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Study on Achievements and Perspectives towards a Green Economy and Sustainable Growth in Serbia

NA PUTU ODRŽIVOG RAZVOJA I ZELENE EKONOMIJE

TOWARDS A GREEN ECONOMY & SUSTAINABLE GROWTH

National Report for the World Conference on Sustainable Development, Rio De Janeiro 20-22 June 2012

Study on Achievements and Perspectives towards a Green Economy and Sustainable Growth in Serbia

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Note

The Study on Achievements and Perspectives towards a Green Economy and Sustainable Growth in Serbia has been prepared to support the Government of Serbia in its preparations for the Rio+20 United Nations Conference on Sustainable Development, which is being held in Brazil in June 2012. The study is based predominantly on documents already adopted by the Parliament and Government of Serbia but it is not an official document of the Republic of Serbia.

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1. Foreword by the Minister of Environment, Mining and Spatial Planning of the Republic Serbia

In the tripartite structure of sustainable development, green economy highlights the places where economic interests will be a vehicle to promote good environmental management and social equity and in this context the options for development are considered. Green economic growth strategies provide the backdrop for the creation of the progressive political framework needed to set a national sustainable development pathway.

In the preparatory process for the Rio+20 World Conference on Sustainable Development, the United Nations does not require the National Report to be drawn up according to a standard model. Each report should be specific to the country, with a framework including the country's dedication, progress and problems in the sphere of green economy and institutional organisation (set-up) to implement sustainable development. Bearing in mind the instructions given, the National Report for Serbia focuses on the Green Economy, complemented with an important chapter dedicated to the challenge of efficient institutional organisation for implementing sustainable development.

The Republic of Serbia has been on the sustainable development path since 2002, by including the Johannesburg action plan in its strategic documents, and constantly bearing in mind the Rio Declaration, Agenda 21 and the three Rio Conventions. It must be admitted that enthusiasm for and dedication to sustainable development have not had the same intensity in all phases (2002/2003 stands out with the significant encouragement conveyed in the message of the then Serbian prime minister to the 2002 World Summit on Sustainable Development which was that "the environment is a priority and an important support for economic development," as well as 2009/2010, when the Serbian President confirmed Serbia's dedication to sustainable development at the Millennium Development Goals Summit).

At the UN Conference on the Environment and Development, which was held in June 1992[1] in Rio de Janeiro, Brazil, as well as at the UN World Summit on Sustainable Development in August/September 2002[2] in Johannesburg, South Africa, the Republic of Serbia participated as the Federal Republic of Yugoslavia. The Republic of Serbia has been officially addressed under this name since 5 June 2006[3].

1 The head of the delegation was Dr Mihailo Burić, the Federal Environment Minister at the time (besides representatives of the federal state and the Republic of Montenegro, the environmental protection minister of Serbia at the time, Dr Pavle Todorović, represented the Republic of Serbia in the delegation)

2 The appointed head of the delegation was Dr Anđelka Mihajlov, the Minister for the Protection of Natural Riches and the Environment of Serbia at the time (besides representatives of the federal state and the Republic of Montenegro, in the delegation from the Republic of Serbia were also Aleksandar Vesić and Dr Stojan Jevtić, advisors)

3 The legal succesor to the Federal Republic of Yugoslavia and the State Union of Serbia and Montenegro.

Preparatory activities for the Conference on Sustainable Development 2012 include[4]:

- active participation of the Serbian delegation in different international events, such as meetings within the framework of UNECE (United Nations Economic Commission for Europe), UNEP (United Nations Environment Programme), UNEP GC / GMEF (Governing Council / Global Ministerial Environment Forum) and UNESCO (United Nations Educational, Scientific and Cultural Organisation);
- presidency[5] of the UNEP Governing Council/ Global Ministerial Environment Forum (2009-2011) and dedication to the process of strengthening and reforming international environmental governance (the "Belgrade Process");
- organisation of the sub-regional Green Economy and Sustainable Consumption and Production Workshop which was held in Belgrade in April 2011;
- organisation of high-level events in September 2011: Serbia-European Union Forum, with various debates, including a panel discussion on sustainable development and green economy;
- organisation of national seminars[6] dedicated to preparing documents for Rio+20, November 2011 and May 2012;
- organisation of a sub-regional conference (March 2012) of the Adriatic-Ionian region (Adriatic-Ionian Initiative) and the Black Sea region (Organisation of the Black Sea Economic Cooperation);
- organisation of the regional conference "The Environment toward Europe- meeting Rio+20 – EnE12" (May 2012), as well as a learning event for Rio+20 preparations.

The Republic of Serbia minister responsible for the environment presided over the UNEP Governing Council / Global Ministerial Environment Forum (2009-2011), when the Belgrade Process, aimed at strengthening international environmental institutions and their links with one another, was started.

The Republic of Serbia prepared its vision for Rio+20 on the basis of initial preparatory activities and national strategies and documents, including but not limited to the implementation of the sustainable development strategy, the EU Accession Strategy, Environmental Approximation Strategy, strategic poverty reduction documents, Implementation Plan to Achieve the Millennium Development Goals, National Environmental Protection Programme, Strategy for Sustainable Use of Natural Resources and Environment, Energy Development Strategy until 2015, Implementation Plan for the period 2007 to 2012 of the Energy Development Strategy until 2015, First Action Plan for Energy Efficiency until 2012, Biodiversity Protection Strategy, Waste Management

4 For more information visit Internet presentation of the Ministry of Environment, Mining and Spatial Planning of Republic Serbia (www.ekoplan.gov.rs)

5 Serbian Minister for Environment and Spatial Planning Dr Oliver Dulić was President of the UNEP Governing Council from 2009 to 2011

6 UNDP Office in Serbia has supported Serbia's preparations for Rio+20 since October 2011

Strategy for the period 2010 to 2019, as well as an analysis concerning the implementation of multilateral environmental and energy agreements ratified by Serbia.

The Republic of Serbia believes that Rio+20 will contribute to a continuation of partnerships, and the development of new partnerships, with all stakeholders. With the **business sector, investment in eco-innovations will be promoted, as well as efficient use of resources and energy. Civil society participation in decision-making processes will be promoted, and a high level of science and appropriate and relevant expertise will be ensured, with special attention paid to socially vulnerable groups (such as youth, women, rural communities – particularly in isolated areas such as mountainous regions, and the unemployed) to enable them to influence the processes which contribute to sustainable development.**

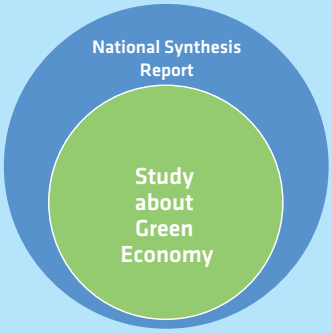
Recommendations (given in chapters 7 through 10 of this document) relate to changing the "economic landscape" in a way which achieves the concept of sustainable development

Serbia understands that, to contribute to the transition towards a resource-efficient and low-carbon Europe, and as a **country which has specific characteristics**, transitioning to a green economy as a means to achieve sustainable development is a great challenge. The National Report and the Green Economy Study show that **Serbia needs support, including financial support, in efforts to develop its economy and society as a whole on these principles**.

In 2012, when the World Conference on Sustainable Development is held in Brazil, in Serbia the focus is not on numbers but on vision and strategy.

After the 2012 Conference on Sustainable Development in Brazil, this document should be reviewed based on the conclusions and recommendations given. In this aim, in the concluding chapter, there are systemised activity recommendations, indentified in this green economy study and this national report.

The National Report for Serbia contains a Green Economy Study complimented with an analysis and recommendations for the institutional framework.



2. Introduction

This study on the green economy and the corresponding institutional set-up is intended to trigger greening of central sectors of the economy and focus public and private sustainable investment on a low-carbon, resource-efficient path, increase green employment and achieve other related social goals.

Within the research presented in this study, special attention was paid to identify potential synergies (regulatory above all), with the purpose of simplifying the procedures for greening the economy in Serbia without duplication. A green economy is not directed against economic growth; on the contrary, it is a new flywheel of growth and a generator of new, green, decent jobs, as well as a necessary strategy for reducing existing poverty. There is increasing evidence that greening the economy contributes to an increase in income and the creation of employment. A number of examples show that with better allocation of investments to green sectors, higher economic growth and employment rates can be achieved. In addition, in order to integrate the economic, social and environmental aspects, *the growth* that is pursued must be "inclusive" and "green." Certainly, the key is the creation of favourable conditions for the transition towards a green economy, and there is much that can be done in this field, mainly through the creation of appropriate environment and practical policies, which are prioritised in this document in line with the multi-sectoral approach.

3. Summary

This study about achievements and perspectives towards a Green Economy and Sustainable Growth in Serbia constitutes a first analysis on this topic. It is important to note that even at the global level there is still no uniform, generally accepted definition of the term *green economy*. While creating this study we have relied on the definition of "green economy" given by UNEP[7], while also taking into consideration the definition given by the International Chamber of Commerce (ICC)[8].

The green economy concept is promoted as a tool to assist countries on the path to achieve sustainable development. The world witnessed that while economic growth lifted millions out of poverty,

This Green Economy Study has been devised in a way that the assumption of a green economy are horizontally, comparatively and synergistically considered **in existing, adopted national strategies and documents**.

7 United Nations Environment Programme (UNEP), *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication* (2011).

8 Ten conditions for a transition toward a "Green Economy", Prepared by the ICC Commission on Environment and Energy – Task Force on Green Economy, Doc. No. 213-18/7 – 8th Dec. 2011)

it was often at the expense of environmental and social conditions and did not benefit all. The decades in which new values and prosperity were created based on the principles of traditional economic models have not managed to fight social marginalisation and change ever-growing excessive consumption of resources. Therefore, it is important to ensure that economic growth provides benefits to society and the environment as a whole. Sustainability still remains a primary long-term goal, but additional efforts must be focused on implementing the concept of green economy if the desire is to achieve that goal[9].

Sustainable development is an umbrella, holistic concept and paradigm which connects economy, society and environment, within which green development strategies can be viewed as an appropriate framework contributing to feasible sustainable development policies. In view of this, it is clear that green economy is something which is more specific than sustainable development.

The document has been prepared with the broad participatory involvement of relevant stakeholders at national and international level. The existing strategic frameworks which are relevant for greening the economy in Serbia are given in chapter 4.

The list of green economy examples which are currently being implemented in Serbia shows *the different shades of the colour green* in the process of greening the economy in Serbia. Arguing the idea[10] that it would be of practical benefit to develop a supporting instrument to assess the impact of activities on sustainable development, for the purpose of sustainable development indicators, the indicative symbol of a "traffic light for a green economy" was presented. For the portrayed examples existing

UNEP defines a green economy as: ***"An economy that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.***"

The ICC Green Economy Task Force has thus defined the term "Green Economy" as follows: ***"The business community believes that the term "Green Economy" is embedded in the broader sustainable development concept. The "Green Economy" is described as an economy in which economic growth and environmental responsibility work together in a mutually reinforcing fashion while supporting progress on social development. Business and industry have a crucial role in delivering the economically viable products, processes, services, and solutions required for the transition to a Green Economy."***

9 Sustainable consumption and production and green economy, Office of the Deputy Prime Minister responsible for European Integration and the Serbian Chamber of Commerce, publication realized with the support of the Swedish International Development Agency (SIDA) through the project "Support for the implementation of the National Sustainable Development Strategy of the Republic of Serbia," Belgrade (2011)

10 Republic of Serbia – Contribution to the zero draft of the outcome document (2011/2012); available at http://www.uncsd2012.org/rio20/index.php?page=view&type=510&nr=115&menu=115
http://www.ekoplan.gov.rs/en/Rio-20-102-p1-list.htm?_sector_id=6&_sm_id=110

in Serbia in 2012 (chapter 5, and some other chapters in which the argument is supported), it can be said that they fall under greening the economy.

This Green Economy Study and proposals for the appropriate related institutional set-up have been prepared to promote sustainable production and investment in greening sectors and subsectors which would result in social inclusion and increased employment. Based on the existing state, during the preparation of this document the following were recognised as strategic directions for the development of a green economy in Serbia, and are explained in more detail in chapter 6:

1. Harmonising socio-economic development with the European Union's Resource-Efficient and Low-Carbon Policies[11] (including the efficient use of natural resources and energy, sustainable consumption and production patterns, a 'green public procurement' policy, economic and fiscal policy reforms which would set the right market signals, measures towards an economy with a lower carbon footprint, education and innovation for sustainable development, etc.)

2. Advancing social inclusion and poverty reduction (including measures to reduce poverty and income disparity, fight against inequality, support the creation of new jobs and reduce unemployment, with special emphasis on inclusion of vulnerable groups)

3. Empower the environment sector (including promoting investment in infrastructure that supports all aspects of sustainable development, from socially sensible job creation to environmental protection, support the strengthening of expert capacities, etc.)

4. Establish a long-term institutional and financial framework in support of sustainable development (which includes a mandatory "budget line for sustainable development" in every key institution, introduction of a sustainable development impact analysis, promotion of a stable institutional set-up with a financial framework for sustainable development).

5. Promotion of sub-regional cooperation (through processes like the regional Adriatic-Ionian Initiative, cooperation in the Danube-Carpathian region, the Energy Community Treaty, bilateral knowledge and expert exchange schemes among EU candidate countries, etc.)

To establish the institutional set-up required for targeted, result-oriented monitoring and improvement of sustainable development (and green economy as one of the key means towards sustainable development) is a great challenge at all levels. A stable, efficient,

11 In an effort to reproduce the European Union Flagship initiative under the Europe 2020 Strategy

professional and operational administration and institutions, which remain firm in spite of political changes, are a requirement of sustainable development. A proposal is given in this study for an institutional set-up for sustainable development in Serbia which takes into account the reality of the situation and which has the potential to be long-term and successful. The proposed institutional system comprises the following: an improved version of the existing Sustainable Development Council, a Government Advisory Board, Council Secretariat, an Advisory and Scientific Committee of the Sustainable Development Council, Sustainable Development Council working groups and a Bureau. The continued development of the institutional framework and improvement of the coordination of the social inclusion process are required. In this respect, the coordination of the function of the Social Inclusion and Poverty Reduction Team must be carried out sustainably. Inside the ministries themselves, professional, systemised tasks should be ensured for focal points – individuals who are responsible for specific international agreements and processes, green economy, sustainable development and the sustainable use of natural resources. Systematic mechanisms for planning, coordinating implementing, monitoring and evaluating policy at Government level must be established. In this respect, the role of the Government's General Secretariat, which is expected to perform important coordination tasks related to passing and implementing public policies at republic level, will be especially important.

In the initial stage of the implementation of the proposed institutional networking it is necessary to: develop the working procedure of each of the aforementioned structures (at government level and in key ministries, develop a part for improving green economy processes through the Sustainable Development Council and develop a part for improving social inclusion processes through the Economic and Social Council.

The capacities of the National Assembly of the Republic of Serbia, i.e. its committees, also need to be strengthened. Although a Sustainable Development Committee is not formed in the Serbian Assembly, there are decrees on the basis of which the activity of existing committees can be focused on sustainable development, and those possibilities are that: the committees cooperate with one another, and that – on a question which is of common interest, committees can hold sessions together. Until the establishment of operative mechanisms for the functioning of the "Groups of the Sustainable Development Committee", it is necessary to make use of the possibility that the Speaker of the National Assembly may engage scientific and expert institutions in the working body, as well as scientists and experts, for the purpose of studying (and providing operational support for) the issues of sustainable development which fall under the jurisdiction of the National Assembly as issues of public interest.

It is necessary to further harmonise the financing policies of local self-governments, develop information systems (which entails collecting and exchanging information), strengthen their capacities and include them more fully in the process of social inclusion

and poverty reduction, implementing local sustainable development strategies and local environment action plans, etc.)

The analysis of possible scenarios for the renewable energy sources, energy efficiency and agriculture sectors is given in chapter 7.

Strategic goals are given in chapter 8. Recommendations have been systemised into priority strategic directions, focused on the medium-term (and long-term) transition to a green economy.

Concluding considerations focus on stating what needs to be done for economic development in Serbia to have the features of sustainable development and a more prominent green colour in the green-economic concept.

After the 2012 Conference on Sustainable Development in Brazil, this document should be reviewed based on the conclusions and recommendations given. In this aim, in the concluding chapter, there are systemised activity recommendations, indentified in this green economy study and this national report.

The recommended steps for improving the legal framework include: improving and adapting laws to the green economy concept, supporting the efficient application of laws, supporting the legislative and procedural setting of the sustainable indicators proposed in this study (as one of the criteria for approving project financing in all sectoral fields), supporting the implementation of multilateral and regional agreements which contribute to development, supporting the development of new (for example, for the sustainable development of the Dinaric Alps and Balkan Mountains) multilateral and regional agreements and treaties, if they have the potential to strengthen the macro-region.

The recommended steps for the further directing of strategic planning include: after the 2012 Conference on Sustainable Development in Brazil, to review this document with analyses of the conclusions and recommendations adopted, and prepare the National Green Economy Strategic Plan, as appropriate. Furthermore, they include the supporting of a horizontal analysis of all relevant strategies adopted to date and legal solutions with a focus on contributing to greening the economy and sustainable development, with the proposal and implementation of changes for the purpose of a harmonised and synergetic approach. As part of further steps, a national programme to put green public procurement into action should be prepared, economic and fiscal policy measures for greening the economy should be prepared and the conditions for their implementation created and fiscal policy should be examined in order to stimulate the creation of new jobs.

On the basis of this green economy study, a national sustainable consumption and production action plan, for at least a 10-year period, should be prepared. The Cleaner Production Strategy should be further revised, and an appropriate revision of the National

Sustainable Development Strategy should be conducted in order to reflect conclusions and findings of the "Rio+20" Conference. It is necessary to plan the development, production and application of domestic equipment and plan the training of the personnel required for the functioning of systems as part of greening the economy, and support the more effective development of sustainable tourism through green tourism, green destinations, green services, the promotion of green sensitive users of tourist services, and the Tourism Development Strategy should be permanently updated based on these principles. If required, the accessibility of public finances should be increased so that a series of strategic tools can be used to best take advantage of private financing. It should be underscored that provincial and local self-government need to be encouraged (through legal instruction) to provide special budgetary lines in their budgets for green economy and sustainable development (intended for the implementation of local sustainable development strategies).

The recommended steps for improving the institutional framework include: supporting the development and creation of conditions for the institutional set-up proposed in this document (details given in chapter 6.4.3), and putting this stable institutional set-up for sustainable development into action through the amendment of laws.. It is necessary to also strengthen and support the work of the Sustainable Development Council and its working bodies, strengthen and support the work of the Social and Economic Council and its working bodies, strengthen the expert support of joint sessions between several Committees in the National Assembly; in aim of achieving parliamentary influence on sustainable development and green economy. It is necessary to support the continuous training of government officials in relation to the development and implementation of multi-lateral environmental agreements, as well as to support "professional, knowledge-based support activities" for focal points of different conventions, develop mechanisms for functional networking. It is no less important to develop operative institutional networking mechanisms for achieving regional cooperation.

A key recommendation for improving implementation capacities is to create the conditions where adopted laws and strategies are fully implemented.

Serbia, in the model of its economy in transition, must also anticipate that it is located in a sensitive region, which also includes sensitivity to climate changes and frequent natural disasters.

The means for implementing this document and the resulting recommendations are either already contained in the documents this study is based on or will be contained in the development documents which are recommended (in various sectors of action). Anticipated, necessary and unavoidable (required or essential) investments in the environment[12], as well as in the mitigation of and adaptation to climate changes, combined

12 National Strategy for Environmental Approximation (NEAS) - Nacionalna strategija Republike Srbije za aproksimaciju u oblasti životne sredine (2011)

with adequate measures to promote social inclusion should be seen as a driver of green (sustainable) development, as an initial investment and never as an expense.

Today's economic crisis signals that we must approach "long-term recovery" systematically at the national, sub-regional, regional and global level. This document represents the dedication of the Republic of Serbia to contribute to agreement between the countries of the world at the 2012 World Conference on Sustainable Development, and to be a basis for continued development and implementation after the conference.

4. Existing Strategic Framework for Greening the Economy

The primary directions of the development of the Republic of Serbia are defined by "umbrella" strategic documents which include: National Sustainable Development Strategy, National Strategy on Sustainable Use of Natural Resources and Environment, Poverty Reduction Strategy in Serbia, First National Report on Social Inclusion and Poverty Reduction, National Millennium Development Goals, National Economic Development Strategy of the Republic of Serbia, National European Union Integration Strategy of the Republic of Serbia, National Environmental Protection Programme, National Environmental Approximation Strategy of the Republic of Serbia, National Energy Development Strategy until 2015, Implementation Programme for the Energy Development Strategy until 2015 for the Period 2007 to 2012 and the First Action Plan for Energy Efficiency until 2012, Initial National Communication, etc. Besides the aforementioned documents, there are also a certain number of strategies from the environment and energy spheres, as well as a large number of "sectoral" strategies (in the fields of employment, education, social welfare, health, etc.) which contain measures for improving the position of sensitive groups.

5. Stocktaking of Green Economy Examples in Serbia

By means of a participatory approach a form was developed, which was then widely distributed in aim of identifying and stocktaking (positive) examples of a green economy, which take place in practice, and which are only now through this process recognised as examples of good practice in greening the economy.

Examples of green economy practices are complied to inspire dialogue and discussions at the "Rio+20" Conference, to inform the Serbian delegation, and serve as a basis for further activities after the conference.
It is important to emphasise that this report only includes a limited number of examples. There are many other good practices that are widely implemented but not included in this report, such as the use of manure for energy production in farms, the introduction of a chemical advisor for the inspection of chemical management, the introduction of an agriculture advisor to promote sustainable agricultural production, the introduction of "building passports", energy audits, the introduction of BAT through the IPPC permits and the reorganization of groups for IPPC, sub-national (regional) waste management planning.

The examples in the list were chosen (which were also chosen via a participatory process with stakeholders), following two main categories:

Renewing the vehicle fleet of city buses in cities in the Republic of Serbia

The bus fleet in the Republic of Serbia comprises 8000 buses. Of this, the fleet of city buses is made up of around 4100 buses, with only a very small number of buses using compressed natural gas, and biodisel is not used as motor fuel.
The replacement of the vehicle fleet can take place in several scenarios.
It is estimated that approximately €700 million is needed for the procurement of 4100 buses while with the introduction of modern vehicles the reduction in energy costs, i.e. costs of motor fuel, is estimated at €70 million a year, and approximately €700 million over a 10-year period of using the buses.
For the envisaged vehicle fleet renewal scenarios, in relation to the base year of 2010, CO_2 emissions are reduced the most in the scenario which sees the bus fleet renewed with buses which use biodisel.

- Sustainable tourism in Serbia as a demonstrative example of a green economy and
- Cleaner production and responsible business and financing as demonstrative examples of a green economy.

5.1. Sustainable tourism in Serbia as a demonstrative example of a green economy

In 2002 in Johannesburg, Serbia presented sustainable tourism, i.e. tourism placed on the concept of sustainable development, as its example of sustainable development.

In recent years the development of the sustainable tourism programme has become strategic. The goal of the programme is the achievement of the following two key results:

- *At national level*: development of a legal and political framework to support the diversification of the rural economy through tourism and contribute to the achievement of the Millennium Development Goals. Key activities focused on achieving this goal are: a) development of a National Master Plan for the Development of Rural Tourism and a National Rural Development Programme; and b) provision of guidelines for public investment in aim of creating national and international partnerships between the public, civil and state sectors

- *At local level*: better connection and organisation of rural tourism by improving the capacities of local actors to offer services and produce in line with the national strategy. Key activities focused on achieving this goal include: a) strengthening the capacities of rural tourism entrepreneurs (sole-proprietors), tourist organisations and citizens' associations, and b) promoting an innovative approach to development, through Local Action Groups (LAGs) and tourist organisations and giving special support to local projects through the Joint UN Programme on Sustainable Tourism and Rural Development.

By means of tenders for the diversification of the rural economy through tourism in 2010 and 2011, a total of USD600,000 in grants were awarded; with over 70 projects supported.

Special attention is dedicated to activating women and vulnerable segments of

Promoting Eco Tourism by connecting Serbia to the European Walking Route Network

The walking routes E4 and E7 pass through Serbia and this contributes to the additional attractiveness of what Serbia has to offer to tourists. Tourists and mountain-hikers who want to discover new areas, use these paths, and they cover entire distances in one go or with breaks at different times. The E4 European walking path stretches from Gibraltar via the Pyrenees and Lake Balaton to Serbia, where in the east it begins in Kanjiža. The route goes via Carska Bara bog, Belgrade, Iron Gate to the Jerma canyon, where it enters Bulgaria. The E7 path begins in the Canary Islands in the Atlantic, and passes via the Mediterranean, Andorra and France, along the Italian lake Garda and southern Hungary. It passes through the eastern part of Serbia from Palić then via Bač, Novi Sad, Zasavica, Rajac and Zlatibor it continues to Sopotnica, Devil's Town and Vlasina, to the southernmost mountain of Dukat and then it continues on into Bulgaria.

Marked walking paths have also been formed in the Kopaonik and Tara national parks, hiking and cycling paths are planned in Bajina Bašta, as well as keep-fit paths near Paraćin and walking and cycling paths in Stari Slankamen.

society and encouraging their involvement in rural tourism, particularly in making local handicrafts and traditional production methods, revitalising village schools and stimulating active learning and learning in nature for children and young people, as well as facilitating access to the local market of agricultural goods, which are produced locally and, in particular, those which come from small farms.

Some other positive examples of sustainable tourism which are being implemented include:

- International standardisation of beaches and marinas through the certification system Blue Flag[13] – The "Ada Ciganlija – Sava Lake" beach was awarded this international certification in 2012. This recognition is a positive and inspiring challenge for other beaches and marinas (on the Danube and other rivers) to gain international certification;

- Reviving "old crafts for the new age", particularly to improve the economic position of unemployed women by strengthening female entrepreneurship in rural regions with positive examples in south-west Serbia in the municipalities of Nova Varoš, Prijepolje and Čajetina. In the aforementioned municipalities a network of three women's associations for producing, distributing and promoting standardised handmade souvenirs has been formed;

- Promotion of cycling in cities (a positive example is iBikeBelgrade); The EuroVelo 6 cycle route – pan-European corridor which links Serbia with the Netherlands and Germany to the north and Romania and Bulgaria to the south;

- Use of recycled paper for souvenir-making (a positive example is the ekoBečej Creative Workshop.

Solving the legal status of individual collectors of secondary raw materials

As opposed to recycling centres and companies which, for the purpose of performing recycling and secondary raw material collection tasks, employ workers by means of employment contracts or other contracts provided for by the Labour Law, individual collectors of secondary raw materials do not have a regulated work status and have no health insurance. They also face other problems such as a lack of adequate equipment for work and work safety resources. The Labour and Social Policy Ministry has recognised the work-legal and social position problem of individual collectors of secondary raw materials and with future amendments and additions to the Labour Law, will take into account this problem, particularly when introducing new flexible forms of work, and which will be adjusted to the their needs and the specifics of the work they perform.

13 National Operator of the Blue Flag Programme for Serbia: Contact: fee.serbia@gmail.com

5.2. Cleaner production and responsible business and financing as demonstrative examples of a green economy

Eco-labelling

The eco-label of the Republic of Serbia is a type I environmental protection label, which means that it is a voluntary, multiple-criteria based third party programme, within which licences are issued that authorise the use of the environmental protection label, which affirms products' overall environmental friendliness within specific product categories, and which is based on consideration of the life cycle. Labels of this type are defined by the *SRPS-ISO 14024* standard. In March 2010, the Ministry of Environment awarded the first Republic of Serbia eco-label to the *Kanjiža-based construction material production company POTISJE KANJIŽA*, for the following products: extruded tiles, pressed tiles and products for inter-floor constructions.

Improving lignite exploitation technology in Kolubara Mining Basin with an aim to increase thermal power plant efficiency and reduce the impact on the environment

With the ratification of the Energy Community of South East Europe Treaty in 2006, the energy sector of the Republic of Serbia became part of the European market. In line with national strategies (for sustainable development and introducing cleaner production), EPS (Electric Power Industry of Serbia) and Mining Basin Kolubara defined priority activities for establishing the sustainable exploitation of coal. The essence of the project for establishing homogenisation is for coal to become a "good of known" standardised quality for both pits and thermal power plants.

The project is multi-disciplined and represents the union of environmental protection, electricity production and coal exploitation. By introducing a system to unify the quality of coal (homogenisation) in Mining Basin Kolubara, it is possible to optimise the combustion process in the boilers in Thermal Power Plant Nikola Tesla (TENT), and contribute to increasing efficiency and lowering environmental pollution.
An economic/financial contribution is seen in both the mining and energy sectors. Total quantified savings in the energy sector following the introduction of a coal quality management system (homogenisation) are: €26 million annually, and in the mining sector €7.6 annually.

Total savings in the energy and mining sector: €36.7 million annually.

Quantified reductions in flue gas emissions in the thermal power plants of the company PD TENT (Nikola Tesla Thermal Power Plants) due to coal homogenisation are as follows: SO_2 emissions = 3,648 t/yr; NO_2 emissions = 21,370 t/yr, and CO_2 emissions = 555,350 t/yr. The homogenisation of coal influences a 3% reduction in ash and slag quantities, which is a reduction of 885,000 t/yr.

DAIRY FARM LAZAR BLACE
– biogas plant in the milkable cow farm in the village Gornja Draguša, BLACE municipality, south Serbia.

LAZAR dairy farm employs 200 workers and over 3000 business partners and villagers, and is a pillar of economic and social development in south Serbia and the preservation of rural areas. The company is also the recipient of an agro business leader award in Serbia.

By using new technologies, LAZAR dairy farm is solving the problem of biodegradable waste from the farm and the dairy farm's production process, manure and whey, using waste as an energy-generating product for producing bio gas and electricity. The project is environmentally responsible. The value of the investment is USD 1.5 million.

Application of chemical leasing business model

Chemical leasing[14] is a service-oriented business model which shifts focus from increasing sales volumes of chemicals towards a "value added" approach. Lowering chemical consumption is achieved by economically motivating producers to transfer expert knowledge to users in fields which are not their core business and together with them optimise consumption.

An agreement on the application of the chemical leasing business model between Knjaz Miloš, as a chemicals user, Ecolab, as the supplier, and the Cleaner Production Centre, as a neutral party, was signed in 2009, the year in which the application of the model also began. The model is applied to the lubricants line for packing products in PET packaging.

Although the goal of operating to this model is to reduce chemical consumption (consumption has been reduced two-fold), the result of its application is the reduced consumption of other resources: water, other chemicals (for the pre-treatment and treatment of waste water), process improvement (5% increase in line efficiency), reduced negative impacts on the environment, improved health and safety at work (no contact with chemicals, reduced quantities of aerosols in the air and risk of injury), as well as financial profit for participants.

Development of a can recycling collection network

Ball Packaging Europe and the company *Recan d.o.o.* support the activities of the Recan Fund for returning and recycling aluminium beverage cans. Between 2006 and 2011, the Recan Fund launched can collection drives in 526 schools. The Recan Fund engages around

14 http://www.chemicalleasing.com/

100 schools on average a year and collects approximately 3 tons of used beverage cans (UBC).

In addition to this, they support marginalised social groups. Between 2006 and 2011, at least 280 individuals recognised UBC collecting as a source of additional income. In the same period, 117 small- and medium-sized enterprises as well as 12 public utilities companies joined the Recan collection network. Activities in the Southeast Europe region involve cooperation with 8 companies. Another good example of a good practice is ECOprofit[15].

Strawberry energy – Strawberry Tree has created a device which helps people re-start their digital devices via an environmentally friendly platform. Strawberry energy is a socially-oriented solar charger and Wi-Fi station, where people can charge their transmitting devices. The main goal is to attempt to raise public awareness of the large energy potential of renewable sources of energy.

Managing water losses in the Novi Sad water system

The Novi Sad water supply system actively applies the methodology of the International Water Association (IWA) to analyse and reduce water losses. Besides this, the water price policy has also been improved. These activities have a direct effect on preserving drinking water resources, increasing system efficiency and the concept of sustainable development. The results achieved make the Novi Sad water supply system one of the most successful in Serbia in terms of managing water losses and financial self-sustainability.
The company achieved a positive economic statement by changing the water price policy: +350 million RSD (2010) and +700 million RSD (2011), consumer water consumption was reduced by 15%, consumer awareness that drinking water is a limited and a difficult-to-renew resource was raised and water losses were lowered to 23% (from 12.3 million m^3 in 2007, which was 32%, to 7.4 million m^3 in 2011). In the long-term, the exploitation of drinking water sources is being reduced and resources are being preserved for the future.

Improving energy efficiency in schools

Measures to increase energy efficiency have been introduced into a certain number of schools and they immediately saw positive results.

The following was carried out in the Radivoj Popović school for children with special needs in Sremska Mitrovica: replacement of wooden windows, doors and skylights with new PVC ones, replacement of fuel oil boiler with a new natural gas boiler (500 KW), a boiler room was built, installation into and connection to the new measurement-regulation station network and thermostatic radiator valves installed. Spent energy costs were lowered by 43%, when the heating season before the measures were implemented is compared with the heating season after their implementation. Energy consumption per

15 ECO profit, www.victoriaconsulting.co.rs

m^2 of heated area was reduced by 54%, from 120 KWh/(m^2 yr) to 55 KWh/(m^2 yr), when the heating seasons before and after the implementation of the measures are compared. Total CO_2 emissions were lowered by 50% when the heating seasons before and after the implementation the measures are compared.

In the Mico Matović Primary School in Katići two mazut boilers were replaced with biomass boilers. The school used approximately 10t of mazut annually, which costs approximately 5,000 euro. The same heating power is now achieved with approximately 35m^3 (spatial) of fire wood which costs the school around 1,000 euro a year. The saving on fuel costs is approximately 4000 euro annually. CO_2 emissions into the atmosphere have been reduced by around 30t annually.

Commitment of the banking sector to a green economy – one of many examples

Eurobank EFG has implemented a series of programmes in aim of reducing negative impacts on the environment and promoting sustainable development: using low energy multifunctional equipment, the use of which is reducing paper consumption by 60% (duplex printing), continually improving energy efficiency in all of the bank's business premises by implementing technological measures and raising employees' environmental awareness, sending monthly statements by e-mail, waste management system (recycling paper, electric and electronic waste, toners cartridges, PET packaging), monitoring clients' environmental and social risk when approving loans, a loan approved for the Ministry of Science and Technology for a nuclear facility management project, etc).

Under the Eurobank EFG PARKS project, a total of 9 parks in 7 Serbian cities have been renovated with green areas enriched and park furniture and lighting)

In the Jovan Popović Primary School in Čoka, spent energy costs have been reduced by 39.4% following the installation of two natural gas boilers (2x300 KW) with burner and accompanying equipment (heating had been mazut-based), when the heating seasons before and after the implementation of measures are compared. Energy consumption per m^2 of heated area was reduced by 16.25%, from 143 KWh/(m^2 yr) to 120 KWh/(m^2 yr), when the heating seasons before and after the implementation of the measures are compared. CO_2 emissions were reduced by 42.7%, when the heating seasons before and after the measures were implemented are compared.

In the context of promoting the use of solar energy in Serbia, solar power station pilot projects were implemented in the Mihajlo Pupin technical school in Kula (5kWp), the Rade Končar electrical engineering school in Belgrade (5kWp) and the high school in Varvarin (5kWp), and a thermal-solar plant in the Gornja Toponica Special Hospital in Niš (25m^2, 2,500L).

Global Compact Network Serbia

In December 2007, eight companies and one non-governmental organisation founded the Global Compact Network Serbia at a conference organised by UNDP Serbia and the National Bank of Serbia. Its mission is to promote the *Global Compact (GC) Network* and its 10 principles concerning human rights, labour rights, the environment and combating corruption in Serbia, and to ensure the progress of its members in relation to the implementation of this learning principle through partnership. This kind of networking has created the opportunity for more dialogue and advocacy through collective activities. The total number of signatories now stands at around 80 (38 companies, 26 non-governmental organisations, 8 business associations, 4 academic institutions, 2 trade unions, 1 city and 1 central bank). Activities are performed through eight working groups: for social inclusion, for combating corruption, for banking and finance, for education and the development of socially responsible business, for environmental protection, for the media, for emergency situations support and for labour rights.

At the leaders' summit and annual meeting of local GC networks held in New York in 2010, the Serbian network received an award for being one of the three most successful networks in the world in 2009 (together with Japan and Ukraine). The Serbian Chamber of Commerce supports the work of the network and performs the role of the network's Secretariat and participates in its Steering Committee. The Network represents one of the significant tools used to exchange experiences, know-how and information with regard to the role of business in implementation of the Green Economy concept.

Green business through the GREEN project

The idea of the international GREEN project (Greening business through the Enterprise Europe Network) is to help small- and medium-sized enterprises implement environmental protection standards and management systems, as well as to assist the European Enterprise Network (EEN) in providing services and solving environmental protection problems in two specific sectors: the food processing industry and the construction materials industry. The partners of this project, which was implemented during 2011 and 2012, are the Italian, Greek, Bulgarian, Slovenian, Montenegrin and Turkish Chambers of Commerce, the Macedonian Foundation for Management and Industry Research, the Osijek Centre for Technological Research and, from Serbia, the Mihajlo Pupin Institute in Belgrade. Company representatives had the chance to improve their knowledge in four areas: EU and local regulations on environmental protection, voluntary "green" initiatives, "ecological" requirements for products and facilities, and logistics. At interactive workshops special emphasis was placed on the importance of assessing energy efficiency, eco-design of products, the CE sign for products and the importance of recycling as well as the standardisation of management systems (ISO 14001, EMAS, ISO 50001, etc.). A

key result of this project is increased awareness and the exchanging of knowledge and experiences in the SME sector, and, in particular, connecting companies which offer environmental protection services with waste companies-producers and polluters. The GREEN project is supported by the Ministry of Environment, Mining and Spatial Planning and the Serbian Chamber of Commerce.

Rehabilitation of the District Heating Systems in Serbia

Since 2001, one of the most successful development programmes of the Republic of Serbia has been implemented within the framework of financial cooperation between Germany and Serbia – "Rehabilitation of the district heating systems in Serbia." Three phases of this programme, worth a total of €63 million, have been implemented to date, under which the district heating systems in 8 cities and towns were rehabilitated: Belgrade, Novi Sad, Niš, Kragujevac, Kraljevo, Pirot, Sombor and Zrenjanin. The programme continues in the fourth phase in which an additional 20 participants will be included. Once this phase has been completed, **22 district heating systems of the total of 57 in Serbia will have been rehabilitated and modernised through this programme.** The primary goals of this programme are more stable and energy efficient heating, environmental protection and contributing to the fight against climate change. The programme will also contribute to more quality living conditions for approximately 1,000,000 citizens of Serbia.

To date, three phases of the programme have been carried out: Phases I and II were carried out between 2001 and 2004. The total value of the investment came to €26.3 million. Of this, €17.7 million was a donation of the German government and €8.6 million was co-financed by partners in Serbia. Belgrade, Novi Sad and Niš as well as towns with the largest district heating systems participated in the programme. 40.4 km of hot water pipeline and 960 heating substations were reconstructed.

Phase III of this programme was carried out between 2008 and 2011. The towns of Kragujevac, Kraljevo, Niš, Pirot, Sombor and Zrenjanin participated in the programme. The total value of the investment came to €38.8 million, of which €10.2 million was a donation of the German government, €12 million was credit, €5.5 million was from the Republic of Serbia and €11 million from heating plants. Six new boiler-plants with a total capacity of 132 MW were built and another six boiler-plants with a total capacity of 250 MW and heating substations with a total capacity of 205 MW were reconstructed. 70 km of hot water pipeline was reconstructed and 2700 calorimeters installed. Energy efficiency in heating production and distribution systems increased 12%, which provide annual energy savings of 38,000 MWh. Energy costs savings stand at €2 million annually. The annual reduction in CO_2 emissions is 10.000 t.

To date, all agreements between KfW and the Republic of Serbia, which form the legal basis for Phase IV, have been signed. These agreements have secured funds to a total of **€58.2 million** for its implementation, of which **€54.25 million is for the implementation of technical measures, i.e. rehabilitation and modernisation of the district heating system (heating plants). Under the Loan and Programme Agreement, KfW has approved €45 million** in soft credit, under exceptionally favourable conditions, **to the Republic of Serbia**. In addition, under an **agreement on swap of debt in the amount of €18.5 million,** the Republic of Serbia has committed to financing Phase IV by providing €9.25 million in the form of subsidies from the Budget. Owing to the unique **"debt-for-nature"** arrangement, between the Republic of Serbia and FR Germany, this participation by Serbia will be the basis for the write-off of €18.5 million of the public debt Serbia owes to Germany

All of these funds are transferred by Trilateral Agreement under the same conditions to the participants in Phase IV of the programme, and they are the heating plants in 20 towns in Serbia.

In addition, €4 million has been provided for consulting services which accompany the programme. The Government of FR Germany donated €2 million through KfW for financing consulting services, while an additional €2 million in donations have been secured from EU funds – the European Western Balkans Joint Fund. Besides technical advancement, the programme will also concern itself with the introduction of new rules such a payment system according to consumption but also with other institutional changes which should contribute to the more sustainable operation of district heating companies in the aforementioned cities and towns in Serbia.

Application of energy efficiency measures and rehabilitation of the energy supply system with the use of clean and/or renewable sources of energy for heating in public buildings in the health, education and social welfare sector

The applied energy efficiency measures encompass construction work/interventions on the construction envelope (façade insulation, replacement of building components and the repair of roof structures) and machine works (repair and reconstruction of the heating system) in two clinical centres and 90 public buildings. The total value of the work stands at approximately USD55 million. In the first phase of the project, the rehabilitation of the heating system in the Clinical Centre of Serbia in Belgrade was carried out (construction of a gas boiler room, 50 MW, repair of 55 substations and the energy network and cogeneration plant construction, 2 x 2 MW), and energy efficiency measures were implemented in 28 public buildings (16 schools and 12 hospitals around Serbia). In the second phase of the project, the rehabilitation of the heating system in the Clinical Centre of Niš was carried out (construction of a gas boiler room with accompanying distribution network, 32 MW, construction of 14 substations and replacement of internal heating installations for approximately 15,000 m^2), and energy efficiency measures were implemented in 62 public

buildings (20 hospitals within the Clinical Centre of Niš complex and 9 hospitals, 28 schools and 5 social welfare institutions around Serbia).
An important result stemming from this project is also the contribution to sustainable development – the project has created economic and social sustainability on the one hand (through financial and physical savings in energy consumption), and social sustainability (improving the comfort and satisfaction of users) in connection with environmental protection on the other. The sustainability of the results is reflected through: a demonstrative effect, because it is an example which can encourage other users to implement the same or a similar methodology when repairing energy in their buildings; contribution to changing forms of behaviour and increasing concern for protecting the environment, as well as the use of renewable sources of energy; concessions to all potential users of optimal technical measures, whose application guarantees optimal energy saving results. The project received the Green Award, which the World Bank gives to projects which have incorporated the postulates and achievements of a green economy into their objectives, for its role in improving the quality of the environment.

Sustainable Urban Transport in the City of Belgrade – Transport and mobility challenged by the sustainability aspects at national and local level in Serbia

Belgrade, as with many cities today, faces a multitude of challenges related to congestion, noise, air quality issues, health, safety, quality of life and the problem with a multitude of diverting policies in the field of urban transport. On the global level, the challenge of climate change and its environmental, health and economic impacts is strongly connected to transport and unsustainable mobility behaviour.

These challenges are the driving forces behind recent calls for powerful measures to address sustainable transport. This project is one of the pioneering attempts in Serbia to address these challenges and issues on a wider scale.

The UNDP Project to Support Sustainable Urban Transport in the City of Belgrade is financed through the Global Environmental Facility Fund. The project budget amounts to USD950,000 and will last for four years. The overall objective of the project is to reduce metropolitan emissions in the City of Belgrade by improving the public transport network, reinforce the participation of cyclists in traffic and provide a policy framework for the sustainable urban development of transport in Belgrade.

The City of Belgrade and its institutions – the Land Development Agency and the Secretariat for Transport, are identified as the main partners and beneficiaries of the project. The project design is conceived in such a way to stimulate and support the main partners in their operations targeting the improvement of sustainable urban transport in the City of Belgrade.

The project is operational as of early 2011. The last year was a period which saw the inception and taking up of the project which supports the establishment of more sustainable urban transport in the City of Belgrade. Big challenges lay ahead in April 2011, when the inception plan was adopted. The project was redesigned during the inception phase in order to better match the portfolios of current activities by both partners, the City Secretariat for Transport and the Land Development Agency. This project, above all, is designed in a way that it complements the core business of the partners and supports them in providing better urban transport sustainability.

The front of activities and actions are diverse, ranging from institutional support, policy making, public awareness and promotion of alternative mobility to the implementation of pilot projects on the ground that improves the safety of the youngest members of the population and at the same time educates on topics such as protection of the environment and mobility. Capacity building is mainstreamed through the entire project by increasing the abilities of the city's institutions and stakeholders to deal with mobility management through knowledge sharing and training of professional drivers on safe and eco-driving.

6 Strategic Directions for Developing a Green Economy

The Republic of Serbia must implement defined measures for mitigating the consequences of the economic crisis and ensure the conformity of the work of all stakeholders who influence the economic environment. Under the influence of the crisis, internal conditions pertaining to the reform process and socio-economic development are becoming increasingly more demanding and complicated. **Therefore, adopting laws and strengthening the institutions vital to the success of reforms** means the necessary funds need to be earmarked. However, the adoption of such measures is complicated to an extent by the ongoing global economic crisis.

The following strategic policy recommendations to support and promote the development of a green economy in Serbia are being considered:

1. **Harmonising socio-economic development with the European Union's Resource-Efficient and Low-Carbon Policies** (including the efficient use of natural resources and energy, sustainable consumption and production patterns, a 'green public procurement' policy, economic and fiscal policy reforms which would set the right market signals, measures towards an economy with a lower carbon footprint, education and innovation for sustainable development, etc.)

2. **Advancing social inclusion and poverty reduction** (including measures to reduce poverty and income disparity, fight against inequality, support the creation of new jobs and reduce unemployment, with special emphasis on inclusion of vulnerable groups)

3. **Empower the environmental sector (**including promoting investment in infrastructure that supports all aspects of sustainable

development, from socially sensible job creation to environmental protection, support the strengthening of expert capacities, etc.)

4. **Establish a long-term institutional and financial framework** in support of **sustainable development** (which includes a mandatory "budget line for sustainable development" in every key institution, introduction of a sustainable development impact analysis, promotion of a stable institutional set-up with a financial framework for sustainable development)

5. **Promotion of sub-regional cooperation (**through processes like the regional Adriatic-Ionian Initiative, cooperation in the Danube-Carpathian region, the Energy Community Treaty, bilateral knowledge and expert exchange schemes among EU candidate countries, etc.)

6.1. Harmonising socio-economic development with the European Union's Resource-Efficient and Low-Carbon Policies

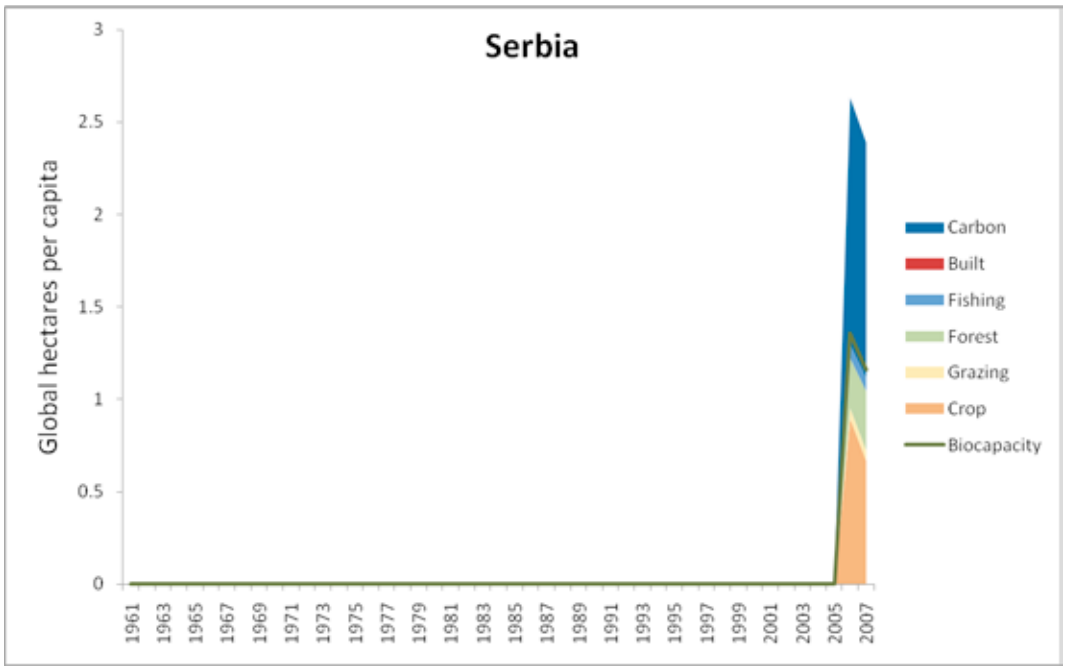
The Republic of Serbia submitted its application to join the European Union (EU) in December 2009 and in March 2012 gained candidate status for membership. By doing this, the Republic of Serbia demonstrated its clear and unambiguous dedication to become an EU member state. The European integration process, as the primary strategic and political orientation and strategic framework of the country's overall democratic and economic development, entails the continuation of the European integration process and the fulfilment of numerous, complicated and interlinked requirements.

6.1.1. Efficient Use of Resources

Using natural resources in a sustainable way, as well as improving footprint[16], implies ensuring their availability in the future and reducing negative impacts of the use of materials on the environment. All natural resources are by definition limited in an economic sense, and at the same time they are very valuable because of their effect on the economy and the benefits they bring society. Accordingly, sustainable use and management of natural resources (renewable and non-renewable) require the application of three key principles:

- The use of renewable resources cannot exceed the rate of their renewal/ regeneration
- The use of non-renewable resources cannot exceed the rate at which substitutes for those resources are developed (use needs to be limited to a degree at which

16 http://issuu.com/undp_in_europe_cis/docs/resource_constraints_and_economic_performance_f#download



Ecological footprint of Republic Serbia

they can be physically or functionally replaced with equivalent renewable resources or at which consumption can be compensated for by raising the productivity of renewable or non-renewable resources)

- The quantity of material released into the environment (pollution) cannot exceed the capacity at which polluting materials are transformed into safe materials or materials which are less toxic to the living world.

MINERAL RESOURCES

The implementation of the general prognosis and geological and economic assessment of resources and mineral raw material reserves project of the Republic of Serbia is in progress, as well as the creation of the mineragenetic map of non-metallic mineral raw materials of the Republic of Serbia. It is necessary to locate appropriate investment locations and perform a seismic evaluation, as well as to assess the engineering and geological process risk and create a geo-scientific database, maps and reports. The Geological Information System of the Republic of Serbia has been formed and its goal, amongst others, is to objectively catalogue the country's overall mineral riches and prepare specific documentation according to international standards. This would provide for further planning of the utilisation of mineral resources in a sustainable manner.

RENEWABLE ENERGY SOURCES [17]

Strategic energy development documents of the Republic of Serbia envisage greater and more efficient use of renewable sources of energy. The energy potential of renewable sources in the Republic of Serbia is exceptionally significant: almost a third of all electricity is produced in hydroelectric power plants, and the total power of the 12 large hydroelectric power plants with 50 generating units stands at 2,835 MW. The technically usable potential of renewable energy sources in Serbia stands at over 4.3 million tons of equivalent oil annually. Biomass accounts for 63% of this amount, while energy from small hydroelectric plants accounts for 14%, wind energy for 5%, solar energy 14% and geothermal energy accounts for 4%. The overall potential for producing energy from biomass in the Republic of Serbia is estimated at 2.7 million t. The potential of biomass is contained in wood waste and forest residues (around 1 million t) and residues from livestock farming, fruit-growing, wine-growing and primary fruit processing (around 1.7 million t). The potential for producing energy from biomass from cattle-herding is estimated at 42,000 t.

In 1990, renewable resources accounted for 4.7% of the consumption of all primary energy and in 2010 they accounted for 8.2%, which is an increase of 64%. After a sudden jump to 9.68% in 1994, the percentage gradually fell until 2007, when they accounted for 6.33%. Since then, the share of renewable sources has increased, standing at 8.28% in 2010. The consumption of renewable sources of energy increased at an annual rate of 2.5% between 1990 and 2010.
The Serbian government has adopted appropriate subordinate legislative acts which regulate the programme of stimulating measures (feed-in tariff) for producing electricity from renewable sources, with an aim to encourage investment in their greater use, which contributes to greater reliability in supplying the region, reduced dependence on energy imports, generation of new jobs, rural development, reduced greenhouse-effect-causing gas emissions, as well as sustainable development of the energy sector.

ENERGY EFFICIENCY[18]

The first objective of energy policy is to ensure an uninterrupted supply of energy in order to meet the ever increasing demands of citizens and companies and to reduce the risk of jolts to the system and interruption of supply by means of reconstruction, revitalisation and the construction of production, storage and distribution plants, whereby the lowest costs must be ensured, which means *the highest efficiency and energy savings*, while simultaneously reducing the risk to the environment to a minimum. The use of cogeneration plants (combined heat and power) significantly increases the efficiency of using energy, but their

17 Also see chapter 7 of this study
18 Also see chapter 7 of this study

use in the Republic of Serbia is not yet economically cost-effective for plants with smaller capacities. In order to stimulate the use of cogeneration, the Government has set, by means of subordinate legislative acts, stimulating prices (feed-in tariffs) for cogenerating plants with an installed capacity of up to 10MW. The greatest potential in terms of the economic and technical profitability of cogeneration is found in industry, while smaller gas or biomass units (up to 10MW) would be suitable for central heating systems, hospitals and student and pupil halls of residence.

On the basis of rough estimates (the Statistical Office of the Republic of Serbia does not have the required GDP data needed for a precise analysis), the energy intensity in Serbia is 2-3 times larger than the EU15 countries, which results from the decline of industrial activity during the 1990s, slow industrial recovery, low electricity prices and non-harmonisation of the price of energy and energy-producing products which do not stimulate rational energy usage. Relatively high energy consumption per capita is characteristic for the Republic of Serbia (3.789 Mtoe in 2010, whereas the world average is below 3 Mtoe). One of the reason lies in the fact that, in comparison to more developed countries where high electricity consumption per capita is the result of its intensive use in production and the creation of new values, in Serbia a large part of electricity consumption in households and public buildings, as well as in commercial activities, is primarily for heating purposes (households accounted for 53% of consumption of electricity in 2010). Intensive use of electricity in these sectors is the result of low electricity prices compared to other energy-generating products. According to estimates in the Republic of Serbia Energy Development Strategy Implementation Programme, the average specific final consumption of energy and preparation of sanitary hot water in the Republic of Serbia is estimated at approximately 220 kWh/m^2, which is much higher than the EU average. Energy intensity in industry in the Republic of Serbia in 1990 was four times higher than Western European counties, and in 2002 it increased 25%. Specific energy consumption of the industrial sector grew during the course of the 1990s, while the share of industry in final energy consumption fell due to the low use of available plant capacities, aging equipment and inadequate maintenance of equipment. Gently fluctuating growth in energy consumption in the industrial sector has been recorded over the last few years. From the statistical data available today, the exact final energy consumption per industrial branch cannot be determined nor can energy indicators be clearly defined. The key problem in terms of energy efficiency and protecting the environment, but also traffic safety, is the age of the vehicle fleet in the Republic of Serbia. At the end of 2005, the average age of the vehicle fleet in road traffic was 15.3 years of which 20% of vehicles (over 400,000) are older than 20 years. From these indicators it is evident that in all final energy consumption sectors[19] - industry, building design and construction and traffic, there is great potential for improving energy efficiency. Increasing energy efficiency must be a lasting process in all production and energy consumption sectors, something which is today a routine practice in more developed countries, and for which it is necessary to create the relevant legal framework and implement stimulating

19 http://www.sepa.gov.rs/download/Izvestaj_o_stanju_zivotne_sredine_za_2010_godinu.pdf

measures. In order to improve energy efficiency, certain activities have been undertaken, including, the creation of a draft Law on Rational Energy Use, the passing of the new Law on Planning and Construction, the adoption of the National Energy Efficiency Action Plan and the implementation of projects with contribute to improving energy efficiency.

FOREST RESOURCES

The share of natural forestry land and forested land cultivated in the specific period in the total land fund is 35.33%. Of the total territory of the Republic of Serbia, 29.1% is under forest and the remaining forestry land, which belongs to thickets and brush according to international definition, encompasses 4.9% of the territory, which amounts to 34.0% or 35.3% in total of the area of productive land in the Republic of Serbia. The total area of forest in the Republic of Serbia stands at 2,252,400 ha. Of this, 1,194,000 ha or 53% is state-owned and 1,058,400 ha or 47.0% is privately owned[20]. State forests, covering an area of around 1 million hectares, are certified according to the internationally recognised FSC certification programme. Wood accounts for 14% in the final energy consumption of all energy-generating products and does not jeopardise the durability and sustainable management of forests. Achieving the primary commitments of the Forestry Development Strategy of the Republic of Serbia[21] requires the best form of forest management to be established, regardless of ownership, as well as special economic policy measures. It is also necessary to ensure legal and institutional frameworks for supporting the protective functions of forests so as to regulate and limit current forest management practice in order to protect land from erosion, water resources and infrastructure. When preparing national, regional and local spatial planning documents, it is necessary to provide an inter-sector cooperation model which will respect all forest functions, as well as financial development incentives through projects and a budget fund subsidy system for forests. Tax incentives should improve activities to enlarge territory under forest, as well as encourage the investment of private capital in forestry and wood processing, and also stimulate the forestation of degraded land and found energy plantations, connecting with the existing markets of wood biomass fuel (e.g., pellets, briquettes, etc.). Forests and forestry meet the requirements of sustainability through the engagement of 6,850 trained people.

BIO-, GEO- AND LANDSCAPE DIVERSITY

Biological diversity in the Republic of Serbia is exceptionally large and significant[22]. The total area of protected areas accounts for 5.86% of the total land of the Republic of Serbia. There are 464 protected natural areas (5 national parks, 14 nature parks, 17 regions of exceptional features, 73 nature reserves, 312 nature monuments and 43 protected areas of cultural and historical significance, 1 biosphere reserve), as well as 215 protected plant

20 National Environmental Protection Programme, 2012
21 Forestry Development Strategy of the Republic of Serbia; Law on Forests (Official Gazette of RS, no. 30/10)
22 National Biodiversity Strategy (2010)

species and 429 animal species which are natural rarities. Pressure on biological and geological diversity mostly takes the form of uncontrolled excessive exploitation of limited natural resources. Particularly strong negative impacts stem from activities of man which concern the forest ecosystem and other threatened habitats (swamps, steppe and forest-steppe areas, sandy areas, continental marshy terrain, hilly-mountainous habitats, etc.). It is necessary to develop new and strengthen existing mechanisms in order to ensure the sustainable use of the biological diversity in Serbia and widely promote these mechanisms within the public and private sectors, take care that the social and economic benefits of using genetic resources and other goods and services which come from Serbia's biological diversity remain in Serbia, raise national awareness and employ techniques to economically evaluate biodiversity as a mechanism for the more accurate evaluation and calculation of economic differences between the advantages of protecting biodiversity and human activities which could lead to biodiversity loss.

FISH RESOURCES

It is necessary to protect natural spawning grounds, revitalise existing blue zones and with an ecosystem approach ensure the greatest possible natural reproduction of the fish fund. It is very important to increase management, administrative and user capacities in order to educate experts in tasks related to managing fishing activities and fish production and processing activities. In order to equally develop recreational fishing, as a prerequisite of the development of fishing tourism across the entire territory of Serbia, it is necessary to establish a unique state licence and a flexible user coordination regulation system. Also, it is necessary, through economic mechanisms (e.g., by introducing individual transferable quotas) for endangered fish species (e.g., Acipenseriformes) in zones of high fishing pressure and through benefits of placement and improving the technology for processing the catch in undeveloped market zones, ensure the sustainability of the possible volume of commercial fishing which is limited by conservation demands and natural production. The state should contribute to solving the institutional position of the commercial fishermen and provide them with social protection. It is necessary to increase aquaculture productivity through initial state regulation and the actions of market mechanisms in order for it to become competitive in the production of fish in the region.

WATER RESOURCES

As highlighted in the objectives of the policy for the long-term sustainable use of water resources, the development of the water sector needs to create positive effects on the country's overall economic development, to remove (mitigate) social problems in specific areas and in the Republic of Serbia as a whole, and to protect and improve the environment, particularly water.
Increasing the volume of investment and business in the water sector, which would enable the annual turnover to grow from around €250 million to around €900 million, i.e. the realisation of total investments of €6-8 billion over the next 20 years, would enable the

generation of new jobs and provide additional income to the population (and the state), as well as improve the use of water resources. Without regulating the water regime (surface, subterranean water, ground moisture), high and stable agricultural production cannot be expected. In the area of the population's water supply, the ratio of economic losses due to treatment (not including deaths) and necessary investment for supplying the population with water and the sanitation of settlements is illustrative. From these analyses it is seen that the solution to the issue of providing clean water and sanitising settlements is, according to the ideal (maximum) variant, two times cheaper than treating people as a result of these issues not having been solved. Such water management needs to be established so the needs of today's generation are met in a way that does not endanger the possibility for future generations to meet their needs, that is water usage needs to be founded on the long-term protection of available water resources, in terms of quantity and quality. In managing water, the best known and available techniques, which are the most advanced achievements in their fields, need to be used. Hydro energy accounted for 100% of the total consumption of primary energy from renewable resources in 1990, while in 2010 it accounted for 76%. The share in total consumption of primary energy in 2010 is 6.3%.

EFFECTIVE AND SUSTAINABLE USE OF LAND AND SPACE[23]

Space is recognised as an important resource. Spatial planning based on elements of sustainable development is a special challenge. This includes the special planning of and use of space in urban environments.

Agricultural land accounts for 60.2% of the territory of central Serbia, and 82% of the territory in the Autonomous Province of Vojvodina. In the structure of agricultural land, according to usage categories, there is a lot of arable land (83%). Over the past 15 years the share of agricultural land decreased by 10.6%, while the share of arable agricultural land decreased by 10%. According to the method of use of agricultural land, expressed in percentages, vineyard land decreased the most – 20.7%, and ponds, reed land and bogs decreased the least – 2.5%. In terms of area, pastures disappeared the most – 179,036 ha, or 18% in the last 15 years. It is important to emphasise that ploughed field and garden areas in the Republic of Serbia cover 3,355,000 ha, accounting for 79% of total arable land. To this, approximately 312,000 ha of orchards and vineyards and 587,000 ha of meadows can be added. Around 855,000 ha are not cultivated (pastures, reed lands, bogs and ponds). Factors of agricultural land reduction and degradation in the Republic of Serbia are: growing settlements, industrial, mining, energy and transport facilities, water erosion, wind erosion, land salinization, loss of nutritious elements, chemical pollution from bio-industrial sources, mechanical compression of land when processed by heavy machinery, waterlogged land, floods, loss of fertility, etc.)

23 Also see chapter 7

The Republic of Serbia has large potential in the agricultural production sector thanks to its favourable climate conditions, good natural characteristics of land and available water resources as well as an economic branch which can produce larger value than it does now and contribute to the country's overall economic growth. Organic production is becoming increasingly more significant and is a perspective for agricultural producers in conventional production in Serbia.

6.1.2. Sustainable Consumption and Production

The primary instruments[24] for achieving sustainable consumption and production are: eco-labelling, eco-management and audit (EMAS), 'green public procurements', the introduction of cleaner technology verification, eco-design of products, consumer education, ecological footprint of products and companies and socially responsible business. Bearing in mind the complexity, and for the purpose of achieving result-oriented goals, the Republic of Serbia sees national strategic planning of sustainable production and development as very important. The Republic of Serbia recognised sustainable consumption back in 2002 as an opportunity for post-conflict development[25], participating in the continued process of the international promotion of the importance[26] of this topic. Cleaner production[27] is the application of a comprehensive preventive environmental protection strategy and methods in production processes, products and services, with an aim to increase overall efficiency and reduce the risk to human health and the environment. A sub-regional workshop titled "Sustainable Consumption and production and a Green Economy – experience and examples of good practice"[28] was held in Belgrade in April 2011. Future steps and activities at both regional and national level were defined. The results of the regional workshop were presented at the 19th session of the UN Commission for Sustainable Development (CSD) in New York in 2011, and served as part of the platform for appearing at the World Summit on Sustainable Development (Rio+20) in 2012.

The effects of resource-efficient and cleaner production result in the reduction of the negative external effects of industrial production on other sectors, on the health of the population and on overall well-being. By removing negative externalities, there is greater opportunity for larger investments in agriculture, especially organic, property prices rise, primarily in cities, which is an important component of national prosperity and progress is made in the tourism and other service sectors, and all this positively affects employment and social security. Resource-efficient and cleaner production can be achieved in practice by employing the following techniques: household business, substitution of raw materials,

24 July 2008, the European Commission presented the Sustainable Consumption and Production and Sustainable Industrial Policy (SCP/SIP) Action Plan

25 Sustainable Consumption Opportunities, UNEP/Ministry for the Protection of Natural Resources and Environment, March 2002 (http://postconflict.unep.ch/publications/scopeWeb.pdf)

26 Ostend NGO Statement towards Sustainable Consumption and Production Patterns, EU Stakeholder Meeting, 2004

27 National Cleaner Production Strategy

28 http://www.ekoplan.gov.rs/en/Radionica-Zelena-ekonomija-i-održiva-proizvodnja-i-potrošnja--1147-c35-content.htm

improving the efficiency of processes, equipment modification, changing technology, internal recycling, product change, etc.

6.1.3. Green Public Procurement

In Serbia, under the umbrella of "green public procurement", the authorities, besides the price, aim to take into account the environment as well as social concerns. This will play an increasing role in decision making and is one of the strategic goals by 2015.[29] Experiences concerning the specifics of applying green public procurement principles[30], however, are to date limited. On the other hand, there is awareness of such procurement and willingness[31] to start implementing it more widely, however, one of the key obstacles is the lack of appropriate knowledge on available environmentally and socially friendly products and services or procurement procedures. To achieve this goal, one could focus on energy savings in the public transportation sector on the one hand, and the buildings used by the state on

29 National Strategy of Serbia for the Accession of Serbia and Montenegro to the European Union (2005)

30 *Green Public Procurement*

31 Draft Law on Rational Use of Energy stipulated the obligation of the public sector to conduct public procurement that takes account of the energy efficiency criterion (a methodology for estimation of energy efficiency of goods and services shall be issued by the Minister in charge of energy issues), and this criterion is added to a new Draft Law on Public Procurement.

the other. Furthermore, inclusion of the social aspect in public procurement achieves the targets of inclusive development, and their combining with the environmental protection criteria is an integrated approach to a sustainable public procurement system.
Law[32] has regulated the establishment of the Public Procurement Agency, defined its status as a separate organisation responsible for performing professional activities in the public procurement sector with the purpose of providing conditions for efficient, effective and transparent use of public procurement funds and encouraging competition and equality of bidders in public procurement tenders.

A separate Public Procurement in Serbia Strategy[33] has left room for implementing green public procurement, with the limiting factor being that these elements have not been included in sectoral strategies. However, many activities are taking place and being applied in Serbia which are not termed as green public procurement despite having its properties (e.g., corporate social responsibility), as is the case with the whole endeavour related to green economy. Such examples are: the procurement of energy-efficient audio and video and IT (hardware) devices ("Energy Efficiency Classes"), low-emission vehicles, recycled paper and recycled material, environmental-friendly detergents and cleaning agents, passive buildings and houses, renewable source energy, natural resource-friendly furniture, food procurement procedures for schools, eco-labelling, "green innovation" development.

6.1.4. Economic and Fiscal Policy Measures

One of the direct ways to promote a green economy is through public investment and fiscal policy measures. Public spending on research and development, for example, can be an efficient means of encouraging innovation necessary for the transition towards a green economy. Public investments in a green economy (e.g., using sustainable public procurement to stimulate demand for green products and services) are of special importance. In addition, the aim is to correct negative externalities by ensuring that the price reflects the real cost for goods and services, including the cost for protecting the environment, which is often forgotten in the market. Reform of harmful subsidies, such as a number of fishing subsidies, and the application of tax instruments, such as tax on pollution, i.e. tax exemptions for the adoption of efficient technologies, are the key political decisions.

Economic instruments such as taxes, duties, a deposit refunding system, and cap-and-trade, are effective tools available for reducing environmental impacts through a market mechanism by providing economic incentives. They cannot always guarantee that the specific quality will be fulfilled,, however, these mechanisms can help companies, industries and consumers to make more sustainable choices. Such market oriented policy

32 The Public Procurement Law (Official Gazette of the Republic of Serbia, No. 39/02, 43/03, 55/04 and 101/05)
33 Public Procurement Strategy (71/11)

tools may provide more flexibility for the business sectors in choosing the means to reduce environmental impacts, compared to command and control approaches. However, needless to say, a legal framework that facilitates green economy activity and regulates the harmful forms of consumption and production is also necessary and is a condition for the introduction of such market-oriented policy tools.

Business acknowledges the need for new shared efforts to integrate *environmental externalities.* For a green economy to become operational, indicators, metrics, accounting measures, and better monitoring and reporting must be developed so that they are effective Extending both the governmental capacity and that of other stakeholders, and promoting activities that increase public support for change, may also be required in the transition towards a green economy. Successful implementation of strategic projections is based on the development of economic capacities in the Ministry responsible for the environment and other ministries responsible for specific issues such as the optimal utilisation of economic instruments[34].

It has been estimated that the need for additional budget funding, especially for the development of the environmental infrastructure, will reach its maximum of approximately €360 million during 2018 and should then afterwards gradually decline by around 2025 when full cost recovery could be achieved, under conditional estimates. Improved environmental protection provides economic benefits through: improved human health; lower mortality rates and higher life expectancy; reduced damages incurred by agriculture and property due to pollution; and healthier ecosystems, which reduce biodiversity loss and maintain ecosystem services, for example. **In the domain of general economic policy, transition to a "new growth model" should bring radical change in the incentives for economic actors.** Investment- and export-orientation should be supported by coordinated measures of the monetary, fiscal, industrial, foreign-trade and other key sectoral policies.

It is also necessary to reconsider the fiscal policy in order to stimulate new jobs. Doubling the GDP appropriation share for active measures in the labour market by 2015 should also be carried out in combination with increasing transparency of fund utilisation and targeting severely threatened multiple vulnerable groups. In addition to this, it is also necessary to develop a microfinance concept and provide a framework for the further development of different types of social economy with the purpose of expanding employment of the inactive population. **Within the new fiscal policy, it is necessary to radically reduce labour taxation, especially taxation of low-paid labour.** Income tax reform, on the other hand, will provide greater vertical equity and implement the tax-based income policy.

34 Based on the condition of the infrastructure in the environment in Serbia and the extrapolation of the situation in the countries which recently became members of the EU, it has been estimated that the total costs[31] to meet the Acquis Communautaire of the EU in the environmental area will amount to approximately € 10.6 billion (from the present day until 2030), of which the most demanding are the water sector (€5.6 billion), waste (€2.8 billion) and the industrial pollution sector (€1.3 billion). A considerable part of the costs relates to operational costs. It is expected that the direct economic benefits that would originate from the harmonisation in environmental areas from now until 2030 would exceed the costs almost 2.4-fold.

6.1.5. Measures for a Low-Carbon Economy

Low-carbon economy (and technology) is aimed at setting long-term guidelines and frameworks to combat climate change. The frameworks for the Republic of Serbia are given in Serbia's Initial National Communication under the United Nations Framework Convention on Climate Change[35] and the First Action Plan for Energy Efficiency of the Republic of Serbia, 2010-2012; they will be also defined through a new Energy Sector Development Strategy of Serbia for the period until 2025 with projections up to 2030[36]. Certain additional analyses on GHG emissions limitation have been conducted during the implementation of the project: Efficient Ways for GHG emissions reduction under the post-Kyoto framework as well as the Capacity Development Project on Nationally Appropriate Mitigation Actions (NAMAs)[37]. These analyses provide preliminary and initial information on mitigation opportunities until 2020, which will be upgraded and improved at a future time. The Republic of Serbia has been a party to the United Nations Framework Convention on Climate Change since 2001 and the Kyoto Protocol since 2008, with developing country (non-Annex I country) status.

Through the implementation process of the National Waste Management Strategy, the Republic of Serbia is moving towards alternative forms of waste management that considerably prevent methane formation.

6.1.6. Innovations for a Green Economy and Sustainable Development

The research and development and innovation policy is a policy which aims to foster science and technology and to support the commercialisation of technology transfer which companies need to participate in national and international market competition. The Republic of Serbia has launched a new project to support innovative entrepreneurship worth €8.4 million[38].

35 Initial National Communication under the United Nations Framework Convention on Climate Change , adopted by the Government and submitted to the UNFCCC (2010)

36 - A new Strategy is being developed.
- National Capacity Self Assessment for Environmental Protection Management (NCSA), Cross-Cutting Analysis Report and Action Plan for Serbia (2011/2012), GEF/UNDP, Ministry of Environment Mining and Spatial Planning of Serbia
- Project Efficient Ways for GHG emissions reduction under the post-Kyoto framework, GARRIGUES Medio Ambiente/ Ministry of Environment, Mining and Spatial Planning of the Republic of Serbia (2010),
- Available at:
http://www.ekoplan.gov.rs/src/uploadcentar/dokumenti/izvestaji/final_report_ghg_emissions_projections_and_reduction_measures1.pdf
- Capacity Development Project on Nationally Appropriate Mitigation Actions (NAMAs) - Ministry of Environment, Mining and Spatial Planning of the Republic of Serbia (2010-)

37 Available at: http://www.ekoplan.gov.rs/src/Opste-informacije-1622-c106-content.htm?_sector_id=6&_sm_id=112

38 Funded through EU pre-accession funds (IPA) for Serbia for 2011, and carried out in cooperation with the World Bank; http://www.inovacionifond.rs

6.1.7. Education for Sustainable Development and Green Economy

1. In order to develop a green economy, a sustainable social policy and the sustainable use of natural resources and environmental protection, the people who will perform these tasks in an knowledgeable and professional manner should be identified. It is necessary to determine a market of the required occupations and the required knowledge and skills in order for sustainable development to produce results[39]. That means that educational programmes should be adjusted to the needs of the labour market in the context of a green economy. The educational level and the awareness of the population are of crucial importance for reviving the economy in the Republic of Serbia. Therefore, it is necessary to define and implement all of the education development[40], which will focus on improving the quality, fairness, efficiency and competitiveness of the educational system, and to strategically adopt a framework for sustainable development education. Education for sustainable development[41]upgrades environmental (environmental protection) education and is an education for the future and for future generations.

According to the National Sustainable Development Strategy, the basic partners of the *Ministry of Education for the sustainable development* are:

- The Ministry competent for the environment, for 53% of the activities

- Professional associations, for 30% of the activities

It is necessary to establish a flexible network of educational institutions that will adapt more quickly to demographic changes and different user needs. Continuous work on improving the teaching profession and modernising of teachers' competencies is required.

To fully include children from vulnerable groups (Roma children, children with disabilities, children from villages), it is necessary to support and strengthen inclusive practice in schools, improve teachers' competencies and support the creation of "an inclusive environment."

39 UNEP et al (2008). *Green jobs: towards decent work in a sustainable, low-carbon world.* Nairobi: UNEP

40 Education Development Strategy for the period 2010-2020

41 Education on sustainable development in reformed school and society should be based on the standards set at international level: UN Conference on the Environment and Development – Rio de Janeiro 1992; UNESCO Conference on Education and Development of Public Awareness for Sustainability - Thessaloniki 1997; *Millennium Declaration* adopted at the UN Conference on the Sustainable Development in Johannesburg in 2002; *Education for All – a Road to the Developed Society* - Dakar 2002; Declaration of Ministers of the Environment on the Sustainable Development Education – Kiev 2003; The UNECE Strategy for Education for Sustainable Development – Vilnius 2005; UN Decade of Education for Sustainability adopted for 2005-2015; Joint Declaration of the Ministers for Environment and Education of the UNICE Region Countries on the Sustainable Development Education, which ex[presses the need and willingness to intensify the efforts for its implementation (adopted on the Sixth "Environment for Europe" Ministerial Conference in Belgrade, October 2007)

In the area of monitoring social exclusion and poverty reduction, a significant shift was made in 2009 within the Social Inclusion and Poverty Reduction Team with the definition of nationally-specific indicators, and the establishment of clear objectives which launched the monitoring of the social inclusion and poverty reduction indicators, adopted at EU level, within the borders of the Republic of Serbia.

The selected indicators of social exclusion and poverty for the period from 2008-2010, contain indicators in several key areas for monitoring social inclusion and poverty: financial poverty, social welfare, health, housing and education.

Preliminary analyses show a need to "upgrade" the existing occupations with new green competencies and knowledge[4242]. Presently, accreditation of higher education institutions in Serbia, directed towards the accomplishment of education for the environment and sustainable development, has not produced educational programmes for future, but programmes approved by the Commission for Accreditation, which are mainly based on a rigid system of division into: natural, technical, biotechnical, medical and social sciences, the consequence of which is the "production of professional profiles" that are not recognised in the market (they are not accurately specified in the list of occupation codes, employers are not informed about the kind of knowledge and competencies these professional profiles can offer). In addition to all this, the lack of jobs is also a consequence of not enough economic activity and the economic crisis.[4343]

Education for sustainable development[4444] implies integration of appropriate knowledge and skills into the curricula at all education levels. There is a need for **continuous education and increased awareness of all relevant actors** in the fields of law enforcement, protection and respect of human and minority rights (judiciaries, police, public prosecutors and judges, together with employees in state administration bodies and the provincial and local self-government bodies) with special emphasis placed on educating citizens about discrimination and the mechanisms for its suppression.

At this point, it can be said that the initiative and the duty[4545] to integrate sustainable development into the educational and training system is still largely "on hold" with the decision makers.

42 Mihajlov A., Needs for tailored knowledge and skill-based education for sustainable development: Balkan Environment Life Leadership Standards Courses, World Symposium on Sustainable Development at Universities (WSSD-U-2012), Rio de Janeiro, 2012

43 According to the National Employment Service

44 http://unesdoc.unesco.org/images/0021/002163/216383e.pdf

45 The First Framework Action Plan for Environmental Education in the Function of Sustainable Development, the Ministry of Environment of the Republic of Serbia (2008). Prepared by the working group for the implementation of the UNECE Strategy for Education for Sustainable Development.

6.2. Advancing Social Inclusion and Poverty Reduction

The poverty reduction concept[46]in the previous period has been based strategically on dynamic economic growth and development, with emphasis placed on new jobs and the development of programmes, measures and activities aimed at vulnerable groups of population. Transition from the poverty reduction concept to the social inclusion concept is motivated by the commitment of the Government to carry out the European integration process and the need to harmonise government measures with EU policies, which leads to more effective social cohesion. This transition will be based on improving the quality of life of all social categories and is a constituent part of the European integration process.

6.2.1. Measures for Poverty Reduction and Social Inclusion of Vulnerable Groups[47]

It is important that Serbia continues to monitor absolute poverty trends in line with the current methodology (absolute poverty line and household consumption) in order to gain a comprehensive picture of poverty in the Republic of Serbia. Following a period of considerable reduction (2002-2008), absolute poverty began to rise in 2009 as a consequence of the deterioration of labour market indicators caused by the effects of the world economic crisis. The absolute poverty rate increased from 6.1% in 2008 to 6.9% in 2009. This upward trend continued in 2010 (9.2%). The absolute poverty profile shows significant regional differences, differences between urban and rural areas, and indicates a strong tie between poverty and education levels. The relative poverty line, calculated as 60% median of personal consumption per consumption unit, indicates that 14.5% of the population were poor in 2010.

Economic growth with increasing employment rates and decreasing or unchanging inequality in the income of the population are two basic preconditions that should be accomplished in aim of reducing financial poverty.

State assistance for the poor in the future period should mitigate the emergence of new poverty, and help prevent poverty from deepening for the most vulnerable categories of the population. In the area of services, deinstitutionalisation and further development of services in the community remain the most important strategic development directions. It should be noted

In December 2011, the Office for Sustainable Development of Underdeveloped Areas, in cooperation with the Agribusiness Project, started the **Agribusiness Training Programme intended for women**. The Programme is devised solely for women who have an idea to start a business in the agribusiness sector in the territory/municipality of Novi Pazar, Sjenica, Tutin, Prijepolje, Priboj and Nova Varoš, Žagubica, Malo Crniće, Petrovac na Mlavi, Kučevo, Majdanpek, Golubac and Žabari.

46 National Poverty Reduction Strategy (2003)

47 The Government has defined the following vulnerable population groups in the Republic of Serbia: disabled persons, children, young people, women, adults above the age of 65, the Roma minority population, uneducated, unemployed, refugees and internally displaced persons and the population in rural areas.

that the social dimension includes public policies that go beyond employment and education, such as social safeguards, welfare system and other investments that can be used to target different vulnerable groups, affected by any green-economy trade-offs, and to assure that they benefit more directly from new green economy policies.

6.2.2. Support for New Jobs and Reduction of Unemployment

In Serbia 45% of the working age population (from 15 to 64 years old) are employed, making it one of the countries in Europe with the lowest employment rate. Achieving the goal of raising employment requires a more efficient labour market and changing the structure of the workforce. In order to increase labour market efficiency, first of all, the Labour Law should be amended, labour legislation should be consistently implemented in order for a big a section as possible of the grey economy is brought into the sustainable real sector. The labour market ought to become more flexible, and the dynamic of the labour market ought to be advanced in order for competition in this area to improve, alongside real and credible collective negotiations on adequately evaluating work and protecting workers' rights. A responsible policy should also be taken on defining the minimum wage, which should be set at a level which makes working more profitable than the alternatives (social welfare, unregistered employment), simultaneously alongside a revision of the system and the introduction of progressive taxation (including social insurance contributions regulations), which would in the wider taxation context result in more efficient tax payments and greater social justice. A rise in competitiveness in this area would also attract new investment, which would enable the generation of new jobs. It is also necessary to significantly advance inter-sectoral cooperation between ministries whose sphere of work is important for green economy issues, as well as the ministry responsible for employment in order to profile new occupations which would become the framework of a green economy, to define common incentives for creating "green jobs" and evaluate the actual effects of the green economy on the labour market.

A new post-crisis growth model should integrate targets related to the labour market and social inclusion, i.e. it should set the increase of employment and the decrease of both absolute and relative poverty as its ultimate goal.

To accomplish the specified employment policy targets, it is necessary, in addition to parallel improvements in the efficiency of active employment measures, to increase the GDP share of those measures from 0.1% to 0.4% within three years, and then stabilise this share to approximately 0.5% of GDP in the second half of this decade. In the following years, higher quality monitoring and thorough evaluation of the existing programmes and their more efficient targeting towards vulnerable groups should be worked on.

Defining the frameworks and the institutional support for the development and promotion of social entrepreneurship aimed at strengthening this sector is required.

Reform of secondary vocational education should be accelerated and bound to a greater extent to the needs of the labour market. The state should also work on the greater inclusion of adults in education, connection of formal and informal education, and promotion of life-long learning.

6.3. Empowering the Environment Sector

One of the major actions required in Serbia to shift towards a green economy is increasing investment in environmental infrastructure, which addresses multiple aspects - from socially sensible job creation to environmental protection. Development of a green economy in the Republic of Serbia mainly implies investment in the environment sector and its further improvement. This priority is accomplished through strengthening strategic planning and its implementation via legislative reform and strengthening the administrative capacities in the environment sector, developing an integrated information and monitoring system, ensuring conservation and sustainable use and improving management of natural resources, developing and improving the waste management system, improving water management, and improving air quality by controlling harmful emissions.

6.3.1. Environmental Infrastructure for Sustainable Development

Basic infrastructure is one of the preconditions for economic growth, competitiveness as well as the bases for sustainable development. Inefficient services in the infrastructure area discourage or prevent investments and decrease economic growth rates, and finally, the rate of employment. On the other hand, planning and development, in conjunction with the environmental principles, are the integral parts of any comprehensive development strategy.

As for Serbia, it is necessary to provide significant funds for the required investments[4848], both in terms of improving existing capacities and harmonisation with legislation in the area of environmental protection.

Owing to the implementation of the Waste Management Law and the special Packaging and Packaging Waste Law, adopted in May 2009, guaranteed purchase of collected PET waste, and the investments of the plastic recycling company Greentech from Novi Sad into the collecting infrastructure of suppliers – members of its network (which amounted to RSD 17 million 2011 alone), the number of private collectors doubled compared to 2008 and currently stands at 77 companies, and within them a significant increase of the number of employed persons can be perceived, especially of those who come from the most economically vulnerable population groups. In 2011 the quantity of waste recycled in the Greentech factory reached record 4,000 tons per year, a 56% increase compared to the period before the adoption of the set of green laws. (www.greentech.rs/socijalniaspektreciklaže)

48 National Strategy for Environmental Approximation (NEAS) (2011)

The 2012 *Disability Matters International Award* was given to the Serbian company Delta Holding – the member of the General Agreement in Serbia, for its programme for the professional rehabilitation of persons with disabilities. Disability Matters is one of the most important European awards for corporate social responsibility, which is awarded to companies – leaders in providing support to disabled persons and their families. Since October 2008, 207 disabled pesons have been employed in Delta Holding, and they are engaged in different jobs in the companies which are members of Delta Holding, according to their qualifications.

6.4. Instituting a Long-Term Institutional and Financial Framework for Sustainable Development

In order to achieve the above goals, it is necessary to develop a modern and efficient state administration, i.e. a system of institutions that jointly lead towards sustainable development. Improving cooperation, coordination and consultation between the sectors, and between the state administration and the private and civil sectors, is the precondition for accomplishing sustainable development. Achieving the desired long-term sustainable development results related to improving quality of life and living standards and to reduce poverty will not be possible without solid, capable and stable institutions. The development of an efficient institutional framework at all levels is the foundation for the accomplishment of the sustainable development targets.

For funding the sustainable development process, the use of funds from the Republic of Serbia's budget, the municipal budgets, dedicated funds, e.g., the Development Fund and the Environmental Protection Fund, donations, and funds mostly from economy is planned. The Government should proceed with the planning of a budget that will support the strategic development priorities, and ensure a higher degree of coordination between individual sectors in the implementation of the Strategy measures aimed at achieving full rational use of budget funds for those purposes. The Government should also plan an incrementing share in the budget dedicated to sustainable development in order to

provide additional funds for the implementation of the action plan for the implementation of the Strategy, using the mechanisms of the public-private partnership, cooperation with donors, and other funding methods.

At the same time, strengthening the capacity of the Council for Sustainable Development, the Economic and Social Council and similar councils at local level is required.

6.4.1. Budget Line for Sustainable Development

When implementing the sectoral strategies, it is clear that they are supported through dividing the budget for the respective sectors.

When funding multi-sector and inter-sector strategies such as the Sustainable Development Strategy, the Strategy on Sustainable Use of Natural Resources and Environment and the Poverty Reduction Strategy, the unsolved funding and budgetary support line problems are still an issue. Moreover, the process of transitioning from *project* funding to *sector* funding, which started in Serbia in 2009, posed a need and a challenge to seek innovative and efficient solutions for sustainable development funding.

> According to documents and projections adopted, at least 2.5% of the GDP in 2021 should be provided to the environmental sector.

Some analyses as part of the implementation of the National Sustainable Development Strategy indicate that over 50% is under the jurisdiction of the Ministry responsible for environment.

An analysis conducted for the purpose of this document shows approximately that in the sectors, or in the competent ministries, **there should be a specific budget line for sustainable development,** and that **allocated budget funds**[49] **for the three priority strategies**[50]**in the sustainable development corpus should be significantly specified**[51] **for:**

- The Ministry competent for the environment[52], and
- The Ministry competent for social policy[53]

49 Only including budgetary funds

50 National Sustainable Development Strategy, National Strategy for Sustainable Use of Natural Resources and Environment, National Poverty Reduction Strategy

51 Outcome of extensive stakeholder consultation; need for additional consultation on budget planning

52 This amount should at minimum equal the amount that has been estimated at 2.5% of GDP in 2021 (compared to the current 0.4 percent of GDP) (NEAS)

53 At minimum: To accomplish the specified employment policy targets, it is necessary, in addition to parallel improvements of the efficiency of active employment measures, to increase the GDP share of those measures from 0.1% to 0.4% within three years, and then stabilise this share to approximately 0.5% of GDP in the second half of this decade. Under the conditions of fiscal restrictions, reallocation between active and passive measures should be made: a lower limit for compensation should free additional funds for the active programs

and then to a significantly lesser extent for: the ministry competent for innovations, the ministry competent for education, the ministry competent for energy, the ministry competent for economy, the ministry competent for water management, the ministry competent for agriculture, the ministry competent for mineral resources, and the ministry competent for forests.

The existence of the **Environmental Protection Fund** creates a foundation for the regular funding for the application of the part of the national strategies in the green economy corpus. With the establishment of the Environmental Protection Fund, activities have begun to be funded in a more organised manner, in addition to the regular budgetary allocation for the operations of the competent institutions. The Law on Fund for Environmental Protection (2009) stipulates dedicated use of the funds. The Fund's income is secured through fees for trading in wild flora and fauna, and fees for environmental pollution that include fees for motor vehicles, substances that deplete the ozone layer, emissions of sulphur oxides and nitrogen oxides, powdery substances, and produced or discarded waste. While the income secured through the fees for trading in wild flora and fauna belongs entirely to the Fund, the income from the fees for pollution is divided in such a way that 60% belongs to the Fund, and 40% to the local self-government covering the territory of the polluter. Since 2010, the Fund has also secured incomes in accordance with different sectoral laws in the environmental fields, i.e. through fees for special waste movements, placing packaging in the market and for the use of fishing areas. In addition, a fee for environmental pollution in areas of special national interest in the field of environmental protection has been adopted (funds secured through this fee are divided in a way that 80% of the income belongs to the budget of the Republic of Serbia, and 20% to the local self-government covering the territory where the pollution occurred). Incomes from the fees and duties for environmental protection, which are the funds of the Environmental Protection Fund, are approximately 0.3% of GDP annually. The Fund's assistance is allocated to individuals and legal entities in the territory of the Republic of Serbia through public tenders, and financing carried out through credit, incentive funds, grants, non-returnable funds and assistance.

The founding of the **Energy Efficiency Fund** is stipulated by the draft Law on Rational Use of Energy. This Fund is supposed to be the main funding mechanism and institution that provides funds to encourage the rational use of energy and increase energy efficiency in Serbia.

6.4.2. Establishing a Sustainability Impact Assessment

During the process of registering examples of green economy in practice in Serbia, regardless of what was defined as being regarded as green economy and the green economy concept, it turned out that different entities interpret the term differently, giving the green colour in the green economy concept a range of various shades (already mentioned in Chapter

3 of this document). An expert team coordinating the production of this document has proposed, and the participants in the shaping of the paper have accepted, that it would be very helpful to develop an instrument to evaluate impacts on sustainable development[54] (or, evaluation of sustainability[55]) and apply it until the essential understanding of green economy becomes familiar in Serbian practice.

It seems that this instrument should be based on an analytical instrument[56], *the life cycle analysis* (LCA[57]), with the inclusion of not only an analysis of the environment but of other sectors[58]. Initial outlines for the indicative "traffic light for the green economy" instrument (where shade "3" of the colour green would be an example of green economy, and shades "1" and "2", of the economy becoming green through social policy and environmental protection), form the synergy framework of the economic, social and environmental indicators.

6.4.3.Institutional Challenges and Recommendations

Institutional set-up for the targeted and result-oriented monitoring and improvement of sustainable development (and the green economy, which has the same supports, only with differently set boundaries of the scope of the system), is a great challenge at all levels. At the global level, there are some UN guidelines and frameworks, which can lead to a higher chance of success.

Stable, efficient, skilled and operational institutions and administration, which are remain firm amidst political changes, are required for a sustainable future.

In Serbia, the institutional set-up for sustainable development has shown continuous weaknesses.

54 Sustainable Development Impact Assessment
55 Sustainability Impact Assessment
56 Mihajlov A., Basic Environmental Analytical Tools (in Serbian) , monografija, University Edukons (2010), ISBN 978-86-87785-13-7
Stevanovic Carapina H. ; Jovovic A. ; Stepanov J.; Life Cycle Assessments the tool for efficient strategic waste management (in Serbian). ISBN 978-86-87785-26-7, Editor: University Educons (2011)
57 LCA _ Life Cycle Analysis
58 **EE**A Technical Report: Time for action – towards sustainable consumption and production in Europe, 1/2008 (2008)

Relying on the inter-sector analysis of the implementation of the "3 Rio Conventions[59]" (see Chapter 5 – Green Economy Examples) and extrapolating the proposal for efficient institutional monitoring and development of these three conventions into the wider context of sustainable development, this study presents below a proposal for the institutional set-up for sustainable development in Serbia, which takes into account the reality of the situation and has the potential to be long-term and successful[60].

Sustainable Development Council[61], consisting of competent ministers, coordinates activities related to sustainable development within the Government, monitors policy and proposes measures.

Government Advisory Board would have the role of a framework body, which includes various Government councils.

Council Secretariat[62] – performs professional and operative tasks in support of the operation of the Sustainable Development Council (communication with competent institutions, Governmental professional services, stakeholders).

Scientific and Advisory Committee of the Sustainable Development Council – shall provide professional services, information and propose measures in support of the creation and implementation of the sustainable development policy. The Committee is made up of representatives of scientific institutions, universities, professional organisations, associations, individuals, etc.)

Working Groups of the Sustainable Development Council – shall be professional groups of the Sustainable Development Council established as appropriate, in line with the most significant international treaties, processes and obligations of the country in the area of sustainable development policy. The working groups are composed of focal points for the respective treaties and processes, representatives of the competent ministries, and other stakeholders (care should be taken to avoid the competencies of the working

59 National Capacity Self Assessment for Environmental Protection Management (NCSA), Cross-Cutting Analysis Report and Action Plan for Serbia – Report and Action Plan (2011/2012), GEF/UNDP, Ministry of Environment Mining and Spatial Planning of Serbia

60 Project activity is recommended after the Rio+20 Summit, and should help such a set-up and should be pilot-tested

61 Decision on the establishment of the Sustainable Development Council (103/03 of 24 October 2003, 12/06, 71/08. 94/08, 05/11)

62 In accordance with the Regulation on the Government Offices (*Official Gazette of the Republic of Serbia*, 75/05, 48/10), an Office – Secretariat of the Sustainable Development Council (analogue to the Secretariat for the Economic and Social Council, for example) should be established by REGULATION

groups overlapping with the competencies of the Scientific and Advisory Committee). The working groups shall also consider specific thematic issues and policies, and shall forward the results of their work in the form of proposals to the Sustainable Development Council (via the Bureau).

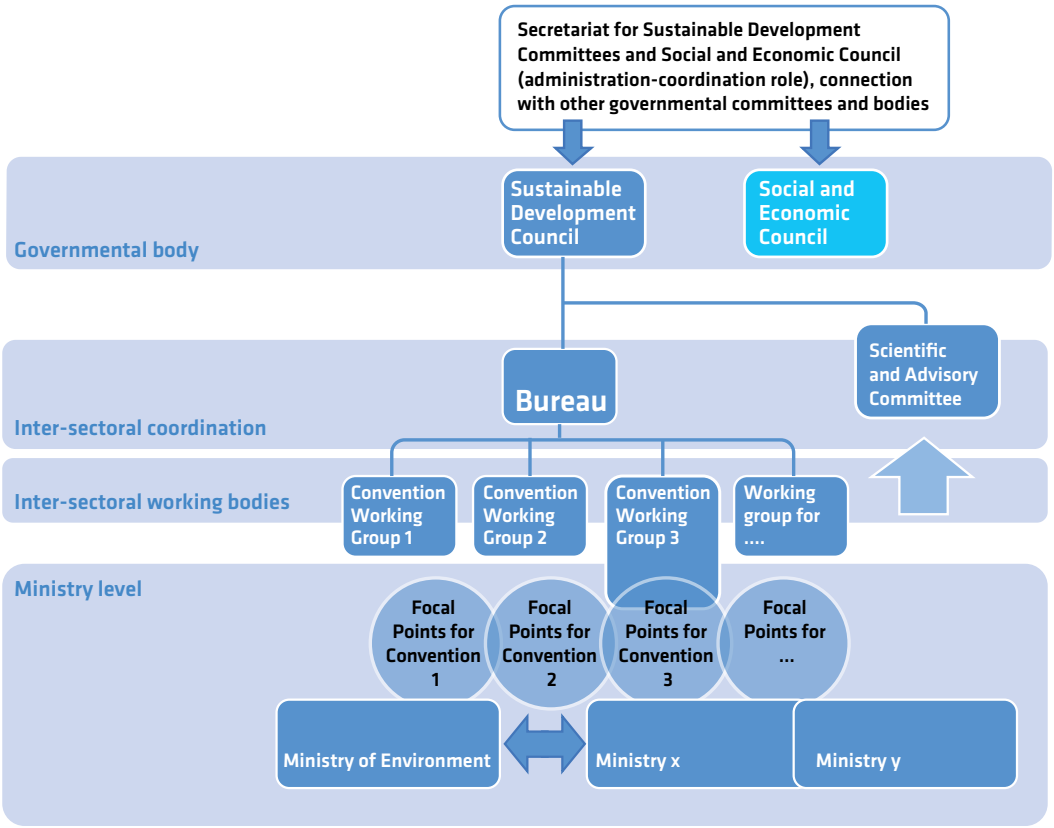
Bureau – the supervisory body for the operation of the working groups and a mechanism for establishing synergy between individual working groups, including conventions and processes under their competence. The task groups shall maintain communication with the Sustainable Development Council with the mediation of the Bureau. The members of the Bureau are focal points competent for certain international treaties and processes.

Further development of the institutional framework and improvement of the social inclusion process is necessary. In this respect, **it is necessary to make the coordination function of the Social Inclusion and Poverty Reduction Team sustainable,** which will contribute to increasing the efficiency and effectiveness of the bodies the domains of which already have certain functions in the social inclusion process. Likewise, cooperation and integration of the bodies that perform similar tasks should be promoted, with the purpose of accomplishing greater cost-effectiveness of the administrative assignments within the current context of reducing public expenditure.

During 2011 and 2012, the first part of the project, Partnership for Harmonisation with the EU Regulations (RASE), funded by the European Union through the European Association of Chambers (Eurochambers) was completed, and the partner countries are the Western Balkans countries – Albania, Bosnia and Herzegovina, Croatia, Macedonia, Montenegro and Serbia. In Serbia, the partner on the national level is the Serbian Chamber of Commerce. The project is aimed at assessing the level of harmonisation of the company operations with the European legislative, i.e. corresponding national regulations in horizontal areas – environmental protection, occupational safety and health, and in the sectoral areas – food-processing industry, chemical / pharmaceutical industry and technical legislative (CE mark on the products) . Exactly 20 trained experts from 6 Western Balkan countries, according to the prior defined methodology, made audits (checks) in 300 companies in total. The result of the project is a study that provides a sort of benchmarking, or to be precise, comparison of the level of application of regulation in the companies of the six countries of the Western Balkans. The analysis showed where the main difficulties in the application of the European legislative in individual countries could be located, as well as where there are possibilities for further improvement. (The study can be downloaded from the link: http://www.pks.rs/SADRŽAJ/Files/Brochure_PACE_04_04_2012.pdf)

Within the ministries themselves, professional, systematised tasks for the focal points competent for particular international treaties and processes (tasks should not be assigned as additional work to one person intended as a "focal point" for many international treaties, since this implies impossibility of efficient implementation), the green economy, sustainable development and sustainable use of natural resources should be provided. A good example from the practice is the establishment and the operation of the Department for Sustainable Development and Climate Change in the energy sector, within the Department for Sustainable Energy, Renewable Energy Sources and Strategic Planning of the Ministries Competent for the Energy Field.

In the current institutional structure of the Government of the Republic of Serbia, the successful implementation of sustainable development and accession to the European Union will require the improvement of the current inter-ministerial and intra-ministerial cooperation and cooperation channels. Increased attention should be devoted to strengthening communication, coordination and cooperation between and within the bodies competent for the implementation and application of the transposed regulations. There are a number of national strategies that are not necessarily mutually complementary. It is necessary to establish systemic mechanisms of planning, coordination, application, monitoring and evaluation of policies on the governmental level. In this sense, the role of the **General Secretariat of the Government**, which is expected to perform important tasks of coordination, adoption and implementation of public policies at national level, will be of special importance. Therefore, it is necessary to further establish and build the capacity of the General Secretariat of the Government in order to allow this body the possibility of efficiently carrying out the aforementioned duties. In addition, further efforts should be made to provide the independent bodies with adequate working conditions.



In the initial phase of the implementation of the proposed institutional linking, it is necessary to:

- elaborate (at least approximately) the operational procedures for each of the above structures (at governmental level and within the key ministries),
- elaborate the part related to improving the process within the green economy framework through the Sustainable Development Council,
- elaborate the part related to improving the social inclusion process through the Social and Economic Council.

As far as the responsibilities of local self-government are concerned, in the following period, the priority should be to complete the takeover of the already transferred responsibilities and establish partnerships at local level, including inter-sectoral and inter-municipal cooperation. In order to achieve this, it is necessary to further harmonise the funding policy of local self-government authorities, develop an information system (entailing the gathering and exchange of information), strengthen their capacities and their full involvement in the process of social inclusion and poverty reduction, the implementation of local sustainable development strategies and local environmental action plans, etc.

During the participatory process for the preparation of this document, and the preparation of the Republic of Serbia for the 2012 World Summit for Sustainable Development, several parties expressed the need that, in addition to the appropriate institutional set-up for sustainable development within the executive government, **the capacities of the National Assembly of the Republic of Serbia, i.e. its Committees, should be strengthened.**

The expert team of coordinators for the preparation of this document have analysed the possibility for the most efficient positioning of the activities of the National Assembly of the Republic of Serbia for monitoring the impacts on sustainable development and the possibility for intervention within existing operating practice. In line with the Rules of Procedure of the National Assembly, the National Assembly has working bodies that may be permanent (Committees) and temporary (Inquiry Committees and Commissions) (Art. 41). The scope of the work of the Committees is stipulated in Art. 44, and fully corresponds to what a Sustainable Development Committee, if it existed, should do for the area of sustainable development. However, **although a Sustainable Development Committee has not been established within the National Assembly of Serbia, there are provisions on the basis of which the activities of the existing committees could be directed towards sustainable development, and these are possibilities for: mutual cooperation of the committees and, with regard to the issues of mutual concern, the committees to hold a joint session.**

So, when it comes to strategic issues and legislative solutions related to green economy and sustainable development, for example, joint sessions could be held between:

The Committee on Finance, State Budget and Control of Public Spending	Joint session	**Groups of Sustainable Development Committee**
Committee on Labour, Social Issues, Social Inclusion and Poverty Reduction		
Environmental Protection Committee		
Committee on Economy, Regional Development, Trade, Tourism and Energy		

Until the establishment of operational mechanisms for the work of the "Groups of Sustainable Development Committee", it is necessary to take advantage of the possibility that the President of the National Assembly may, upon a proposal of a working body, **engage scientific or professional institutions, as well as scientists and experts, with the purpose of studying (and providing operational support for) sustainable development issues, which fall under the jurisdiction of the National Assembly as issues of public interest.**

6.5. Promotion of Sub-Regional Cooperation – Contribution to a Green Economy and Sustainable Development

With the implementation of the Carpathian Convention, Serbia gains significant knowledge from the positive examples of the sustainable development of mountains, and wishes to use the same model for the protection of the Dinaric Alps and the Balkan Mountains, which are the "common denominator" of the Danube-Carpathian and the Adriatic-Ionian regions, and place Serbia at the "synergetic centre" of this cooperation.

Sub-regional cooperation, involving a secure energy supply, a developed transportation and energy infrastructure, and conservation and improvement of the environment, is of crucial importance for the overall economic development and quality of life of the regional population. The Republic of Serbia, naturally and geographically located on the crossroads of transportation corridors, is the shortest and most efficient transit link between the countries of Central and Western Europe, on one side, and the countries of South Europe and the Middle East and Far East on the other. The economic and financial crisis with its social consequences, climate change and other adverse impacts on the environment, are additional challenges faced by region. The Republic of Serbia participates in a number of sub-regional initiatives and processes[6363]: Southeast European Cooperation Process; Regional Cooperation Council (RCC); Energy Community, Central European Initiative (CEI); Southeast European Cooperative Initiative

63 Lopandić D., J. Kronja, Regionalne inicijative i multilateralna saradnja na Balkanu, Evropski pokret u Srbiji (*Regional Initiatives and Multilateral Cooperation in the Balkans, European Movement in Serbia*), Second Revised Edition, 2010

International cooperation in the field of environmental protection and improvement, and primarily between neighbours, is a must because of the cross-border nature of this area. The ground for cooperation is a wide array of global and regional multilateral conventions and agreements.

The Republic of Serbia is a member country of a number of multilateral agreements in the environmental field.

(SECI); Migration, Asylum, Refugees Regional Initiative (MARRI); Organisation of the Black Sea Economic Cooperation (BSEC); Adriatic-Ionic Initiative (AII); Danube Cooperation Process; International Commission for the Protection of the Danube River (ICPDR); Danube Commission; International Sava River Basin Commission; and many other specialised initiatives and centres that are mainly initiated under the auspices of the former Stability Pact for South Eastern Europe (the operation of which has been assumed by the Regional Cooperation Council – RCC).

When it comes to the issues related to sustainable development and the green economy, facts indicate that regional cooperation plays a significant role in the implementation of numerous international treaties and processes. Actually, the states from certain regions, owing to their natural, political and socio-economic similarities, implement their international obligations more efficiently through joint activities, programmes and cooperation projects. In addition, the sub-regional initiatives are largely instrumental for the interests of individual countries to be presented with success on the international scene. It is also important to note that countries of the region share different experiences of sustainable development and green economy – exchanging this experience and information can bring benefits to the entire regions. This particularly stands for joint projects and activities in fields such as waste management, trans-boundary management of protected areas, energy consumption and production, etc. The fact is that major donors, such as EU, are creating macro-regional approaches when it comes to financing and implementation (e.g., EU Strategy for the Danube Region, draft EU Strategy for Adriatic-Ionian Macro-Region, etc.)

The European Movement in Serbia (the Research Forum) advocates for the launching of an initiative aimed at concluding a *Convention on Cooperation of the South East European countries in the area of environmental protection*.

Energy Community Treaty

In October 2005 the European Community and Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, the Former Yugoslav Republic of Macedonia, Romania, Serbia and UNMIK on behalf of Kosovo signed a Treaty establishing the Energy Community. Whilst Moldova became a fully fledged member on 1 May 2010, Ukraine officially acceded to the Energy Community on 1 Feb 2011. As of Oct 2011, as many as 15 European Union Member States have Participant status.
The Energy Community Treaty has been ratified by the Serbian Parliament. The Treaty requires the Contracting Parties to implement relevant parts of the acquis communautaire, provides for the creation of a single energy market and a mechanism for the operation of network markets. In addition, and following the established procedures, the Contracting Parties took up the commitment to implement a set of energy and environment related legislation. The acquis must be implemented within a fixed time frame and is supported by concrete Action Plans.

The Treaty also establishes the institutions of the Energy Community, as well as the decision-making process. It thereby provides a stable investment environment based on the rule of law, and ties the Contracting Parties together with the European Union.

The principal decision-making institution of the Energy Community is the Ministerial Council. The Ministry in charge of energy sector (currently the Ministry of Infrastructure and Energy) represents Serbia in the Energy Community (The Law on Energy, Article 42). The Minister of Infrastructure and Energy is a member of Ministerial Council of Energy Community. This ministry is in charge of implementation of the decisions of the Ministerial Council on behalf of Serbian Government.

The Treaty outlines the internal decision-making process. The Energy Community may take measures in the form of recommendations, decisions or procedural acts. This gives rise to Energy Community secondary legislation. According to Article 76 of the Treaty, a Decision is legally binding in its entirety upon those to whom it is addressed.

For more information visit: http://www.energy-community.org

7. Analysis of Scenarios in Selected Sectors[64]

The analysis has been done for the indentified three key sectors:

- **Energy demand:** with emphasis on energy efficiency, in buildings (including residential, commercial and services energy use) industry and transport.
- **Energy supply:** with emphasis on power generation, including the use of renewable energy.
- **Agriculture:** with a focus on the potential to transition to ecoagriculture[65]practices to increase value added and employment.

The analysis presented in this study entails the creation of customised simulation models making use of existing national and international statistics, as applicable. Data collection was carried out to gather the most suitable and valid data across sectors for inclusion in the models.

Despite the lack of data at national level for certain sectors and selected indicators (such as for organic agriculture), the models were created to match available information and generate projections that could be directly compared with existing databases - national, regional and global. In fact, assumptions from the literature, even if they do not reflect the specifics characteristics of Serbia, were used in certain instances to simulate the scenarios. The methodology employed is called System Dynamics (SD), and relies on causal relations, feedback loops, delays and non-linearity to correctly represent complexity. This methodology allows the generation of projections that do not rely extensively on historical data, or not to the same degree as optimisation and econometrics studies require. Validation was carried out using behavioural and structural validation tests. The simulation starts in the year 2004 and goes up 2030, allowing for historical behavioural validation over a period of approximately 6 years (for most variables, depending on data availability). Two main scenarios have been simulated and analysed in this study, and they are presented below.

- A **Business as Usual (BAU)** case that assumes the continuation of historical and present trends. This includes all policies and interventions currently active and enforced, but excludes policies planned but not yet implemented (e.g., including all targets that are not mandated by law or policies that are being evaluated for future implementation). In the case of energy this means a continuation of demand trends for energy consumption and no marked expansion of renewable energy for power generation, as highlighted by the scenarios included in the Energy Sector Development Strategy[66]. Concerning agriculture, the BAU scenario does not assume

64 Scenario analysis for Green Economy interventions in Serbia - A scoping study in support of Serbia's Green Economy Study (GES), UNEP (2012)

65 ecoagriculture (state of the art adopted terminology: http://www.ecoagriculture.org/page.php?id=47)

66 These scenarios are the Prosperous economic development of the country (the PED scenario) and the Slow economic development of the country (the SED scenario).

an expansion of organic agriculture, with the area cultivated with ecological practices remaining constant in the future.

- A set of **Green Economy (GE)** scenarios that simulate additional interventions that reduce energy intensity, increase the use of renewable energy, and support the adoption of ecoagriculture practices. The specific interventions and assumption simulated in the GE scenario are listed below and in the results section.
-
  - *Energy efficiency:*
    - Energy efficiency improvement: using Directive 2006/32/EC of the European Parliament and the First Energy Efficiency Plan of the Republic of Serbia for the Period from 2010 to 2012 (NEEAP), scenarios are simulated for a 9% energy efficiency improvement by 2018, and 1% per year till 2030 (20% total)[67]. Further, two additional scenarios are simulated, for a 10% -weaker- and 30% -more aggressive- improvement in energy efficiency by 2030.
    - Specific assumptions and interventions in the transport sector include lowering the age of vehicles and increasing the fuel efficiency of passenger vehicles (through the purchase of new and more efficient vehicles, e.g., hybrids; source: Strategy of railway, road, inland waterway, air and intermodal transport development in the Republic of Serbia, 2008 – 2015). In order to reach the target for energy efficiency in the transport sector, the main interventions simulated include the reduction of the lifetime of vehicles (through, for instance, the provision of incentives to purchase more efficient vehicles) and the increase of market penetration of hybrid and other low carbon vehicles (up to 12% by 2030).
    - Initial energy efficiency improvements are allocated as follows: industry (45%), transport (36%), residential and other sectors (19%) (source: NEEAP).
      - The main indicators calculated include the investment required, energy and CO_2 saving, cost avoided, employment and potential income generated.

  - *Renewable energy:*
    - Increase in the use of new renewables for power generation: the share of new renewable sources of energy in final energy consumption is assumed to rise to 5% by 2015. An additional scenario is tested for an increase to 10% of consumption by 2030.
    - Increase in the use of biomass for energy generation: biomass CHP capacity is assumed to reach a total of 800 MW of capacity by 2015 (about 400 MW more than its current value). While the potential for energy generation is higher (2.7 Mtoe, 1.0 Mtoe from wood biomass, and 1.7 Mtoe from agriculture

67 The targeted final energy savings of 1.5% (0.125 Mtoe) will be achieved with the implementation of the EEI measures in the sectors of households and public and commercial activity (0.0235 Mtoe), industry (0.0566 Mtoe) and transport (0.0453 Mtoe). Source: NEEAP.

biomass), specific investment scenarios (e.g., on secondary biofuels) could not be simulated due to the lack of cost information.

- The main indicators calculated include the investment required, energy and CO_2 saving, cost avoided, employment and potential income generated.

- *Agriculture:*

Analysis is done for organic agriculture[6868] as one example of agri-environment schemes/ practices relevant for environmental conservation and protection.

- Increase in the land area under organic agriculture: using the National Action Plan for the Development of Organic Farming in Serbia (MAFWM 2009), the expansion of the organic agriculture area is assumed to reach 50,000 ha by 2016 and expand to 150,000 ha by 2030 (or 3% of current agricultural land). An additional scenario projects a less aggressive expansion, reaching 96,000 ha by 2030, or 2% of current agriculture land (calculated by doubling of the organic agriculture area every five years, starting from its current value).
  - The main indicators calculated include the investment required, production increase and employment, potential income generated.

For all sectors and scenarios, impacts are estimated on, among others, avoided energy consumption and costs, avoided CO_2 emissions (for energy demand and supply intervention), economic performance and production (for the agriculture sector), and employment.

Policy options to achieve stated goals and make progress towards reaching a greener economy have been analysed qualitatively, including a comparative analysis of how these worked in different countries.

Simulation results are presented in this report with an upper and lower range, for two main reasons:

- Data availability and quality is uneven across the variables and sectors analysed. Further, certain indicators were calculated using existing global literature/data sets that may use assumptions that do not apply to the specific socio-economic and environmental context of Serbia (e.g., transport and energy efficiency employment).
- Most of the results projected assume the correct and effective implementation of investments and/or regulatory measures up to 2030. Since the future development of the sectors analysed depends on the specific policies and interventions implemented (i.e. setting economic incentives, regulations, soft measures), projections may change considerably if a different mix of interventions is simulated. Identifying the best

68 EU estimations show that around 30% of the overall EU territory is HNVF (High Nature Value Farmland); http://www.ieep.eu/work-areas/agriculture-and-land-management/high-nature-value-farming/2004/04/high-nature-value-farmland

intervention option is beyond the scope of this study and, as a consequence, it is more appropriate to indicate a range of results rather than a single point estimation.

The main results of the analysis indicate that the Green Economy interventions analysed would:

- Effectively reduce energy consumption and emissions, also reducing energy expenditure in all sectors, while creating employment.
- Increase organic agriculture production[69], generating additional value (revenues and GDP) in certain production subsectors, and with certain enabling conditions (e.g., price premiums).

From an economic perspective it can be concluded that – with the assumptions utilized (based on national reports and international peer-reviewed studies) – the return on investment for agriculture could be positive in the following scenario: when costs are offset by increased (or maintained) yields, and/or a decline of yields is offset by price premium for organic production; and that investments addressing energy demand (energy efficiency) and energy supply (renewable energy) would reduce the reliance on fossil fuels, increase the resilience of the sector to fossil fuel price variability, but may have high upfront capital costs resulting in long returns.

These main impacts have several ramifications across sectors, such as employment creation, or the cost of production in energy intensive sectors, which would vary in strength and relevance depending on the policies and mechanisms utilised to reach the goals projected in this study.

7.1. Energy Demand

Energy demand is projected to reach 9.7 Mtoe and 10.5 Mtoe by 2020 and 2030, or 8%-12% below BAU. Depending on assumptions used for GDP growth, the value could be higher or lower.

Figure 1 shows final energy consumption, calculated as the sum of all energy consumption across sectors and influenced primarily by GDP, population, energy prices and energy efficiency in the possible BAU scenarios. The figure shows results for a range of simulations assuming a varying range of real GDP growth (1% to 4.62%, including the PED and SED scenarios) and urbanisation (assumed to reduce km drive per vehicle per year by 5% and 10% by 2030). Figure 2 shows final energy consumption for the possible GE scenarios, which are always below the baseline (red line).

69 As well as Increase High Nature Value Farmland

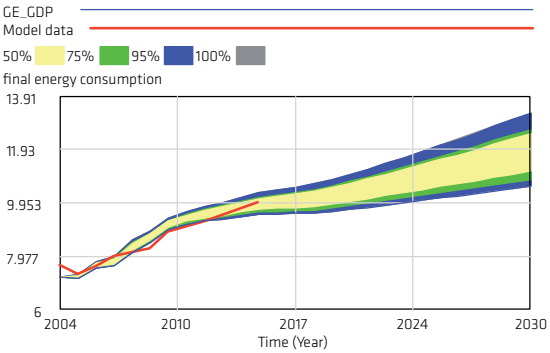


Figure 1: Final energy consumption. The red line represents historical data and existing projections to 2015 (Energy Sector Development Strategy). The coloured area indicates the potential future values for demand, under varying assumptions for GDP and urbanisation in the BAU and GE scenarios. The yellow are represents a high probability (>50%), the green a medium probability (between 25% and 50%), the blue area low probability (between 25% and 5%) and the grey area a probability smaller than 5%.

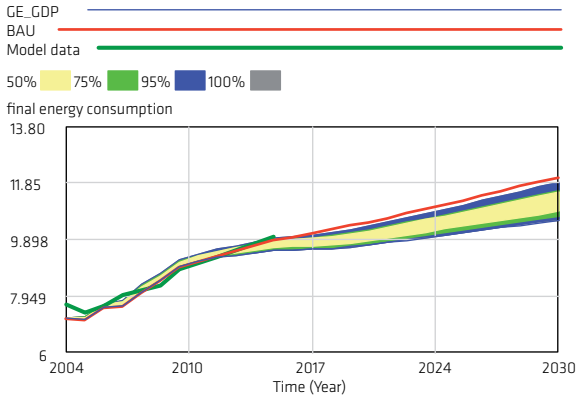


Figure 2: Final energy consumption. The red line represents the BAU projection and existing projections to 2015 (Energy Sector Development Strategy), the green thick line the historical data and the coloured area indicates the GE values.

- *Investment*

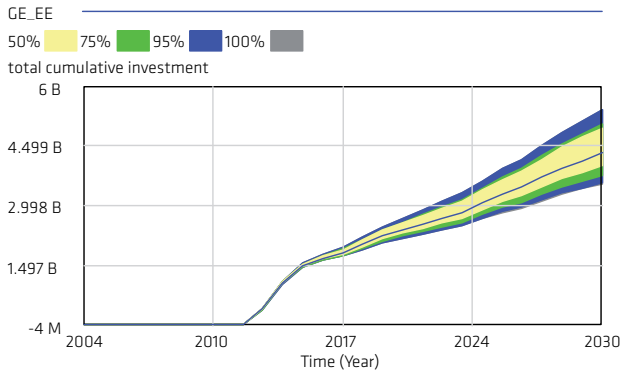
The total investment required in the GE scenario for energy efficiency improvements reaches a total amount of 2.7 billion euro by 2030. The average annual investment is 147 million euro. This was calculated by estimating the energy consumption that would be avoided when reaching the energy efficiency target assumed for the GE scenario (20% by 2030); by calculating the corresponding fossil fuel emissions that would be avoided as a result; and by multiplying the amount of emissions by the assumed cost to required to achieve such reduction ($50/ton of emissions).

Transport is projected to require approximately 1.05 billion euro, or 58 million euro per year, lowering consumption and emissions by 17% below BAU by 2030.

The residential, commercial and industrial sectors are projected to require approximately 1.7 B Euro in total (or 89 M Euro per year) and improve efficiency by 12% across sectors relative to BAU, lowering emissions to 32.8 M ton or 11% by 2030.

The total investment estimated would change under varying assumptions on the target for energy efficiency and the cost of intervention. Our analysis indicates that reaching a more

aggressive improvement (30% by 2030), when considering the residential, commercial and industrial sectors as an example, would require 2.8 B Euro in total, or 148 M Euro per year, approximately 67% more than in the 20% energy efficiency case (or possibly an even higher value, depending on the policies implemented).



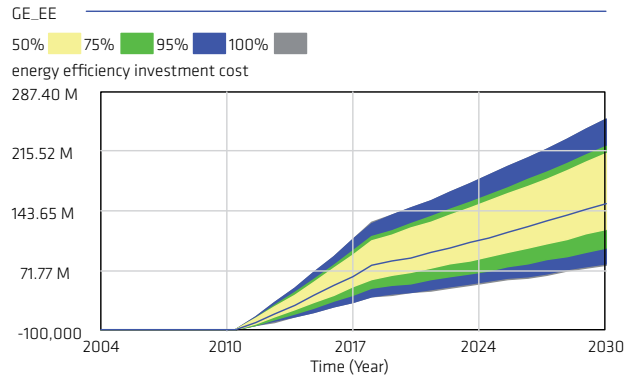


Figure 3: Cumulative investment (for transport, residential, commercial and industrial sectors and energy supply) and residential, commercial and industrial energy efficiency annual investment. The central blue line represents the median GE scenario. The coloured area indicates the potential future values for both variables, under varying assumptions for the energy efficiency target and cost of intervention.

Depending on the policies utilised to reach the targets stated, the investment is allocated across the main actors of the economy; public, private, domestic and foreign investment. Incentives, among others, are instruments designed to stimulate private investment, which are attracted by the favourable investment conditions created by government interventions.

In this respect, as an example, a 20% incentive by the government to stimulate the required investment for the 20% efficiency scenario by 2030 would represent a total expenditure of between 25 million to 35 million euro per year.

- *Avoided cost and net investment*

The total investment implemented in the GE scenario is projected to have several impacts. These include, among others, a reduction in energy demand and emissions, as indicated above. The savings on energy consumption, or avoided costs, can be used to estimate the overall (or economy-wide) net investment required to achieve the targets stated, calculated as investment minus avoided costs.

The avoided costs from energy efficiency investments in the residential, commercial and industrial sectors reach a maximum value of approximately 170 million euro in the year 2030, and a total cumulative value of 1.8 billion euro throughout the simulation (or 95 million euro per year on average, as opposed to 89 million euro of investment per year). With higher market prices for energy, in a scenario where the market price of electricity grows in real terms (when accounting for inflation), savings could be more consistent.

Avoided costs in the transport sector amount to a total of between 2.9 billion euro and a maximum estimate of 5.5 billion euro, or approximately 155 million euro to 290 million euro per year on average against investments of a little over 1 billion euro. This broad range is estimated considering both investments in energy efficiency (low range of avoided costs) and efforts to improve mass transport or non motor transport (high range of avoided costs). A very effective strategy could reduce fuel use considerably, effectively supporting an avoid-shift-improve strategy (UNEP, 2011). Also, transport liquid fuel prices are assumed to be increasing in real terms going forward (following historical trends for the past 10 years), an important factor that increases avoided energy costs form energy efficiency interventions.

As a result, avoided costs will be higher than investments by 2030, reaching a cumulative net benefits amount of between 1 billion and 2 billion euro, or approximately 50 million to 100 million per year. The overall payback time is 7 to 10 years considering the assumptions simulated, with the break-even point (from an economy-wide perspective) being reached in 2019-2022. This calculation does not include additional potential avoided health costs, especially in the transport sector.

While the residential, commercial and industrial sectors are projected to yield positive returns within 3 to 5 years, the transport sector shows a comparatively worse economic performance in the short and medium term, but offers higher returns in the longer term (with a payback of 10 years on average). This is due to a variety of factors, including the cost of intervention as well as energy prices. In fact, the projected higher liquid fuel prices increase the profitability of transport investment in the longer term, with the short-term performance being affected by comparatively high intervention costs.

Although it was not possible to include potential avoided health costs from green economy investments, especially in the transport sector, into the modelling to project avoided costs, the savings from the avoided health costs could be relevant. While specific statistics for Serbia are not available, several studies have been carried out to estimate the impact of transport (and the greening of transport) in health and other cost. A comprehensive example was prepared by the Victoria Transport Policy Institute (www.vtpi.org), and refers to the North America context, including several types of cost for different transport modes. Interestingly, health benefits are presented as negative costs, as they would effectively reduce expenditure.

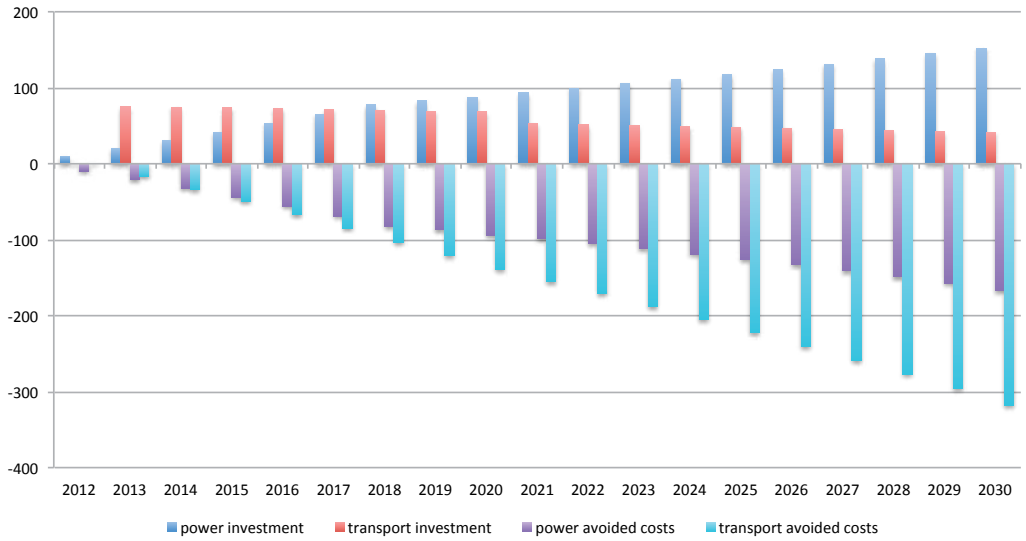


Figure 4: Comparison of annual investments (positive values) and avoided costs (negative values).

- *Employment*

The investments simulated are projected to have the potential to create 5,000-8,000 jobs by 2030, depending on the specific policies implemented. Of these, 2,000 to 3,000 would be created by 2030 in the residential, commercial and industrial sectors and the remainder in the transport sector. These numbers should be viewed with caution, as specific statistics on green jobs in Serbia are currently not available, thus the simulation adopted peer-reviewed regional and global data where necessary, and it is therefore difficult to make projections.

Of particular interest is that transport interventions have the potential to generate considerable employment if investments target the expansion of the public transport infrastructure (more conventional investments that, according to literature, can create up to 80 jobs per million euro invested, see ITUC (2012)), potentially leading to the creation of 6,000 jobs during the initial years of green transport investment. On the other hand, job creation would be very limited if transport energy efficiency improvements are to be achieved only through the import of passenger vehicles manufactured abroad.

7.2. Energy Supply

Electricity supply is projected to reach 40 and 44 GWh by 2020 and 2030 in the GE scenarios, or 11.3% below BAU in 2030. The energy mix comprises thermal generation (61% instead of 73% in the BAU case in 2030), hydro (26% and 25% in GE and BAU in 2030), new renewables (such as solar, wind and cogeneration, 13% in the GE case against 2% in the BAU scenario in 2030). Specifically, cogeneration and wind are projected to reach each 6% of power supply and solar PV 1%.

Various scenarios were simulated for the expansion of renewable energy, driven by different targets for the share of renewables in total energy consumption. The range of results is presented in Figure 5, where an increase in capacity is assumed in the short and medium term, with more conservative expansion in the longer term.

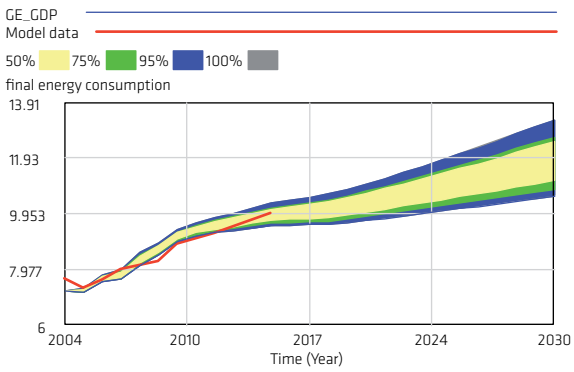


Figure 5: New renewables share of total energy consumption. The coloured area indicates the potential future values for the share of new renewables, calculated as the ratio between power generation from these sources and total energy consumption. The red line represents the BAU case, and the central blue line represents the GE simulation (reaching 5% penetration of final energy demand). The coloured area represents additional possible results obtained by changing assumptions, such as investments or the cost of intervention. The yellow area represents a high probability, the green one medium probability and the blue one a low probability to obtain results shown in the graph.

- *Investment*

The total investment required to expand renewable energy supply in the GE scenario reaches a total amount of between 1.5 billion to 2.5 billion euro by 2030 for the 5% and 10% new renewable energy penetration scenarios respectively. The average annual investment is 80 million to 130 million euro. While the high renewable expansion scenario allows for a considerable reduction in the planned expansion of coal-fired power generation (with generation 30% below BAU by 2030), it should be noted that other intervention options, such as the replacement of old power plants with more efficient ones ("clean coal"), should be explored.

As in the case of energy demand, considering the existing incentives in place to support the expansion of new renewables in power generation, the investment would be allocated

among the public and private sector. Given the projected fast growth of supply the current structure of feed-in tariffs many need to be revised, but it clearly indicates the willingness to share costs. In the case of solar PV and wind, the public sector would contribute tens of million of euro by 2020.

The possible phasing out of the incentive, possibly when the capital costs and efficiency of new renewables are competitive with other supply options (even large scale), would result in public investment progressively declining.

- *Avoided cost and net investment*

Avoided costs in the case of power supply would be the reduced construction of thermal power capacity when investments in renewable energy are implemented. The avoided consumption of coal (as a variable cost) would also be a saving. On the other hand, the capital cost of renewable energy capacity is generally higher than conventional thermal (IEA, 2011). The avoided power generation from coal reaches 5,000 to 10,000 GWh in 2030, generating capital savings of up to 1.3 billion euro.

The net investment for energy supply, making rough assumptions on the current and future cost of coal for power generation, reaches a total of between 10 million and 40 million euro in 2030 (roughly assuming 20 euro per ton), or reaching up to 50% of the annual investment. The overall payback time in this case would be shortened, but specific estimations could not be made as coal price information for power generation is Serbia was not available at this stage. In fact, any of the figures could change considerably when considering different projections for coal price, as well as variations to the cost assumption for power generation capacity from renewables.

- *Employment*

The employment generated in the power supply sector was calculated for all energy sources utilised and for construction as well as operation and management. The total additional employment generated ranges between 1,500 (operation and management) and 2,600 jobs (operation and management as well as construction – with temporary peaks at 5,000 jobs), but this range is highly dependent on the policy utilised and on the domestic manufacturing potential for power generation capacity from renewables. In fact, several studies indicate that renewables are more labour intensive for the manufacturing of capacity (up to 8 times more than thermal power capacity), but have about the same labour intensity for operation and management (see for instance Wai et al., 2010). As a consequence, if solar panels and wind turbines, among others, are imported and only installed domestically, the potential new job creation would be confined to a small percentage of the full potential, and employment creation in 2030 would be estimated at an average of between 1,500 and 1,600 jobs.

Table 1: Main results of the analysis of the impact of energy efficiency and renewable energy interventions.

		2018	2025	2030
TRANSPORT SECTOR				
Average investment	euro/year	58 M		
Energy consumption reduction *(Includes interventions beyond those for which investments could be calculated)*	Mtoe/year	0.17	0.35	0.48
Avoided energy cost	euro/year	103 M	222 M	318 M
Employment energy efficiency	Person	Potential for 3,000 – 5,000 in 2030		
RESIDENTIAL, COMMERCIAL AND INDUSTRIAL SECTORS				
Average investment	euro/year	89 M		
Energy consumption reduction	Mtoe/year	0.52	0.8	1
Avoided power cost	euro/year	82 M	126 M	167 M
Employment energy efficiency	Person	Potential for 2,000 – 3,000 in 2030		
ENERGY SUPPLY (RENEWABLE ENERGY)				
Average power supply additional investment	euro/year	80 M – 130 M		
Biomass capacity	MW	800 – 1,150 by 2030		
Solar capacity	MW	300 – 750 by 2030		
Wind capacity	MW	700 – 1,700 by 2030		
Thermal capacity	MW	minus 600 – 1,000 by 2030		
Reduction in electricity consumption (by 2030), contributing to a reduction in required power capacity	GWh	*4,900*		
Average fuel input consumption reduction	Mtoe/year	1.3 – 1.9	2.1 – 3.0	2.3 – 3.5
Employment power generation sector	Person	Potential for 1,500 – 2,600 in 2030		
		2,300 *(2012-2017)*	1,150 *(2018-2024)*	1,800 *(2025-2030)*

7.3. Organic Agriculture Area and Production

Projections on the organic land area indicate that production (or the yield) could increase when the land is managed with more ecological practices, especially for certain types of production. Using current estimates (Table 2), apart from maize (which shows an average decline in yield of approximately 4%), all other crops and fruits have higher yields (generally in the range of 9% above BAU), or lower/similar yields but marked improvements over the last two years. We could, therefore, assume that organic production in the future might concentrate on those crops and fruits that provide higher yield, or on those market segments that guarantee a higher price. However, for the purpose of simplification, the

simulation was run based on the assumption that the current composition of crops and fruits would remain the same.

Table 2: Observed yields for organic vs. conventional agriculture in Serbia (Source: MoA).

	2008	**2009**	**2010**	**Average**
Maize	98%	96%	93%	**96%**
Wheat	81%	94%	103%	**93%**
Soya	92%	100%	91%	**94%**
Apples	110%	105%	113%	**109%**
Raspberries	114%	110%	102%	**109%**
Strawberries	115%	109%	105%	**109%**
Plums	103%	107%	106%	**105%**
Sour cherries	115%	99%	114%	**109%**

- *Investment*

In the first scenario, reaching 150,000 ha by 2030, the total investment required would be between 15 million euro and 55 million euro in total, or between 720,000 and 2.75 million euro per year on average. This estimate was calculated based on the cost related to operations and management of the farming activity, assuming that in Serbia costs would be 30% to 300% higher than figures available in studies carried out for developing countries (i.e. costs of approximately $100/ha).

In the second scenario for organic area expansion, a more conservative estimate reaching 96,000 ha by 2030, the investment required would be 9 million to 36 million euro in total, or 0.5 to 1.5 million euro per year on average.

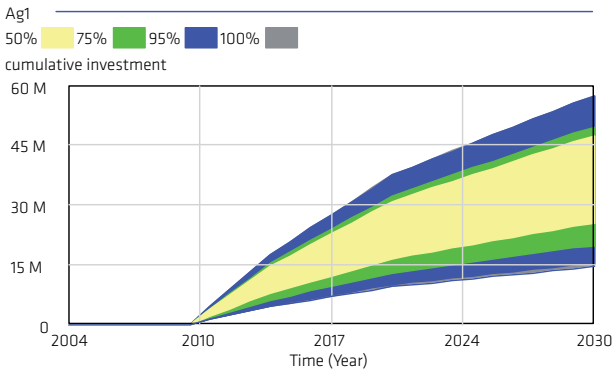


Figure 6: Agriculture cumulative investment. The coloured area indicates the potential future values for the total agriculture investment, calculated as the product of organic land area (scenario assumption) and conversion cost, ranging between 100 euro and 300 euro. The yellow area represents a high probability, the green one medium probability and the blue one a low probability of obtaining the results shown in the graph.

- *Revenues and net investment*

Shifting to organic agriculture will contribute to boosting revenue through the increase in market price, increase of yield and other additional economic benefits, i.e. revenue from carbon sequestration.

Several studies show that certified organic production would normally enjoy a premium price (e.g., 40% to 200% in Switzerland), but the magnitude and extent to which this premium is available depends on market conditions (e.g., demand) (FAO, 2012).

In the simulations tested, utilising the assumptions mentioned above (with historical yields and low intervention costs), it is estimated that the market price should be approximately 9% higher than crops from conventional agriculture production in order to maintain the same level of profitability of the sector observed in the BAU scenario, without paying back the addition investment. In this respect, to have a positive return on investment, a 10-year payback time would require a price premium lower than 20% (on average, for simplification, and across all crops currently cultivated with organic practices). Serbia's proximity to EU countries and its export potential to the EU market could provide a good chance to enjoy a higher end of price premium. With cumulative investments totalling 15 million euro to 55 million euro for the high expansion scenario, we tested three possible price premium scenarios: if the price premium is 60%, an additional 51.7 million euro will be generated per year between 2012 and 2030 (or 981 million euro in total); 40%, creating 34.4 million euro of extra value per year on average (or 654 million euro in total); 20% yielding 17.2 million euro per year on average (or 327 million euro in total). This extra added value added, even in the 20% case, would largely allow for full repayment of costs (depending on the assumptions used, for investment and yield) (see Table 3 for more details).

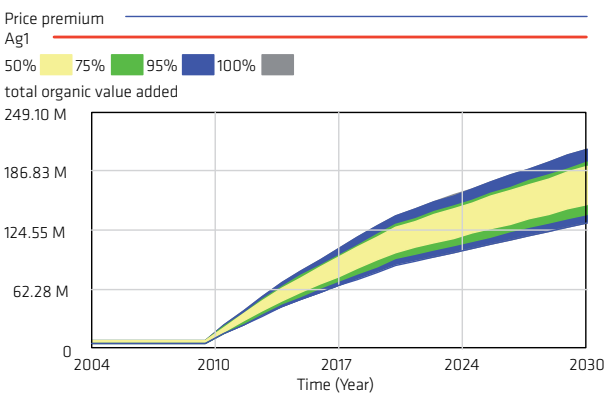


Figure 7: Organic agriculture, annual value added. The coloured area indicates the potential future values for the annual agriculture value added, calculated as the product of organic agriculture production and value added per ton (scenario assumption), including a premium price up to 60%. The difference between the bottom and the top of the coloured area represents the 70 million euro additional value creation mentioned in the main text above.

Considering that even in the worst case scenario the total cost of intervention would amount to 6.75 million euro per year on average, or a total of 135 million euro, the availability of a price premium would be a relevant enabling condition for certain crop production (e.g., wheat, maize and soya) and a 20% premium would already allow to pay back the investment 6 times by 2030.

Further, if the transition to organic agriculture requires more employment – as several studies seem to suggest (FAO, 2012), see below –, the price premium should be higher, to offset the increased labour costs.

On a more positive note, and adding to the opportunity provided by the market price premiums, organic agriculture practices reduce soil erosion and allow higher carbon sequestration in the soil relative to conventional practices. It is estimated that in northern Europe the additional carbon sequestration is in the order of 2 tons of CO_2 per hectare per year (Høgh-Jensen, 2004)[70]. Applying this value to the projected expansion of organic agricultural land, and considering an average market value of carbon, generally being estimated in the range of $5/ton to $15/ton for studies similar to this one (3.85 euro/ton – 11.5 euro/ton), the value of carbon sequestered in the year 2030 alone could reach between 0.6 million euro and 1.7 million euro in the ambitious expansion scenario (150,000 ha by 2030). The total value of carbon throughout 2030, assuming that a carbon price will be implemented immediately (a strong but perhaps unlikely assumption), reaches between 6.7 million euro and 20 million euro in the two pricing scenarios respectively.

Along this line, avoided health costs from the use of synthetic pesticides may also be considered, depending on the extent to which health is affected by the use of these production inputs in Serbia.[71]

In conclusion, the return of the investment in organic agriculture will be positive if the price premium of organic agricultural products were to be in the range of 9% or higher, the yield were to be higher than current observations (at least 9% above BAU on average), or a carbon pricing mechanism were to be implemented. Policy interventions, such as subsidies and incentives, can be introduced to support the transition to organic agriculture (e.g., to ensure market access), especially in light of the uncertainty mentioned above. While more data certainly would be needed, targeted intervention is needed as some organic production is already yielding more than conventional practices, and there may already be a premium price in the European market for Serbian organic agricultural products.

70 Høgh-Jensen, B. F. (2004). Carbon sequestration potential of organic agriculture in northern Europe – a modeling approach. Nutrient cycling in agro ecosystems , 68 (1), 13-24.

71 For example, in China, pesticides used only in rice systems have been estimated to amount to US$ 1.4 billion per year in health costs to people, and adverse effects on both on- and off-farm biodiversity (Norse et al. 2001). Norse D, Li, J. Jin, L., and Zhang, Z. (2001). Environmental Costs of Rice Production in China. Aileen Press, Bethesda.

- *Employment*

Currently there are no data to estimate whether organic agriculture in Serbia is creating additional jobs relative to conventional agriculture. On the other hand, surveys carried out in developing countries indicate the potential to create up to 30% more jobs when utilising organic agriculture in developing and transitioning countries in Africa and South East Asia (FAO, 2012). While this value seems high for Serbia, where agriculture production is certainly more mechanised than in these countries, it is possible that organic agriculture will generate additional jobs or simply require more work hours for farmers. While this could be considered a positive development for job creation and income, unless yields or prices increase more than jobs, the per capita revenue (and profits) of farmers could decline. It is therefore crucial to evaluate and monitor the overall performance of the sector, and its profitability to design successful interventions (e.g., policies and investments).

Table 3: Main results of the analysis of the impact of green agriculture interventions. An expansion of the organic agriculture area is expected to generate additional value added and employment.

		2016	**2020**	**2030**
Organic agriculture area	Ha	50,000 12,000	100,000 24,000	150,000 96,000
Total investment	euro	15 M – 55 M 9 M – 36 M		
Average annual investment	euro/year	0.72 M – 2.75 M 0.5 M – 1.5 M		
Share of current agriculture investment	%	0.25% to 1.25% in the low and high cost		
GE additional value added	euro/year	With no price premium: -9% on average or 6 M euro in the high expansion case With price premium: between 17.2 M euro and 51.7 M euro in the 20% and 60% cases respectively.		
GE value of carbon sequestration	euro	In the range of 6.7 M to 20 M in total		
GE required price, yield increase, or subsidy	%	9% for 2030 payback 20% for 2022 payback		

7.4. Recommendations

Generally, there are four main ways to influence future trends in order to reach the stated goals: (1) voluntary behavioural change, (2) capital investment, (3) public targets mandated by law, and (4) incentives (such as tax reductions and subsidies). Since targets and mandates ensure achievement of stated goals while controlling expenditure, and incentives as well as capital investments support cost sharing across the key actors in the economy without ensuring a goal, creating a comprehensive package would allow making the best of all the options analysed, as already indicated in several energy efficiency policies in the EU.

More specifically, synergies could be created by using:

- Mandates: to ensure achievement of a stated goal. These include the enactment of a law that requires the penetration of renewable energy in power supply to reach a specific target by a given year. For example, the adoption of the Law on Rational Use of Energy that will prescribe obligations for energy savings for big and public consumers (introduction of Energy Management System), introduce requirements on energy producers, distributors and transmitters to fulfil minimal energy efficiency requirements and introduce consumption based billing
- Incentives and capital investments: to reduce upfront costs (shared between government and other actors, such as households and the private sector), with incentives being especially effective if the upfront cost is contained and capital investments reduced when initial costs are high. These include incentive packages such as feed-in tariffs, incentives to adopt organic agriculture practices, establishment of the Energy Efficiency Fund, etc.
- Green economy interventions, often starting with an economic disadvantage, would require policy packages that include mandates/targets to ensure action, incentives to share costs, and capital investments to stimulate R&D and emerging sectors. The goal is to find a strategy to balance funding responsibilities, sharing benefits with all actors of society and the economy, while providing support to low income and disadvantaged families.

Specific recommendations emerging from the study include:

- Data collection: more data are needed to better evaluate the potential impact of green economy interventions in Serbia. Information regarding job creation, potential salary levels, as well as productivity of green practices would considerably improve the analysis and provide for better informed decision-making.
- Green economy investment in Serbia is currently unattractive to many because they start from a disadvantaged position. Policies that stimulate inefficiencies (such as energy price subsidies) should be removed to level prices and returns in the energy sectors and stimulate efficiency improvements and low carbon

development. Although not easy to implement, due to the domestic production of coal, the gradual removal of electricity subsidies (taking into account social impacts) should be considered in the context of a green economy strategy and in light of a future integration in the EU. Further, the removal of subsidies could be reallocated (as avoided expenditure) to support energy efficiency (see below). Bearing all this in mind, in order to stimulate rational use of energy and increase energy efficiency, it is crucial to establish the Energy Efficiency Fund as soon as possible and introduce other kinds of incentive mechanisms such as VAT and tax reduction.

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- In light of potential energy and/or agriculture production cost increases, interventions should be designed to simultaneously provide incentives to reduce inputs (e.g., through energy efficiency) to mitigate potential cost increases. Initial efforts to comply with the EU directive on energy efficiency should therefore be continued and extended.
- Low carbon transport options, especially public transport, require considerable upfront investments but lead to significant medium- and longer-term savings. A more efficient public transport sector (for both passenger and freight), will also increase in profitability (leading to higher avoided costs), should energy prices rise in the future.
- The introduction of renewable energy is advised for selected uses (e.g., solar heat water) already in the short term. Further, the expanded use of biomass for energy production could support the creation of a local supply chain and reduction of waste.
- Finally, the potential of organic agriculture should be investigated, especially concerning the potential market value of organic products and employment creation. Relevant opportunities may be available for the sector going forward and Serbia could profit from early positioning in the European market. Of potential interest is also the capacity of organic agriculture to increase carbon sequestration, which could provide additional revenues should a global (regional or national) carbon price mechanism be enacted in future years.

8 Strategic Policy Recommendations for Consideration

The recommended set of strategic policy measures is only a suggestion. They are derived from the work done so far, and their purpose is to inform the Serbian delegation and to facilitate dialogue and discussion during the Rio+20 Conference.

This study on green economy in the Republic of Serbia has been made in a way that recommendations are systemised within the framework of priority strategic directions, focused on the medium-term (and long-term) process towards a green economy.

Harmonising socio-economic development with the European Union's Resource-Efficient and Low-Carbon Policies
Efficient Use of Resources
• Mineral resources (metallic, non-metallic, and fossil fuels)
Objectives
Reduce and establish sustainable management of waste stemming from mining activities
Reduce the illegal exploitation of mineral resources
Find new deposits and rationally use existing natural resources with the use of cleaner technologies, integrated pollution prevention and control
Evaluate the validity of remaining mineral raw materials in tailings and dumps of active and closed mines, from both an economic and environmental aspect
Put policies on sustainable management of mineral resources into action

Harmonising socio-economic development with the European Union's Resource-Efficient and Low-Carbon Policies
Efficient Use of Resources
• Renewable sources of energy
Objectives
Increase the use of renewable sources of energy in line with the strategic objectives of transition
Reduce imports of fossil fuels and losses in the power grid by renewing infrastructure and building new capacities for connecting renewable sources of energy
Increase the share of bio fuels in the transportation sector
Increase the use of biomass as fuel

Harmonising socio-economic development with the European Union's Resource-Efficient and Low-Carbon Policies
Efficient Use of Resources
• Energy efficiency
Objectives
Increase energy efficiency in line with strategic development objectives and improve energy efficiency indicators
Ensure that new and refurbished plants for production, i.e. systems for transmission and distribution of electrical and heating energy, meet the minimum requirements in terms of their energy efficiency
Reduce fossil fuel consumption in the transportation sector
Implement the obligations taken on under the Energy Community Treaty
Reduce final energy consumption (without the air traffic) by the end of 2018 in relation to projections for 0.752 Mtoe (9% FEC in 2008)
Harmonising socio-economic development with the European Union's Resource-Efficient and Low-Carbon Policies
Efficient Use of Resources
• Bio-, geo- and landscape diversity and forest resources
Objectives
Increase the percentage of total forest coverage to 41.7%, instead of the current 28% (approximately); increase area under forests to 29% of the territory of the Republic of Serbia by 2015
Improve the existing forests structure (larger share of tall trees)
Use timber more rationally (higher processing level and higher share of the final products in the total products structure; use of processing products and wood waste for energy)
Strategic objectives for landscaping and using forests and forest lands
Improve the sustainable management of protected areas
Affirm the agro-forestry principle (combined use of agricultural and forest areas within the whole system)
Protect larger complexes of arable land in lowland areas by raising linear, multi-row shelterbelts
Decrease pressure on biological and geological diversity (mainly reflected in the over-exploitation of limited natural resources)
Adequately recognise biodiversity and ecosystem values, multi-dimensional assessment of natural resources
Valuate natural capital and ecosystem services

Harmonising socio-economic development with the European Union's Resource-Efficient and Low-Carbon Policies
Efficient Use of Resources
• Water and fish resources
Objectives
Reduce water pollution, water eutrophication, irrational use of water, drinking water losses in public water supply systems
Ensure integral water resources management
Reduce the exploitation of fish resources to the a sustainable level, i.e. stabilise fisheries and freshwater ecosystem of the fish waters
Reduce stocking with alohtonic and potentially invasive fish species
Conserve the natural spawning grounds, revitalise the existing flood zones and by using the eco-system approach provide the largest possible natural reproduction of fish stocks
Increase management, administrative and user capacity
Increase aquaculture productivity in order that it becomes competitive in fish production in the surrounding area

Harmonising socio-economic development with the European Union's Resource-Efficient and Low-Carbon Policies
Efficient Use of Resources
Efficient and Sustainable Use of Land and Space (including Agriculture)
Objectives
Sustainable planning and use of space, particularly in urban environments
Reduce permanent loss of land, land pollution, desertification, areas designated as degraded land, "historical land pollution", acidity of agricultural land
Sustainable use of highland resources in healthy food production, with the use of conservation and anti-erosion measures
Sustainable use of the agro-forestry principle (combined use of agricultural and forest areas within the whole system)
Protect against degradation and land use changes, and landscaping of agricultural land; protection of larger complexes of arable land in lowland areas by raising linear, multi-row shelterbelts
Develop and promote organic agriculture
Apply integrated/coordinated management/use of land and space in line with their use according to planning documents

Harmonising socio-economic development with the European Union's Resource-Efficient and Low-Carbon Policies
Sustainable Consumption and Production
Objectives
Accomplish the goal to establish a sustainable production system by 2017, in line with the Action Plan for Implementing the National Sustainable Development Strategy for the period 2011-2017
Rational and sustainable use of natural resources, through technological processes that contribute to reducing harmful emissions and maintain the stability of the ecosystem
Promote an educational campaign to increase consumer awareness of sustainable consumption – sustainable consumption need not be a "spend less" matter but rather "spend differently"

Harmonising socio-economic development with the European Union's Resource-Efficient and Low-Carbon Policies
Green Public Procurement
Objectives
Fulfil the conditions for the implementation of the 2015 strategic goal of "green public procurement" (public procurement that takes account of the environment and the social component beside the price, and plays a significant role in decision-making) of Serbia
Decrease energy consumption through the procurement of efficient equipment, technologies and other products that influence energy consumption in the public sector

Harmonising socio-economic development with the European Union's Resource-Efficient and Low-Carbon Policies
Economic and Fiscal Policy Measures
Objectives
Provide dedicated funds, specified herein, from the budget for the further greening of the economy
Reduce the VAT and tariff rates on products and technologies that contribute considerably to reducing energy consumption
Adopt economic and fiscal policy instruments to put in place the enabling conditions necessary for the transition to a green economy/resource-efficient, low carbon economy

Harmonising socio-economic development with the European Union's Resource-Efficient and Low-Carbon Policies
Sustainable Development Innovations
Objectives
Achieve the recognised strategic direction in order to achieve a green economy through innovation

Advancing Social Inclusion and Poverty Reduction
Measures for Poverty Reduction and Social Inclusion of Vulnerable Groups
Objectives
Decrease the number of the poor who cannot meet their basic needs and decrease the relative poverty rate to 14% by 2020[172]
Promote sustainable economic growth that results in increased employment rates and lowers income inequalities

Advancing Social Inclusion and Poverty Reduction
Support for Creation of New Jobs and Lowering Unemployment
Objectives
Increase the percentage of employed population aged 20 to 64 (to the target of 68% by 2020)
Increase the efficiency of the labour market and change the workforce structure

Empower the Environmental Sector
Environmental Infrastructure for Sustainable Development
Objectives
Implement the adopted strategic documents related to the development of infrastructure for sustainable development

Empower the Environmental Sector
Support for Strengthening of Professional Capacities and Education
Objectives
Provide greater expertise for conducting tasks in the environmental sector, based on contemporary knowledge and experience
Implement adopted strategic commitments for the application of education for sustainable development

72 According to the strategic document *Serbia 2020 (draft)*

Establishment of a Long-Term Institutional and Financial Framework in support of Sustainable Development
Instituting Analysis of Sustainable Development Impacts
Objectives
Provide an approximate/indicative assessment of the project impacts on sustainable development in the earliest possible phase of decision making

Instituting a Long-Term Institutional and Financial Framework in support of Sustainable Development
Stable Institutional Set-up and Budget Provision
Objectives
Provide efficient and stable institutional functioning for the transition to a green economy and achievement of sustainable development
Provide budgetary lines for sustainable development in the important ministries
Provide various available sources of financial support
Make sectoral and inter-sectoral financing of sustainable development operational

Establishment of a Long-Term Institutional and Financial Framework in support of Sustainable Development
Other Activities for Establishing Strategic, Regulatory, Financial and Monitoring Mechanisms for Providing Sustainable Development
Objectives
Reduce the quantity of waste and packaging waste in line with the adopted strategic documents

8.1. Closing Considerations

After the 2012 Conference on Sustainable Development in Brazil, this document should be reviewed in terms of the conclusions and recommendations from the conference. To that end, this concluding chapter presents recommendations within framework activities, identified in this green economy study and in this national report with a view of: 1. improving the legislative framework; 2. further directing strategic planning; 3. improving the institutional framework; 4. improving implementation capacities; and 5. implementing some other recommendations that are defined herein.

For Serbia, as a country in transition towards an economy in line with the European Union's Resource-Efficient and Low-Carbon Policies, and a **country that has specific characteristics,** it is a great challenge to achieve a green economy and sustainable development. Serbia needs support, including financial support, in its effort to develop its own economy and a society based on those principles.

The recommended steps for improving the legal framework include: improvement and adjustment of laws to the green economy concept, support for more efficient law implementation, support for the legislative and procedural setting of indicators for sustainability of development recommended in this study (as one of the criteria for the approval of funding of projects in all sectoral fields), support for the implementation of

The analysis conducted during the preparation of this document gives approximate indications that in the sectors and in the competent ministries, **there should be a special budgetary line for sustainable development, and that the appropriated budget funds for three national strategies of high priority from the sustainable development corpus, should be assigned primarily to the**:
- Ministry competent for the environment
- Ministry competent for social policy

multilateral and regional agreements that contribute to development, support for new multilateral and regional agreements and treaties (e.g., sustainable development of Dinaric Alps and the Balkan mountains), if they have the potential to strengthen the macro-region.

The recommended steps for the further directing of strategic planning: after the 2012 Conference on Sustainable Development in Brazil, this document should be reviewed in terms of the conclusions and recommendations which are adopted and the development of a national strategic plan/framework for a green economy should be considered, as appropriate. Furthermore, the recommended steps include support for the horizontal analysis of any relevant strategies and legal solutions adopted thus far with the focus on their contribution to greening the economy and sustainable development, with the proposal and implementation of amendments with the aim of a harmonised and synergistic approach. Further steps should include the development of a national programme for the putting green public procurement into operation, the preparation of economic and fiscal policy measures aimed at greening the economy, and reviewing fiscal policy in order to stimulate the creation of new jobs. Based on this green economy study and the Strategy for Cleaner Production and other studies, a national sustainable consumption and production action plan for at least a period of 10 years should be developed. It is necessary to plan the development, production and use of domestic equipment, training for the necessary professions required for supporting the greening process, and to support the more efficient development of sustainable tourism, through green hospitality and hotels, green destinations and green services, as well as the promotion of a green-sensitive tourist services users, and update the Tourism Development Strategy based on these principles. It is also necessary to increase the availability of public funds if required, so that an array of strategic tools is available to better utilise private funding. It is important to support the development and implementation of other strategies noted in Chapter 8. It should be stressed that provincial and local self-government should be encouraged (through legislative instructions) to envisage in their budgets a special budgetary line for green economy and sustainable development (dedicated to the implementation of local sustainable development strategies).

The recommended steps for improving the institutional framework include: support for the development and achievement of conditions for the institutional set-up recommended herein (details are given in Chapter 8); such a stable institutional set-up for sustainable development shall be put into operation through amendments to legislation. It is necessary to strengthen and support the operation of the Sustainable Development Council and its working bodies, strengthen and support the work of the Social and Economic Council and

its working bodies, strengthen expert support with joint sessions of several Committees in the National Assembly, with a view of achieving parliamentary influence on sustainable development and the green economy. Continuous training of government officials related to the development and implementation of multilateral treaties in the area of the environmental should be supported, as should "expert, knowledge-based twinning activities" for the focal points of various conventions, and development of mechanisms for functional connection. Of no less importance is the development of operational mechanisms for connecting institutions with the purpose of maintaining regional cooperation.

The key recommendation for improving implementation capacities is to achieve the conditions for the full implementation of adopted laws and strategies.

Sustainable prosperity contains many challenges, the continuation of the transition in the economy through the proper selection of launched and new initiatives.

An anticipated possible risk[73] of time-delay in the practical application of the sustainable development concept would lead to long-term, irreversible adverse effects.
Serbia, in the model of its economy in transition, must also anticipate that it is located in a sensitive region that includes sensitivity to climate change and frequent natural disasters. The means for implementing this document and the resulting recommendations are already contained in the documents this study is based on or will be contained in the development documents which are recommended (in various sectors of action). Perceived, necessary and unavoidable investments in the environment[7474] and prevention of and adjustment to climate change should be seen as a driver of green (sustainable) development, as an initial investment, and never as an expense.
Symptoms of the current economic crisis signal that "long-term treatment" requires a systematic approach at national, sub-regional, regional and global levels. This document presents the commitment of the Republic of Serbia to contribute to agreement between countries of the world at the 2012 World Conference on Sustainable Development, and to be a basis for further development and implementation after the Rio+20/Johannesburg+10 conference.

73 Interagency Report "Towards Sustainable and Inclusive Development in Europe and Central Asia" UNECE/UNDP/UNEP/UNIDO/WHO/FAO/ILO (2011)

74 National Strategy for Environmental Approximation (NEAS) – National Environmental Approximation Strategy of the Republic of Serbia (2011)

Further considerations that support promotion of green economy:

- Additional support for the poor and excluded population groups in order to provide them with full access to education, work, health and social services, possibilities for solving residential and financial problems;
- Support for operational cooperation with the Chamber of Commerce; support for companies to adopt the LCA approach; encouraging innovative industrial design;
- Promotion of the "green exchange" of the innovative and investment funds of green economic growth;
- Support for recording and developing new and necessary green economy occupations and the prevention and mitigation of climate change (in the formal educational system, by accrediting adequate courses in informal education, support for lifelong learning);
- Support for civil society scientific and professional organisations (associations and others), which deal with the accomplishment of general interest in improving, popularising and promoting scientific and research work in the fields important for the green economy and the prevention and mitigation of climate change;
- Support for recording and developing potential for innovation related to sustainable development and the green economy;
- Support for entrepreneurs, companies and professional organisations of civil society (associations and other), which deal with the accomplishment of general interest in improving, popularising and promoting innovative work and the green economy;
- Support for the development of instruments/methodologies for a simple, indicative assessment of how a project, or an activity influences sustainable development (among other things, it should be gender-sensitive);
- Support for the implementation of other recommendations stated herein.

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