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Opportunities for resource efficiency investments in Serbia

Introduction

If we want progress, Serbia has to act at the same time on two fronts: promoting transition towards green industrial development with utilization of market forces for benefit of reduction of resources consumption and energy intensity of society and economy and reducing the gap that separates it from the more developed market economies, as well as implementing new development models, which would be sustainable in the economic, social and environmental aspects.

The liberty of designing and applying reforms in Serbia is obviously leading to chaotic and non feasible decision making, however it does not differ much from the abilities of other countries in region.

Strategic planning is a key link in an environmental change management system, while the creation of a database (information base) to identify the real status of society, economy and environment is an initial and the most important stage in a planning process.

Status of EU environmental legislation in Serbia

The Serbian Government, under the leadership of SEIO, **adopted a National Programme for the Adoption of Acquis (NPAA) for the period from 2013 - 2016.**¹ This document is a detailed, multi-year plan for the harmonization of national legislation with EU regulations.

The plan follows the dynamics of the EU accession negotiations, and it will be revised annually in accordance with the actual steps in the process of membership negotiations. Moreover 337 regulations, including 65 laws, are set to be adopted in 2013, and at the beginning of each year detailed legislative activity will be defined.

This plan is unfortunately in direct conflict with number of other strategies and plans (most significantly energy strategy and strategy for development of industry) that are directly undermining idea of transition towards non polluting economy of Serbia.

Given the complexity of the environmental acquis and its direct conflict with number of other sectors especially energy and heavy chemical and metallurgical sectors in Serbia, and the fact that the

¹ http://www.seio.gov.rs/upload/documents/nacionalna_dokumenta/npaa13_16.pdf

jurisdiction of the EU is divided between a numbers of institutions in this area, there is a strong need to further strengthen inter-agency cooperation and coordination.

There are legal and implementation gaps in the EIA and SEA laws that have to be rectified, to ensure these processes fit into the overall environmental planning framework. The correct transposition and application of the EIA (85/337/EEC) and SEA (2001/42/EC) Directives is very important, since they are directly linked to programming and project preparation for the EU pre-accession as well as structural funds and the European Commission can be expected to pay close attention to their application².

Points of weakness:

- lack of alternatives
- limited and /or lack of assessment (floods, climate adaptation, social consequences of selected scenarios, economically damages of selected scenarios..)
- cumulative impacts (multi sector and multi layer approach with direct feeding of findings in to algoritm of decision making)
- legal and institutinal framework for clear and feasible formulation and implementation of selected scenarios
- inadequate and incompetent staff at all levels of governance, including inspection services in the field of environmental protection (especially for strategic impact assessment, environmental impact, integrated pollution prevention and control, monitoring, inspection activities).

The practice of drafting of by-laws after the adoption of a primary law, while existing by-laws remain in force, must be discontinued in order to avoid long transitional periods before new laws are fully and effectively implemented and institutional setup defined.

From an approximation perspective, legal certainty is a prime criterion for compliance with the Acquis. If a law is unconstitutional, inconsistent, or in contradiction with other laws, than the Acquis cannot be considered to be fully transposed.

The existing administrative capacities, especially at the local level are insufficient for adequate implementation.

Separated policies, short-run interest and lack of holistic approach lead to managing problems separately, which creates contradictory regulations and conflicting solutions in economic, environmental and social problems.

² National Environmental Approximation Strategy for Serbia

Water management

Major sources of surface water pollution in Serbia include: industrial and municipal wastewater; agricultural drainage water; drainage and seepage water from landfills; water pollution caused by pollutants that are spread through rivers; as well as floods and waste materials originating from thermal power plants.

The Republican Statistical Office data reveal that only about 35% of households is connected to sewerage network. Out of the total amount of municipal wastewater, approximately 87% is released into water recipients without purification. In the major cities in the country, Belgrade, Novi Sad and Niš, wastewater is released into water recipients without purification. Diffuse sources of pollution account for more than 50% of the total water pollution.

Mining activities represent the greatest potential transboundary environmental risk.

The largest users of water is industry, power plant "Nikola Tesla" A and B, located on the river Sava, "Kostolac" A and B, located on the Danube and "Morava" on Velika Morava, given the considerable irrationality of our industry in terms of water use (which indicates the value of highly-specific water consumption per unit of product) as well as the fact that the existing technology is very slow change can be expected to lead to an increase in water consumption, pollution of watercourses, as well as dryness.

Conflict of jurisdiction and competences between state bodies on national and local levels for infrastructure projects needs to be clarified. Projects dealing with mapping of flood risk have been concluded, and vulnerability and flood risk maps for about 50% of Serbia's flood-prone areas are drafted³.

Biggest problem is lack of Strategy for water management and even more completely wrong approach to the concept of water protection that leads to obvious failure to cope with challenges that are happening and will happen in near future, which prevents further strategic planning and further adoption of plans. Also, Serbia annually does not implement the plans for flood protection because of small monetary assets which are provided from the budget.

It is necessary to continue the process of connecting multilateral and bilateral cooperation in compliance with the European directives in the field of water policy EU WFD / 2000/60 / EC, Directive 2007/60 EC on the assessment and management of flood risks and other EU directives in the field of water.

There is an inadequate tariff structure for full cost-recovery, low water metering rate in most public water companies (PWCs) and a lack of financial incentives or penalty system to deter polluting and over-consuming behaviour: water service costs account for less than 1% of household annual budget on average.

This is largely due to the fact that water is not viewed as falling into an economic category, but rather one of the ways in which the country's standard of living can be maintained.

³ Progress report for Serbia from 2013

Proposed activities:

- Adopting the **Strategy for water management**, on which basis are all other plans for water management that should be developed and adopted.
- Investments in wastewater treatment - constructing sewerages and treatment plants.
- Investments in infrastructure
- Provide stability in administration responsible for the sector
- Invest and enhance surface and groundwater monitoring network

IPPC

Based upon the Preliminary IPPC List (on December 31, 2012) for plants for which an integrated permit is issued in the Republic of Serbia, there are 161 of such plants, out of which 29 in the energy sector, 20 in metal production and processing industry, 28 in the mineral industry, 16 in the chemical industry, 4 waste management plants, and 64 plants in other fields of industry.

Department of the integrated permit along with the legal department has prepared a draft law amending the Law on Integrated Prevention and Control of Environmental Pollution. Changes in the law are related to issuance of integrated permit, regarding to extend period for issuing integrated permits for existing installations (up to 2020th), in order to achieve harmonization of national regulations and greater integrated approach to prevention and control of environmental pollution.

According to the **Progress report for Serbia from 2013** the current practice of having separate water and waste permits is not in line with the requirements of the IPPC Directive.

Linkages between environmental impact assessments and IPPC need to be strengthened and their synergies exploited. Capacity at central and local level for issuing IPPC permits is insufficient. Intra- and inter institutional cooperation needs to be established. Minimum standards for assuming statutory duties at local level are yet to be ensured before competencies are devolved. The public participation foreseen in the integrated permitting process needs to be significantly enhanced.

Assessment of compliance with BAT requirements will be possible after completing permitting process by majority of existing installations subject to IPPC Law.

Businesses continue to avoid their obligations to the Agency for Environmental Protection

Agency for Environmental Protection wants to inform public that analysis showed that many companies continue to avoid submission of data to the National Register of pollution sources. The Agency has initiated action, with the aim that in two months, collect all the missing data. After 80 days, until 27 July 2014th, Agency received 1104 report, which was less than 15% of the total number of statements were missing.

Estimated approximation costs of the investments in the air quality and climate change sector together are around €452 million (4% of total approximation costs in environmental sector) for the period until 2030⁴

⁴ National Environmental Approximation Strategy for Serbia

SEA

Experience has shown that large number of laws and other related regulations is not well coordinated and managed to achieve environmental protection in spatial plans, primarily because laws has no clearly defined objectives, and therefore cannot provide a responsible use of natural resources, space and environmental protection.

The introduction of SEA in the planning system in many cases is been neglected, implemented in artificially and formally manner, without real attachment to the decision making process and thus without real value and as a consequence large number of planning decisions have a negative impact on the society, economy and environment.

Structural part of the SPU is an overview of the current situation and the environmental quality of the area plan:

- The lack of relevant data on the state of the environment (the inability to define the ecological capacity, which represents base for defining protection measures)
- Often single-purpose measuring represent data of environmental conditions (such measurements cannot be relevant),the basic data of which is made SEA are often outdated
- Undefined integration process SEA in planning process
- SEA reports are often done in the final phase of a plan, disabling them to have more or any influence on the plan
- Public participation is proposed for the final phase of SEA process and only in the form of public debate that ends up in presentation, with few commnets that arent in most of cases influencing process or final findings.

The biggest challenges in the scoping phase are the analyses of alternative solutions presented in the plan (with decision making process and explanation of choices) and identification of needed impacts to be assessed.

Defining proper indicators and criteria for evaluation, multisecotral approach with clear and up front involvemnet of interested public (especially interested environmental and other profiles of NGOs) in to decision making process.

The SEA must be harmonized with other strategic environmental assessments, as well as with plans and programs for environmental protection.

Climate change

Serbia is extremely sensitive to climatic excesses of permanent changes. In the long term Serbian economy and infrastructure are nonresistant to climate change. There is no binding strategic analysis of adjustment to climate change sectors, programs and projects.

Office for climate change is being established and financed in framework of international projects and not thorough Budget of Serbia. Therefore, Ministry has under staffed capacity for dealing with climate change. Development of an adaptation system to new climatic trends has not yet been identified as priority in public policy.

Climate change have a significant negative socioeconomic impact, and Serbia has been greatly exposed to natural disasters, primarily floods which dominate with 55% of the total number of all disasters (62% were caused by nature). According to the International database on disasters (EM-DAT), in the period 2000-2011, Serbia faced a higher risk of natural disasters than of technological accidents.

In the light of the recent floods in Balkans, it's estimated that the annual direct flood damage in Serbia, is about 100 million EUR- indirect damage is not calculated. There are about 15000 torrential flows of which 1500 present a permanent threat.

According to data from the preliminary flood risk assessment for the Republic of Serbia (in accordance with Water Law , prepared by Ministry, National Water Directorate there are over 90 major floodplains⁵.

Proposed activities:

- **Improving flood risk management and flood risk prevention**- implementation of Flood Risk Management Plans, and trans-boundary cooperation.
- **Establish natural retentions as flood control measures** - forbid the construction of residential structures in flood retention areas.
- **Afforestation**- minimize the landslides that are very often closely connected with floods.

Energy

The strategic re-examination and positioning of national energy sector should enable this sector and country's economy to come out of current crisis at lower costs, as well as enable the future economic growth and sustainable economic development to take better starting position.

The strategic priorities of energy sector development in the Republic of Serbia by 2030 are:

- Energy Security
- Development of energy market
- Transition towards sustainable energy system

Given that energy sector has extremely high external effects (costs for or benefits to indirect participants who must not be direct consumers, or suppliers), it is necessary for this market to have corrective mechanisms for internalizing the externality (application of the "polluter pays principle").

⁵<http://www.rdvode.gov.rs/doc/6.2.1%20Znacajna%20poplavna%20podrucja%20za%20teritoriju%20Republike%20Srbije.pdf>

This means that the environmental and other external costs must be included in retail prices – through charges, fees, taxes, fines or other economic and financial instruments.

Energy is a commodity, thus its turnover and prices must have a market character.

About 25 million EUR of resources will go for the support for lignite sector in Serbia from IPA II, while in same time SPD⁶ clearly points that there is not sufficient level of development of RES projects for the Single project pipeline for financing.

Most projects are relating to the reduction of primary NOx emissions from thermo power plants.

This activity should be discarded and company should find other sources for NOx projects. For such volume of money it would be possible to prepare at least 10-15 blue prints (feasibility studies and detailed studies for transition of district heating systems to the biomass or other RES sources). RES as such receives practically 0% of IPA support in 2015.

Anti- pollution measures especially de NOx projects are according to our understanding not acceptable and should be considered as state aid that is not acceptable since it should be obligation of the company to invest in those measures. It is clear that in efficiency of production in company and COST NOT REFLECTING prices are reason for financial non ability of company to invest.

About 57 million EUR out of 62 million EUR is foreseen for fossil fuel transport gas pipeline, support for fossil fuel utilization connecting Obrenovac and Bajina Bašta and oil storage, and environmental improvement of lignite utilization.

In same time less than 1% is directly directed for the RES and that also in highly far-fetched manner that is not actually directly supporting any concrete project.

Concept of alignment of TPP capacities in Serbia have completely crowded out climate change consideration. Fulfilling obligations of IED, and alignment with IPPC have consumed most of sources without considering that actually company should fulfill its obligations and align the capacities.

For such amount of money significant number of small RES projects could be prepared and significant number of local EE funds established and operated.

In case of continued lignite dependency in Serbia and scenario “business as usual”, a low carbon energy sector can only be achieved by large carbon capture and storage projects, such a division might result in a situation where ‘light members’ would feel more comfortable to continue with unsustainable energy planning.

The bill for economic mistakes and failures will always arrive, regardless of delays.

⁶ Sectoral Planning Document

The potential for reducing emissions

Improving energy efficiency is a long-term activity that requires creating certain preconditions (legal framework, securing the sources of funding, education and awareness of the main actors and the public), that cannot be met at a fast pace, the question remains what extent would we succeed in reducing the existing non-compliance with the developed countries, or at least preventing them from growing further.

Serbia is an energy-intensive country – but the energy is not used efficiently.

Most of Serbia's potential in the area of renewable energy lies in biomass (49%), while the rest is in large Hydro-electric power plants (HPPs, 27%), solar (13%), wind (4%), geothermal (4%) and small HPPs (3%). Biomass energy resources are distributed across an area of 24,000 km² (25% of territory) covered with forests and 45,000 km² (55% of territory) used for agriculture. Biomass energy potential comes mainly from agricultural wastes and wood biomass. Usable energy potential of animal waste is estimated at 0.45 toe, while industrial and municipal waste is estimated at 1.4 billion toe.⁷

The Budget Fund for Energy Efficiency is already designed and incorporated in domestic regulation, more precisely in the Law of efficient use of energy, but Fund isn't independent body, and there is not enough capacity or the resources for functioning.

EE fund should be established again in form of self standing institution and for such end IPA sources should be used.

Increasing investment in forestry development will result in more economic activities in forestry, sustainable management of forests, reducing the cost of fossil fuels are imported as well as reducing the greenhouse effect, using efficient and low-emission devices, as well as technology based on wood biomass.

Proposed activities:

- Ensure direct support and financial resources for biomass
- Cogeneration - in existing plants
- Ensure better cooperation on the level of the relevant ministries - Fund for Energy Efficiency as a focal point.
- Encourage pilot programs for fast growing energy plants in Serbia, and research
- Education of professional staff for the use of biomass

From the aspect of environmental protection and cost-effectiveness in the energy sector, it is necessary to insist on the implementation of scenarios which include the implementation of energy-

⁷ http://www.mpzss.gov.rs/wp-content/uploads/datoteke/razno/IPARD_II_Program_2014-2020.pdf

efficiency measures, utilisation of renewable energy sources, within the SEA, considered much more favorable relative to the reference scenario (“business as usual”).

Energy efficiency is our largest energy resource, but we haven't even begun using that chance effectively.