



Ministry of Environment,  
Mining and  
Spatial Planning



# NATIONAL CAPACITY SELF ASSESSMENT FOR ENVIRONMENTAL PROTECTION MANAGEMENT

Cross-Cutting Analysis Report for Republic of Serbia



February 2012

## **Executive summary**

During the 1990s, international community became aware of the need to protect global environment. To this end, there was a need to implement effectively the UN Framework Convention on Climate Change (UNFCCC), Convention on Biodiversity (CBD) and Convention to Combat Desertification (CCD). In the late 1990s it was noticed that certain parties to these conventions, namely developing countries, there was a problem with capacities for full implementation of the conventions. In order to assess the countries' needs regarding capacities and to plan strategies to realize those needs, an agreement was reached between the GEF Secretariat and United Nations Development Programme. Capacity Development Initiative (CDI) was promulgated in May, in 1999. As the first step in CDI implementation it was approved to finance the countries which wanted to implement national capacity self-assessment (NCSA) for the environmental protection management.

The Republic of Serbia has become a signatory of the Rio Declaration on Environment and Development by succession. The Republic of Serbia has endorsed the United Nations Convention on Biological Diversity (UNCBD), the United Nations Convention to Combat Desertification / Land Degradation (UNCCD) and the United Nations Framework Convention on Climate Change (UNFCCC).

The Republic of Serbia has been a member of the UNFCCC since 10 Jun, 2001, and Kyoto Protocol since 17 January 2008, as a developing country (non-Annex I country). The Ministry of Environment, Mining and Spatial Planning (MEMSP) is the national coordinator for the implementation of the Convention and Protocol. MEMSP is a focal point for the Convention on Climate Change).

The Federal Republic Yugoslavia Parliament ratified the Convention on Biological Diversity in 2001 (the Convention was published in the Official Gazette of the FRY – International agreements, number 11/2001). Ministry of Environment, Mining and Spatial planning (MEMSP) is a focal point for the Convention on Biological Diversity.

The Republic of Serbia ratified CCD via Law on ratification of UN Convention on Combat Drought and Desertification (CCD) (Official Gazette Serbia, International agreement 102/07). Ministry of Environment, Mining and Spatial planning (MEMSP) is a focal point for the Convention Combat desertification/Land use.

The primary objective of the NCSA is to determine national priorities for capacity building in order to improve the environmental protection management, both at national and global level. The specificity of the NCSA in relation to other projects referring to capacity assessment is in possible synergic effects of considerations regarding the needed capacities for global environmental protection management in a comprehensive and integrated way.

At the request of the Ministry competent for Environment, the GEF approved in 2003 the means for the realization of the project "National Capacity Self-Assessment for the Environmental Protection Management in Serbia" and the project started in 2005.

Finalization of the project “National Capacity Self-Assessment for the Environmental Protection Management in Serbia” is again initialized by the Ministry of Environment, Mining and Spatial planning in 2010 and financed by GEF.

National priority capacity building process in Serbia is based on outputs of two main consecutive processes of NCSA. These main consecutive processes are:

- Thematic assessment for three conventions, to identify the cross-cutting issues and synergy areas linked to thematic assessments,
- To form national capacity action plan related to cross-cutting issues and synergy areas

A key deliverables of the NCSA process are 4 documents which outlines

- 3 separate documents for each thematic area of: biodiversity, climate change and desertification/land degradation
- Cross cutting Report on NCSA address – priority issues, capacity constraints and opportunities for capacity building for Rio Conventions and Action plan.

For the Process of developing NCSA assessment four open ended working group were establish:

- 3 for each convention
- Cross cutting working group for preparation of NCSA Cross cutting Report and Action Plan

The first phase of Project – building upon upgrading existing documents (Thematic reports already undertaken in the Serbia in 2005 ) – result in an assessment of capacity constraints within the three thematic areas of biodiversity, climate change and desertification/land degradation. During the process in 2004-2005, the thematic groups were identified key issues which were assessed in terms of the linkages across the conventions. Several categories of capacity issues were examined:

- *Institutional coordination*
- *Environmental databases*
- *Public awareness*
- *Environmental mainstreaming*
- *Monitoring systems*
- *Management capabilities*
- *Economic processes*

After reviewing documents, in 2011, categories which are examined as cross cutting issues for NCSA process are adapted/updated as follows

- Management processes including Institutional organization, legal framework and
- Coordination including International cooperation and links to international organizations

- Mainstreaming
- Data collecting , Monitoring & Reporting including : collecting and processing of data from monitoring, evaluation of the environmental changes and reporting
- Research, and Information exchange including Promulgation and provision of information, Mutual exchange and utilization of information databases and expertise, research , utilization and transfer of new, environmentally sound, technologies
- Awareness raising and education :
- Provision on financial resources including Utilization of domestic and foreign financing mechanisms

Key requirements of the individual Conventions were evaluated using the method of analysis of strengths and weaknesses, opportunities and threats (SWOT analysis), taking into account proposals for increasing and developing capacities. The results of the work of Working groups, consisting of relevant Stakeholders, established for the individual Conventions were compared at joint meetings and it was found that the input information and results of the overlap; this fact was employed successfully in cross-cutting analysis of capacities.

Working groups working under NCSA have been examining each of the conventions. Key requirements of the individual Conventions were evaluated using the method of analysis of strengths and weaknesses, opportunities and threats, taking into account proposals for increasing and developing capacities.

The results of the work of Working groups for the individual Conventions were compared at joint meetings and it was found that the input information and results of the specialized task forces overlap; this fact was employed successfully in cross-cutting analysis of capacities.

Specific activities towards completing these assessments include:

- the preparation of a “thematic profile” or “situation analysis” ;
- selection of a set number of priority issues;
- and identification of related capacity constraints.

These three thematic assessments represent the basis for the identification of opportunities for thematic and cross-cutting capacity building projects resulting in NCSA Cross cutting Report, developed by Cross cutting Working group .

Identified cross-cutting weak points and opportunities are reflected in the recommendations of the cross-cutting working group and further elaborated in formulation of tasks in the action plan for development of capacities in meeting of obligations of the Republic of Serbia following from accession to the Conventions.

The purpose of this Cross-Cutting Analysis report is to consolidate the major findings of the groups, and to highlight the issues that link the international conventions and other key environmental strategies in Serbia. This analysis will lead to preparation of an NCSA Action Plan early in 2012 (plan to be the subject of wide stakeholder and interested parties consultation in

order to accommodate Rio Principle 10 related to participation in document finalisation process).

Based on the output of both phases, Republic of Serbia develop a NCSA Report for capacity building and sustaining the capacity developed, both within and across the thematic areas.

**The aim of this Report , is to prepare NCSA Report and Action Plan to Build Capacities in Serbia to Fulfill the Requirements of the 3 Rio Convention on:**

**1- The United Nations Convention on Biological Diversity (CBD),**

**2- The United Nations Convention to Combat Desertification (CCD),**

**3- The United Nations Framework Convention on Climate Change (UNFCCC).**

The submitted Report is the result of the work of the cross-cutting working group, which evaluated the level of preparation of the Republic of Serbia in fulfilling the objectives of the Rio Conventions, i.e. the Convention on Biological Diversity (CBD), the UN Framework Convention on Climate Change (UNFCCC) and the UN Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (CCD).

Capacity analysis included the current state of implementation of the Conventions; the requirements and potential for development of capacities in meeting the Conventions' objectives were determined at an individual, institutional and systemic level.

NCSA Report consists of the 5 chapters and annexes , as follows:

Chapter 1. INTRODUCTION

1.1. Purpose and Objectives

1.2. Linkage , synergies and cross cutting analysis

Chapter 2. NCSA PROCES IN SERBIA

2.1 Country background

2.1. Methodology

2.1.1. Thematic Reports

2.1.2. NCSA Report

Chapter 3. ANALYSIS OF THEMATIC REPORTS 22

3.1. Legal and institutional framework for 3 Rio Conventions and environmental protection in Serbia

3.2.National strategic framework for 3 Rio Conventions

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Chapter 4. CROSS-CUTTING ANALYSIS 47

4.1. NCSA Action Plan

4.2. Linkages between Cross cutting issues across Conventions 58

## Chapter 5. CONCLUSIONS AND RECOMMENDATIONS

### 5.1. Cross-cutting Analysis Conclusions

#### ACTION PLAN

#### Annex A: List of international conventions

The report suggests that a strategic and joint focus on the key capacity issues among the multi-lateral and bilateral programmes would help to create the necessary institutional momentum and evidence of initial results that would encourage international donors to participate in environmental improvements in Serbia and assist the implementation of the international environmental conventions.

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In the previous rounds of assessments (2005-2008) other experts were included.

Financial support for NCSA is provided by the Global Environment Facility (GEF) and UNDP.

#### List of Acronyms

BD	Bilateral donors,
CDM	Clean Development Mechanism under UNFCCC
EEA	European Environmental Agency
EIA	Environmental Impact Assessment
EIONET	European Information and Observation
EU	European Union
EUF	EU Funds
EPR	Environmental Performance Review
EPF	Environmental Protection Fund,
GEF	Global Environmental Fund
GHG	Greenhouse gases
IF	International funds

INC	Republic Institute for Nature Conservation,
IPCC	Intergovernmental Panel on Climate Change
LA	Local Authority
LAP	Law on Air Protection ,
LEP	Law on environmental protection
LEAP	Local Environmental Action Plans
LB	Local budget
MEMSP	Ministry of Environment, Mining and Spatial pLnnng
MATFWM	Ministry of Agriculture, Trade, Forestry and Water Management
MME	Ministry of Infrastructure and Energy,
MF	Ministry of Finance,
MERD	Ministry of Economy and Regional Development,
MI	Ministry of Interior ,
MES	Ministry of Education and Science
NAPDD	National Action Plan for Drought & Desertification
NBSAP	National Biodiversity Strategy Action Plan
NPEP	National Programme for Environmental Protection
NSDS	National Sustainable Development Strategy
PSEPSD	Provincial Secretariat of Environmental Protection and Sustainable Development,
PINC	Provincial Institute for Nature Conservation,
PA	Protected Areas,
RB	Republican Budget
SEPA	Serbian Environmental Protection Agency,
SRI	Scientific and Research institutions
UNCBD (CBD)	United Nations Convention on Biological Diversity
UNCCD (CCD)	United Nations Convention to Combat Drought and Desertification
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNFCCC	United Nations Framework Convention on Climate Change
UNEP	United Nations Environmental Programme
UNESCO	United Nations Education, Science and Culture Organization

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- **Introduction**

From 3-14 June 1992, Rio de Janeiro hosted the United Nations Conference on Environment and Development (UNCED). The focus of this conference was the state of the global environment and the relationship between economics, science and the environment in a political context. The following documents were promulgated at Rio Conference: Declaration on Environment and Development (Rio Declaration), Agenda 21 (Activities' Programme for 21st century), Convention on Climate Change (UNFCCC), Convention on Biological Diversity (CBD), Convention to Combat Desertification (CCD) and Principles of management, protection and sustainable development of all types of forests

In order to meet MEA responsibilities, each country will need the capacity to manage the following functions:

1. to mobilize information and knowledge;
2. to build consensus and partnerships among all stakeholders;
3. to formulate effective policies, legislation, strategies and programmes;
4. to implement policies, legislation, strategies, programmes and projects, including mobilizing and managing human, material and financial resources; and
5. to monitor, evaluate, report and learn.

In the late 1990s it was noticed that certain parties to these conventions, namely developing countries, there was a problem with capacities for full implementation of the conventions. In order to assess the countries' needs regarding capacities and to plan strategies to realize those needs, an agreement was reached between the GEF Secretariat and United Nations Development Programme. Capacity Development Initiative (CDI) was promulgated in May, in 1999. As the first step in CDI implementation it was approved to finance the countries which wanted to implement national capacity self-assessment (NCSA) for the environmental protection management.

GEF support for the preparation of National Capacity Self-Assessments (NCSA) is pursuant to the GEF Council Decision which "requests the GEF Secretariat, in collaboration with the Implementing Agencies and Executing Agencies, to initiate processes so that the self-assessment of capacity building needs can begin immediately in countries that request such assistance". The overall aim of GEF support for the NCSA is to provide countries with the opportunity to take the lead in articulating their own capacity needs and priorities with respect to the global environment taking into account the three global conventions on biodiversity, climate change and desertification/land degradation.

Table 1. Summary list of Convention requirements

Biodiversity	Climate change	Land degradation
<ul style="list-style-type: none"> <li>• Undertaking national biodiversity conservation planning</li> <li>• Identifying and monitoring biodiversity and its conservation</li> <li>• In-situ conservation, including protected area system management</li> <li>• Ex-situ conservation of biodiversity</li> <li>• Utilising environmental impact assessment for biodiversity conservation</li> <li>• Managing information, notably through clearinghouse mechanisms</li> <li>• Providing scientific and technical education and training</li> <li>• Preserving indigenous and local knowledge, innovations and practices</li> <li>• Implementing the Cartagena Protocol on Biosafety</li> <li>• Regulating access to and transfer of genetic resources</li> <li>• Regulating the handling of living modified organisms</li> <li>• Regulating the commercialisation and ensuring benefit-sharing from genetic resources</li> <li>• Accessing financial resources</li> <li>• Raising understanding and awareness</li> <li>• Developing and introducing economic and social incentives</li> </ul>	<ul style="list-style-type: none"> <li>• Preparing national communications</li> <li>• Developing national climate change programmes</li> <li>• Preparing and managing greenhouse gas inventories, including emission database management</li> <li>• Research and systematic observation of climate and other functions</li> <li>• Assessing vulnerability and adaptation</li> <li>• Developing and implementing adaptation plans and measures</li> <li>• Assessing mitigation options</li> <li>• Developing and transferring technology</li> <li>• Institutional capacity-building, notably through Secretariats or focal points</li> <li>• Improved decision-making, including assistance for participation in international negotiations</li> <li>• Working with the Clean Development Mechanism</li> <li>• Meeting needs arising from implementation of Convention Articles 4.8 and 4.9</li> <li>• Information and networking, including databases</li> <li>• Education, training and public awareness raising</li> <li>• Enhancing the enabling environment</li> </ul>	<ul style="list-style-type: none"> <li>• Effective early warning and advance planning for periods of adverse climatic variation</li> <li>• Systems for research and development</li> <li>• Technical and scientific co-operation</li> <li>• Joint research programmes for the development of appropriate technologies</li> <li>• Systems to collect, analyse and exchange information</li> <li>• Training for collection and analysis of data for disseminating and using early warning information systems, covering drought and food production</li> <li>• Transfer, acquisition, adaptation and development of economically, socially and environmentally appropriate technology</li> <li>• Training and technology regarding alternative, renewable energy sources</li> <li>• Promotion of alternative livelihoods, including training in new skills</li> <li>• Education and public awareness</li> </ul>

- **Purpose and Objectives**

The primary objective of the NCSA is to determine national priorities for capacity building in order to improve the environmental protection management, both at national and global level. The specificity of the NCSA in relation to other projects referring to capacity assessment is in possible synergic effects of considerations regarding the needed capacities for global environmental protection management in a comprehensive and integrated way.

The primary goal of the NCSA is to identify, through a country-driven consultative process, priorities and needs for capacity building to protect the global environment. Specific objectives to be accomplished through the NCSA include, *inter alia*:

- to identify, confirm or review priority issues for action within the thematic areas of biodiversity, climate change and desertification/land degradation, respectively;
- to explore related capacity needs within and across the three thematic areas;
- to catalyse targeted and co-ordinated action and requests for future external funding and assistance; and
- to link country action to the broader national environmental management and sustainable development framework.

In order to perform all the above mentioned functions, it is necessary to build capacities at all three levels:

1. **systemic** (creation of a suitable environment – policies, laws, division of competence, communication amongst institutions, processes for public participation, etc.)
2. **institutional** (jobs, prepared instruments, methodologies, management of information flows, etc.)
3. **individual** (personal attitudes, knowledge and skills, motivation, etc)

In order to meet all the requirements given in multilateral environmental agreements (MEA), each contracting party should develop the capacities to mobilize relevant information and knowledge, to build consensus and partnership between all stakeholders and on the basis of that they should formulate effective policy, legislation, strategies and programmes. It is also necessary to develop capacities to implement such policy, legislation, strategies and programmes, with the inclusion of human, materialistic and financial resources. Finally, it is necessary to build capacities to monitor, evaluate, report and learn on the basis of the achieved in comparison to planned activities.

National priority capacity building process is based on outputs of two main consecutive processes of NCSA. These main consecutive processes are:

- Thematic assessment for three conventions, to identify the cross-cutting issues and synergy areas linked to thematic assessments,
- To form national capacity action plan related to cross-cutting issues and synergy areas

A key deliverable of the NCSA process is a document which outlines – for each thematic area of biodiversity, climate change and desertification/land degradation as well as across the thematic areas – priority issues, capacity constraints and opportunities for capacity building

The first phase would – building upon existing work already undertaken in the country – result in an assessment of capacity constraints within the three thematic areas of biodiversity, climate change and desertification/land degradation.

Specific activities towards completing these assessments include:

- the preparation of a “thematic profile” or “situation analysis” ;
- selection of a set number of priority issues;
- and identification of related capacity constraints.

These three thematic assessments could form the basis for the identification of opportunities for thematic and cross-cutting capacity building projects.

Based on the output of both phases, countries may need to consider developing a strategy for capacity building and sustaining the capacity developed, both within and across the thematic areas

## **1.2. Linkage , synergies and cross cutting analysis**

There is a lot to be gained from establishing links between the UNFCCC and the other two major environmental conventions namely the CBD and the CCD.

It is necessary to understand the driving forces behind the three major environmental problems the international community is currently addressing, i.e. climate change, loss of biological diversity (or biodiversity) and desertification. Climate change (UNFCCC definition) is the result of the concentration of carbon dioxide and other greenhouse gases (GHGs) in the atmosphere, which has increased to reach alarming levels over the last century (IPPC, 2001). It is also understood that a significant fraction of the GHGs that have been emitted to the atmosphere has originated from the destruction of natural forests and other biomes, and their subsequent conversion to agricultural or grazing land, the very process that has led to the extensive destruction of habitats and the loss of biological diversity (Wood et al.,2000). In many cases, especially in the tropics, when natural systems are brought into agricultural production, a degradational process begins whereby the land progressively loses its productivity. If such a process is allowed to start and to continue unchecked in arid, semi-arid and dry sub-humid environments, it can ultimately lead to an irreversible state of land degradation called desert. This is what the process of desertification is all about. Loss of natural vegetation (hence biodiversity), degradation of agricultural and grazing lands, and climatic variations are therefore some of the recognised causes of desertification. In many tropical areas, climate change will exacerbate climatic variations leading to more frequent droughts and wild fires that in turn will accelerate the loss of biological diversity and desertification. It is therefore clear that there are inherent linkages between the three problems although a causal relationship may not always be easy to establish between them. Nonetheless, the desertification – biodiversity loss – climate

change nexus is without any doubt the biggest threat to sustainable development, especially in Africa.

Linkages between the implementation of the UNFCCC's and the CCD's mitigation and adaptation measures The United Nations (UN) recognizes the interdependence of climate change, land degradation and biodiversity, and their importance for sustainable development, in the three Rio Conventions – the UNFCCC, the UNCCD and the CBD. There are strong synergies between the efforts to address the mandates of these three international agreements that are relevant in preventing and controlling land degradation.

The objective of the Rio Conventions may be summarized as follows:

- UNFCCC is to stabilize greenhouse gas (GHG) concentrations in the atmosphere at a level that prevents further human-induced global warming.
- CCD is to combat desertification/land degradation and mitigate the effects of drought, which are likely to increase as a result of climate change. The CCD provides assistance to affected developing country Parties, particularly in Africa.
- CBD is to conserve biodiversity, encourage the sustainable use of its components and promote the equitable sharing of benefits derived from the use of genetic resources

Many of the implementing programmes and regulations in each of the three Conventions recognize the relationships between climate change, land degradation and biodiversity.

The UNFCCC indicated four areas of potential synergy between the UNFCCC and the CCD: forestry (e.g. reforestation, avoided deforestation and sustainable forest management), sustainable land management (SLM) and agriculture; mitigation, including through non-forestry activities such as fuel- consumption and energy efficiency at the community level, and the use of biofuels; adaptation through enhancing ecosystem resilience and its capacity to adjust to changes; and education, awareness raising, information and science. Bearing in mind listed synergies, the CCD process has invited Parties to promote capacity building measures so that stakeholders can carry out synergistic programmes to prevent land degradation, rehabilitate degraded lands and help mitigate climate change in the agriculture, rural and land use sectors.

Conserving biodiversity is an essential part of sustainable land management, which aims to combat land degradation and desertification. Many of the climate change adaptation measures mandated by the UNFCCC in the rural, agriculture and forestry sectors provide synergies with the CCD and the CBD. The UNFCCC calls for integrated management plans for water resources and agriculture, and for the protection and rehabilitation of areas affected by drought and desertification, especially in Africa.

## • **NCSA PROCESS in Serbia**

This Report is part of the National Capacity Self-Assessment (NCSA) process under the Global Environment Facility for capacity needs related to implementation of the international

conventions on biodiversity conservation (CBD), land degradation (CCD) and climate change (UNFCCC). Cross-cutting aspects are those that involve one or more of the conventions.

The Republic of Serbia became state in May 2006 as a successor state of the State Union of Serbia and Montenegro. As part of the restructuring process, Serbia has adopted the international conventions on climate change (2001) and biodiversity conservation (2002) followed by ratification of the land degradation convention in 2007. The first two were signed by the Federal Republic of Yugoslavia (the state name before become State Union of Serbia and Montenegro)..

## **2.1 Country background**

### **Socio–political system**

The Republic of Serbia is (regained its independence in 2006), democratic state with a multiparty parliamentary system. The governmental system is based on the division of power into legislative, executive and judiciary.

Integral parts of the Republic of Serbia are the Autonomous Province of Vojvodina and the Autonomous Province of Kosovo and Metohija as forms of territorial autonomy. The Autonomous Province of Vojvodina is situated in the northern part. The Autonomous Province of Kosovo and Metohija, on the basis of the United Nations Security Council Resolution 1244 which was adopted on June 10, 1999., is under the interim civil administration of the United Nations.

The territory of the Republic of Serbia is divided into: municipalities (194), cities (24) and Belgrade as a unit of local self – government. The territory is also divided into 29 administrative districts and the territory of the city of Belgrade, as a district of its own. The Republic of Serbia has 6169 settlements, of which 207 are urban settlements.

### **Population**

The total population, according to the 2002 census 7,498,001, according to the preliminary results to the 2011 census **7 120 666** .

According to the 2002 census, the largest cities in Serbia are Belgrade (1,576,124 inhabitants), Novi Sad (299,294), Nis (250,518) and Kragujevac (175,802).

The ethnic population of the Republic of Serbia is very diverse as a result of the country's turbulent past. Serbs are the majority, while 37 nationalities live jointly with them in Serbia.

### **Economy**

Economic development of the Republic in Serbia in the period from the mid nineties of the last century to the year 2000 was characterized by a slow–down in industrial production and reduced investments, high unemployment rate, problems related to internal and external dept, high external trade deficit and low competitiveness on the international market. The specified

industrial slow-down of the country and other circumstances that occurred in the considered period resulted in a decreased gross domestic product (GDP) per capita.

A process of economic recovery and a modest social development has commenced in 2001. Macroeconomic stability was restored and sustainable, stable economic development was continued, large system restructuring and privatization of state-owned enterprises was initiated and legal adaptation of all economic sectors and social areas to the new circumstances commenced.

## **Energy industry**

The energy sector is a major polluter, mainly because it uses polluting fuels and lacks necessary energents, around 40 % of which are imported. Oil, gas and high quality coal are imported, while electricity is mainly produced from local resources. Production of low-caloric coal is dominated in total primary production (54%). Since 2002 more energy has been consumed, with fossil fuels – coal, oil and gas – as the main sources. In 2008, consumption was 15.58 million tonnes of oil equivalent (toe), or 2.12 toe per person. Households, agriculture and public and commercial activities consume 40 % of total energy; industry and transport about 30 % each. Since 2002, total energy intensity has been reduced, because the growth in the economy has exceeded growth in total energy consumption .

Electricity production in the Republic of Serbia is based on the combustion of low-rank domestic coals in thermal power plants and utilization of available hydro potential in run-off-river and pumped storage hydro power plants. The said production is organized through the facilities of the Public Utility Enterprise „Elektroprivreda Srbije” (EPS). The relatively low efficiency of the energy transformation processes and high consumption still represents one of the key problems facing the energy sector in Serbia.

Serbia has the potential to produce nearly 30 % of its total energy requirements from renewable sources, but the contribution of renewable energy sources to primary energy consumption has been around 7 % since 1990. The share of renewables in electricity consumption has been around 30 % since 1990, so Serbia has exceeded the EU indicative target of a 21 % share by 2010.

Regarding environmental protection (from the negative impacts of emissions of pollutants from energy generation facilities), Serbia lags behind more developed countries and EU standards.

Energy policy in future years will be focused on the use of renewable sources, implementation of an energy efficiency programme, implementation of a programme of rational energy use, and developing a strategy for and establishing a clean development mechanism, in accordance with the Kyoto Protocol.

## **Industry**

The unfavourable economic situation in the industrial sector over the past decade, resulting from the period of economic sanctions, caused a drop of around 60 % in industrial production in the early 1990s, but since 2000 production has been rising – production in 2007 was 3.7 % more than in 2006 – but in 2008, industrial production growth was only 1.1 % as a direct result of the

world-wide economic crisis. The share of industrial production in GDP is declining – for 2001-2006, the average share was 22.3 % (Source: Statistical Office of the Republic of Serbia - SORS).

Industrial production is under-developed and characterised by obsolete technology, low energy and raw material efficiency, weak technological discipline and a high level of waste generation.

Neither the cleaner production concept nor the best available techniques concept (BAT) is yet applied sufficiently in industrial production. The established environmental protection management system covers 140 enterprises, and BAT has been applied by 14 (Source: Chamber of Commerce of Serbia). The recycling potential in Serbia is scarcely used; its share in industrial production is just 0.3 %.

These problems will be resolved by structural adaptation in the industrial sector with the aim of establishing an efficient and competitive industrial structure contributing to European development and preparing for adaptation of industrial production processes to environmental quality standards.

A programme of harmonisation of specific commercial activities with environmental quality standards will be designed and implemented with the aim of adapting industry to the requirements of Directive 96/61/EC on integrated prevention and control of pollution.

## **Transport**

Serbia is situated at the centre of the Balkans, on the crossroads of major traffic corridors, providing through its territory the shortest and most rational road and rail transit links between the countries of Central and Western Europe and those of Southern Europe and the Middle and Far East.

Poor economic situation of the country, damaged and destroyed transportation infrastructure (the road network and bridges) and discontinuation of international traffic that occurred during the 1990s, has resulted in a reduced physical volume of transportation (in all branches of the transport sector), causing a slow-down in transport sector development towards the provision of more efficient and competitive transport sector services. During the period considered, as well as today, one of the key problems with respect to energy efficiency, environmental protection and transportation safety represent the old age of vehicle fleet, import of low-quality fuels and similar.

Investments in rail and river transport made since 1990 were insignificant, causing this mode of transportation today to be in particularly unenviable situation. This is especially reflected in the poor condition of rail infrastructure and transport vehicles, low service quality, increased debt, high operation costs and business losses, improper system organization and similar. The higher utilization rate of railway and waterway transport at the expense of road freight transport is deemed one of the country's priorities in the period to come.

There has been an increase in transport volumes since 1999, mainly freight transport that has almost tripled. The largest share, about 63 %, of freight transport is by rail.

Total passenger transport has grown by more than 40 % since 1999, and by about 10 % since 2002. About 80 % of passenger transport is by road, 85 % of the total number of vehicles in road



transport is by passenger cars (Source: Statistical Office of the Republic of Serbia - SORS and Serbian Environmental Protection Agency – SEPA).

## **Education**

Compulsory and free-of-charge primary education is provided for everyone under equal. Since the school year 2006/07, pre-school education for children age six is also compulsory.

The education system in the school year 1998/99 (no data for Kosovo and Metohija) consisted of 3623 primary schools and 471 secondary schools.

In Serbia, there are 7 state-founded universities covering 86 faculties, and additional 2 state faculties not belonging to any university. In addition, there are 7 private universities with 44 faculties, and 5 private faculties not belonging to any university. The number of non-university educational institutions is 49, of which 42 are state-founded and 7 are private.

Compulsory education and secondary education are free and funded from the state budget of the Republic of Serbia.

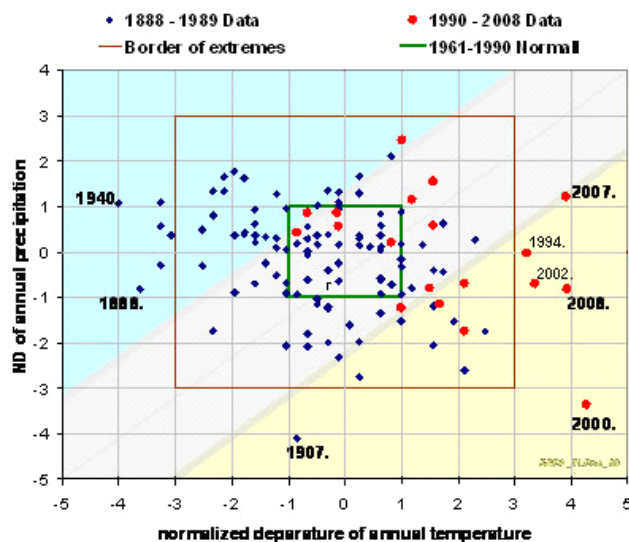
The literacy rate is 96.4 % of the population (men 98.9 %, women 94.1 %).

In 2002, the percentage of the population with higher education was about 6.5 % of the total population, which is 1 % more than in year 1991

## **Climate**

The effects of global warming on the territory of Serbia are evident from a long series of meteorological data. Annual temperatures and annual precipitation for the period 1888-2008, measured at the Belgrade Meteorological Observatory, can be used for illustration. Values for each year are calculated as normalised departures from the 1961-1990 average (Figure 1).

Warmer years dominated in the post-1990 period and most of them had a deficit of precipitation. From 1990, the extremes of temperature were higher than average, with the year 2000 being the warmest. Other analyses indicate that the trend of increasing air temperature in Serbia since 1990 is several times higher than in the previous period. Summer 2008 was the 19th successive summer that was warmer than normal.



Droughts have been frequent since 1990, and their intensity and duration have also increased. This has had a great impact on many activities, primarily the production of food and energy, human health, biodiversity, and water supply. Serbia is located in a region of the world considered vulnerable to climate change (IPCC, 2007).

The Republic of Serbia is characterized by high genetic, species, and ecosystem diversity. The highland and mountainous regions of the Republic of Serbia, as a part of Balkan Peninsula, are one of six European biodiversity centres. Moreover, in terms of the wealth of its flora, the Republic of Serbia is potentially one of the global centres of plant diversity. Although the Republic of Serbia's 88,361 km<sup>2</sup> represent only 2.1% of European territory, biodiversity of different groups of organisms remains high.

Diverse climatic vegetation zones, including a large number of extrazonal, intrazonal and azonal ecosystems, such as wetlands, peat lands, salt marsh lands and sands, strongly influence the high biodiversity of the Republic of Serbia.

The Republic of Serbia's genetic resources are very rich and include a large number of autochthonic cultivated plant and domestic animal species. Genetic resources important for food and agriculture are maintained through traditional agricultural systems or in ex-situ conditions.

The Republic of Serbia's ecosystem diversity may be observed through diversity of vegetation and plant associations, which represent the primary structural and production component of all land ecosystems. The territory of the Republic of Serbia is characterized by a diversity of habitats, hence a diversity of biocenoses that makes this region a significant European centre of ecosystem diversity

A map of the natural potential vegetation of the Republic of Serbia presents an "ecosystem mosaic" composed of forests, shrubs, meadows, swamps, marshes and lakes.

Agro-biodiversity in the Republic of Serbia includes species and habitats of cultivated plants and animals, as well as species and ecosystems of importance to the production of food and fodder (species in agro-ecosystems, pastures and meadows, forest and aquatic ecosystems). Traditional

knowledge and cultural heritage are also important agrobiodiversity components in the Republic of Serbia. The role of agro-biodiversity lies in increasing food production and safety, reducing pressure on different, including vulnerable, ecosystems, forests and endangered species.

According to the National Forest Inventory of Serbia, completed in 2006, published in 2009, a **forest** cover 29.1% of the total territory of Serbia, while the remaining woodland, which according to the international definition includes bushes and shrubbery, covers 4.9% of the territory, which gives a total of 34.0% or 36.3% in comparison to the productive land area in Serbia.

**Soil** of the Republic of Serbia is very heterogeneous as a result of different geological base, climate, vegetation and pedofauna.

The main natural processes of land degradation are water and wind erosion; losses of organic substances; compression through increase in volume weight and decrease in land porosity; salinization through accumulation of soluble salts in soil; landslides caused by slope sliding, i.e. medium fast or fast movements of soil masses and stone material.

According to characteristics, it is identified eight fertility classes of soil, reflecting the relative suitability for agricultural production, with classes I–IV representing higher quality soils. It is estimated that about 45% of total territory belongs to the soil classes IV–VIII which are not suitable for tillage and profitable crop production. Instead, this land is used for semi-subsistence vegetable or fruit production or as meadows.

Soil in urban and industrial areas are very different from the soil in natural environment. Soil in urban areas tend to be limited for use due to soil pollution, sometimes even completely destroyed. Such soil can have adverse effects for human health due to the accumulation and release of heavy metals, nitrites, pesticides and organic pollutants.

Occupation of land through expansion of artificial areas and related infrastructure is the main reason for change in the way of land use in Serbia. Such changes lead to degradation of biodiversity through reduction of species number and habitats, as well as through fragmentation of landscapes

The total area of land in Serbia which changed its use between 1990 and 2000 amounted to 1.1% of total observed territory. The greatest changes are seen within the artificial areas category, where we noticed increase of 3,947 ha. Agricultural areas reduced by 8,473 ha in the same observed period.

**Inadequate agricultural practice** also affect soil quality, including uncontrolled and inadequate application of artificial fertilizers and pesticides, as well as the absence of irrigation water control (most commonly these waters are considerably polluted).

Approximately 52 percent of Serbia's agricultural lands are affected by poor drainage. Problems with drainage have led to waterlogging, salinization, and erosion, among other challenges. Drainage systems cover 2.08 million ha nationwide. Due to neglect caused principally by lack of funds during the past decade, drainage channels have been deteriorated by siltation and weed

growth, and associated structures and pumping stations have also been damaged. Widespread rehabilitation is required.

Soil pollution is caused by localized pollution sources, such as industrial plants, and by non-point pollution from atmospheric rainfall, such as acid rain, chemicals dispersion from farms and by land erosion. Local soil pollution is present in the areas with intensive industrial production, inadequate waste disposals, mines, in accident sites.

The Republic of Serbia has significant **metallic mineral raw material base** (copper, lead and zinc, nickel and cobalt, iron, tin, bauxite, antimony, molybdenum, gold, etc.), energy mineral raw materials (coal, oil, natural gas, and so on), and nonmetallic mineral raw materials (magnesite, dunite, dolomite, limestone, barite, quartz, phosphate, fire-resistant and ceramic clay, gypsum, asbestos, fluorites, feldspath, volasonite, diatomite, zeolite, boron minerals, petruric mineral raw materials, and so on).

The **mining basins** in Serbia are characterized by many years of massive exploitation. Intensive exploitation of minerals, apart from depleting the nonrenewable natural resources and polluting the water, air and soil, has led to significant destruction and degradation of soil. Most of the soil has been degraded through open cast mining of copper and coal. Huge areas are covered with flotation, metallurgic or mine tailings, which are in most cases disposed off in inadequate dumpsites. It is estimated that the dumpsites in Serbia contain:

- 1.4 to 1.7 billion tones of overburden tailings
- About 700 million tones of flotation and separation tailings

Open cast mines and tailings ponds in major mining basins have resulted in degradation of about 40 thousand hectares of soil. Less than 20% of this area is covered by natural recultivation (so far only landscaping).

Exploitation of mineral materials, especially in open cast mines, leads to complete land degradation. This phenomenon is particularly obvious in Kolubara and Kostolac basins where exploitation of lignite is performed, which is deposited under best quality soil.

Acidification of soil occurs due to natural pedogenetic processes, but also due to anthropogenic impacts, partially due to intensive use over the previous period without the application of appropriate agrotechnical measures, and partially due to global acidification processes as a non-point form of land degradation

## **2.1. Methodology**

The purpose of the NCSA Project was to enable Republic of Serbia to:

- Review the global environmental issues that require its priority attention, particularly, but not exclusively, with regard to issues covered by the Rio conventions.
- Determine what capacity development is needed to strengthen management of these issues; and

- Prepare a national plan of capacity development actions

Activities in the Project were concentrated mainly on the following tasks:

- Determine and analyze the current state of implementation of the Conventions
- Define their synergy and interconnections with broader emphasis on management of the environment and sustainable development
- Determine the requirements and potentials for capacity development in the Serbia for these 3 Conventions at an individual, institutional and systemic level
- Prepare a proposal for a Strategic Action Plan for national capacity building for management in the area of the environment

The National Capacity Self-Assessment (NCSA) in Serbia programme is initiated in 2003 and being implemented in period 2004-2007 by UNDP and the Ministry competent for Environment (i.e. Ministry for Protection of Natural Resources and Environment, Ministry of Science and Environment, Ministry for Environmental Protection, etc. ) to determine needs and priorities for implementation of the conventions.

In the period 2004-2007 were establish 3 Thematic Working groups (TWG) under NCSA which have been examining each of the Conventions. TWG produced two initial documents- the stocktaking report, and thematic profiles. The thematic profiles provide preliminary lists of emerging cross-cutting needs that has to be up-dated and analysed for possible capacity development actions to be investigated for the Action Plan. The final output of the project “NCSA Action Plan for Capacity Development” is still pending. NCSA Action Plan is not prepared at that time.

Since 2007, significant changes in legal and institutional environmental framework in Serbia occurred.

Bearing in mind obligations under 3Rio Conventions, MEMSP initiated renew/new Project in order to finalize the NCSA Report in 2011. The primary goal of the NCSA Project initiated in 2011 by MEMSP and financed by UNDP is:

- to renew existing NCSA document and
- To identify through a country-driven consultative process, priorities and needs for capacity building to protect the global environment, taking into account the three Rio Conventions and thematic areas related to biodiversity, climate change and desertification/ land degradation.
- To prepare Capacity building Action plan

Specific objectives to be accomplished through the NCSA include, *inter alia*:

- to identify, confirm or review priority issues for action within the thematic areas of biodiversity, climate change and desertification/land degradation, respectively;
- to explore related capacity needs within and across the three thematic areas;

- to catalyse targeted and co-ordinated action and requests for future external funding and assistance; and
- to link country action to the broader national environmental management and sustainable development framework.
- The NCSA should contribute to strengthening existing national programmes and should lead to targeted action plan development and implementation both within and across the thematic areas of biodiversity, climate change and desertification/land degradation. It should also help to identify linkages between global and national environmental management issues and capacity building efforts.

MEMSP recognized that NCSA Project is especially important in terms of successful implementation of Rio Conventions.

The unit responsible for coordination of the Project process is Sector for International Cooperation and EU Integration. Main responsibilities of the Unit were:

- Establishing new TWGs,
- Managing the project,
- Organizing the meetings and National Workshops
- Supervising the Thematic Working Groups, providing the necessary scientific, technical and administrative support to these groups, working in close co-operation with relevant government agencies, the scientific communities and other stakeholders ,
- Ensuring that reports are regularly submitted
- Revising and preparing all reports and other relevant documents
- Submitting the Project Final Report to the UNDP(UNEP)

Thematic working groups (TWG) were established for each of the three conventions, while the assessment of synergies and cross-cutting issues was ensured by a fourth working group.

During the project special attention was paid to the consultations with various stakeholders. The collection of a wide range of information and opinions happened at conferences, forums, personal interviews and written consultations.

### ***2.1.1. Thematic Reports***

The Report related to Thematic Assessment of the Necessity to Build Capacities to Fulfill the Requirements of the each Rio Convention in Serbia has comprised of the following steps:

- I. Analysing new data – actual/current stocktaking related to
  - Institutional and legal framework
  - Environmental databases
  - Public awareness

- Environmental mainstreaming
- Monitoring systems
- Management capabilities
- Economic processes

II. generation of synergies,

III. identification of problems and gaps

IV. Reviewing current capacities and identifying new areas for capacity enhancement to address Requirements of Convention ;

V. The identification where institutional strengthening and capacity building is necessary in the area of implementation of Convention

VI. Consultation with focal points in the Ministry of Environment, Mining and Spatial Planning, Ministry of Agriculture, Trade, Forest and Water Management ,local community as well as other stakeholders for identification of most up-to-date reports on policy assessment integration and recommendations of key areas for potential improvement, capacity building and demonstration projects.

The Inception Meeting was organized with focal points in October 2011. During the meeting, relevant data are collected and evaluate .

Main findings addressing Draft Thematic Reports for all 3 Rio Conventions was presented at the Workshop on Climate changes and Green economy , held on November 21<sup>st</sup> 2011 in hotel Zira, Belgrade. At the workshop was participate 90 participants. Wide range of stakeholders from national and local levels, public administration, professional institutions, university, business sector and NGO community were presented .

In preparation of Draft Thematic reports , Consultant carried out the following activities in cooperation with the Unit

- Documents related to Conventions were reviewed,
- Inventory of information that will form a basis was collected :
- Reports, information, activities, practices, researches and projects related to the issue were reviewed,
- List of stakeholders is determined,
- Interview with stakeholders are perform ,
- National obligations were reviewed within the scope of Rio Conventions,
- One workshop was held with participation of stakeholders,
- SWOT analyses of institutions having responsibility/obligation in implementation of Conventions were made; their current status on national level were revealed; capacity gaps in individual, institutional and systematical terms were identified,
- The capacity needs necessary were identified and prioritized ,

- Exchange of views and cooperation was achieved between the thematic area consultants and cross-cutting issues/synergy consultant in order to identify the cross-cutting issues and possible synergy areas among Rio Conventions

Capacity needs were identified and prioritized on systematic, institutional and individual level. The needs identified for three thematic areas are given below in general terms.

- Integration of Rio Conventions into sectoral policies
- Application of integrated approach in plans and practices
- Reviewing the legislation
- Awareness-raising
- Training of personnel
- Provision of financial resource
- Research, monitoring and reporting
- Creating data base, access to information and data sharing
- Development and transfer of information and technology
- Carrying out works on adaptation to climate change

Draft Thematic Reports were prepared and distributed to Stakeholders in early December 2011 for further comments and finalisation in 2011. Document is approved by Ministry in December 2011.

A comprehensive list of documents has been used to identify the issues listed above and it includes:

- GEF: A Guide For Self-Assessment of Country Capacity Needs For Global Environmental Management, Washington, 2001
- Economic Commission For Europe - Committee On Environmental Policy, Environmental Performance Reviews - Republic Of Serbia, Second Review, UN, New York and Geneva, 2007
- Official strategies of the Republic of Serbia: Initial National Communication, Strategy for sustainable development, National Strategy of Serbia for the Accession to the EU,
  - Action Plan for harmonisation of the legislation of the Republic of Serbia with EU legislation, National Strategy for Economic Development of the Republic of Serbia for 2006-2012, • Regional Development Strategy of the Republic of Serbia for 2007-2012, Agricultural Development Strategy of the Republic of Serbia, • Forestry Development Strategy, Biodiversity Strategy, • Waste Management National Strategy with the EU Approximation Programme, • Poverty Reduction Strategy, • Spatial Plan of the Republic of Serbia, • Water Management Basics of the Republic of Serbia, • Strategy for Development of Railway, Road, Water, Air, and Intermodal Transport in the Republic of Serbia for 2008-2015 • National Environmental Approximation Strategy



- Official documents presented on the Government of Serbia web site.
- Statistical office of the Republic of Serbia (<http://webzrzs.stat.gov.rs>)
- National Strategy for Incorporation of the Republic of Serbia into the CDM-Waste management, Agriculture and Forestry Sector. 2010.  
([http://www.ekoplan.gov.rs/en/upload-centar/dokumenti/razno/cdm\\_strategija\\_engleski\\_za\\_stampu.pdf](http://www.ekoplan.gov.rs/en/upload-centar/dokumenti/razno/cdm_strategija_engleski_za_stampu.pdf)).
- Serbia 2010 Progress Report. 9th November 2010. European Commission  
([http://ec.europa.eu/enlargement/pdf/key\\_documents/2010/package/sr\\_rapport\\_2010\\_en.pdf](http://ec.europa.eu/enlargement/pdf/key_documents/2010/package/sr_rapport_2010_en.pdf)).
- Energy sector development strategy of the Republic of Serbia by 2015 (May 2005). Ministry of Mining and Energy.
- Programme for Implementation of the Serbian Energy Development Strategy until 2015 in the period 2007-2012 State
- Documents from European Environment Agency (<http://www.eea.europa.eu/soer>).
- Official documents presented on the MEMSP web site
- Official documents presented on the SEPA web site

### **2.1.2. NCSA Report**

For the purpose of the reports prepared within the NCSA process (thematic and crosscutting assessments), the analysis of capacities was conducted for three levels – **individual**, **institutional** and **systemic**. The term ‘capacity building’ was understood as all the activities which improve the abilities of individuals, institutions and the whole system and conduct own functions in an efficient, effective and sustainable manner.

Based on the three Thematic Assessments, cross-cutting analysis was conducted and a corresponding Report prepared in December 2011 as working document, by taking into consideration the capacity gaps, priority capacity needs and opportunities on the basis of obligations specified in the thematic reports related to 3Rio Conventions.

“Cross-cutting Issues/Synergy Workshop” was held in December 2011 in cooperation with the MEMSP Unit, CBD, CCD, UNFCCC National Focal Points and thematic area Consultants for the purpose of preparing the NCSA Cross-cutting Report.

NCSA cross cutting Report was prepared on the basis of :

- Thematic Reports
- Workshops
- Discussion with Focal points
- Comments on Draft Report

Cross-cutting issues and synergy areas for three conventions were presented by assessing the prioritized capacity needs, opportunities, weaknesses and strengths in implementation and capacity gaps that cover three Rio Conventions. The Cross-cutting and Synergy areas also include the probable linkages (national program, strategy, plan and sustainable development objectives) that can be achieved on national basis for three Rio Conventions

The primary objective of the cross-cutting analysis was to identify priority cross-cutting capacity strengths, constraints and needs, as well as priority opportunities for synergies in capacity development. The cross-cutting assessment (coupled with specific findings from the Thematic Assessments) established the basis for preparation of the Action Plan, which recommends specific actions to bridge the capacity gaps for implementation of the three UN Conventions and to promote synergies

The NCSA process has identified seven priority areas of cross-cutting capacity constraints on systemic, institutional and individual levels.

*Systemic level:*

- National policy and legal regulatory framework;
- Economic regulatory framework;

*Institutional level:*

- Vertical and horizontal cooperation and subsidiarity;
- Knowledge gaps related to research;
- Information management and data collection

*Individual level:*

- Knowledge gaps related to education;
- Awareness on the three topics and sustainable development.

The methodological approach applied in the identification and analysis of cross-cutting capacity issues in the implementation of the Rio Conventions in Serbia consisted of the following four steps:

- Literature review;
- Interviews with stakeholders, mainly focal points and technical consultations;
- Design and application of the framework to identify and analyse cross-cutting capacity issues; and
- Definition and application of the framework to prioritise cross-cutting issues for detailed consideration in the NCSA Action Plan.

Literature review and interviews/ technical consultations (held in November 2011, Belgrade ) were conducted in order to get data about current state of environmental management related to implementation of Rio Conventions and to collect additional information.

The design and application of the framework to identify and analyse cross-cutting and synergistic capacity issues included the following activities:

- identification of common SWOTs (strengths, weaknesses, opportunities and threats), based on the findings of the Thematic Assessments;
- determination of cross-cutting requirements established by the Conventions;
- determination of the level of capacity available in Serbia to meet the identified cross-cutting Conventions requirements

- **Analysis of Thematic Reports**

Identification of the systemic needs for the implementation of the three Rio conventions, required clear understanding of the objectives and measures of the three Conventions, as well as the necessary enabling environment for the proper implementation. The three Rio Conventions identify ambitious objectives for global environmental management.

The objective of the UNFCCC:

- to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

The objective of the CCD:

- to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa, through effective action at all levels, supported by international cooperation and partnership arrangements, in the framework of an integrated approach which is consistent with Agenda 21, with a view to contributing to the achievement of sustainable development in affected areas.

The objectives of the CBD:

- the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.

The achievement of these objectives clearly requires an integrated approach to environmental management based on the principles of sustainable development – as it is explicitly highlighted in the text of the CCD.

Understanding the synergies among these conventions, and finding ways to co-ordinate and harmonise overlapping activities among them, are becoming increasingly recognised as ways to help to ensure effective national measures at the country level to protect the global environment.

The Republic of Serbia has become a signatory of the Rio Declaration on Environment and Development by succession.

The Republic of Serbia has been a member of the UN Framework Convention on Climate Changes (UNFCCC) since 10 Jun, 2001, and Kyoto Protocol since 17 January 2008, as a developing country (non-Annex I country). MEMSP is the national coordinator for the implementation of the Convention and Protocol. MEMSP, in cooperation with other ministries and special Governmental organizations, implemented activities to fulfill the obligations undertaken with the ratification of the Convention and Protocol. MEMSP is a focal point for the Convention on Climate Change.

On 8th June 1992, state delegation of the Federal Republic of Yugoslavia (FRY) signed the Convention on Biological Diversity (CBD) in Rio de Janeiro, being one of 153 signatory countries. Federal government of the FRY adopted the Resolution on biodiversity conservation policy in FRY on 31st December 1993. The FRY Parliament ratified the Convention on Biological Diversity in 2001 (the Convention was published in the Official Gazette of the FRY – International agreements, number 11/2001). The Convention entered into force on 1st March 2002. Ministry of Environment, Mining and Spatial planning (MEMSP) is a focal point for the Convention on Biological Diversity

The Republic of Serbia ratified the Convention Combat desertification/Land use (CCD) via Law on ratification of UN Convention on Combat Drought and Desertification (Official Gazette Serbia, International agreement 102/07). Ministry of Environment, Mining and Spatial planning (MEMSP) is a focal point for the Convention Combat desertification/Land use .

- **Legal and institutional framework for 3 Rio Conventions and environmental protection in Serbia**

The Constitution of the Republic of Serbia (Official Gazette of RS issue 98/2006), guarantees environmental protection and sustainable development.

A new legal framework for environmental protection was introduced in 2004 by the Law on Environmental Protection (LEP) , the Law on Strategic Environmental Assessment (LSEA), the Law on Environmental Impact Assessment (LEIA) and the Law on Integrated Prevention and Pollution Control (LIPPC) . In order to improve the state of the environment, the Republic of Serbia introduced legal framework for environmental protection harmonised with the EU acquis. Thirteen new laws in the field of the environment, such as the Law on Air Quality, the Law on Waste Management and the Law on Packaging and Packaging Waste, were adopted by the Serbian Parliament in 2009. Taking into account the provisions of EU Directives and Decisions transposed into these laws, it is expected that their implementation will affect future environmental protection .

Comprehensive list of laws and Strategies related to 3Rio Conventions are adopted in Serbia

**Law (LEP) on Environmental Protection** (Official Gazette of RS, Nos. 135/04, 36/09, 36/09 – other law and 72/09 – other law), represents the framework law in the field of environmental protection. The law contains basic principles of legal order that comprehensively and completely regulate protection of the environment.

This law regulates integral system of environmental protection, which shall ensure human rights to live and develop in healthy environment and balanced correlation between economy growth and environment, with special emphasis on:

- integration of environmental protection and improvement policy into the economic policy;
- consistent decisions of local self-government bodies that determines charges for protection and improvement of the environment;
- any person who utilizes natural values shall be obliged to pay real cost for their utilization and recultivation of the area,
- the polluter shall be obliged to pay single charge for environmental pollution and bear the total costs of measures for prevention and reduction of pollution, including the costs of risks for the environment and cost of elimination of damage inflicted on the environment;
- imposition of economic instruments and other measures to improve the quality of the environment

General provisions of the LEP determine the general subject, basic principles on which the environmental protection system is based, subjects that provide protection and special laws adopted with the aim to regulate sustainable management of natural values and protection of environment.

Aforementioned law also regulates management of natural values and conditions for environmental protection, monitoring the state of the environment, public informing and public participation, economic instruments, liability for pollution of the environment, supervision and penalty provisions.

For the purpose of implementation of the LEP regulation of certain issues is determined by by-laws, particularly by regulations and rulebooks. LEP serves as a framework law for the field of environmental protection and other system laws.

Specific , main laws related to 3Rio Convention are inter alia

- **Law on Air Protection** (Official Gazette of RS, No. 36/09) – This law regulates air quality management and establishment of environmental protection measures, their organization and control of their implementation, as well as control of air quality improvement, since it is the natural value of general interest that enjoys special protection;
- **Law on Nature Protection** (Official Gazette of RS, Nos. 36/09 and 88/10) – this law regulates protection and conservation of nature, biological, geological and landscape diversity as an integral part of the environment;

- **Law on Waste Management** (Official Gazette of RS, No. 36/09) – this law regulates: types and classification of waste, waste management planning, waste management agents, responsibilities and obligations in waste management, waste management organization, specific waste streams management, conditions and procedure of authorisation, cross-border movement of waste, waste information and database, waste management funding, monitoring and other relevant issues regarding waste management.
- **Law on Chemicals** (Official Gazette of RS, Nos. 36/09 and 88/10) – this law regulates integrated management of chemicals, classification, packaging and labelling of chemicals, integral registry of chemicals and registry of chemicals placed on the market, restrictions and bans on chemicals production, use and placing on the market, export and import of certain hazardous chemicals, licenses for operating with, trading and using particularly hazardous chemicals, placing detergents on the market, systematic monitoring of chemicals, data accessibility, supervision and other relevant issues regarding chemical management.
- **Law on Environmental Impact Assessment** (Official Gazette of RS, Nos. 98/2002 and 36/09) – regulates the assessment process regarding the effects of the projects that may have significant environmental consequences, the content of the Environmental Impact Assessment Study, participation of stakeholders, authorities, organizations and public, inter-state information about the projects that may have significant trans-boundary impact on the environment, monitoring and other relevant issues regarding environmental impact assessment.
- **Law on Strategic Environmental Assessment** (Official Gazette of RS, No. 98/2008 and 88/10) – this law regulates the conditions, methods and procedure according to which environmental impact assessment of certain plans and programmes is carried out in order to provide environmental protection and enhancement of sustainable development by integrating basic principles of environmental protection into the procedure of preparation and adoption of relevant plans and programmes.
- **Law on Nature Protection** (Official Gazette RS, No. 36/09) regulates the protection and conservation of nature, biological, geological and landscape diversity. It sets the following goals: Protection, conservation and development of biological (genetic, species and ecosystem), geological and landscape diversity; Harmonization of human activities, economic and social development plans, programmes, bases and projects with sustainable use of renewable and non-renewable natural resources and long-term conservation of natural ecosystems and a natural balance; Sustainable use and/or management of natural resources and goods, maintenance of their function, along with conservation of natural values and the balance of natural ecosystems; Timely prevention of human activities and actions which may lead to permanent depletion of biological, geological and landscape diversity, as well as disturbances with negative consequences for nature; Determination and monitoring of nature status;. Improvements in the status of degraded parts of nature and landscape
- **Law on Geological Research** (Official Gazette of RS, No. 98/2008)

- **Law on Waters** (Official Gazette of RS, No. 30/10) – regulates legal status of waters, integrated water management, management of water structures and underwater land, sources and means of funding water management, monitoring and implementation of this law and other relevant issues regarding water management. This law transposes Water Framework Directive to a great extent and a set of by-laws shall be adopted within the period of two years from adoption of the Law in order to continue approximation to EU water standards.
- **Law on Agricultural Land** (Official Gazette of RS, No. 62/06, 65/08 and 41/09) prescribes the measures for the protection of agricultural land related to the prohibition of the non-agricultural use of arable land, the approval to change the intended use of arable land, the prohibition of the fragmentation of cadastral parcels of arable land, the prohibition on releasing or depositing hazardous and harmful substances, the assessment of the presence of hazardous and harmful substances in arable land and irrigation water, anti-erosion measures, soil fertility assessment and the quantities of mineral fertilizers and pesticides introduced into arable land, field damage and protection of arable land from frost, hail and fire
- **The Law on Genetically Modified Organisms** of the Republic of Serbia is based on the EU Council Directive of 23 April 1990 regarding the deliberate release of genetically modified organisms into the environment 90/220/EEC..
- **The Law on Forests** (Official Gazette of RS, No. 30/10 of 7/5/2010), foresees the implementation of a National Forest Inventory (NFI) every 10 years<sup>1</sup>
- **The Law on Tourism** ("Official Gazette of RS" No. 36/09), prescribes and coordinates conditions and ways of planning and development of tourism. The Law also foresees the proclamation and sustainable use of tourist areas. If the tourist area is within the area of a protected natural asset, then regimes of protection and internal order are applied in keeping with the regulations that define conservation and use of the asset.
- **Law on Meteorological and Hydrological Activities** ("Official Gazette of RS", No. 88/2010 ), regulates the authority of the Republic Hydro Meteorological Service of Serbia (RHMSS), as a National Hydro Meteorological Service in the establishment and functioning of the National Hydro-Meteorological system of early warning, the authority of RHMSS to issue warnings on the occurrence of disasters of meteorological and hydrological origin, as well as development of risk maps and vulnerability to weather hazards
- **Law on Planning and Construction** ("Official Gazette of RS", no. 72/09), which prescribed the development of a Republic of Serbia Spatial Plan . This Law regulates conditions and manner of spatial planning, regulation and use of construction land and building construction; enforcement and inspection; other matters important for spatial planning, regulation and use of construction land and building construction
- **Law on the Spatial Plan of the Republic of Serbia from 2010 until 2020** ("Official Gazette of the RS", Issue 88/10) defines , inter alia, necessity to drafting Spatial Plans. Spatial and urban development plans are among strongest instruments which should provide for

rational organization, regulation, use and protection of space. They are the key link in environmental management system, especially in the area of protection and rational utilization of natural resources. They serve to integrate environmental protection, economic and social development, hence they play crucial role in implementation of sustainable development concept

- **Law on Emergencies** (“Official Gazette of RS”, No. 111/2009), which defines and governs the following: activities, declaring and management in emergency situations; system of protection and rescue of citizens, material and cultural goods from natural and man-made disasters; rights and obligations of citizens, state agencies, autonomous provinces, local self-governments, companies and other legal persons and entrepreneurs; inspection and supervision, international cooperation and other issues relevant to organisation and functioning of the protection and rescue system
- **Law on Free Access to Information of Public Importance** (“Official Gazette of the RS”, no. 120/2004), regulated the right to access the information of public importance which are at dispose of the governing bodies, in order to realize and protect the interest of the public to know and in order to achieve democratic system and open society. It is considered that justified interest of public to know exists always when information which is at dispose of the governing body refers to threatening and/or protection of human health and environment. The obligation to disseminate information related to the environment has been given in the Law on Environmental Protection and in the Law on EIA.

**Ministry for Environment, Mining, an Spatial planning (MEMSP)** performs state administration activities related to, but not only , the system of protection environment , monitoring climate changes, identification and protection of natural systems that are of national significance, determining environmental protection requirements in spatial planning and construction; accident emergency warning; waste management, with the exception of radioactive waste; strengthening and sustainable development of natural resources; inspection control in the field, establishing rules and standards for drawing geological maps; designing a research programme in the field of basic geological research concerning sustainable use of resources and groundwater

MEMSP has competence over the conservation and development of biodiversity and protected areas; monitoring and sustainable use of biodiversity and landscape; internal and international trade in endangered and protected species of wild flora and fauna.

Certain competences in the area of environmental protection have been decentralized to provincial or self-government unit level. Since 2009, according to the Law on Determination of Competences of the AP Vojvodina (“Official Gazette of the RS”, Issue 99/09), competences of the Provincial Secretariat for Environmental Protection and Sustainable Development have included activities related to environmental protection on the territory of AP Vojvodina, the protection of natural resources, in compliance with the law regulating nature protection, development and adoption of an environmental protection programme for AP Vojvodina territory, adoption of plans and programmes related to natural resources and goods



management, control of utilization and protection of natural resources and areas of its territory and continual monitoring and control of the environmental status of the Province

Local self-governments have competences over land usage planning, environmental protection and development, as well as utility services. Local level environmental secretariats have competences over environmental protection, including air quality protection, noise protection, municipal waste management, urban planning and permitting for construction of facilities other than those at the national level. Their statutory tasks also include strategic assessments of plans and programmes, environmental impact assessment and integrated permits

The Republic of Serbia ratified the Kyoto Protocol, that entered into force in 2008. As a Non-Annex I Party, Serbia is eligible for Clean Development Mechanism (CDM).

**Serbian Environmental Protection Agency (SEPA)** functions as an administrative body of MEMSP, performing duties related to: development, approximation and management of national environmental information system (monitoring the state of environment factors, registry of pollution sources, etc.), collecting and consolidating environment data, their processing and writing reports on the state of the environment and implementation of environmental policy; developing a procedure for environment data processing and assessment; Cooperation with European Environment Agency (EEA) and European Information and Observation Network (EIONET); performing other duties specified by law.

**The Ministry of Agriculture, Trade, Forest and Water management (MATFWM)** is inter alia responsible for the following:

- Implementation of the Cartagena Protocol on Biosafety,
- Biosafety Clearing House,
- Organisation of the National Committee for Biosafety,
- Forest management,
- Accreditation of laboratories,
- Food and livestock food production quality control

**Directorate for Forest Management**, is an administrative authority within the MATFWM, performs specialized tasks related to: forestry policy, forest conservation, improvement and use of forests and wildlife, implementation of forest and wildlife protection measures, control of the seed and seedlings in forestry and other tasks specified by law.

**Republic Directorate for Waters (WD)**, being a body of the MATFWM, performs the activities of state administration and professional activities referring to water management policy; multipurpose use of water; water supply system, except for water distribution; protection against water; protective measures for waters and planned rationalization of water consumption; ordering of water regimes; observing and maintaining cross border water regimes, as well as other activities prescribed by law WD is responsible for the flood protection infrastructures and for flood protection planning. In this framework WD performs flood risk assessment for the areas with flood defenses, but not for the other areas or those under the responsibility of other Water management institutions (Belgrade Vode, Serbia Vode etc.).

WD is involved in drought management, by proposing the appropriate accumulation and flows regimes in case of low water levels for hydrological drought management.

Certain competencies relating to 3 Rio Conventions are entrusted also to:

- **Ministry of Economy and Regional Development (MERD)** (including sectors of industry, tourism and complementary activities);
- **Ministry of Health** (implementation of sanitary regulations pertaining to environmental protection and biosafety);
- **Ministry of Education and Science (MES)** main financial source for various basic and applied research related to the land degradation, combat desertification, climate changes, biodiversity investigation ;
- **Ministry of Infrastructure and Energy (MIE)** performs state administrative duties, part of which is related to emission of polluting substances from vehicles into the air and noise emission from vehicles, aeroplanes and machines and maritime transport.
- **Ministry of interiors (MI)** performs state administrative duties related risk assessment
- and other ministries

**The Environmental Protection Fund (EF)**, established in 2004, provides funds for incentives and environmental development in the Republic of Serbia. The Fund manages projects and performs financial mediation in the area of conservation, sustainable use, protection and development of the environment and the use of renewable energy sources, in compliance with the National Environmental Protection Plan and other strategic plans, programmes and concluded international agreements

**Republic Hydro-meteorological Service (RHMS)** is a specialized organization that performs technical tasks related to: monitoring of air quality, systematic meteorological, climatological, agro meteorological and hydrological measurements and observations and implementation of established and compliant programmes for quality control of air, surface and groundwater from first aquifer and precipitations; database of observed and measured hydrological and meteorological data; monitoring, analysis and forecasts of weather, climate and water change including the quality of air and water; development of methods, operating observation and warnings about adverse atmospheric and hydrospheric conditions; research of the processes in the atmosphere and hydrosphere and developing methods and models for weather, climate and water forecast; weather modification; designing proposals for use of energetic capacities of sun and wind; hydrometeorological support for river transport; establishing and preservation of benchmarks and calibration of hydrological and meteorological information systems; performing international duties in the field of meteorology and hydrology, and other tasks specified by law.

**Chemicals Agency** was founded as an independent, developmental, specialized and regulatory organization that performs public authorizations with the aim to provide administrative capacities for quality, efficient and safe management of chemicals and biocidal products

**Institute for Nature Conservation (INC)** is responsible for protection and improvement of natural assets of the Republic of Serbia. Its tasks are: research and studies in the field of environmental protection, determining the borders of the area in need of protection, valorization of a natural good and proposing measurements for protection regime and natural good category; monitoring the state of protected natural good and proposing measurements for protection regime and natural good category to competent institutions; preparation of professional proposals and analyses for determining measures for protection and conservation of natural goods in the process of assessing the environmental impact.

**Institutes for Health Protection (IHP)** cover monitoring of ambient air quality in local urban network of agglomerations and quality of surface waters in the flow zone through urban areas, monitor adequacy of drinking water and noise pollution.

Serbian Government resolutely faces challenges such as the development of underdeveloped areas and the fight against poverty. On July 24, 2008 the Government of the Republic of Serbia established the **Office for Sustainable Development of Underdeveloped Areas** entrusted to the Minister without Portfolio . Office for Sustainable Development of Underdeveloped Areas performs professional services for the Government relating to participation in activities to prepare program and planning documents related to the sustainable development of underdeveloped areas, making periodic reports on achievements in sustainable development of underdeveloped areas, giving opinions in the process of developing legislation, policies, measures and indicators of sustainable development of underdeveloped areas.

### **3.2.National strategic framework for 3 Rio Conventions**

The Government adopted the First National Communication on 11 November 2010, and submitted it to the Secretariat of the UN Framework Convention on Climate Change on 25 November 2010.

Initial (First) National Communication is containing the GHG inventory for 1990, as a base year, and for 1998. 1998 was chosen because statistical and other data sources were the most appropriate ones for demonstrating the state of emissions in Serbia and at the same time they meet the requirements of the relevant IPCC guideline for inventories of non-Annex I Parties. The First National Communication containing GHG emissions trends (scenarios) by 2012 and 2015<sup>1</sup>.

According to the "business as usual" scenario in this document, total GHG emissions in 2012 will reach 112.23% of emissions level in 1990, whilst alternative scenario has shown that the growing GHG emissions trend could be decreased on the way that 2012 year GHG emissions will reach level of 110.56% of the emissions in 1990. The National Sustainable Development Strategy for the period 2009-2017 (: NSDS) was adopted in May 2008 (Official Gazette of RS No. 57/08). NSDS defined the vision of development of the country and laid down principles, priorities and objectives for achievement of that vision. NSDS creates balance between three key factors of sustainable development, sustainable economy development, sustainable society development and environment protection with rational utilization of natural resources. In addition, an institutional frame for implementation of NSDS has been set, as well as sources of financing and

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<sup>1</sup> Data discussed in this report is for 2012

mechanism of monitoring with clearly defined indicators that are complied with the revised list of UN sustainable development indicators. NSDS is in compliance with the EU Sustainable Development Strategy, Millennium Development Goals (UN) and with a National Strategy for the Accession of Serbia-Montenegro to the European Union (adopted by the Government in June 2005).

The Action Plan for implementation of NSDS for the period 2009-2017 was adopted in 2009 (Official Gazette of RS No. 22/09). The Action Plan determined specific measures and/or activities for implementation of NSDS, competent institutions and partners in implementation of the measures and/or activities, time limits for implementation of the measures and/or activities, total costs and sources of financing. Changes and amendments to the Action Plan that laid down indicators for monitoring of implementation of majority of measures and/or activities and that complied planned measures and/or activities with contemporary economic situation, were adopted by the Government in (Official Gazette of RS, No. 31/10). The implementation of NSDS and the Action Plan was successfully started in 2009.

According to the LEP, planning and management of environment protection is secured and provided by implementation of the **National Environment Protection Programme** (Official Gazette of RS No. 12/10) adopted by the Government (for the period of ten years). For the purposes of efficient implementation of the National Environment Protection Programme, the Action Plan is being prepared and it is expected to be completed in 2011/2012. The Action Plan provides legal and institutional foundation for existing and future programmes and projects related to environment protection. In the NEPP priority was given to the activities of climate change mitigation. Simultaneously, the importance and the need to conduct activities of mitigation to modified climate conditions were also outlined

Newly adopted **Biodiversity Strategy (BS)** for period of seven years (2011-2018), is main national strategic framework for Biodiversity management and protection. The legal basis for adoption of the BS in the Republic of Serbia is the LEP, in accordance with the Law on Ratification of the Convention on Biological Diversity. The Strategy in particular identifies the pressures and direct threats to biodiversity and gives an overview of the known impact of other sectors (agriculture, forestry, traffic, and mining) as well as climate Change. The BS and the Action Plan affirm the importance of developing a national strategy and mechanisms in order to understand, plan and minimise possible effects of climate change on biodiversity

**The Energy Sector Development Strategy** of RS by 2015 includes, as one of the programme priorities- Environment Protection Programme.. In accordance with promoted objectives of energy policy of Serbia and basic premises in determining energy needs, the following priority programmes have been selected:

- *First – basic Priority of continuity in technological modernization* of the existing energy facilities/systems/sources, in all energy production systems
- *Second – directed Priority of rational use of quality energents* which covers substitution of electrical power utilization, by utilizing natural gas for heating energy services in the sector of Households and Public and Commercial Activities, and increase in energy efficiency in production, distribution and utilization of energy

- *Third – special Priority of New Renewable Energy Sources* (particularly biomass and hydro potentials at small river courses and other sources) and introduction of new energetically efficient and environmentally sound technologies and devices
- *Fourth – action Priority for emergency/urgent investments in new electrical-energetic sources*, with new gas technologies (combined gas-vapor thermal-energetic facility), in case of highly dynamic economic growth of the country and worsened conditions for distribution of electrical energy from existing sources or from the surroundings
- *Fifth – long-term development and regional strategic Priority* of constructing new energy infrastructure facilities and electrical-energetic and heating sources (so-called exchange capacities), as well as capital-intensive energy infrastructure within regional and pan-European infrastructure systems.

Development of the **National Appropriate Mitigation Actions (NAMAs)** till 2020 for the energy efficiency sub-sector is in the initial phase of implementation. The finalisation of this document is planned for mid-2013. Its implementation should follow the adoption of the document by the Government.

**The Agricultural Development Strategy** has, as one of its objectives, objective to- Preserve environment from effects of agriculture production.

**The Strategy of Clean Technologies** has been adopted in 2009 ("Official Gazette of RS", No. 17/2009). Strategy is a guidance document for industries on clean technologies. The main goals of introduction of clean technologies are resource conservation, and its sustainable use, reduction of toxic raw materials and waste minimization. The companies that will implement clean technologies measures should gain economic benefits in terms of reduced labour costs, reduced costs of waste treatment, reduced costs for energy consumption, etc. This Strategy presents the operational part of National Sustainable Development Strategy in the part that refers to production processes and it benefits through improved public health and reduced environment pollution.

**The Development Strategy for Rail, Road, Water, Air and Intermodal Transport** of the Republic of Serbia from 2008 to 2015, as one of its general objectives sets out- Reduction of negative environmental impact of transport, in the line with the principles of sustainable development.

**The Strategy of Tourism Development** in the Republic of Serbia ("Official Gazette of RS" No. 91/06) emphasizes the concept of sustainable development, where natural resources hold possibilities for reaching commercial and other objectives in tourism. In order to realise this Strategy, 15 master (business) plans were elaborated for selected tourist destinations, which register the potentials for the development of tourism. Two types of tourist offers, among a number of others, are interesting for their significant potential for biodiversity and rural economy:

- Mountain and lake resources
- Rural tourism

The Strategy outlines that mountains and lakes are the strongest potential tourist product, from the aspect of resources, but are almost non-existent from the aspect of infrastructure and marketing

According to the goals defined in the Forestry Development Strategy for the Republic of Serbia (Official Gazette, No. 59/06, 6/7/2006), Serbia is finalising the Programme for the Development of Forestry in Serbia 2011-2020, (the project is funded by the Government of Finland, in cooperation with FAO, as the implementing agency and the Directorate for Forests as the donation recipient). It is expected that the Programme for the Development of Forestry in Serbia is expected be adopted in 2011.

**The National Strategy for Sustainable Use of Natural Resources and Goods** is a work-in-progress document. Its adoption is expected in the first quarter of 2012. The overarching objective of the protection and management of biodiversity in the Republic of Serbia has been defined as the conservation, improvement of the status and sustainable use of autochthonous species and communities on a level that will safeguard their long-term viability.

**National Environmental Approximation strategy** (2011) noted that the **economic challenge** of environmental approximation is enormous. Based on the state of environmental infrastructure in Serbia and extrapolation from the situation in countries that recently acceded to the EU, it is estimated that the total cost of meeting the requirements of the environmental Acquis will be around €10.6 billion (between now and 2030), the most demanding sectors being water (€ 5.6 billion), waste (€2.8 billion) and industrial pollution (€1.3 billion). An important part of the costs are operational ones, which cannot be covered by international sources and will have to be financed from public budgets, private sources or charges. The need of additional financing from Serbian public budgets is estimated to peak at around €360 million in 2018 and should steadily decrease thereafter until about 2025, when full cost recovery can be achieved. Meeting of all these projections successfully is predicated on the development of a robust economic capacity in MEMSP and the optimised use of the economic instruments. On the other side of the balance, the direct economic benefits arising from environmental compliance over the same period should outweigh the costs by the factor of approximately 2.4. The **institutional challenge** is also significant.

### **3.3. Assessment of capacities**

In order to meet all the requirements given in multilateral environmental agreements (MEA), each contracting party should develop the capacities to mobilize relevant information and knowledge, to build consensus and partnership between all stakeholders and on the basis of that they should formulate effective policy, legislation, strategies and programmes. It is also necessary to develop capacities to implement such policy, legislation, strategies and programmes, with the inclusion of human, materialistic and financial resources. Finally, it is necessary to build capacities to monitor, evaluate, report and learn on the basis of the achieved in comparison to planned activities.

In order to perform all the above mentioned functions, it is necessary to build capacities at all three levels: individual, institutional and systematic ones

Environmental management in Serbia is currently characterized by four main features.

- Firstly, the rapid transition toward a market economy is encumbered by many inefficient, energy-wasteful and polluting industries and a generally poor state of environmental infrastructure in the public and private sectors. There is a legacy of environmental neglect and a backlog of over-exploited and degraded ecosystems that remains to be addressed in an era of rapid economic and social transformation. Reforming environmental policies and rehabilitating infrastructure is a major challenge when poverty still remains a common concern in the country.
  - Secondly, despite the various political changes, Serbia has adopted significant legislation and national strategy for environmental management.. But, even it was stated in *Environmental Performance Review* (UN Economic Commission for Europe) in 2007, some notes still remain the same : “.... , and lacks provisions for establishing binding instruments across sectors – ministries each issue permits for their respective fields of competence, and integrated permits have not yet been introduced.” The means of operationalizing the legislation and policy need further strengthening.
  - Thirdly, a lack of coordination is apparent in the largely sector-based approaches to both economic programmes and the management of air, land, water and biological resources. The EPR report also states: “Policy making is still dominated by the planning of operations within sectors. Very few ministries have specific structures in place to cooperate with the MEMSP ... and there are many political and institutional obstacles to this needed cooperation.” The conventions intersect multiple sectors and therefore depend upon coordination processes.
  - Fourthly, while there is a lot of both pressure and support for Serbia to move toward consistency with EU standards, the institutional capacity and resources in government to facilitate this shift are still insufficient
- ***UNFCCC implementation in Serbia***

The main sources of air pollution in Serbia include: the energy sector (thermo power plants, district heating plants), oil refineries, chemical industry, metal processing industry, individual heating boiler plants, traffic, inadequate storage, waste dumpsites including flotation tailing ponds etc. The old vehicle fleet still uses low-quality motor fuels (diesel fuel with high sulfur content).

Taking into account the obligations related to UNFCCC and Kyoto Protocol, as well as ever-growing awareness about this global problem, climate change has recently been given higher attention at the national level.

The most significant positive change which have happened over the past several years in the area of harmonization of development policy and Climate change mitigation are the following:

- UNFCCC has entered into force.

- First National Communication is adopted
- Bearing in mind binding contents of these national communications, this document may be created only as a result of joint efforts made by all relevant authorities and organizations of the Government, as well as public, private and NGO sectors.
- In addition to the development of the national communication, a number of climate change related workshops, trainings and seminars have been organized for a number of various stakeholders,
- Cooperation with relevant institutions at national and regional levels has been improved considerably, as well as the international cooperation; also, a number of projects have been initiated and implemented
- National Strategy for Inclusion of the Republic of Serbia into the Clean Development Mechanism for the areas of waste management, agriculture and forestry is adopted
- Designated National Authority (DNA) for the implementation of CDM projects, a prerequisite for participation in this set of projects, has been fully operational since 21 November 2008
- Ministry of Energy has prepared the Strategy on Application of CDM in Energy Sector of the Republic of Serbia.
- Institutional and organizational adjustments have been done, such as foundation of the SEPA, Fund for Environmental Protection.
- A comprehensive list of Laws and related bylaws that have impacts on climate change are adopted
- Law on Environmental Protection predicted wider use of economic instruments in the area of environmental policy and sustainable development. One of the instruments is the establishment of the Fund for Environmental Protection
- A range of measures for local bodies strengthening have been undertaken referring to sustainable development and Climate change problem-solving. This has also intensified the activities of local governing bodies in preparing Local Agenda 21.
- Distribution of information is established mostly through web-sites presentations, offering information to public (MEMSP; SEPA; DNA) .
- Between certain institutions (Ministry in charge for energy, RHMS; University) there is a good collaboration in realizing the requirements set out in the UNFCCC, which is mostly implemented through projects and contracts on scientific and technical cooperation.
- A comprehensive list of scientific institutions dealing with CC is established. There is also cooperation between scientific institutions and NGOs, i.e. civic associations of various types, but oriented towards environmental protection.
- A number of research projects pertaining to the UNFCCC requirements are financed both by national and international institutions. Information dissemination about new findings in this area is very good, as well as cooperation with foreign institutions.



- There is a number of NGOs dealing with the activities related to realization of the CC requirements. These activities mainly pertain to understanding and awareness raising related to the importance of CC.

There are also numerous problems in the UNFCCC implementation:

- Taking into account that climate change affects numerous sectors and systems in the Republic of Serbia to great extent, and bearing in mind that preliminary analyses and climate scenarios show that even more serious negative impacts are expected in the future, it is systematic dealing with this problem only that will ensure sustainable development at national level. That systematic effort should include beside adaptation also measures for GHG emission reduction. It is therefore necessary to deal with climate change issues systematically and continuously and to place such approach among strategic priorities of the state policy
- In addition to the activities aimed at GHG emission reduction, it is also essential for the Republic of Serbia to implement activities related to climate change impacts and adaptation to changing climate conditions. This is supported with the fact that some parts of Serbia are more and more often affected by floods, land erosions, landslides, draughts and other disasters of atmospheric and hydrological origin, which all cause high economic damages
- Air pollution caused by uncontrolled combustion at waste dumpsites, burning of harvesting waste (PCDF/D and other emissions)
- Air Pollution caused by old and obsolete technologies, low energy efficiency and lack of gas scrubber installations in industry and energy sectors;
- Insufficient application of BAT;
- Use of poor quality heating fuels
- Incomplete register of air pollutant emissions and Cadaster of polluters
- Although they are still in their initial phase, detailed inventories of pollutants, GHGs and POPs chemicals have not been established yet, so that volume of available data on these substances is still small.
- Lack of CC integration in relevant national strategic and planning documentation as well as into other sectoral policies
- Inadequate handling with ODS in servicing processes
- Lack of economic incentives for reduction of GHG emissions;
- General state in the agricultural sector may significantly affect the increase in GHG emissions. The agricultural sector may suffer damages and be one of the most affected by climate change, so adequate planning of adaptation measures in the area of agriculture should be among priorities

- In the process of biodiversity conservation, not enough attention has been paid to what is common denominator to different measures of biodiversity protection, such as climate change adaptation .
- Dissemination of data among institutions is poor
- Institutions and departments dealing with Climate changes and performed activities under UNFCCC are usually understaffed ( ministries, SEPA; RHMS etc.) In some scientific institutions there are problems with lack of equipment, while most of them have problems with finances.
- It is necessary to increase cross-sectoral cooperation in the area of Climate changes and include in sectoral development policies.
- Non-existence of an integral informational system and indicators for CC monitoring
- There is low public awareness regarding CC mitigation
- It is necessary to build capacity of local communities regarding sustainable development policy.
- There is a need for improvement of intersectoral cooperation on national level
- Lack of fully implementation adopted Strategies
- Lack of energy management system
- Insufficient use of renewable energy sources and gas
- Lack of awareness and education about increased energy efficiency and utilization of renewable energy sources
- Lack of environmental awareness amongst agricultural producers about the Code of Good Agricultural Practic.
- ***CBD implementation in Serbia***

The most significant positive changes which have happened over the past several years in the area of harmonization of development policy and biodiversity protection are the following:

- Convention on Biological Diversity has entered into force.
- Strategy on Biological Diversity is adopted
- Republic of Serbia became a signatory to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity (CBD)
- Institutional and organizational adjustments have been done, such as foundation of the SEPA , Fund for Environmental Protection.
- A comprehensive list of Laws and related bylaws is adopted

- Law on Environmental Protection predicted wider use of economic instruments in the area of environmental policy and sustainable development. One of the instruments is the establishment of the Fund for Environmental Protection
- CBD Clearing-House mechanism has started in december 2011
- Law on GMO is adopted
- Procedure of Biosafety Clearing-House mechanism has started.
- A range of measures for local bodies strengthening have been undertaken referring to sustainable development and biodiversity conservation problem-solving. This has also intensified the activities of local governing bodies in preparing Local Agenda 21.
- Distribution of information is establish mostly through web-sites presentations, offering information to public .
- Between certain institutions there is a good collaboration in realizing the requirements set out in the CBD, which is mostly implemented through projects and contracts on scientific and technical cooperation.
- A comprehensive list of scientific institutions dealing with biodiversity is established. There is also cooperation between scientific institutions and NGOs, i.e. civic associations of various types, but oriented towards environmental protection.
- A number of projects pertain to the CBD requirements are financed both by national and international institutions. Information dissemination about new findings in this area is very good, as well as cooperation with foreign institutions.
- There is a number of NGOs dealing with the activities relates to realization of the CBD requirements. These activities mainly pertain to understanding and awareness raising related to the importance of biodiversity conservation, as well as to promotion and introduction of socio-economic incentives for the purpose of its conservation.

There are also numerous problems in the CBD implementation:

- The most significant progress has been made in biodiversity conservation in narrower sense, whilst less progress has been seen in the area of spatial and urbanistic planning, and the least progress has been noted among the economists, where economic development has been interpreted in narrow sense.
- In the process of biodiversity conservation, not enough attention has been paid to what is common denominator to different measures of biodiversity protection, and these are development, physical conditions and wider strategic framework of the resources utilization.
- Although wider use of economic instruments has been predicted in the area of biodiversity protection, a possibility to use the system of trade in permits has not been introduced yet, as well as insurance against ecological damages and other economic instruments for environmental and biodiversity protection financing.

- There are no agreements or contracts on using the data owned by the institutions, which refer to the CBD. Pieces of information are available to other institutions and public, but mostly, there is no information about which institutions possess which types of data, so there is a need for information management by the principle of clearing-house mechanism, which would enable better access and information about the existing data. There is also a need for the formation of databases for individual areas and objects of research in order to have better insight into work in certain fields and projects related to certain topics.
- There is a problem in some parts of Serbia, mostly in south-east Serbia, where communication is very poor, or does not exist (Internet), which significantly affects data utilization and exchange.
- In the ministries, there are usual problems related to insufficient staff (also in national parks and municipalities) which would perform the activities related to the CBD requirements, while those problems are less represented at scientific institutions level. In some scientific institutions there are problems with lack of equipment, while most of them have problems with finances.
- It is necessary to enhance cross-sectoral cooperation in the area of biodiversity protection and application of criteria in biodiversity protection in appropriate sectoral development policies. All relevant organizations should introduce environmental impact assessment into their practice and should function in compliance with the principles of sustainability.
- The problem of privatization of natural goods is not solved.
- It is necessary to modernize the system and mechanism of national parks management, Ramsar areas management, game reserves and other protected natural areas management. It is necessary to found and implement the protected natural goods management programme.
- Active protective measures are not applied at protected areas at appropriate level, not even those traditional, mostly extensive forms of natural resources utilization, which have contributed to biodiversity conservation at given areas.
- Serbia has not yet accessed to the international agreement of Pan European Strategy for Biological and Landscape Diversity Conservation. There is also lack in legal basis for the formation of ecological network.
- Serbia has not yet ratified protocols of Carpathian Convention.
- One of bigger problems is also non-existence of an integral informational system and indicators for biodiversity monitoring. For now, this system is organized only in some areas.
- There is low public awareness regarding what is meant under the idea of biodiversity and why it is significant to conserve it.
- There is no law within plant genetic resources, but the ordinances are changed depending on the policy of the moment. Also, there are no national programmes for plant genetic resources, which results in losses of agro-biodiversity. There is a need for the establishment of a professional body which should determine priorities.

- Although certain measures have been undertaken in the area of local governing bodies strengthening, still there is a problem of poor implementation of regulations at local level, and to that end, it is necessary to build capacity of local communities regarding sustainable development.
- Ministry of Education and Science and Ministry of Agriculture, Trade, Forestry and Water Management present two ministries whose activities are to great extent connected to the CBD requirements. Between them and other ministries there is cooperation related to the CBD requirements, but that cooperation is not formal, i.e. in the description of other ministries competences there are still no competences related to the activities within the CBD requirements.
- There is a need for more efficient implementation of the existing legal regulations.
- The examples of basic principles and sustainable development criteria being operational up to analytic and operative concepts are very rare.
- One of biggest problems in biodiversity monitoring and protection in Serbia is the fact that still there are no scientifically proved data (national flora, national vegetation, and national fauna) on life existing at the territory of Serbia.
- Serbia developed its first Red List in 1999 covering extinct and critically endangered plant species (The Red List of Serbian Flora 1 – Extinct and Critically Endangered Taxa). The second Red Book - Red Book of Butterflies for Serbia. Lepidoptera: Hesperioidea Papilionoidea was published in 2003. With regard to vertebrates, only a preliminary red list of species has been published in 1991.

- ***CCD implementation in Serbia***

The most significant positive changes which have happened over the past several years in the area of harmonization of development policy on combat desertification and land degradation are the following:

- CCD has entered into force.
- A comprehensive list of International conventions is ratified : Stockholm, Bon, UNFCCC, CBD
- Strategy on Forest management, Biological Diversity, Water management and Agriculture management as well as First National communication are adopted
- Institutional and organizational adjustments have been done, such as foundation of the SEPA , Fund for Environmental Protection.
- A comprehensive list of Laws and related bylaws is adopted
- Law on Environmental Protection predicted wider use of economic instruments in the area of environmental policy and sustainable development. One of the instruments is the establishment of the Fund for Environmental Protection
- Procedure of Biosafety Clearing-House mechanism has started.

- A range of measures for local bodies strengthening have been undertaken referring to sustainable development, forest, waste and agriculture land management . This has also intensified the activities of local governing bodies in preparing Local Agenda 21.
- Distribution of information, mostly general, about environmental protection is established through institutional web-sites , offering information to public .
- Between certain institutions there is a good collaboration in realizing the requirements set out in the CCD, which is mostly implemented through projects and contracts on scientific and technical cooperation.
- A comprehensive list of scientific institutions dealing with forest management, biodiversity, agriculture land, contaminated sites is establish. There is also cooperation between scientific institutions and NGOs, i.e. civic associations of various types, but oriented towards environmental protection.
- A number of projects pertain to the CCD requirements are financed both by national and international institutions. Information dissemination about new findings in this area is very good, as well as cooperation with foreign institutions.
- There is a number of NGOs dealing with the activities relates to realization of the CCD requirements. These activities mainly pertain to understanding and awareness raising related to the importance of forest management, biodiversity conservation, agriculture land management as well as to promotion and introduction of socio-economic incentives for the purpose of its conservation.

There are also numerous problems in the CCD implementation:

- Insufficiently efficient implementation of **environmental** and nature protection regulations
- Insufficient cross-sectoral cooperation
- Lack of good environmental management
- Insufficient land irrigation
- Geological hazards (landslides, earthquakes, drifts, floods)
- Degradation and change of land use, especially at the expense of forests, swamps and marshes, etc is very high
- Land pollution as a consequence of industrial, mining, agricultural and transport activities and energy
- Uncontrolled change in land use and unsustainable land use
- Loss of agricultural land due to wind and water erosion, and due to landslides and drifts
- Lack of systematic monitoring of soil quality
- Lack of adequate legislation in the area of land protection and monitoring harmonized with the EU regulations
- Lack of the cadastre of landslides and unstable terrains

- Lack of plans and/or insufficient and inadequate recultivation of degraded areas
- Inadequate waste and chemicals management
- Lack of systematic control of application of fertilizers and plant production products
- Inadequate management of soil fertility and application of mineral and organic fertilizers
- Inadequate manure management in large livestock farms, which results in environmental pollution; agricultural and forestry practices which abet soil erosion
- Lack of quality standards for non-agricultural land
- Lack of the cadastre of contaminated areas
- Undeveloped verification system for historic pollution in privatization process i.e. in ownership change
- Insufficient studies, i.e. lack of data about geodynamics of soil under certain human activities
- Areas under risk of soil and groundwater pollution resulting from excessive use of fertilizers and plant protection products are not identified
- Areas under risk of erosion, reduction of organic substances, salinization, landslides and soil tamping are not identified
- Biogas and biomass are limited used
- Intensive and unsustainable exploitation of **forests**,
- Incomplete monitoring and lack of data on land use and forest exploitation
- Forest fires, natural disasters (draughts, landslides, drifts, floods), accidental pollution, etc.
- Negative consequences particularly affect the status of forest ecosystems and specially sensitive ecosystems (wetland habitats, steppe and forest-steppe, sands, continental salty areas, highland habitats, etc.), i.e. they result in biodiversity losses:
- Use of obsolete technologies in exploration and inefficient use of non-renewable energy and mineral resources (for instance lignite and copper open cast mines, etc.) without ensuring adequate protection measures
- Insufficient level of forest cover in certain parts of Serbia (Vojvodina)
- Illegal harvesting, conversion of forests and woodland into land for other purposes
- Inadequate forest management]
- Excessive use of wood for heating
- Pressures from other sectors - Clearance of forests for other sectors: agriculture, industry, infrastructure, urban development, etc
- Lack of a strategy for prevention of desertification and degradation risks

- Obsolete **mining technologies** and outdated facilities in exploitation and processing of minerals
- Insufficient and inadequate recultivation of land degraded by mining activities
- Improper disposal of mining waste
- Uncontrolled spillages of mining waters from abandoned mining facilities
- No selective excavations and no disposal of the excavated material
- Negative impacts to flora and fauna near mining basins
- Lack of wastewater treatment
- Non-compliance with the existing **planning documents**
- Lack of appropriate information base (establishment of a database on space and environmental performance)
- Insufficiently developed and applied methods for sustainable spatial and urban development planning
- Lack of methodology for monitoring and implementation of plans (development of indicators system within the monitoring);
- Lack of economic instruments for the implementation of planning documents
- Insufficiently developed instruments for comprehensive consideration of economic, environmental and social issues
- Energy efficiency criteria are not sufficiently addressed in design-planning documentation.
- Insufficient compliance with spatial planning and urban planning documents
- Unsustainable use of natural resources
- Inadequate municipal and transport infrastructure
- No list of relevant research institutions as well poor research data exchange among referin to the CCD. (so there is a need for information management by the principle of clearing-house mechanism, which would enable better access and information about the existing data)
- Insufficient staff (in MEMSP, in Agencies as well as municipalities) which would perform the activities related to the CCD requirements,
- It is necessary to modernize the system and mechanism of forest and land management,
- Serious problems is lack of an integral informational system . For now, some fragmented system is establish.
- Low level of public awareness especially among farmers addressing land degradation and combat desertification



- There is low knowledge of farmers regarding sustainable agriculture management and implementation Code of good agriculture practice
- Although certain measures have been undertaken in the area of local governing bodies strengthening, still there is a problem of poor implementation of regulations at local level, and to that end, it is necessary to build capacity of local communities regarding sustainable development.
- Poor cross-sectoral cooperation (economy, transport, tourism and others), addressing degradation of forests and land processes, as well as incorporation current social-political circumstances in the country, regardless the ownership, poverty and employment
- Activities of MEPMSP and MATFWM are to great extent connected to the CCD requirements. Fully Cooperation has to be establish

There is a need for:

- To develop a long-term strategy and related action plans and programmes for drought, degradation and desertification management
- more efficient implementation of the existing legal regulations and to increase the level of harmonization of national legislation in the area of forestry, agriculture and soil protection as well as mining and water management with the relevant EU legislation
- to establish cadastre of landslides and unstable slopes in Serbia for most of its territory and to map terrain sensitivity in terms of stability
- To establish a programme of systematic monitoring of soil quality and to establish a database of soil status and develop of multifunctional information system on soil
- To develop a list of contaminated locations and to establish priorities for rehabilitation and remediation
- To improve sub-regional, regional and international cooperation among those parties affected by drought in the area of environmental protection and conservation of soil and water resource
- To establish database of transboundary soil pollution, to assess risk of pollutant migrations; to develop a 3D pollution model for Serbia
- To educate and inform public through the activities at national and international levels about fighting against land degradation and desertification
- To finalize the initiated activities of remediation and recultivation of closed mines
- To establish and improve environmental monitoring near all active mining facilities,
- To establish a recording system about types and quantities of utilized fertilizers and plant protection products, the areas under organic agricultural activities
- To identify areas under risk of soil and ground water pollution originating from fertilizers and plants protection products, control change in agricultural land use Introducing

monitoring of sludge quality, Monitoring the impact of big livestock farming estates and processing plants, Agro-biodiversity monitoring

- Improved monitoring of forests health status in accordance with the International Cooperation Programme for Forests (ICPF).
- To implement soil and water monitoring in order to determine presence and distribution of pollutants, as well as their impact to ecosystem components
- To erect wind protection bands in order to prevent eolic erosion on agricultural land
- To draw up maps for highly valued agricultural areas from biodiversity aspect in order to protect them
- To restore and maintain traditional agricultural areas
- To improve the sustainable management system, especially in privately owned forests
- Determining specific parameters and monitoring factors of land degradation, soil erosion, reduction of organic substance, contamination, salinization, compression, loss in biodiversity, change in land use, floods and landslides
- Defining criteria for determination of zones under risk of degradation
- Identifying locations with confirmed presence of dangerous substances in quantities that may cause risk to human health or environment – contaminated locations
- Developing database of contaminated locations
- to improving public awareness and capacity building to help farmers take advantage of new rural development support programs.
- Greater investment is needed in irrigation, drainage, and soil conservation, particularly in intensely cultivated lands. Where investment already exists, efforts should be made to improve the effectiveness of the programs and widen their reach.
- There is a need among public employees and private forest owners for capacity building in sustainable development and multi-use management, rather than a narrow focus on timber harvesting. This understanding should also help the sector prioritize improvements to the nation's protected areas and efforts to combat invasive species.
- Private forest management needs to be strengthened, mainly by also strengthening the forest advisory system, especially by forest cooperatives.
- Process of certification for forests have to be finalized
- The existing programmes and obtained data indicate the need for better defining and monitoring of hot-spots through the development of inventories of contaminated land and mechanisms for the application of adequate technologies for their rehabilitation and remediation.

The main aim of the progress within sustainable use of land in Serbia should include better integration of soil protection into sectoral, local and regional plans and policies,

implementation and more comprehensive application of best available techniques and processes of rehabilitation and remediation

#### 4. Cross-cutting analysis

National thematic reports, the main outputs and preparation method of which was outlined in the previous section for each thematic area, were prepared as a result of the thematic group works carried out within the framework of the National Capacity Self Assessment of Serbia under Rio Conventions (NCSA). The principal aim of the cross-cutting issues/synergy areas work is to determine to what extent the capacity gaps identified within the scope of all three conventions are common or cross-cut each other, prioritize these and detect the activity areas which will create synergy in implementation of conventions within this scope.

Two different approaches can be adopted in the search for potential synergy in implementation of the Conventions, emphasis on synergy in content (interconnections in the subjects of the Conventions) or on synergy consisting in adoption of a joint approach in their implementation. In the light of the urgent nature of aspects related to implementation, we have chosen the second of the potential means of analysis.

SWOT analysis is performed and adapted :

S ( Strength )	W (Weaknes)
Good geopolitical position;	Shortages in regulation plans;
High level of biodiversity, geodiversity and landscape diversity in Serbia	Complicated and sometimes legal framework with gaps, related to some natural resources;
Relatively protected natural habitats;	Nonproper/non adecvat environmental protection measures;
Catalized sustainable use of prectected areas;	Noncompliance with legal requirements, particularly related to land use and protection measures ;
Improved institutional and legal framework;	Mechanisms to resolve conflict of public and private interests;
Respectable geological- mineral resources potential and good economic performance of this sector (the portion in GDP);	Low investments ;
Existance of basic infrastructure and planning documents, as well as human capital	Shortages in data related to capacities of protected areas, as well as some other data;

Possibilities for greenfield investement, especially in real and export sector;	Not developed economic instruments for ecosystems valorisation;
Support to educational, research, inovative and development programes, projects and processes, including demonstration projects;	Only cosmetic political and public commitment to implement Strategy for Sustainable Development
Interes of potential investors for infrastructure projects;	Complicated and with gaps legal framework related some natural resources, esspecially when it is need for to comply with international standards and procedures ;
New investments (having as the outreach industry/economy development, new jobs opening, better living standard);	Not adecvat institutional set up and capacities of national research institutes (like for geology, minning, etc)
Privatisation of big production capacities and consecions in resources sector ;	Obsolete technology ( for example in mining sector);
Improvements in forests management;	Fragmented data bases (especialy when it is need to be available for foreign investments);
Initialization of planning and technical documents for water accumulation facilities, based on the actual legal framework;	Selectivity in legal requirements implementation;
Legally based forests/forests land users mandatory contribution to Budget Fund (3% of profit);	Low level of public knowlege related to needs for sustainable use of natural resources (and possible resources shourtages in future);
Forests users obligation to make available 15 % of <i>wood</i> market value to site forest reproduction and improvement;	Opsolete and not proper maitanance of water supply networks;
Legally based forests ownners mandatory contribution to Budget Fund (5% of wood from the site market value);	Non clear local priorities for investments;
Good trends for some natural resources potentials;	Mostly small and medium size of mineral resources spots;
Actual good situation with water resources (Note: projections should be assessed);	Respective quantities of mineral resources are geologically conserved ; Numerous non remediated old exploitation sites;
Spatial distribution of surface and ground waters;	Non finished ownership transformation related to some production capacities;

Possible hydroenergy potential;	Groundwater influenced mineral resources;
Spatial distribution of mineral and geothermal waters;	Obsolete technologies, particularly in mining sector;
Relatively good status of environment in non-industrial areas;	Geothermal potentials under used;
Potential to improve energy efficiency, particularly by renewable energy sources means;	Not enough public informed
Comparative advantages of some areas for specific sectors (like organic agriculture and food with protected geografic origin);	Underdeveloped private sector in forests management;
	Nonharmonised capacities for production with resources potentials Undercontrolled usages of water resources;
	Underdeveloped research related to ground waters;
	Water resources should be taken (time and space distribution) in relation to anticipated climate change! Water pollution;
	Water monitoring should be improved;
EU accession process, transboundary and regional cooperation	Very few facilities for waste water treatment;
Local project within IPA (EU funds) Commitment (by Government) to improve transport infrastructure;	Low level in controlling the water resources usage
<b>O (Opportunities)</b>	<b>T (Treats)</b>
Improvements in environmental sector through EU accession process;	Numerous factors and activities having as the consequence natural habitats degradations and unsustainable use of natural resources;
Possibilities to use different International Funds;	Preasure to natural resorces to implement economic profit;
Pottentials for eco-tourism in protected areas;	Potential local political preasure to use natural resources as the „political category“
Possibilities for big foreign investments, primarely in mineral resources sector;	Somethimes nonharmonised legal requirements in different sectors (like environment and minning, environment and spatial planning);
Development of underdeveloped regions of Serbia, as well as further development in country as the whole;	Somethies easier to practice import than to develop in-country capacities;

Upgrading education, through modern tools and skills development, primarily in environmental related education;	Bigger spots of natural resources sources in other countries
Potential that Serbia become respectable producer of strategic raw materials;	Infrastructure development not take in account all aspects of sustainable use of natural resources;
Intersectoral cooperation, as well as local (sustainable) development;	Competiveness (against monopoly practice) still in early phase;
Networking-klastering within industrial branches;	Detected cases of ilegal wood cutting, and other natural resources usages;
Possibilities to invest in particular activities for forests improvement, management of protected areas, as well as to related industries developmentetc.;	Polluters in general; Non effective governance;
Possibilites to use financial sources (diferent state budgetary funds) ;	Climate change
Streightening (education, trainings, capacities) human capacities involved in sustainable use of natural resources	Nonsustainable tourist infrastructure development;
Streightening institutional capacities and governance related to sustainable use of natural resources	Nonharmonised spatial plans and prject documentation in particular concrete cases;
Improvements to develop economic potentials of natural resources	Poverty;
More prrotected areas, and better management	Taxes, payment for natural resources usage as the “social category”, often with small/no payment ;

The following areas were outreach from analysis above and the specialized reports, as potentially involving mutual overlap and **synergy** in the use of the available capacities for implementation of the Conventions:

- **Management processes including Institutional organization, legal framework and Implementation of policies and measures** with a positive impact on the monitored environmental characteristics (especially at a local and regional level, Evaluation of the effects of policies and measures implemented in practice (adaptation measures and the risk of drought – soil erosion, impacts on biological diversity, agriculture, etc.)
- **Coordination including International cooperation and links to international organizations**
- **Mainstreaming**
- **Data collecting , Monitoring & Reporting** including : collecting and processing of data from monitoring, evaluation of the environmental changes and reporting

- **Research, and Information exchange including** Promulgation and provision of information, Mutual exchange and utilization of information databases and expertise, research , utilization and transfer of new, environmentally sound, technologies
- **Awareness raising and education :**
- **Provision on financial resources** including Utilization of domestic and foreign financing mechanisms

Cross cutting issues were prioritized in accordance with the priorities in the NSDS and other national strategies and action plans, priorities in the thematic areas, Focal Points and views presented by the thematic groups in the synergy workshop.

Through analyzing Thematic reports the 'root causes' or main sources of the key capacity issues in each of the thematic areas are identified and cross cutting analysis is presented in n Table 1. as follows.

Table 1. **Main root causes for Cross cutting Capacity assessment** .

<b><i>Management Processes</i></b>
<ul style="list-style-type: none"> <li>• Inadequate and insufficient professional staff at all levels of public administration, including environmental inspectorates (especially for SEA, EIA, IPPC, monitoring, inspection activities).</li> <li>• The environment ministry is functioning with limited capacities. Lack in capacities is reflected in material, technical and human potential</li> <li>• Insufficient strategic and planning documents in the areas</li> <li>• Inadequate management of soil, forest and water resources</li> <li>• Inadequate management in agriculture and forest sector</li> <li>• Inadequate management in mining sector</li> <li>• Adaptive management for biodiversity conservation is not established;</li> </ul>
<b><i>Coordination</i></b>
<ul style="list-style-type: none"> <li>• Internal coordination between different department in MEMSP ( departments responsible for urban planning and construction, natural resources, desertification and land use, climate change, biodiversity) not fully establish</li> <li>• Communication and cooperation between focal points for 3Rio Conventions is not fully establish</li> <li>• Connection among ministries addressing 3 Rio Conventions is not fully establish</li> <li>• Connection between ministries and institutions relevant for 3 Rio Conventions is not sufficiently developed;</li> </ul>

- Connection between ministries and local level addressing 3Rio Conventions is not sufficient
- lack of systematic cooperation and coordination with “stakeholders” (science, research, public administration at a regional and local level, etc.),
- Poor implementation of regulations at local level and low efficiency in the implementation of existing regulations;
- Combating land degradation is divided by several ministries; a state group which would coordinate projects related to the problem of land degradation does not exist;
- Relevant ministries are not coordinated regarding the issues on land degradation, forest and agriculture amnagement ;

### ***Mainstreaming:***

- Lack of The National Strategy of Sustainable Use of Natural Resources and Goods as well as some other strategic documents : Air protection Strategy, Climate change Strategy, National Action Plan for Drought & Desertification Lack of Strategy for Combat desertification and land degradation
- Lack of consistent integration of environmental considerations in the process of drafting spatial and urban plans and construction permitting.
- Lack of consistent integration of environmental considerations and requirements in strategic planning in energy sector, agriculture, forest management, mining sector,
- Assessment of Economic evaluation of natural resources is not fully establish

### ***Data collecting , Monitoring & Reporting***

- Lack of fully data base addressing biodiversity,
- Lack of data base addressing land degradation, contaminated sites
- insufficient and inadequate monitoring, fragmented monitoring.
- Insufficient institutional coordination and coverage of environmental monitoring activities
- Formats and mapping standards for presentation of gathered data are not established
- Indicators for CCD , CBD and UNFCCC are prescribed by bylaw adopted in 2011, , but data base is at the very beginning
- Lack of an integral Information system for all 3Rio Conventions
- Inadequate systematized data collection and lack of a data base;



- inadequate vulnerability assessment of the sectors and systems and lack of financial and technical–technological capacities.
- Methodology for land degradation assessment is lacking
- No data addressing identification and inventory of contaminated sites
- Monitoring systems for particular land management problems are not established, or only partly functioning;
- Problems of land desertification and degradation as well as biodiversity pretectiona and climate changes are poorly represented in media;
- Presentations of projects at local levels are rare and are not presented in media enough

### ***Research, and Information exchange***

- Information relevant for UNFCCC, CBD and CCD are not considered appropriatly by ministries and relevant institutions
- Lack of inventory of relevant institutions dealing with CBD, CCD, and UNFCCC and data base which is under their responsibility ;
- Lack of fully research in Climate change , combat desertification and protection of biodiversity Insufficient number of researcher dealing with CCC; CBD and CCD
- Lack of financial means for research
- Insufficient studies of climate change impacts and possibility of adaptation
- Lack of information addresing climate change, land degradation and biodiversity management at local the local level.
- Insufficient exchange data among institutions .*Clearing house* mechanism is establish but not implemented;
- Poor cooperation between research institutions. Lack of data exchange and dissemination of scientific and technical information

### ***Awareness raising and education :***

- Formal education in the area of Climate changes, biodiversity protection, combat desertification and land desertification within the educational process is not as yet satisfactory
- At regional and local levels there are no structural mechanisms who would train and advise population about the protection and sustainable use of natural resources. As a consequence, we have relatively low knowledge about the measures which can be applied to prevent land degradation, climate change

mitigation and biodiversity protection; Possible role of Civil Society Organizations ;

- Lack of knowledge and education of decision makers as well as administration, particularly on local level , about climate change, biodiversity protection and desertification/land degradation;
- Lack of knowledge on individual level, particularly among farmers
- Lack of knowledge and incomplete legal instruments in the process of MEAs implementation at national level, as well as harmonization with EU laws.
- There are no many NGOs/CSOs working on 3Rio Conventions;
- Educational institutions insufficiently prepared to train an adequate number of environmental experts.
- There is no fully integration of public participation in decision making process address to issues defined by 3 Rio Conventions . As a direct consequence, there are difficulties in the implementation of the proposed measures due to insufficient information among stakeholders or due to dissatisfaction with the proposed measures
- The need for training and education in order to eliminate lack of knowledge in the area of adaptation
- Campaigns aimed at raising public awareness and the understanding of 3Rio Convention requirements have been sporadic, geographically limited and incomprehensive in their treatment of the subject.

#### ***Provision on financial resources***

- The system of economic instruments is undeveloped and does not enable sufficient economic incentives for reduction of pollution
- Lack of adequate economic and financial instruments for CC mitigation  
Ineffective system of financing of environmental protection and lack of economic incentives.
- .Lack of staff with adequate economic analysis skills.

#### **• NCSA Action Plan**

The purpose of the NCSA Action Plan is to identify the priorities and specific activities needed to address the national gaps in capacity to implement the international conventions on biodiversity conservation (CBD), land degradation (CCD) and climate change (UNFCCC). The Action Plan will draw upon the analysis undertaken in the NCSA thematic reports and cross-cutting report, and the results of a workshop with the major stakeholders.

The capacity constraints that will be considered by the Action Plan include those associated with **organizational capacity** (mandate, staffing, directives, etc.), **technical capacity** (analytical methods, information, human resource skills, etc.), and **logistical resources** (facilities, equipment, transport, etc.). The key issues and related capacity gaps are identified in the NCSA thematic reports. These will provide a starting point for preparation of the Action Plan.

As the framework for detailed NCSA action Plan seven cross-cutting issues listed below and synergy areas within the scope of each cross-cutting issue were identified by analyzing the above-mentioned cross-cutting issues and synergy areas.

Table 2. **Main Cross cutting/synergy Capacity assessment** .

<b><i>Management Processes</i></b>
<ul style="list-style-type: none"> <li>• Establish legal framework for f 3 Rio Conventions ,</li> <li>• Establish institutional framework for f 3 Rio Conventions</li> <li>• Completing National Action Plans for 3 Rio Conventions</li> <li>• Ensuring coordination and cooperation among Rio Conventions at national level by establishment of mechanism</li> <li>• Capacity development for coordination and cooperation of 3 Rio Conventions</li> <li>• Review infrastructure needs for sustainable management of Ecosystems, soil, forest and water resources, agriculture and mining sector</li> </ul>
<b><i>Coordination</i></b>
<ul style="list-style-type: none"> <li>• Establish mechanism for internal communication and coordination in implementation of 3 Rio Conventions between different department in MEMSP</li> <li>• Establish mechanism for communication and coordination between focal points and secretariats for 3Rio Conventions</li> <li>• Establish mechanism and rules in communication and cooperation between ministries addressing 3 Rio Conventions</li> <li>• Establish mechanism and rules in communication and cooperation between ministries and relevant institutions ;</li> <li>• Establish mechanism and rules in communication and cooperation between ministries and local level</li> <li>• Develop mechanisms to facilitate international cooperation addressing to climate change , biodiversity and combat drought and desertification ;</li> </ul>

**Mainstreaming:**

- Draft The National Strategy of Sustainable Use of Natural Resources and Goods as well as some other strategic documents : Air protection Strategy
- Draft Strategy for Combat desertification and land degradation
- Review existing Strategic and planning documents at national and local level considering (biodiversity protection, Combat desertification and land degradation as well as mitigation climate change ) in energy sector, agriculture, forest management, mining sector,
- Establish mechanism for Economic evaluation of natural resources

**Data collecting , Monitoring & Reporting**

- Create and/or update *integrated* /synergy data base within the scope of Rio Conventions: biodiversity, land degradation, contaminated sites
- Fully Establishing a national monitoring and evaluation system for desertification, climate change and biological diversity,
- Establish reporting system related to the obligations within the scope of Rio Conventions
- Establish information network of relevant institution dealing with data management

**Research, and Information exchange**

- Providing support for the research-development activities for effective implementation of conventions in synergy,
- Reviewing the in-service training programs in terms of all three convention subjects and improving education/training system in this regard,
- Ensuring that universities, private and public sector, and institutions that provide financial backing support the research and development projects related to Rio Conventions,
- Ensure capacities for exchange and disseminated data and Information relevant for UNFCCC, CBD and CCD between ministries, local level and relevant institutions. These includes to develop mechanism not to practice “silent respond” by ministries when they are asking for opinion / contribution;
- Establish data base of relevant institutions and researcher dealing with CBD, CCD, and UNFCCC y ;

***Awareness raising and education :***

- Develop an Formal education module on 3Rio Conventions
- Informing and raising awareness of people in the fields of climate change, desertification and biological diversity, especially farmers
- Strengthening the local stakeholders, especially local decision makers and administrative staff by education in relevant areas
- Ensuring that private sector undertakes/shares responsibility in implementation of conventions,.

***Provision on financial resources***

- Ensure financial resources for implementation according to requirements of 3Rio Conventions
- Increase contributions from the National Environmental Protection Fund for 3 Rio Conventions related projects
- Promote the financing of Projects and activities related to requirements of 3Rio Conventions as examples of Corporate responsibility within the private sector

- **Linkages between Cross cutting issues across Conventions**

Survey of current capacities for implementation of the “Conventions from Rio” according to the results of the specialized reports and expert assessments.

Table 3: **Linkages between Capacity Issues across the Conventions**

	UNFCCC	CBD	CCD	Joint approach
Key issues	Current status			
• Management processes including Institutional organization, legal framework	3	3	1	3
• Coordination	3	2	1	3
• Mainstreaming	2	1	1	3
• Data collecting , Monitoring & Reporting	3 (or 2)	1	1	3
• Research, and Information exchange	2	2	1	3

• Awareness raising and education :	1	1	1	3
• Provision on financial resources	1	1	1	3

- **Good    2. High    3. Very high**

- **Conclusions and recommendations**

- **Cross-cutting Analysis Conclusions**

From a cross-cutting perspective, there is significant potential for joint programming by UNDP and others under NCSA/GEF, the UNECE initiatives and EU Environmental *acquis* capacity development support to address the major issues affecting implementation of the Rio Conventions.

The following **conclusions** are drawn from the NCSA review to date:

- The duties of organizations responsible for the Rio Conventions in Serbia have not been fully recognized and communicated. Some level of uncertainty remains about the specific obligations and actions under the conventions and how this may change the operations of certain ministries.
- The cross-cutting analysis indicates that there is considerable similarity in the key capacity issues affecting implementation of several conventions and this provides opportunities to promote certain common objectives such as more integrated approaches to environmental assessment and management within the development sectors and increased public awareness of the Rio Conventions and their concerns.
- The complementarity between UN and EU environmental capacity building objectives and the National Sustainable Development Strategy suggests that coordinated approaches to capacity building support with international donors could enhance the overall benefits of investing in improved environmental management, although the framework for coordination is not apparent.
- The NCSA key issues and root causes analysis suggest that specific targets for capacity building are related to Coordination, Mainstreaming, Information, Monitoring and Assessment, Awareness and Decision-making and Management Processes. Certain elements need to be addressed as a priority – institutional coordination arrangements, defined duties of the responsible agencies, and appointment of sufficient staff or associates to assist implementation of the Rio Conventions.

The integrated, harmonized governance should be improved through more effective institutional set up.

- Spatial planning – environmental management interrelationships, both functional and institutional, appear to be central to integrated approaches that support the Rio

Conventions. This includes environmental management mainstreaming efforts at the national and particularly at the local level.

# **Action Plan**





The NCSA Action Plan of the Republic of Serbia for the period 2011 - 2018 contains activities, responsible institutions and timeframes, as well as potential source of financial resources for implementation of the NCSA Report .

	<b>Synergy Areas</b>	<b>Actions</b>	<b>Coordinator/ Responsible institutions<sup>2</sup></b>	<b>Time frame<sup>3</sup>  Short (S) Medium(M)  Long ( L)</b>	<b>Financial resources <sup>4</sup></b>
<b>I</b>	<b>Management processes</b>				
1.1	Establish legal framework for all 3 Rio Conventions	Review and upgrade the national, regional local and sectorial legal acts and regulations related to the issues covered by the objectives and goals of the conventions	MEMSP/ MATFWM	M	RB
1.2	Establish institutional framework for implementation of 3 Rio Conventions	Perform a functional review of the sectors dealing with 3Rio Conventions and develop clear and detailed institutional mandates and policies in those areas	MEMSP/ MATFWM	S	RB
		Placing the operational focal points mainly within the structures of the Ministry responsible for the Environment.	MEMSP/ MATFWM	S	RB

<sup>2</sup> MEMSP – Ministry of Environment, Mining and Spatial Planning, MATFWM – Ministry of Agriculture, Trade, Forestry and Water Management, MIE – Ministry of Infrastructure and Energy, MF – Ministry of Finance, MERD – Ministry of Economy and Regional Development, MES – Ministry of Education and Science, PSEPSD – Provincial Secretariat of Environmental Protection and Sustainable Development, EPF – Environmental Protection Fund, SEPA – Serbian Environmental Protection Agency, INC – Republic Institute for Nature Conservation, PINC – Provincial Institute for Nature Conservation, RHMZ- Republic Hydrometeorological Service, PA – Protected Areas, SRI – Scientific and Research institutions, LA-Local Authority

<sup>3</sup> Short (1-3 years) Medium(3-5years) Long ( 5+years)

<sup>4</sup> RB – Republic Budget, EUF – EU Funds, GEF – Global Environmental Facility, BD – Bilateral donors, IF – International funds

		Properly placing the convention secretariats at the departments of the Ministry of the Environment and formulating their goals.	MEMSP	S	RB
		In long term planning, if feasible establish units related to conventions in the relevant ministries	MEMSP/ MATFWM, MI, MERD, MES, PSEPSD,	L	RB
		Appoint National Coordination Board <sup>5</sup> (NCB) <sup>6</sup> for efficient implementation of 3 Rio Convention.	MEMSP/ MATFWM, MI, MERD, MES, PSEPSD, SEPA	S-M	RB
		Establish relevant Unit at local level dealing with implementation of 3Rio Conventions, especially in agriculture and forest management as well as other Rio convention related issues	MEMSP/LA	S-M	LB
1.3	Completing National Action Plans for 3 Rio Conventions	Draft National Action Plan for Combat Drought & Desertification	MEMSP	S-M	RB/GEF
		Draft National Action Plan for Climate Change Strategy			
		Ensure implementation of Strategy for biodiversity	MEMSP/ MATFWM	S-M	RB/GEF

<sup>5</sup> The main duties of NCB should be, but not only, as follows : supervision of fulfillment of the obligations resulting from the provisions of the Conventions; coordination of the sectorial activities ,improving the national policies, strategies and direct actions devoted to realization of the main objectives and tasks derived from the provisions of the Conventions, reviewing the national, regional local and sectorial policies and development strategies and on the legal acts and regulations related to the issues covered by requirements of the Conventions;

<sup>6</sup> **Recommendation is that NCB is the Thematic-Synergy (MEAs) Working Group of National Council for Sustainable Development; This will be developed (in details) as the Initiative for effective Sustainable Developed Governance in country, and will be presented as the NCSA input to National Syntesis Report for Rio+20 Conference (under preparation)**

		Review and/or upgrade relevant Strategic framework for Sectors (agriculture, forest, tourism, spatial planning, energy , transport , and but not limited to mining ) and identify gaps and incompatibilities addressing to climate change, biodiversity and combat desertification and ensure implementation	MEMSP/ MATFWM, MERD, MIE	S-M	RB
		Adopt Strategy of Natural Resources	MEMSP/ MATFWM, MERD, MIE	S	RB/IF
		Review current Spatial plans (at national and local level) and identified rules and guidelines for implementation requirements of 3 Rio Conventions	MEMSP/LA	S-M	RB/LA
		Improve inter-sector planning	MEMSP/ MATFWM, MERD, MIE,LA	M	RB/LA
		Promote updated Action plans through workshops, media	MEMSP/ MATFWM, MERD, MIE,LA	M	RB/LA
		Develop economic instruments for implementation	MEMSP/ MATFWM, MERD, MIE,	M	RB
1.3	Ensuring coordination and cooperation among Rio Conventions at national level by	Create duties, rules and guidelines for National Coordination Board (CB) <sup>7</sup>	MEMSP	M	RB
		Establish guidelines and instruments for integration requirements of 3 Rio Conventions in sectorial plans and policies,	MEMSP/ MATFWM, MERD, MIE,LA	M-L	RB/IF

<sup>7</sup> As noted, duties will be developed further within the proposal for institutional set up , as the foreseen input for National Synthesis Report for Rio+20 Conference

	establishment of mechanism	Prepare rules and guidelines for Integrated requirements of 3 Rio Conventions in SEA	MEMSP/LA	M-L	RB/LA
1.4	Capacity development for coordination and cooperation of 3 Rio Conventions )	Appointing an Advisory Team for fulfillment of the convention provisions supporting the National Coordinator	MEMSP/	M-L	RB/LA
		Establish network of institutions for support to National Coordinator, focal points and Secretariats of Convention	MEMSP/ MATFWM, MERD, MIE	M-L	RB
		Training the administration at national and local level	MEMSP/LA	S-L	RB/LA/IF
1.5	Review infrastructure needs for Sustainable management of Ecosystems, land , forest and water resources, as well as agriculture and mining sector	Identify areas of vulnerability to climate change on national level. Assess and develop vulnerability map to climate change for water and soil management( flood risk, drought), forest, biodiversity , agriculture,	MEMSP/ MATFWM	M-L	RB,IF, EF
		Develop Plans for sectorial adaptation to climate changes for 3 Rio Conventions : for sustainable water, forest, biodiversity and agriculture management as well as flood and drought management	MEMSP/ MATFWM,MIE	M-L	RB, IF
		Improve flood resistance systems,	MATFWM/ MEMSP	M-L	RB, IF
		Improve forestation, forest fire protection systems , protection of forests against vermin and plant diseases	MATFWM/ MEMSP	L	RB,IF
		Improve existing and invest in new irrigation and drainage systems and related infrastructure	MATFWM/ MEMSP	L	RB,IF
		Improve soil structure with adequate treatment in order to increase its water storage capacity	MATFWM// MEMSP	L	RB,IF

		Introduce measures to protect land from erosion	MATFWM// MEMSP	L	RB.IF
		Change practices concerning the use of fertilizers and chemicals	MATFWM// MEMSP	L	RB.IF
		Increase number of protected areas	MEMSP	L	RB.IF
<b>II</b>	<b>Coordination and mainstreaming</b>				
2.1	Establish mechanism for Internal communication and coordination in implementation of 3 Rio Conventions between different department in MEMSP	Strengthen and make more effective (and coordinative) department for international cooperation and sustainable development in ministry competent for environment, by creating guideline and procedure for communication and coordination with/ between different ministerial departments, especially , but not limited to: departments responsible for urban planning and construction, natural resources, desertification and land use, climate change, biodiversity.	MEMSP	S	RB
		Identify capacity gaps and capacity needs and create new jobs if necessary	MEMSP	S	RB
		Training the personnel	MEMSP/MES	S-M	RB.IF
2.2	Establish mechanism for Communication and cooperation between national focal points and Secretariats for 3Rio Conventions	Strengthen and make more effective (and coordinative) department for international cooperation and sustainable development in ministry competent for environment, by creating guideline and procedure for communication and coordination related to cross cutting issues	MEMSP	S	RB

2.3	Establish mechanism and rules in Communication and cooperation between ministries addressing 3 Rio Conventions	Create guideline and procedure for communication and coordination relevant ministries especially regarding the issues on land degradation, forest and water, and sustainable agriculture management ;	MEMSP	S	RB
2.4	Establish mechanism and rules in Communication and cooperation between ministries and relevant institutions	Establish network of institutions, and identify their roles and responsibilities	MEMSP/ MATFWM; MERD, MES	S-M	RB
		Create guidelines and procedures to communicate	MEMSP/ MATFWM; MERD, MES	S-M	RB
		Training the personnel working in network	MEMSP/ MATFWM; MES	S-M	RB,IF
2.5	Establish mechanism and rules in Communication and cooperation between ministries and local level	Create guideline and procedure for communication and coordination between local level and relevant ministries especially regarding the issues on land degradation, forest and water, and sustainable agriculture management, including impact on climate change	MEMSP/LA	S-M	RB, LF
		Strengthen local community capacity through trainings and workshops	MEMSP/LA	S-M	RB, LB, IF,EF
2.6	Develop mechanisms to facilitate international cooperation addressing to climate change, biodiversity and combat	Develop mechanisms to facilitate the harmonization and implementation of multilateral international agreements related to thematic areas	MEMSP/ MATFWM	M	RB
		Collaborate with neighboring countries on the exchange of information	MEMSP/ MATFWM,SEPA	M	RB

	drought and desertification	Promote and provide support for communication and information exchanges at the international level	MEMSP/ MATFWM,SEPA	M	RB
III	<b>Data collecting , Monitoring &amp; Reporting</b>				
3.1	Create and/or update integrated /synergy data base within the scope of Rio Conventions: biodiversity, land degradation, climate changes	Establish National data base related to 3 Conventions	SEPA,/ MEMSP, MATFWM	M	RB
		Use of geographic information systems for planning, monitoring and management	SEPA,/ MEMSP, MATFWM	M	RB, IF
		Identify standards for data collection for each of 3 Conventions , verification and reporting	SEPA,/ MEMSP, MATFWM	M	RB, IF
		Training personnel	SEPA,/ MEMSP, MATFWM, MES	M	RB, IF
3.2	Fully Establishing a national monitoring and evaluation system for land degradation, climate change and biological diversity,	Develop indicators for monitoring 3 Rio Conventions	SEPA,/RHMS MEMSP, MATFWM, INC	M-L	RB, IF
		Improve the climate monitoring system	SEPA,/RHMS MEMSP, MATFWM, INC	M-L	RB, IF
		Develop standards for monitoring and assessment	SEPA,/RHMS MEMSP, MATFWM, INC	M-L	RB, IF



		Establish data Formats and mapping standards for presentation of gathered data for land degradation, vulnerability assessment, biodiversity monitoring	SEPA,/RHMS MEMSP, MATFWM, INC	M-L	RB, IF
		Establish mechanism for monitoring and implementation National action plans	SEPA,/RHMS MEMSP, MATFWM, INC	M-L	RB, IF
		Establish continuous monitoring and evaluating system relating to vulnerability and adaptation	SEPA,/RHMS MEMSP, MATFWM, INC	M-L	RB, IF
		Improve climate monitoring and early warning systems of droughts, floods and other extreme climate episodes of importance to agriculture	SEPA,/RHMS MEMSP, MATFWM, INC	M-L	RB, IF
		Establish efficient data exchange among the „data owners“	SEPA,/RHMS MEMSP, MATFWM, INC	M-L	RB, IF
		Training personnel	MEMSP, MATFWM	M-L	RB, IF
		Establish financial instruments for monitoring vulnerability and adaptation on climate change ,	MEMSP, MATFWM	M-L	RB, IF
3.3	Establish a reporting system related to the obligations within the scope of Rio Conventions	Identify standards for reporting	SEPA/ MEMSP, MATFWM	M-L	RB, IF
		Training personnel	MEMSP, MATFWM, MES	M-L	RB, EF, IF

3.4	Establish information network of relevant institutions dealing with data management	Establish network of accredited institution for data collection	SEPA/ MEMSP, MATFWM	M-L	RB
		Establish roles and procedures for institutional coordination and inter institution data flow and exchange	SEPA	M-L	RB
		Training personnel	MEMSP, MATFWM, MES	M-L	RB
IV	<b>Research, education and Information exchange</b>				
4.1	Providing support for the research-development activities for effective implementation of conventions in synergy,	Develop Knowledge center/s (KC) at the University (or if more realistic Clearing House) for 3Rio Conventions consisting of different stakeholders dealing with different aspects of implementation	MES/ MEMSP, MATFWM,	L	RB
		Establish data base of relevant institutions as well as experts and researcher dealing with CBD, CCD, and UNFCCC	MES/ MEMSP, MATFWM,SRI	L	RB
		Intensify multidisciplinary research on climate change impacts	MES/MEMSP; SRI	L	RB, IF
		Identify the priority research Project to be supported	MES/MEMSP; SRI	L	RB, IF
		Identifying, preparing, implementing and monitoring projects related to vulnerability and adaptation within the scope of titles identified within the scope of I National communication	MES/MEMSP; SRI	L	RB, IF
4.2	Reviewing the in-service training programs in terms of 3Rio Convention subjects and improving education/training system in this regard,	Providing training in integrating approach to administration officers within Secretariats of Convention	MEMSP	S-M	GEF, IF
		Providing training in integrating approach to decision makers addressing to subject of 3 Rio conventions	MEMSP	S-M	GEF, IF

4.3	Ensuring that universities, private and public sector, and institutions that provide financial backing support the research and development projects related to Rio Conventions,	Develop joint Projects	MES/MEMSP; SRI	L	RB, IF
4.4	Ensure capacities for exchange and disseminated data and Information relevant for UNFCCC, CBD and CCD between ministries, local level and relevant institutions.	Create centre for data exchange (web site, )	MEMSP	M-L	RB, IF, EF
		Support cooperation, data exchange and dissemination of data among research scientific institutions.	MES/MEMSP; SRI	M-L	RB, IF, EF
		Support implementation of Clearing house ;	MES/MEMSP; SRI	M-L	RB, IF, EF
		Support local and national media to promote problems and solutions of land desertification and degradation as well as biodiversity protection and climate changes adaptation	MES/MEMSP; SRI, LA	M-L	RB, IF, EF
<b>V</b>	<b>Awareness raising and education</b>				
5.1	Develop an Formal educational module on 3Rio Conventions	Establishing cooperation with relevant Ministries, at first with the Ministry of Education and Science to meet requirements within the scope of Rio Conventions in formal and all other levels of education	MES/MEMSP	M-L	RB
		Develop an educational module for preschool and nursery school levels	MES/MEMSP	M-L	RB
		Integrate information about 3Rio Conventions in primary and secondary school curricula	MES/MEMSP	M-L	RB

		Develop or improve academic programmes and courses on information about 3Rio Conventions	MES/MEMSP	M-L	RB
		Develop programmes for training teachers and teaching associates on information about 3Rio Conventions	MES/MEMSP	M-L	RB
		Train the trainers and environmental experts in related areas	MES/MEMSP	M-L	RB
5.2	Informing and raising awareness of people in the fields of climate change, desertification and biological diversity, especially farmers	Develop a national programme and training centre to provide training for the public and private sectors on biodiversity, climate changes, drought and desertification monitoring, assessment, management and conservation	MEMSP/ MATFWM, MES,LA	M-L	RB, LB
		Improve understanding of the multi-sectoral character of climate change and Conduct a national campaign to increase awareness of the causes and impacts of climate change	MEMSP/ MATFWM, MES,LA	M-L	RB, LB
		Develop and implement a campaign to raise public awareness of 3Rio Conventions	MEMSP/ MATFWM, MES,LA	M-L	RB, LB
		Organize training and workshop related to vulnerability and adaptation	MEMSP/ MATFWM, MES,LA	M-L	RB, LB
		Create an informative web portal on 3Rio Conventions in the Republic of Serbia	MEMSP/ MATFWM, MES,LA	M-L	RB, LB
		Generate public awareness of the importance of implementing the Biosafety Protocol	MEMSP/ MATFWM, MES,LA	M-L	RB, LB
		Develop training to farmers addressing to Good farming practice	MEMSP/ MATFWM, MES,LA	M-L	RB, LB

		Promote the participation of local communities, residents and other stakeholders in planning, management and creation addressing to, but not limited to spatial planning, transport, agriculture, touristic sectors	MEMSP/ MATFWM, MES,LA	M-L	RB, LB
5.3	Strengthening the local stakeholders, especially local decision makers and administrative staff by education in relevant areas	Develop a national programme and training centre to provide training for the local stakeholders and decision makers on biodiversity, climate changes , drought and desertification monitoring, assessment, management and conservation	MEMSP/ MATFWM, MES,LA	M-L	RB, LB
		Raising awareness of and training the NGO within the context of Rio Conventions	MEMSP/ MATFWM, MES,LA	M-L	RB, LB
		Involving NGOs in the awareness-raising and training process, as well as other Major Groups in expertise and participatory process	MEMSP/ MATFWM, MES,LA	M-L	RB, LB
5.4	Ensuring that private sector undertakes/shares responsibility in implementation of conventions	Develop a national programme to provide training for the private sector	MEMSP/ MATFWM, MES,LA	M-L	RB, LB
		Raise business sector awareness about the 3Rio Conventions importance	MEMSP/ MATFWM, MES,LA	M-L	RB, LB
		Promote activities related to 3 Rio Conventions as good corporative practice	MEMSP/ MATFWM, MES,LA	M-L	RB, LB
		Develop social responsibility projects	MEMSP/ MATFWM, MES,LA	M-L	RB, LB
<b>VI</b>	<b>Provision on financial resources</b>				
6.1	Ensure financial resources for	Develop a strategic financial plan to fund the implementation of this NCSA Report that	MEMSP	M-L	RB

	implementation requirements of 3 Rio Conventions	identifies a diverse range of funding sources and strategies to ensure longterm implementation, monitoring and refinements in coordination with other relevant strategies and policies			
		Making legal regulation for economic, social and financial incentives in the works related to all three conventions	MEMSP	M-L	RB
		Strengthen the capacities of institutions , local I authorities and other stakeholders to prepare projects and find funding for 3Rio Conventions obligations financed by bilateral and multilateral donors)	MEMSP/LA	M-L	RB, LB , IF
6.2	Increase contributions from the National Environmental Protection Fund for 3 Rio Conventions related projects	Support for preparation of project proposals	MEMSP/LA	M-L	RB, LB , EF
6.3	Promote the financing of Projects and activities related to requirements of 3Rio Conventions as examples of Corporative responsibility within the private sector		MEMSP/LA	M-L	RB, LB , EF

## **Annex A:List of international conventions**

### ***I. International treaties which directly regulate the environmental protection***

- 1) Law Ratifying the Convention for the Protection of the Mediterranean Sea against Pollution ("Official Journal of SFRY" - International Treaties, No. 12/77);
- 2) Law Ratifying the Protocol for the prevention of pollution of the Mediterranean Sea by dumping from ships and aircraft ("Official Journal of SFRY" -International Treaties, No. 12/77);
- 3) Law Ratifying the Protocol Concerning Cooperation in Combating Pollution of the Mediterranean Sea by Oil and other Harmful Substances in Cases of Emergency ("Official Journal of SFRY" -International Treaties, No. 12/77);
- 4) Law Ratifying the International Convention for the Prevention of Pollution of the Sea by Oil ("Official Journal of SFRY" -International Treaties, No. 60/73);
- 5) Law Ratifying Geneva marine conventions of 29 April 1958 by which the Convention on epicontinental area was ratified ("Official Journal of SFRY" No. 4/65);
- 6) Regulation Ratifying the International Conventions Relating to Intervention on the High Seas in Cases of Oil pollution Casualties ("Official Journal of SFRY-International Treaties, No. 2/77");
- 7) Regulation Ratifying the Convention for the Prevention of Marine Pollution by Dumping of Wastes and Other Matter ("Official Journal of SFRY") -International Treaties, No. 13/77);
- 8) Regulation Ratifying Yugoslav-Italian Agreement for Co-operation on Protection of the Water of the Adriatic Sea and the Coastal Regions Against Pollution ("Official Journal of SFRY" - International Treaties, No. 2/77);
- 9) Regulation on the Treaty on Fishery in the Danube River Waters between Government of Federal People's Republic of Yugoslavia, People's Republic of Bulgaria, Romanian People's Republic and USSR ("Official Journal of FPRY"-International Treaties, No. 8/58);
- 10) Law Ratifying Geneva marine conventions of 29 April 1958 by which the Convention on epicontinental area was ratified ("Official Journal of SFRY" , International Treaties, No. 4/65);
- 11) Law Ratifying the International Convention for the Protection of Birds ("Official Journal of SFRY" - International Treaties, No. 6/73);
- 12) Regulation Ratifying the Convention on Wetlands of International Importance, especially as Waterfowl Habitat ("Official Journal of SFRY"- International Treaties, No.9/77);

- 13) Law Ratifying the Convention Concerning the Protection of the World Cultural and Natural Heritage ("Official Journal of SFRY"- International Treaties, No. 8/74);
- 14) Law Ratifying the Convention for the Protection of Cultural Property in the Event of Armed Conflict ("Official Journal of FPRY"-International Treaties, No. 4/56);
- 15) Law Ratifying the Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property ("Official Journal of SFRY" International Treaties, No. 50/73);
- 16) Law Ratifying the Vienna Convention on Civil Liability for Nuclear Damage ("Official Journal of SFRY" - International Treaties, No. 5/77);
- 17) Regulation Ratifying the Convention for the Establishment of the European Plant Protection Organisation ("Official Journal of FPRY"- International Treaties, No. 12/57);
- 18) Regulation Ratifying the International Plant Protection Convention ("Official Journal of FPRY"- International Treaties, No. 7/55);
- 19) Decision Ratifying the Protocol relating to Intervention on the High Seas in Cases of Pollution by Substances other than Oil ("Official Journal of SFRY" International Treaties, No. 12/81);
- 20) Law Ratifying the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources with Annexes I, II and III ("Official Journal of SFRY"- International Treaties, No. 1/90);
- 21) Law Ratifying the Protocol concerning Specially Protected Areas of Mediterranean Sea ("Official Journal of SFRY"- International Treaties, No. 9/85);
- 22) Law Ratifying the Convention on the Law of the Sea ("Official Journal of SFRY" International Treaties, No. 1/86);
- 23) Regulation Ratifying the International Convention for the Prevention of Pollution from Ships ("Official Journal of SFRY" International Treaties, No. 2/85);
- 24) Protocol of 1978 referring to the International Convention for the Prevention of Pollution from Ships, 1973. Not published.
- 25) Law Ratifying the Agreement for the Environmental Protection from Pollution of the Tisa River and its tributaries ("Official Journal of SFRY"- International Treaties, No. 1/90);
- 26) Law Ratifying the Convention on Long-range Transboundary Air Pollution ("Official Journal of SFRY" International Treaties, No. 11/86);
- 27) Law Ratifying the Protocol to the Convention on Long-range Transboundary Air Pollution on Long-Term Financing of Co-operative Programme for Monitoring and Evaluation of the Long Range Transmission of Air Pollutants in Europe (EMEP) ("Official Journal of SFRY", International Treaties, No. 2/87);
- 28) Law Ratifying the Vienna Convention for the Protection of the Ozone Layer ("Official Journal of SFRY" International Treaties, No. 1/90);
- 29) Law Ratifying the Montreal Protocol on Substances That Deplete the Ozone Layer ("Official Journal of SFRY" International Treaties, No. 16/90);
- 30) Amendments on the Montreal Protocol on Substances That Deplete the Ozone Layer ("Official Journal of Serbia and Montenegro" -International Treaties, No. 24/04);



- 31) Law Ratifying the Convention on Early Notification of a Nuclear Accident ("Official Journal of SFRY"-International Treaties, No. 15/89);
- 32) Law Ratifying the Convention on the Physical Protection of Nuclear Material ("Official Journal of SFRY"-International Treaties, No. 9/85);
- 33) Contract Ratifying the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological and Toxin) Weapons and on Their Destruction ("Official Journal of SFRY"-International Treaties, No.43/74);
- 34) Law Ratifying the Agreement between the Government of the Federal Republic of Yugoslavia and Government of the Russian Federation on the cooperation in the Area of Protection and Improvement of the Environment ("Official Journal of FRY"-International Treaties, No. 6/96);
- 35) Law Ratifying the UN Framework Convention on Climate Change ("Official Journal of FRY" International Treaties, No. 2/97);
- 36) Law Ratifying the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal ("Official Journal FRY"-International Treaties, No. 2/99);
- 37) Law Ratifying the Convention on Biological Diversity ("Official Journal of FRY" International Treaties, No. 11/01);
- 38) Law Ratifying the Cartagena Protocol on Biosafety to the Convention on Biological Diversity with annexes ("Official Journal of Serbia and Montenegro"-International Treaties, No.16/05);
- 39) Law Ratifying the Convention on International Trade in Endangered Species of Wild Fauna and Flora ("Official Journal of FRY"- International Treaties, No. 11/01);
- 40) Law Ratifying the Convention on Co-operation for the Protection and Sustainable Use of the River Danube ("Official Journal of Serbia and Montenegro"-International Treaties, No.4/03).
- 41) Law Ratifying the Framework Agreement on Sava River Basin ("Official Journal of Serbia and Montenegro" International Treaties, No. 12/04);
- 42) Law Ratifying the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification Particularly in Africa ("Official Gazette of RS"-International Treaties, No.102/07)
- 43) Law Ratifying the Convention on the Conservation of Migratory Species of Wild Animals, Bonn, 1979 ("Official Gazette of RS"-International Treaties, No. 102/07);
- 44) Law Ratifying the Convention on the Conservation of European Wildlife and Natural Habitats, Bern, 1979 ("Official Gazette of RS"-International Treaties, No. 102/07);
- 45) Law Ratifying the Kyoto Protocol to the United Nations framework Convention on Climate Change, 1997 ("Official Gazette of RS"-International Treaties, No. 88/07);
- 46) Law Ratifying the Convention on the Protection and Sustainable Development of the Carpathians ("Official Gazette of RS"-International Treaties, No. 102/07);

- 47) Law Ratifying the Convention on Access to Information, Public Participation in Decisionmaking and Access to Justice in Environmental Matters. Aarhus, 1998 ("Official Gazette of RS"- International Treaties, No.30/09);
- 48) Law Ratifying the Convention on the Transboundary Effects of Industrial Accidents ("Official Gazette of RS", No. 42/09);
- 49) Law Ratifying the Stockholm Convention on Persistent Organic Pollutants ("Official Gazette of RS", No. 42/09);
- 50) Law Ratifying the Agreement on financing (Project "Regional Development of Bor") between the Republic of Serbia and the International Development Association (Official Gazette of RS, No. 83/08);
- 51) Law Ratifying the Agreement on financing (Additional financing of the energy efficiency projects for Serbia) between the Republic of Serbia and the International Development Association (Official Gazette of RS, No. 83/08);
- 52) Law Ratifying the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, 1998, ("Official Gazette of RS"- International Treaties, No. 38/09);
- 53) Law Ratifying the Convention on Environmental Impact Assessment in a Transboundary Context, (Espoo,1991) ("Official Gazette of RS"-International Treaties, No. 102/07);
- 54) Law Ratifying the Amendment to Annex B to the Kyoto Protocol to the United Nations framework Convention on Climate Change ("Official Gazette of RS"-International Treaties, No. 38/09);

***Multilateral agreements from the field of environment which are in the process of preparation for ratification***

1. Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal, 1999.
2. Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, Lugano, 1993.
3. Protocol on Pollutant Release and Transfer Registers-PRTR, Kiev, 2003.recently ratified, October 2011
4. Helsinki Protocol on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at least 30 per cent, 19856 .
5. Sofia Protocol concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes, 1998.
6. Geneva Protocol concerning the Control of Emissions of Volatile Organic Compounds or their Transboundary Fluxes, 1991.
7. The 1994 Oslo Protocol on Further Reduction of Sulphur Emissions
8. Protocol on Heavy Metal, Aarhus, 1998.
9. Protocol on Persistent Organic Pollutants (POPs), Aarhus, 1998.
10. Protocol to Abate Acidification, Eutrophication and Ground-level Ozone, Gothenburg, 1999.

11. Convention on the Law of the Non-navigational Uses of International Water Courses, New York, 1997

***-Multilateral agreements:***

1. Conventions on Co-operation for the Protection and Sustainable Use of the River Danube (Danube River Protection Convention) was ratified on 30 January 2003 ("Official Journal of FRY" - International Treaties No. 2/2003). Republic of Serbia became a contracting party of the International Commission for the Protection of the Danube River-ICPDR on 19 August 2003,
2. Framework agreement on Sava River Basin, Protocol on Navigation Regime to Framework Agreement on Sava River Basin and the Agreement on Amendments of the Framework Agreement on Sava River Basin and the Protocol on Navigation Regime to Framework Agreement on Sava River Basin signed on 3 December 2002 and ratified on 29 December 2004 ("Official Journal of Serbia and Montenegro"-International Treaties, No. 12/2004),
3. Protocol on prevention of the water pollution caused by navigation to the Framework Agreement on the Sava River Basin was signed on 1 June 2009.
4. The Government of the Republic of Serbia adopted the Law proposal ratifying the Convention on the Protection and Use of Transboundary Watercourses and International Lakes and amendment to articles 25. and 26 of the Convention, at the session held on 10 December 2009 and dispatched the proposal to the National Assembly for adoption. The National Assembly adopted the Law ratifying the Convention at the session held on 5 May 2010. The Ministry of Foreign Affairs of the Republic of Serbia deposited the ratification instruments to the UN by which the Republic of Serbia became the 38th contracting party of the Convention