plans. They aim at supporting local authority in performing its environmental assignments. This applies to 13 municipalities in Serbia. In six additional municipalities LEAP is under way, financed by Ministry for Science and Environmental Protection. Other twenty municipalities have been performing the same assignment with donor and own funds. Environmental awareness- raising programs for the Serbian population , besides LEAP, have been realized through seminars. A campaign “Serbia- Clean and Green” (118) is under preparation.

Program for Environmental Protection and Sustainable Development in Serbian Towns and Municipalities 2004 – 2006, developed by the Serbian Standing Conference of Towns and Municipalities – SCTM and supported by the Norwegian Association of Local and Regional Authorities – KS, is created with an overall goal to improve quality of life in Serbian local communities, by obtaining better environmental conditions and enabling local governments, as well

[X] Vukasovic V, Proc.2nd Regional Conference "Environment for Europe" Belgrade 2006

as national government, to define and pursue policies of sustainability in the future development of Serbian towns and municipalities. The major activity for the first year of program implementation was development of **Local Sustainable Development Strategy Paper**. After adoption of the local strategy of sustainable development, there were numerous positive examples of the cities and towns that have made (or are in the process of making) their local strategies.

The city of Zrenjanin has, for example, formed its Council for Strategic Development of the Municipality (long- term municipal development strategy). After 12 months of intensive preparations, public debate and an option of public participation in reviewing the document, the local parliament adopted the Strategy in December 2005. By doing so, Zrenjanin became the first municipality in Serbia to have created such a document, using own manpower and funds. ♠

Rules and Regulations

Major steps in the area of environment were adoption of the Law on the Environmental Protection (2004); Law on integrated Prevention and Pollution Control (IPPC); Law on Environmental Impact Assessment (EIA) and Law on the Strategic Environmental Assessment (SEA). The principle of public access to relevant environmental information and participation in decision- making has been embedded in the above laws and in the Law on Free Access to Information of Public Interest (2004).

Enforcement of the newly adopted legislation will require significant efforts in both Serbia and Montenegro (121). Implementation and enforcement need to be considerably strengthened, notably through the adoption of implementing strategies and plans and institutional capacity building (121). Too little attention is still being paid to environmental enforcement and institutional capacity (123)	When comparing the set of environmental laws adopted in December 2004 with the concept of Draft Law (adopted by the Serbian Government in 2002 and confirmed in 2003, in spite of the fact that over 80% of its text had been taken from the previous draft) (78), basic differences are the lack of regulation for sustainable use of natural resources and unrealistic terms for capacity building of local management, industry and other institutions for the law enforcement. If we present the 2002 Law concept as a major organ in human body – the HEART, then, by the end of 2004, we had 80% of the remains of that HEART, diminished by a ventricle (conditions of sustainable use of resources have been limited). “Heart” has very constrained exit streams (unrealistic terms for implementation, etc.) How will this heart live? Will it be able to function without treatment and surgeries? The practice will tell (36).