

established and duly programmed for planning purposes. Distribution of grants must be flexible between sectors and re-programmed on an ongoing basis;

- » Restructure the SEPF in view of its high potential for revenue generation in order to avoid overpricing in some sectors (e.g. special streams of waste) and to allow flexible use of funds across subsectors and even sectors²¹.

Medium-term (2015-2019)

- » The public sector should contract a flexible drawdown financing line for ready co-financing of environmental projects. The Financing Plan indicates that an amount of approximately €360 million would be sufficient²². The amount and timing of this financing instrument will depend, to a large degree, on the evolution of the SEPF, which should be monitored closely;
- » Reform the PUCs, which play an extremely important role in the approximation effort, since they are key for cost recovery. Increase their scale of operations, with extension and modernisation of their services. PUCs will be the recipients of the largest portion of grants;
- » Eliminate the present heavy cross-subsidisation of tariffs and provide reference parameters for harmonised service charges that relate service levels to costs;
- » Establish the concepts of “Maximum Affordable Tariffs” and “Full Cost Recovery Tariffs” as reference parameters for project evaluation and the setting of tariffs.

MINISTRY OF ENVIRONMENT, MINING AND SPATIAL PLANNING

Short term (2011-2014)

- » Complete the Decentralised Implementation System (DIS) for EU funds before the end of 2011 (i.e. prior to candidate status). MEMSP will become an “Operating Structure” which entails significant additional administrative and planning expertise;
- » In parallel, prepare Directive Specific Implementation Plans. Target date: before the end of 2012;
- » Create a small but specialised EPU within the MEMSP, including a staff of at least two economists;
- » Urgently request Technical Assistance from IPA IV (Human Resources) in at least the following specialised areas, so as to meet the major challenges faced by MEMSP regarding the Directive Specific Implementation Plans and the Chapter 27 negotiation from 2012 onwards:
 - » EU grant objectives and procedures;
 - » The DIS operational procedures;
 - » Cost Benefit Analysis (CBA);
 - » Affordability and tariff setting;
 - » Financial planning and modelling.

Medium-term (2015-2019)

- » Create the capacity to mobilise the latent affordability at domestic level;
- » Create capacity for ensuring rapid and full mobilisation of available EU funds.

4.3 STRATEGY FOR INSTITUTIONAL APPROXIMATION

The institutional approximation strategy is designed to ensure that adequate institutional arrangements are in place for the Government of Serbia to successfully negotiate Chapter 27 of the Acquis with the EU Council, to implement and enforce the environmental legislation and to successfully draw the EU grants available to Serbia in the field of the environment.

It should be stressed that the EU legislation does not prescribe how to organise the competencies of the national authorities for implementation of the Acquis, provided that the competencies are clearly delineated and do not prevent full implementation. However commencement of the approximation process does provide a unique opportunity to review existing institutional arrangements and consider options for improvement in performance.

Continuing “business as usual” is unlikely to be sufficient especially when it comes to inter-ministerial co-operation and co-ordination (see Institutional Gap Analysis). The strategy proposed is similar to that adopted by the Czech Republic during its accession negotiations. It is based on the revitalisation of the existing Chapter 27 Sub-working

²¹ This is in line with IPA III and the EU multiannual programming objectives.

²² Note that the estimated €360 million is the maximum amount by which it is forecast that at any time outflows would exceed inflows. Thus the requirement is for a line of credit (to meet liquidity needs) not a loan for infrastructure per se.

group, and a series of technical working groups. This is set out in detail in chapter 5. While this Strategy requires significant effort and many meetings, it will be sufficient to enable Serbia to conduct effective negotiations with the European Council. It should be noted that adoption of this Strategy does not preclude subsequent adoption of more radical strategies, such as the establishment of a much larger Environmental Protection Agency than today's SEPA in order to optimise the use of staff resources. These options will be further considered by MEMSP.

The revitalised Chapter 27 sub-working group will perform three main functions:

- » Coordinate Chapter 27 **transposition** activities across all Ministries;
- » Coordinate Chapter 27 **implementation** activities across all Ministries;
- » Provide the information necessary to conduct the future negotiations with the EU Council (see Chapter 6).

The Chapter 27 Sub-working group will be chaired by a State Secretary and meet approximately once a month. The Sub-working group will compose of a representative from each environmental sector plus a representative from each of the five ministries listed in section 2.4.3, as well as a representative of the Ministry of Finance.

PROPOSED ACTIONS

Short term (2011-2014)

- » **Changes in Administrative Operations.** These are set for both inside and outside MEMSP. The main areas set for change are:
 - a. Inter-ministry coordination and cooperation. This will be managed via the Chapter 27 sub-working group described in section 4.3. The Environment Sectoral Representatives (ESR) on the Sub-working group will co-ordinate the activities of the working groups in their sector, established under the seven Sectoral Strategies. Each ESR will arrange regular meetings of the chairpersons of the working groups in their sector. In this way the ESR will monitor progress on every piece of the environmental Acquis and be in a position to report on progress to the Chapter 27 Sub-working group. The aim is that all issues of coordination and cooperation between ministries are managed at working group level and only in difficult cases brought to the Chapter 27 Sub-working group for resolution. The activities of the working groups should be supplemented by the work of the Collegium and its members in issues either concerning the management of MEMSP or that are cross-sectoral in nature;
 - b. Internal Management System – Human Resources (HR). A senior assistant minister will be placed in charge of HR and budgetary issues of the MEMSP and assist coordination between assistant ministers. One focus of HR will be staff assessment which will be conducted for each staff member by the line manager together with an HR Representative. These assessments will relate to the level of personal performance;
 - c. Internal Management System – Policy Development. One focus for the Collegium of the MEMSP will be to provide strategic policy development on issues such as: funding accession; Information Technology (IT) applications; MEMSP Management System; change management; institutional arrangements; cooperation, communication and staff training; permitting procedures and enforcement; law drafting practices. Project groups may need to be established to examine such issues in more detail. As the MEMSP is responsible for issuing many types of permits and their enforcement, this issue will be reviewed in the short term at the strategic level, with a view to optimising the use of staff resources in this area;
 - d. Staff Training. The staff assessment will include a training needs assessment (TNA). The individual TNA will be used to develop an annual training plan for all MEMSP staff.
- » **Interface with Provincial Administration.** This interface will be further developed by ensuring representation of the Provincial Administration on every working group established under the sectoral strategies. Provincial issues will be addressed at every meeting to promote cooperation between the provincial and central levels of administration. Any major difficulty encountered will be brought to the attention of the Chapter 27 Sub-working group.
- » **Changes in Administrative Structures.** It is recognised that the overall numbers of staff available are probably sufficient for the implementation of the Acquis, although the allocation of staff under the current Systematisation does not make optimal use of staff resource. The meetings of the working groups will be used to develop Directive Specific Implementation Plans and, as part of these plans, staff requirements will be reviewed. When beneficial, transfer of staff between institutions, such as the recent transfer of staff from RHSS to SEPA, will be undertaken.

Medium-term (2015-2019)

- » **Interface with Local Self Government (LSG).** It is recognised that LSGs have considerable responsibilities for environmental issues devolved to them under national legislation. The working groups (established under the sectoral strategies) will review any such devolvement with representatives of certain selected, representative LSGs to ensure that adequate resources are available for the implementation of the relevant part of the Acquis. In cases where resources are inadequate, the working group will either recommend that the LSGs must provide the resources, or that responsibility should revert to national level. The working groups will also review the adequacy of training and guidance in the implementation of the Acquis for LSGs. Each LSG has one or more associated PUCs responsible for waste, water supply and waste water collection and treatment²³. Most of the PUCs, with the exception of those in the three largest cities, are relatively small when compared with the size of operation needed to achieve reasonable economies of scale and adequate levels of specialisation. The MEMSP will review the utility operations in the solid waste and water services of each PUC to ensure that they are of an adequate scale and capable of achieving international benchmarks for efficiency. In short each PUC must have the capacity to meet the requirements of the environmental Acquis in relation to solid waste and water services in an economically efficient manner²⁴. In the case of solid waste, each single service area should have approximately 400,000 inhabitants in order to achieve suitable capacity, while in water services the threshold should be about 200,000 inhabitants per service area. It is recognised that the consolidation of PUC activities is vital to develop a pipeline of viable projects to ensure the drawdown of EU funds.

²³ These PUCs are often also responsible for other municipal services such as street cleaning, cemeteries, etc.

²⁴ The question of the financial sustainability of service operations is a key criterion applied by all funding bodies when considering the provision of support for capital investments.



CHAPTER 5

STRATEGY FOR ENVIRONMENTAL APPROXIMATION BY SECTOR

5.1 INTRODUCTION

This Strategy forms a framework for further approximation of Serbia to the environmental Acquis. It sets the Serbian public administration's main strategic direction and provides for an organisational focus to strongly improve the country's ongoing action on the path of approximation. It is not an exhaustive manual of action.

The NEAS represents the highest-level in the strategic planning hierarchy for approximation with the environmental Acquis. Based upon the overarching strategy detailed herein, two additional and increasingly detailed planning frameworks are being developed:

- » Sector Strategies – these focus on the specific environmental sectors and provide full detail on the scope of the Acquis, the current state of approximation in the sector, strengths and constraints, requirements for change, proposed actions, the implementation programmes, cost estimates and an investment programme, the next steps in transposition and where further technical assistance would be appropriate. The Sector Strategies contain a vast amount of detailed information which has been used as support for drafting the NEAS. An abstract of these Sector Strategies is provided further on in this chapter.
- » Directive Specific Implementation Plans – for each directive; these will contain the following elements: the responsible institutions, the main objectives of the directive, the current state of implementation, the plan for meeting requirements of the directive, requirements to the date of accession, identification of problem areas, identification of stakeholders, institutional, material and personnel needs, costs and financial resources, economic impacts, and identification of support projects.

An application of the NEAS in isolation from these Sector Strategies and implementation plans would not be sufficient to guarantee a successful approximation and a confident position for accession negotiations. Conversely, individual piecemeal approaches, even with best intentions, would not work without the systemic changes and actions envisaged by this NEAS. The NEAS, Sector Strategies and ultimately Directive Specific Implementation Plans therefore form a coherent framework, although with varying level of detail.

To establish the necessary link to sector specific approaches, this chapter provides an overview of basic features, issues, approaches and institutional settings of each of the environmental sectors. As will be evident, each environmental sector requires a different approach, although there are clearly many commonalities and interfaces between them.

The following sectors are outlined below and addressed in full by sector strategies

- » Horizontal;
- » Air Quality and Climate Change;
- » Industrial Pollution and Noise;
- » Nature Protection;
- » Chemicals and Genetically Modified Organisms (GMOs);
- » Water;
- » Waste.

As shown before, the total estimated cost (in millions of Euro) for the entire public administration system involved in the environmental Acquis, including the cost of studies and training is €536 million. The breakdown of the administrative costs by sector is provided in Table 14 and over time in Table 15.

Table 14: Total Administrative Costs over 2011-2030

ADMINISTRATIVE COSTS	€ million
WATER	146
WASTE	171
INDUSTRIAL POLLUTION & NOISE	93
NATURE PROTECTION	10
AIR QUALITY & CLIMATE CHANGE	93
CHEMICAL & GMOs	23
HORIZONTAL	-
TOTAL ESTIMATE	536

Table 15: Distribution of Estimated Administrative Costs

ADMIN COSTS (€ million)								
SHORT TERM				MEDIUM TERM				
2011	2012	2013	2014	2015	2016	2017	2018	2019
13	38	52	52	49	37	35	37	39

These administrative costs of approximation are estimated to be only 5% of the total cost of approximation. However, given the pressures on Serbian national and local authority budgets these administrative costs are substantial. An inability to allocate sufficient funds to meet these administrative costs - which are already proving to be prohibitive - could be a major constraint on the approximation process. Effective institutional reorganisation will be a necessity to ensure that costs are minimised and limited budgetary resources are best targeted at the key objective of preparing for accession.

It is proposed that each item of the environmental Acquis becomes the responsibility of a Working Group that will develop an Implementation Plan for each directive, regulation or decision. Each Working Group would be chaired by a person, typically at the level of a head of department, appointed for this purpose. The exact number of Working Groups may be increased or decreased in order to meet the work load. For example it might be decided to combine the Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) working groups thereby reducing the number of groups and meetings required. Equally in the case of complex directives such as the Water Framework Directive, the establishment of a number of associated sub-working groups may be required at least on a temporary basis when the workload is heavy.

Membership of the Working Groups must be agreed, after which attendance at the Working Group meetings should be mandatory. Working Groups should meet usually about once per month, but again the frequency can be varied depending on work load.

5.2 HORIZONTAL SECTOR

INTRODUCTION

There are nine main directives that make up the horizontal Acquis.

In contrast to sector, product or emission specific legislation, the so-called 'Horizontal' legislation relates to general environmental management issues. Principles enshrined in this legislation include: the need for environmental assessments, in which the public have a right to participate, before important planning decisions are made; a right of the public to access to environmental data held by public bodies; the inspection of operators and their liability for environmental damages; the systematic collection and processing of environmental data so as to provide a sound basis for decisions.

IMPORTANT LINKAGES

In addition to the linkages with all other sectors that result from the legislation being 'horizontal', the legislation has great importance for the planning, implementation and management of infrastructure projects with EIAs and due diligence assessments being required.

STATE OF PLAY

Except for the Public Participation and Access to Justice Directive (2003/35/EC), none of the Acquis in this sector is sufficiently transposed for full compliance with implementation requirements.

Transposition of the INSPIRE Directive (2007/2/EC) has only been initiated; legislation transposing the other Directives and implementing the EPRT Regulation (Regulation (EC) No 166/2006) require further work to complete transposition and/or address inconsistencies and/or provide for appropriate implementation.

Institutional responsibility for all areas of the horizontal Acquis has been assigned although further attention will need to be paid to improving communication between the various bodies involved.

CHALLENGES

The main difficulty for Serbia is the breadth of other legislation that the Acquis in this area impinges upon and the interactions with other sectors. For instance The Directive on Access to Environmental Information (2003/4/EC) is

still not entirely transposed, neither by the Law on Environmental Protection, nor by the Law on Free Access to Information of Public Importance. Penal provisions are scattered throughout many different pieces of legislation.

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 application.

Adequate implementation will require: clearer assignments of responsibility; improved co-operation and communication; monitoring implementation of the Acquis by all institutions; reviewing the effectiveness of implementation and taking action to address shortcomings.

STRATEGY

It is planned that a maximum of seven Working Groups would be established in this sector to manage the EIA, SEA, Access to Information, Access to Justice, Environmental Liability and INSPIRE Directives and the European Pollutant Release and Transfer Register (E-PRTR). The working groups will be under the politically managed Chapter 27 Sub-working group. Membership of the Working Groups should include MEMSP (including legal, technical and Control and Surveillance (C&S)), Water Directorate, SEPA, Republic Geodetic Authority (RGA), Public Health Institutes (PHIs), Autonomous Province (AP) of Vojvodina, City of Belgrade, LSGs and PUCs.

Transposition

As transposition of the horizontal legislation is, with the exception of the INSPIRE Directive, quite advanced, the strategy for completing this now requires: detailed analysis of specific provisions and requirements, which since the initial legislation was adopted may no longer be relevant; identifying ways to address the existent inconsistencies between different national acts. Specific and detailed issues to be addressed are identified in the sector strategy. Throughout this process it will be necessary to pay particular attention to furthering the clarity of legislation so as to promote legal certainty.

Implementation

In the short-term profound institutional reform is not required to allow for full compliance with implementation requirements. Rather compliance can be achieved through relatively minor improvements to practices and procedures as the basic required paradigm is in place.

It is not foreseen that additional staff resources need to be allocated to this sector at this stage.

Financing

From the economic and financial point of view, the Horizontal Sector is not a significant issue. Costs will be incurred by the various administrations in the necessary development of their functions but the amount will be small compared to implementation costs.

Administrative costs have been estimated for each environmental sector on the basis of prior experience in other transition economies (see Table 14 in section 5.1).

Some of these administrative expenses estimated for the "vertical" Environmental Sectors will be incurred in the Horizontal Sector. A more precise calculation will be made once the institutions dealing with the various issues regarding approximation are further defined.

The estimated distribution over the time-frame to assumed EU Membership status is shown in Table 15 in section 5.1.

A large part of the costs will need to be provided from the national budget and accessing the required funding may be difficult given the many demands on these funds and the pressures to reduce public sector spending. Consistent attention will need to be applied to identifying cost minimising implementation arrangements. In the short-term this can be achieved through eliminating those legislative requirements that have been identified as going beyond the minima laid down in the Acquis (see the Sector Strategy) and in the medium-term by revisiting the question of fundamental administrative reform and the consolidation and simplification of structures.

5.3 AIR QUALITY AND CLIMATE CHANGE

INTRODUCTION

The Sixth Environment Action Programme of the EU, "Environment 2010: Our Future, Our Choice" has, as one of its objectives, the achievement of levels of air quality that avoid unacceptable impacts on human health and the environment.

The most significant legislation for the implementation of the Sixth Environmental Action Programme in the air quality sector is the Cleaner Air for Europe (CAFE) Directive (2008/50/EC) which sets quality standards aimed at the protection of human health. All other legislation in the air quality sector, including control of emissions from mobile sources and improving fuel quality, support achievement of the quality standards set in the CAFE Directive.

The Sixth Environment Action Programme also recognises that climate change poses the main environmental challenge for the next ten years and sets the objective of reducing greenhouse gases to a level that will not cause unnatural variations of the earth's climate. To strengthen implementation of climate change issues a new Directorate-General for Climate Action ("DG CLIMA") was established in February 2010. DG CLIMA develops and implements the **EU Emissions Trading System** ("EU ETS").

The most significant legislation in the climate change sector is Directive (2009/29/EC) updating and extending the greenhouse gas emission allowance trading scheme. This legislation has allowed the development of a European wide market in GHG emission allowances for larger industries aimed at ensuring that "least cost" reductions in GHG emissions can be achieved".

IMPORTANT LINKAGES

An important linkage is to the industrial pollution sector where the new Industrial Emissions Directive (2010/75/EU) now incorporates the Large Combustion Plant Directive (2001/81/EC). This linkage is important because under the Industrial Emissions Directive stringent emission limits must be set for the largest point sources of emissions to air. Any emission limit that is permitted must be such as to ensure that the air quality standards set in the CAFE Directive are met and that the ceilings for NO_x and SO₂ under the National Emissions Ceilings Directive (2001/81/EC) also are met.

There are further linkages between emissions of ammonia from activities in the agricultural sector and the National Emissions Ceilings Directive. Activities in the agricultural sector include landspreading activities such as those controlled under the Nitrates Directive (91/676/EEC) or the Industrial Emissions Directive. Control of emissions of ammonia is important as ammonia can act as a pre-cursor for the nitrogen based acid gases and deposition of ammonia can lead to eutrophication in waters.

STATE OF PLAY

The MEMSP is the lead institution in this sector through its Air and Climate Change Sections. SEPA, AP Vojvodina and the LSGs are responsible for monitoring air quality. However, the Ministry of Infrastructure and Energy (MIE) has the lead for the transposition of Directives related to the quality of fuels and to automotive emissions.

Transposition of the key Directives in this sector is at a varying state of progress. The Directive on Volatile Organic Compounds (VOC) from solvents (1999/13/EC) has been fully transposed. The 'Clean Air for Europe', or CAFE, Directive is nearing complete transposition, as is its daughter Directive on arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air (2004/107/EC).

The Directive on VOC from paints and varnishes (2004/42/EC) is largely transposed, but the Directive on VOC from the storage and distribution of petrol (94/63/EC) only partially. Transposition of Directives related to the quality of fuels has just commenced.

A provision in the Law on Air Protection allows for the transposition of the National Emissions Ceiling Directive, although further by-laws are required.

The Directive extending the greenhouse gas emission allowance trading scheme has yet to be transposed.

The Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive and the Emissions Trading Directive have been identified as the two directives having highest priority in this sector. Both directives introduce new requirements, such as informing the public on a daily basis in the case of the CAFE Directive and tracking and reporting trades in emissions to the European Registry in the case of the Emissions Trading Directive.

CHALLENGES

Much work remains to be done in relation to developing the inventories of emissions of gases that are significant in relation to the management of air quality and of emissions of GHGs. When the inventories have been fully completed it becomes possible to establish programmes for the reduction of emissions and the length of time it will take for these programmes to be implemented. Once the information on inventories becomes available, this will form the basis for negotiating any extension of the dates for compliance with the CAFE Directive and the IED.

Time limits to attain limit values are set in the CAFE Directive. These can only be met in full if the IED is met in full, and as shown in the economic section, meeting this directive in full is expected to be unaffordable until sometime after the date of accession. As Member States were originally allowed a ten year transition period to achieve the limit values set, and given the scale of investment required especially in relation to reductions in emissions from large combustion plants, it is planned to negotiate a ten year period for implementation starting from 2012.

The NEC Directive will be approximated and linked to that, accession to the Gothenburg Protocol to the Convention on Long-Range Transboundary Air Pollution (CLRTAP) will be achieved. The emission ceilings that are agreed will be inserted in the Law on Air Protection. On the basis of the yearly EMEP/CORINAIR inventories, reduction programmes for sulphur dioxide (SO₂), NO_x²⁵, Volatile Organic Compounds (VOC) and ammonia (NH₃) will be drawn up to meet quantified reduction targets that have been negotiated with the Parties to the Gothenburg Protocol and with the European Council. The challenge is to establish the current levels of emissions and to agree the period of time over which the required reductions can be achieved in an affordable manner.

The institutional arrangements necessary for the emissions trading system do not exist. A competent authority is required to establish the GHG inventory for the emissions trading sector. Depending on the approach adopted to the transition to the system of auctioning emissions, an allocation of emission rights to individual companies may be needed. If so, such allocations would require a government decision, and prior to that would likely require discussion and agreement with the EC.

In addition a competent authority is required to issue GHG Emission permits and to undertake enforcement. A system of annual verification of emissions must be established. Verification should be carried out by independent verifiers accredited by the Accreditation Board of Serbia (ATS).

The challenge is to put these complex institutional arrangements in place in time to allow entry into the scheme at a date that is most affordable to Serbian industry. Consideration is being given to working towards a target of 2016 although it is recognised that progress will have to be monitored and it may not be until 1 or 2 years thereafter that the target can be achieved. The 2016 date is being considered as it is half way through the post Kyoto commitment period (2013-2020) and given the amount of work required, which is expected to take at least two to three years, any date much earlier than 2016 would be extremely hard to achieve. In contrast, much deeper cuts in emissions will be required from 2021 onwards, thus making it more difficult and more expensive for Serbian industry to catch up with the rest of Europe if a date of 2021, the start of the following commitment period, is chosen. Thus 2016 probably represents the earliest practicable date which should also minimise the shock to Serbian industry.

SEPA, with the assistance of C&S, will prepare the GHG inventory and ensure effective communication with the European Emissions Registry that is currently being developed. However, any decision on a National Allocation Plan (NAP), if such is utilised, would basically be a political one and for this reason, the Climate Change Section of MEMSP would be responsible for preparation of a draft NAP that would be presented to government.

STRATEGY

The main thrust of the strategy is to improve the quality of communication, coordination and cooperation for each directive between all the relevant stakeholders. In the air quality and climate change sector this will be achieved by establishing seven working groups to manage the following topics:

1. Air Quality Issues;
2. National Emissions Ceilings;
3. Quality of Fuels;

²⁵ NO_x is a generic term for the mono-nitrogen oxides NO and NO₂ (nitric oxide and nitrogen dioxide). They are produced from the reaction of nitrogen and oxygen gases in the air during combustion, especially at high temperatures. In areas of high motor vehicle traffic, such as in large cities, the amount of nitrogen oxides emitted into the atmosphere as air pollution can be quite significant. (source: <http://en.wikipedia.org/wiki/NOx>).

4. Emissions from Engines;
5. VOCs;
6. GHG Emissions Trading;
7. Fluorinated Gases.

The working groups will be under the politically managed Chapter 27 Sub-working group.

Membership of working groups could include representatives from MEMSP (including legal, technical and C&S), MIE, Ministry of Agriculture, Trade, Forestry and Water Management (MATFWM), Ministry of Economy and Regional Development (MERD), SEPA, Serbian Chemicals Agency (SHemA), PHIs, ATS, Customs Administration, AP Vojvodina, City of Belgrade and LSGs.

The Large Combustion Plant Directive will be handled by the Industrial Emissions Working Group, as the LCP Directive will be repealed by the Industrial Emissions Directive in January 2016.

A broader working group may be established at a later date to address more general climate change issues that go beyond those directly related to approximation.

Transposition

The working groups will focus initially on ensuring that the transposition of the relevant legislation is completed before ensuring the legislation is effectively implemented. The working groups will be responsible for preparing specific plans for each directive for which the group is responsible.

Implementation

The need for staff in different institutions will evolve as different parts of the Acquis are implemented, thus in order to maintain the optimum use of available staff resources a flexible approach will be adopted.

In the short term no significant alteration in institutional arrangements is required for the air quality sector but in the medium term, the needs of the different institutions will evolve. The needs will be discussed in the working groups and changes identified as being necessary will be recommended at meetings of the Chapter 27 Sub-working Group.

In contrast new institutional arrangements, as described above in the section "challenges", will be developed for the climate change sector to provide for the development of emission inventories and interfacing with the new European Emissions Registry.

In the short-term, to meet the new requirements of the CAFE Directive and the Emissions Trading Directive it is expected that a minimum of four new staff will be needed in the MEMSP (SEPA).

Financing

The NPV of the cost of approximation in this Sector will be €452 million, which is 6% of the total NPV cost of approximation in the environmental sector.

The main costs imposed by the legislation in the air quality sector will be incurred by:

1. Establishing and maintaining a network of air quality monitoring stations and associated quality assurance equipment, and reporting the monitoring results. These costs will be borne by central government. Most of this equipment is already available at the SEPA, although there is no budget for its operation and maintenance. In due course the stations will need to be replaced;
2. Preparing emission inventories of greenhouse gases and pollutants that significantly affect air quality. These costs will be borne by central government, AP Vojvodina and LSGs;
3. Preparing plans and programmes to achieve compliance with ambient air quality limits. These costs will be borne by central government.
4. Compliance with emission limits and technical requirements under the directives, or by the implementation of plans and programmes designed to improve ambient air quality. These costs will be mainly borne by Industry.

The investment costs estimated are set out in Table 16. The greatest costs arise in the Quality of Petrol and the Volatile Organic Compounds (VOC) Directives.²⁶ Investment costs in relation to improving the Quality

²⁶ Whilst the greatest costs arise in the Quality of Petrol and VOC directives, as indicated previously, given current scientific and economic knowledge and methodologies it is not possible to determine if the benefits from applying these directives are also the highest.

of Petrol include investment at the main refineries in Serbia. Investment costs in relation to VOCs will include improvements to facilities for the storage, loading and unloading of petrol as well as for the intermediate storage of vapours and the absorption of solvents. In the short-term, the completion of the Inventory and the Monitoring System will have a high priority.

Table 16: Investment Costs

AIR QUALITY & CLIMATE CHANGE Investment Costs of Achieving Targets in € Million		
DIRECTIVE/BUNDLE	Economically Adjusted Undiscounted Investment Costs	Target for Full Compliance
Monitoring Equipment	12	2014
Inventory Equipment	2	2013
VOCs	53	2023
Quality of Petrol	188	2023
Other	38	2023
TOTAL	294	

The impact of the approximation effort in this sector will be a rise in energy costs.

The Serbian Environmental Protection Fund (SEPF) will be particularly important in the financing of air quality improvements. The Revenues budgeted for Air Quality by the SEPF for 2010, 2011 and 2012 are indicated in Table 17 under Ozone depleting substances and SO₂, NO₂ emissions.

Table 17: Projection of SEPF revenues for the period 2010-2012

FEE	2010		2011		2012	
	mil RSD	mil €	mil RSD	mil €	mil RSD	mil €
SO ₂ , NO ₂ emissions, particles and produced and deposited waste	977.00	9.26	1,500.00	14.22	2,529.00	23.97
Ozone depleting substances	8.5	0.08	10.00	0.09	13.5	0.13
TOTAL	985.50	9.34	1,510.00	14.31	2,542.50	24.10

The projected annual income for Air Quality and Climate Control is expected to reach € 24.1 Million by 2012, a substantial amount.

Overall, the expected contributions from the SEPF imply that there will be excess Public Sector financial resources for air as from 2014. This indicates a need for close monitoring and – possibly – structural reform of the SEPF, so as to introduce necessary flexibility to ensure no part of scarce total affordability is “trapped” in the fund.

All the revenue generated through economic tools currently goes to the SEPF. An issue that should be considered is whether such funds should be ring fenced for environmental purposes or go into the general national budget. Given current conditions in Serbia, where these instruments are new and there is little data on the directly related costs, a combination of the two should be considered in order to ensure that funds are allocated integrally to environmental projects but with flexibility in the allocation between projects and sectors.

Other strategic factors that merit special mention are:

- » The compliance schedules will be negotiated on an installation by installation basis, and this requires a prior inventory and a financial analysis of the situation of each installation to ensure the negotiated plans are realisable;
- » Affordability at national level is strained and for economic instruments to be effective, multi-sector planning is necessary avoiding independent focus on any one sector;
- » Fees will be adapted to Serbian conditions, so as to avoid overcharging industry and consumers. Alternatively, the income will be used flexibly so as to provide substantial financial support to the public sector for environmental projects in other areas. Such multi-programming flexibility is fully in line with EU policies and the didactic objectives of IPA III, IV and V.

5.4 INDUSTRIAL POLLUTION AND NOISE

INTRODUCTION

There are nineteen pieces of EU legislation in this sector. The most significant are the Industrial Emissions Directive (2010/75/EU) and the Seveso II Directive (last updated as 2003/105/EC). The Industrial Emissions Directive (IED) aims at avoiding and reducing emissions from large industrial, agricultural and waste installations. The Seveso II Directive aims at avoidance and management of accidents at installations where significant quantities of dangerous substances are stored.

The most significant legislation in the noise sub-sector is the Noise Framework Directive (2002/49/EC) which requires the preparation of noise maps and plans for noise reduction for larger population centres and transport hubs and networks. The other noise directives assist the implementation of the framework directive.

Before Serbia's accession to the EU, the Industrial Emissions Directive will have repealed seven Directives, including the Large Combustion Plant and Integrated Pollution Prevention and Control (IPPC) Directives, which have long dominated the scene in this sector. Moreover, this new directive integrates and makes binding most of what used to be the Recommendations for Environmental Inspections (2001/331/EC). To adapt to this new scene, a major transposition effort will be required.

IMPORTANT LINKAGES

The new Industrial Emissions Directive has important linkages to both the air quality and waste sectors. These have been strengthened with the incorporation of the Large Combustion Plant Directive (2001/81/EC), the Waste Incineration Directive (2000/76/EC) and the Solvents Directive (1999/13/EC) into the IED. The IED also has links to meeting air quality standards under the CAFE Directive (2008/50/EC), water quality standards in relation to the Water Framework Directive (2000/60/EC) as well as some links to GHG emission trading.

The implications of these linkages are far reaching both in terms of transposition and implementation. Full transposition will require a review of the Law on Air, the Law on Water and the Law on Waste Management in addition to the Law on IPPC. Implementation also requires a review of the current arrangements to ensure that the coordination of actions by the different institutions involved is sufficient to guarantee *"an effective integrated approach"* as required by the IED.

Current EU proposals for the amendment of the Seveso II Directive will align it more strongly with the classification of chemicals under Regulation (EC) No. 1272/2008 on classification, labelling and packaging of dangerous substances and mixtures. The main implication of this linkage is to provide consistency in the use of classification of chemicals.

STATE OF PLAY

The MEMSP is the lead institution in the sector through its IPPC and Noise Departments. MEMSP is the main institution for the issuing of IPPC permits although both AP Vojvodina and the LSGs also have responsibility. The Noise Department has overall responsibility for noise, with SEPA having the main responsibility for noise mapping. The MEMSP is also the lead institution for the Seveso Directive, although the Ministry of Interior also has a significant role.

Transposition of the Integrated Pollution Prevention and Control (IPPC) Directive (2008/1/EC) is well advanced and sufficient to allow MEMSP to issue integrated permits, although, provision of a legally binding co-ordination mechanism guaranteeing the integrated approach that is the cornerstone of the IPPC Directive remains lacking. Further work on transposition will focus on the Industrial Emissions Directive.

The Seveso II Directive is largely transposed, sufficiently to allow work on the preparation of Safety Reports to commence. Consistency in the terminology used in this directive is being reviewed and transposition will be completed by mid 2012.

A regulatory framework is already in place to administer Eco-Management and Audit Schemes (EMAS) and Eco-Label Awards, as required by the respective EU-Regulations, allowing for the direct application of these Regulations after accession.

The Environmental Noise Directive is substantially transposed although checks for consistency in terminology remain to be completed.

The current institutional arrangements for IPPC are complex with implementation being undertaken at national, provincial and local levels. Responsibilities remain divided between MEMSP and the MATFWM making effective coordination difficult. Enforcement activity is similarly divided with little coordination between permitting and inspection activities.

The institutional arrangements for Seveso are simpler with responsibility for implementation being effectively only at national and provincial levels.

The institutional arrangements for noise place the responsibility for preparation of noise maps with SEPA. Under the present budgetary constraints this will be difficult to fund as noise maps are expected to cost approximately €0.5 million per each map. It is in conflict with the “polluter pays principle” that such maps will be prepared by SEPA rather than those responsible for the operation of the transport infrastructure.

CHALLENGES

Transposition of the IED is required. This is a challenge because the directive has recast seven directives across three different environmental sectors, namely industrial pollution control, air quality and waste. The challenge is made greater by current institutional arrangements which include permitting and enforcement activity at local, provincial and national levels rendering effective coordination very difficult. Whilst the IED requires the use of Best Available Techniques (BAT) to avoid, reduce and control emissions, standards for air quality and water quality also must be respected. Coordination of legislation to meet all requirements is challenging.

Preparation of noise maps and the development of noise plans is a novel experience in Serbia. The challenge is to coordinate the preparation of the plans by SEPA at central level with the subsequent development and enforcement of these plans at local level.

Additional resources may be needed to fulfil the requirements of the Large Combustion Plant Directive and the Industrial Emissions Directive (recast of the IPPC Directive).

STRATEGY

The main thrust of the strategy is to create integrated organisational arrangements as a key to approximation in this sector. Such arrangements are necessary to provide improved quality in communication, coordination and cooperation between the relevant stakeholders. With the aim of achieving such integrated arrangements, four working groups are to be established in the industrial pollution control and noise sector. The working groups will be under the politically managed Chapter 27 sub-working group. The four working groups will manage the following topics:

1. Industrial Emissions Directive;
2. Seveso II Directive;
3. EMAS/ECO Labelling Regulations;
4. Noise issues.

The IED working group will have two sub-groups to specialise in LCP and water issues. The IED Working Group should also consider the other six directives that have been repealed by the IED and agree how the new IED will be implemented. The six directives are cross referenced previously in this section.

Membership of the Working Groups would include MEMSP (including legal, technical and C&S), MIE, Ministry of Interior, Ministry of Economy and Regional Development, Water Directorate, SEPA, PHIs (Authorised Laboratories), ATS, Serbian Railways, Airport Authorities, Roads Authorities, AP Vojvodina, City of Belgrade and LSGs.

The IED and Seveso Working Groups should hold joint meetings at least once per year to assess the implementation of both directives and the important interface between the two.

A single working group for noise issues chaired by MEMSP may be established, although most of the directives fall to the MIE to transpose and implement. However given the heavy overlap between all noise directives when it comes to implementation, a single working group is recommended.

Transposition

The working groups will focus initially on ensuring that the transposition of the relevant legislation is completed before turning to ensure that implementation is effective. The working groups will be responsible for preparing specific plans for each directive for which the group is responsible.

The EMAS and ECO-Labeling Regulations are low priority and work can be postponed for some time in order to release resources for more urgent issues.

Implementation

In the short term no significant alteration in the institutional setting is required for the industrial pollution and noise sector and this period will be used to gain experience particularly in implementation of the IPPC and Seveso Directives.

In parallel with the ongoing implementation of existing legislation, the IED working group will review the existing organisational arrangements to ensure that coordination of actions by institutions can be sufficiently improved so as to guarantee "an effective integrated approach". This review will dominantly focus on the role of the MATFWM and its Water Directorate, but will also consider the roles of the air quality and waste departments of MEMSP in integrated permitting with a view to ensuring that a single integrated permit can be issued to each installation that requires one, and that such permits are enforced in an integrated manner. The review will also consider the role of LSGs in IPPC permitting with a view to having all integrated permits issued by MEMSP and AP Vojvodina. This review will be completed by the end of 2012, thereby allowing sufficient time to complete transposition of the IED by year end 2013.

The five year period 2014 – 2018 will be used to issue all the integrated permits required, thus ensuring these are in place by the assumed date of accession.

Failure to develop a high level of coordination of permitting and enforcement of integrated permits will result in delays in permitting and leave Serbia vulnerable to a delay in accession and after accession to enforcement action by the EU.

In the case of noise, recent legislation has placed the responsibility for preparation of noise maps with SEPA. The initial round of mapping must be completed by June 2012 and action plans prepared by June 2013, with the second round of mapping due by the end of 2017, with the action plans prepared by the end of 2018. Funding will be provided to SEPA for preparation of the plans.

Financing

The NPV of the cost of approximation in this sector will be €1,540 million, which represents 15% of the total NPV of the cost of environmental approximation.

The main costs imposed by the legislation related to Industrial Pollution and Noise can be divided into administrative costs and costs to be borne by industry.

Administrative Costs:

1. Preliminary costs of setting up or restructuring a competent authority together with any agencies that also might be required. This includes costs associated with physical and human resources and training;
2. Costs of introducing a permitting and enforcement regime and carrying out inspections;
3. Costs associated with identifying the installations to be covered by the directives and assessing their current situation;
4. Costs associated with the development of BAT guidance documents for each industrial sector;
5. Costs associated with consultation;
6. Costs of data recording and reporting;
7. Training costs, and
8. Ongoing costs of operating the system.

These costs may be offset by the implementation of a cost recovery scheme in accordance with the polluter pays principle. This can be achieved by levying a charge for the permitting and regulatory regimes on the operators of installations. There could be complete cost recovery for all the expenses associated with permits. Schemes such as EMAS and ECO-labelling should be entirely self-financing as far as the regulatory bodies are concerned. Consistent retention will be paid to cost recovery issues.

Costs to Industry:

Costs to industry will be substantial, although in many cases much of these costs will be recovered through greater process efficiencies.

The Action Plans of the Ministry of Energy have been analysed and adapted to the new Industrial Emissions Directive, which prescribes compliance for large combustion plants by 30 June 2020 and in cases of planned closure a period at a limited operating capacity (approximately 50%) is allowed until 31 December 2023.

Costs for industry have been estimated as set out in Table 18. Flue gas desulphurisation of the thermal power plants will be the most expensive component with estimated investments of €549 million. Remediation of contaminated sites will require an additional €470 million.

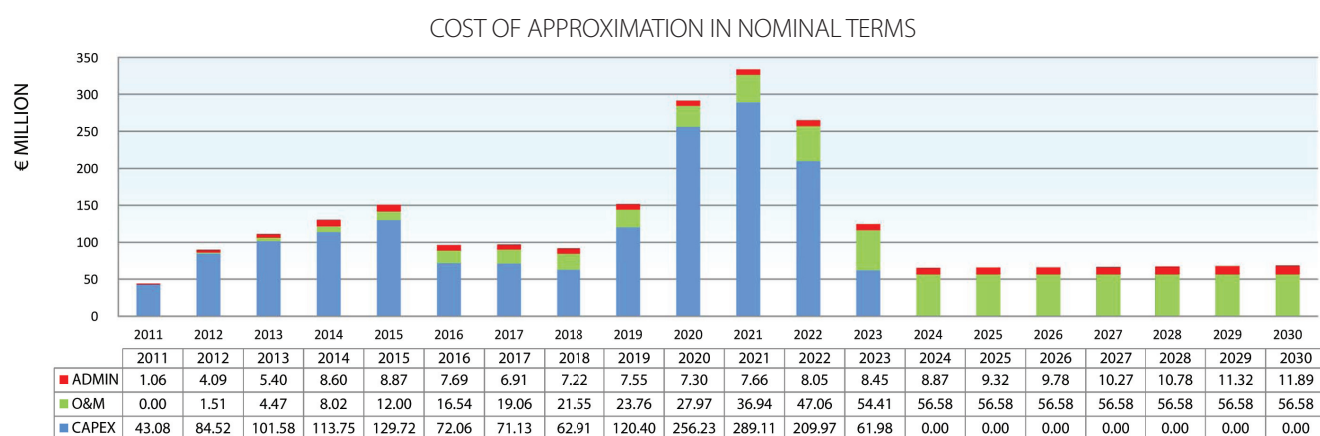
Table 18: Investment needed for Approximation in the Industrial Pollution & Noise Sector

Investment Costs of Achieving Target in € Million	
LCP Directive / Bundle	Economically Adjusted Undiscounted Investment Costs
TPPs Electrostatic Filters	37.5
TPPs NOx Reduction	47.7
TPPs De-sulphurisation	548.5
TPPs Disposal Technologies	63.7
Other 15% of Preceding	104.6
Heating Plants	227.1
TOTAL LCP Directive	1,029.1

Investment Costs of Achieving Target in € Million	
Directive / Bundle	Economically Adjusted Undiscounted Investment Costs
Remediation of Industrial Pollution	470.2
Waste Cadastre & Monitoring	17.0
Noise	17.6
Non-Ionising Radiation	5.9
Other	76.6
TOTAL Non-LCP	587.3

The multi-annual cost flow, including CAPEX, OPEX and additional administrative costs incurred (ADMIN) is shown in Figure 8 below in € Million and in nominal terms for the period 2011-2030

Figure 8: Total Cost of Approximation for the Industrial Pollution and Noise Sector Sector



STRATEGIC CONSIDERATIONS

- » The impact of the approximation effort in this sector will mainly be a rise in energy costs which will be transferred to the consumers through increased user charges. Present costs per kWh in Serbia are lower than in neighbouring countries and are well below full cost recovery levels.
- » The focus of the financing burden will be on industry. Agreements will have to be individually reached for each installation. This will require taking into account not only technical considerations, but also financial ones so that a package achievable conditions can be derived that meet compliance schedules as established by the new Industrial Emissions Directive or as specifically agreed between Serbia and the EU.

- » For remediation of industrial pollution, EU grants will be available, initially under IPA III and in greater amounts after accession under the Structural Funds. Remediation of industrial pollution will require very large expenditure and cooperation in this field between LSGs, industry, Central Government and IPA III is especially important.
- » It must be noted specifically that the expected contributions from the SEPF for air quality, a closely related sector, imply that there will be excess public sector financial resources for air as from 2014. This indicates a need for close monitoring and possibly structural reform of the SEPF, so as to introduce flexibility to ensure no part of scarce total affordability is “trapped” in the fund.

As indicated previously in the summary of the air sector strategy (section 5.3), an issue that will require further consideration is whether SEPF funds should be ring fenced for environmental purposes or go into the general national budget.

Technical Assistance may be required to support the reorganization of SEPF so as to:

- » Adapt fees to Serbian conditions;
- » Use the income for air flexibly so as to provide substantial financial support to the public sector for environmental projects in industrial pollution. This multi-programming flexibility is absolutely in line with EU policy and the didactic objectives of IPA III, IV and V.
- » The action plans drafted by the Ministry of Energy for conforming with the emission limit values should be reviewed to avoid a stricter than necessary compliance schedule for LCPs.
- » Affordability at national level is strained and for economic instruments to be effective, multi-sector planning is necessary to avoid too great a focus on any one sector.

5.5 NATURE PROTECTION

INTRODUCTION

Nature conservation and the protection of biodiversity are key environmental policy objectives of the European Union which are based upon principles of the sustainable use of natural resources. There are ten main pieces of EU legislation in this sector.

In March 2010, the EU Heads of State and Government set themselves the ambitious target of halting, and reversing, the loss of biodiversity in Europe by 2020. A fundamental policy mechanism in this regard is the Natura 2000 network of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) which is designed to protect the most important natural habitats. The EU has also banned a number of activities that threaten species; has legislated in relation to trade in endangered species as well as products from seals and whales, and in relation to the keeping of wild animals in zoos; and has prohibited the use of leghold traps in the EU.

IMPORTANT LINKAGES

Due to its territorial application Natura 2000 has considerable impacts which need to be taken into account when implementing other policies, particularly those relating to agriculture, forestry and infrastructure development. The need to integrate Natura 2000 sites into spatial and infrastructure planning results in linkages with the implementation of the EIA and SEA directives.

The Birds and Habitats Directives are also linked to the Environmental Liability Directive which aims at the prevention/remediation of damage to Natura 2000 sites.

STATE OF PLAY

Whilst the Habitats Directive (92/43/EEC) has been transposed through amendments of the Law on Nature Protection, this Law needs now to be revised to increase coherence, clarity and legal certainty.

The Law on Nature Protection has been amended (Official Journal of the Republic of Serbia 88/10 and 91/10) to introduce the “appropriate assessment” procedure required by the Habitats Directive for projects that may have an impact on NATURA 2000 sites. This is an essential contribution to the alignment of the Law on Nature Protection with the Habitats Directive.

However, further alignment is necessary. For instance the existing legislation includes a typology of protected areas and a typology of protection regimes, but the relationship between the two is not sufficiently clear. Adding the requirements of NATURA 2000 on top of this has further reduced legal clarity and certainty.

As a result of on-going work in relation to this, to date it is not possible to forecast all the sites which may be designated under NATURA 2000 or, hence, the proportion of Serbian territory that might be accounted for by such sites. The mapping of potential NATURA 2000 sites is on-going.

It is however recognised that this process needs to be accelerated. In addition to the obvious benefits of the NATURA 2000 regime for the protection of habitats, the difficulties that some new Member States have encountered have been noted. Not least amongst these are the potential for delays and difficulties in planning and implementing large scale infrastructure projects co-funded by the Cohesion funds.

The Law on Nature Protection also needs to be brought into line with the Directive on Access to Environmental Information.

In contrast, the Rulebook on transboundary movement and trade in protected species is harmonised both with the CITES Convention and the trade related EU legislation of the sector. The Wild Birds Directive (2009/147/EC) is almost fully transposed. Legislation related to leghold traps is still required.

The EU Regulation on Endangered Species (Regulation (EC) No 338/97) was largely inspired by the CITES convention to which Serbia has been a party since 2006. Compliance with convention requirements provides a sound footing for implementation of the requirements laid down in the regulation. In addition, as both the CITES Convention and the EU legislation relating to endangered species mainly concern international trade, addressing the two together can result in synergies, particularly as the same stakeholders (customs, MEMSP, MATFWM) are involved.

In relation to implementation, a clearer delineation of responsibilities would be helpful (Forestry Directorate (MATFWM), LSG, MEMSP, AP Vojvodina, Srbija Šume, Vojvodina Šume, National Parks). In addition, currently there is insufficient capacity (rescue centres for seized animals, MEMSP staff to process applications, availability and training of enforcement officers) to fully enforce the Rulebook on transboundary movement and trade in protected species.

Under a newly established Working Group 'Ecological Network Natura 2000', mapping of eligible sites and listing of endangered species has commenced.

Currently the financing of nature protection in Serbia relies in part on exploitation of natural resources. This can lead to conflicting objectives for institutions.

CHALLENGES

Serbia faces two main challenges in this sector. First, is the mapping of sites of EU interest and the listing of species to be protected. Implementing Natura 2000 as early as possible will avoid conflicts with other planning activities, for instance of major infrastructure projects which later on may turn out to be incompatible with the preservation of SACs.

Approximately 518 thousand hectares of land are currently protected in Serbia. It is estimated at the moment that some 229 thousand hectares of land will be added, which would result in approximately 8.5% of Serbia²⁷ being designated under the EU's Nature directives (which while below the current EU average would be above the 7.2% of UK territory so designated).

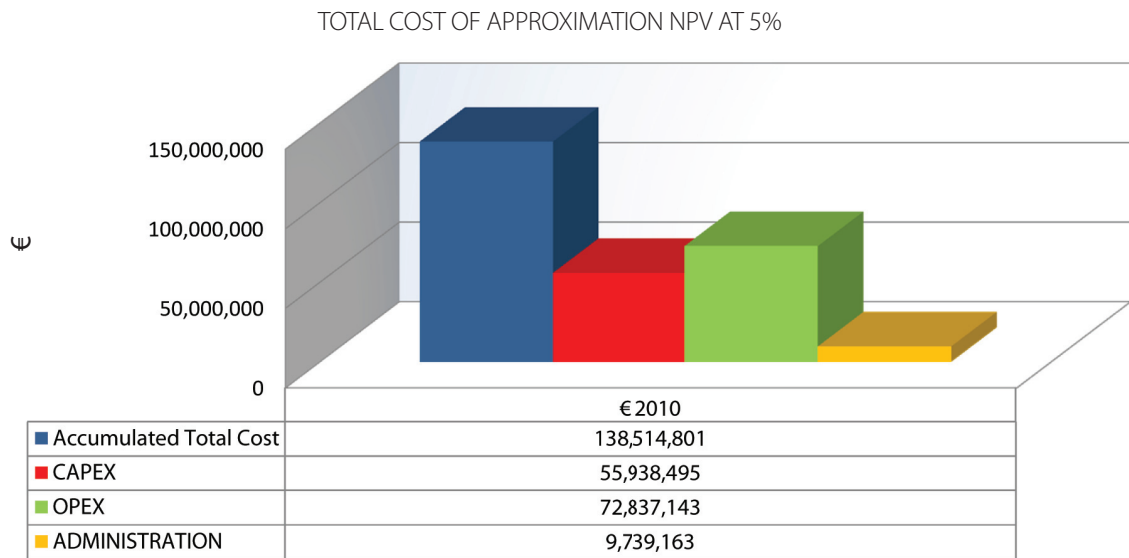
The multi-annual (2010-2030) cost flow, including CAPEX, OPEX and additional administrative costs incurred (ADMIN) is presented in Figure 9 in € million and in net present value.

A capital expenditure requirement with an NPV of some €56 million is forecast some of which it is assumed will be incurred in 2019 after the assumed date of accession. Until accession, operating expenditure and administrative expenditure at net present value are estimated at some €18 million and €2.4 million respectively.

The main costs incurred will be the OPEX for managing the Natura 2000 sites, which up to 2030 will account for € 73 million (in NPV terms). Regarding the designation of sites, the main cost will be in transaction costs, which are the costs of purchasing, or securing by other means, control of these sites. These costs, which are highly variable from one country to another, are estimated at €46 million on the basis of the surfaces planned for the sites and prior experiences in transition economies.

²⁷ Note that caution should be exercised when assessing this estimated proportion of land area as it could be that following more detailed assessments the same land area were to be the subject of designations under both Nature directives. Following identification of sites detailed analysis using geographical information systems would be required of boundaries of designated areas to calculate a more precise indication of the proportion of the Serbian land area subject to designation under the Nature directives.

Figure 9: Total Cost of Approximation for the Nature Protection Sector, NPV at 5%



The development of a cost-minimising administrative structure for implementation and enforcement is likely to require some institutional reform.

STRATEGY

It is planned that one working group would be established in this sector to manage the Wild Birds Directive, the Habitats Directive and all other nature protection directives. The working group will be under the politically managed Chapter 27 Sub-working group. Membership of the working group could include MEMSP (including legal, spatial planning, technical and C&S), MATFWM, Water Directorate, the Institute for Nature Conservation in Serbia (INCS), SEPA, National Parks, Public Forestry Enterprises, AP Vojvodina, City of Belgrade and LSGs.

Transposition

The Law on Nature Protection requires revision in the short-term to further legal certainty and clarity so as to put the SACs/SPAs of the Habitats and Wild Birds directives at the core of the nature protection regime. This will entail revisiting the Law on Environmental Protection and the Law on Forests.

Potentially necessary changes to the Rulebook on transboundary movement and trade in protected species will be re-considered as on accession the related EU regulations (Endangered Species, banning trade in seal products, common rules for imports of whales or other cetacean products) will be directly applicable in Serbia.

Implementation

Appropriate implementation of Natura 2000 will require further institutional development to take full advantage of the expertise and experience available and progress this important task as quickly as possible. In this regard, focussing on accountability and responsibility, the role of the INCS will be assessed in order to determine ways in which it may have a more active role in the implementation of the system.

Training and equipment will need to be provided to strengthen the capacity to implement and enforce legislation protecting endangered species.

Financing

Overall, the NPV of the approximation cost in Nature Protection is estimated to be €139 million, which is 1.3% of the total cost.

The necessary investments, for which donor funding will be actively sought, are expected in the main to be made before accession.

It would be preferable, at least in the short term that the maintenance of protected areas was directly funded from the state budget.

In the medium to longer-term however, it will be essential to increase funding for nature conservation and biodiversity protection with user fees. If this is to be achieved it is necessary to further progress the development

of Serbian rural areas. In this regard, co-operation between the MEMSP and the MATFWM in relation to programming for Component V of IPA will be important. This will also be the case in relation to the design of pilot agri-environmental measures under IPA component V which could be used to support the preservation of the NATURA 2000 network in Serbia. Other funding opportunities will also be pursued including under IPA components II, III and possibly also IV as well as under national research programmes and or FP7²⁸.

5.6 CHEMICALS AND GMOS

INTRODUCTION

There are twenty seven pieces of EU legislation in the sector with most of the legislation consisting of Regulations.

The growing need for data on properties and risks of chemicals in the environment has lead the EU to introduce a framework Regulation (EC) No. 1907/2006 concerning Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) to assess the impact of chemical substances (as such, in mixtures or in some products) on health and environment. "No data, no market" is its core principle. Producers and importers of chemical substances in the EU must apply for registration at the European Chemical Agency (ECHA) by submitting a dossier mentioning the tonnages and properties of their substances.

This framework co-exists with legislation focused on specific substances, such as those which deplete the ozone layer, on products (e.g. pesticides and biocides) and on trade. In addition, EU legislation promotes good laboratory practices and aims at limiting experiments on animals.

GMOs are traditionally added to the chemicals in this sector as they too are man-made and have an impact on the environment. EU legislation establishes authorisation regimes for their use in a confined space, as well as for their deliberate release in the environment (2001/18/EC). Once a GMO crop is authorised, Member States can, under restrictive conditions, regulate its co-existence with traditional crops.

IMPORTANT LINKAGES

Chemicals and GMOs are market products. As such they are regulated by the internal market Acquis, as well as by the environmental Acquis. Any legislative initiative, especially if it goes beyond the latter, must be checked for compliance with the former.

There are also important linkages between the recently established EU framework promoting the sustainable use of pesticides, the Water Framework Directive, the Habitats Directive and the Birds Directive.

In addition, there are some important linkages with pieces of legislation related to Horizontal, Air, Waste and Industrial Pollution sectors.

STATE OF PLAY

Due diligence was made to harmonise with the Acquis in the chemical sub-sector. Transposition/harmonisation has largely been achieved. Only the parts related to centralised procedures in the EU were not transposed but approximated instead. The aim of this legislation is to assure appropriate classification, labelling and packaging of chemicals (CLP) and Safety Data Sheets (SDS) for chemicals placed on the Serbian market, and to be prepared for the demanding requirements of REACH related to risk assessment. Transposition of the Directives on good laboratory practices and on animal experiments has commenced. The Ministry of Health and MATFWM are in charge of these activities.

This sub-sector clearly benefits from a streamlined institutional set-up, with a pivotal role devolved to the Serbian Chemicals Agency (responsible for industrial consumer chemicals and biocidal products - transposition of REACH, CLP, Biocides Directive, etc.).

Whilst transposition of the Biocides and Plant Protection Products Directive (898/8/EC) is completed, some catch-up with the latest EU developments on the authorisation regimes for pesticides and their sustainable use is needed.

In the GMO sub-sector, amending Laws and by-laws, aligned with WTO requirements and EU legislation, have been prepared. These amendments would repeal the current ban on GMOs.

²⁸ EU 7th Framework Programme.

CHALLENGES

Whilst a lot is done to prepare local operators for the entry into the common market, joining that level playing field will require un-doing that part of the regulatory framework that was provisionally adopted to harmonise with EU Regulations, the bulk of the Acquis in this sector. That will require careful preparation.

Since it is not possible to transpose procedures that are subject to the centralised procedures in the EU, it will be necessary to identify all legal entities that will have to apply those procedures (registration, evaluation, etc.) and inform them on their future obligations.

Additional resources are likely to be needed in relation to the Ozone Layer Depleting Substances Regulation (Regulation (EC) No. 2037/2000).

STRATEGY

It is planned that a maximum of three working groups would be established in this sector to manage REACH and associated legislation, Genetically Modified Micro-organisms/GMOs directives, the Good Laboratory Practice (GLP) Directive (2004/10/EC) and the Animal Experiments Directive (86/609/EEC). The working groups will be under the politically managed Chapter 27 Sub-working group. Membership of the working groups could include MEMSP (including legal, technical and C&S), MATFWM, Ministry of Health, Serbian Chemicals Agency, ATS, PHIs, and Customs Administration.

The Working Group on Good Laboratory Practice should confirm that it is responsible for all of the animal laboratory welfare Acquis.

Transposition

For the chemicals sub-sector, the GLP and Animal Experiments Directives will have to be further transposed. Repealing Serbian legislation that transposes EU Regulations is a move that will have to be prepared thoroughly. During this preparatory work, any requirement that goes beyond the Acquis will have to be re-considered for its compliance with the Acquis and its cost effectiveness. Enforcement of the parts of the Acquis that were not covered before accession (centralised REACH procedures) will have to be introduced upon accession.

For the GMO sub-sector, the amending Laws and by-laws that have been prepared need to be adopted urgently, so as to align with WTO requirements and EU legislation.

Implementation

Further implementation in this sector will require institutional strengthening of inspection and enforcement through training programmes, as chemicals and GMOs are novel matters for the officials in charge and of a highly technical nature. Also, it will be necessary to organise training for the staff of the Serbian Chemicals Agency (on risk assessment, enforcement of specific REACH provisions and for the participation in the work of ECHA) and for the industry in order to help them in honouring their REACH obligations (which are very demanding and knowledge based).

Reinforced cooperation will also ensure that environmental and occupational hazards are jointly taken care of by MEMSP, MATFWM and the Ministry of Labour and Social Welfare.

Co-operation between the Serbian Chemicals Agency and European Chemicals Agency (ECHA) shall be further pursued, so as to ensure proper and timely integration of the Serbian chemical enterprises in the common market. Furthermore, the Serbian Chemicals Agency will participate after accession to the EU's 'rolling plan of action,' required by the REACH Regulation for the evaluation of substances, of application dossiers, of authorisations, of new restrictions, etc. The Serbian Chemicals Agency will have to align its work plans to these new tasks, as well as to the participation in the work of relevant ECHA bodies and of bodies responsible for biocidal products.

To implement the new EU framework promoting sustainable use of pesticides, new cooperation mechanisms will be established between MEMSP and MATFWM (Plant Protection Administration and Water Directorate).

Financing

The total accumulated cost over thirty years at net present value has been estimated at €104.95 million²⁹.

²⁹ Based on the so far collected information, a number of projects through which an accurate cost of approximation will be assessed are under preparation.

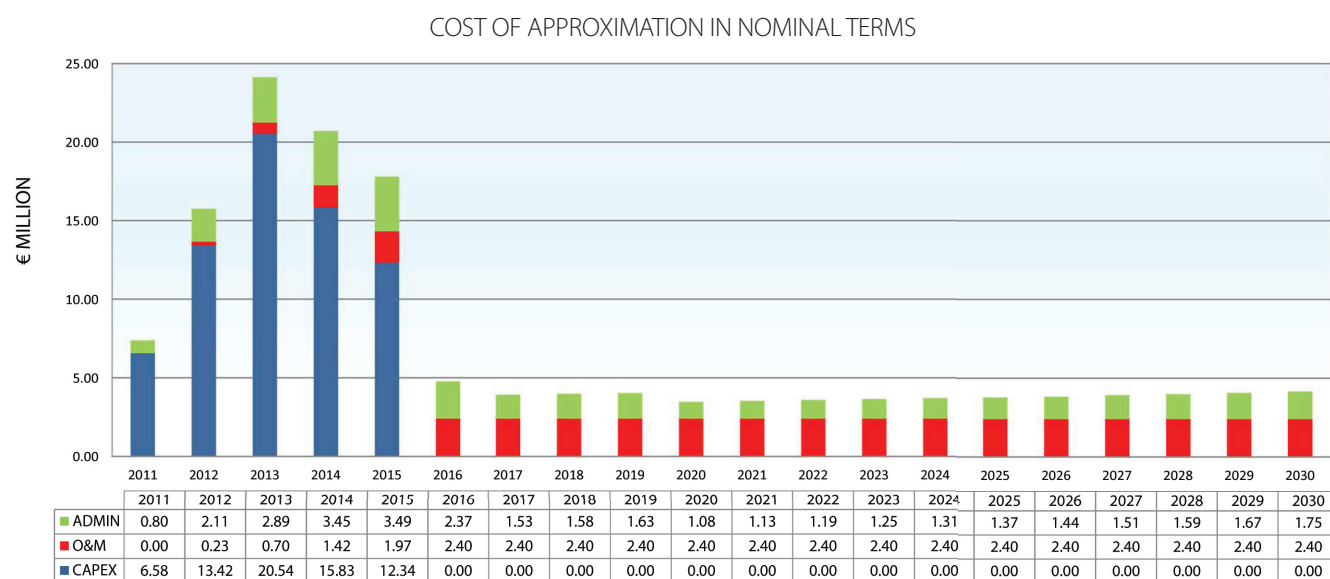
Caution must however be exercised when evaluating costs of a specific sector as, by its nature, environmental protection is multi-sectoral and, as explained previously, solving the problems in one area may also reduce them in another. This applies especially to chemicals, which are present throughout the entire spectrum of industrial production.

The main costs in this sector that are not included in others (VOCs, fuel, Remediation of contaminated sites, etc.) are for GMOs and the Asbestos Directive (87/217EEC), which require estimated investments with an NPV of €28 million and an NPV of €25 million respectively.

The bulk of the costs will be borne by the private sector. In the Member States, adaptation to REACH has led to changes in existing supply circuits, to mergers, acquisitions and sometimes to closures of businesses which could not face the cost. The Serbian chemicals sector is likely to adapt in the same way, even before accession.

The cost to be borne by the public sector is estimated, at net present value, at €22.98 million over 30 years. This cost, mostly incurred by the Serbian Chemicals Agency, will be partly recovered through user charges and that will move the cost cursor further towards the private sector. To minimize the cost, consistent attention will need to be applied to keeping to the requirements of the Acquis and not going beyond, unless it is deemed necessary to face the related cost.

Figure 10. Cost of Approximation in Nominal Terms for the Chemicals and GMO Sector



5.7 WATER MANAGEMENT

INTRODUCTION

In terms of the proportion of total environmental approximation costs, water is by far the largest sub-sector. The sector is covered by a large body of EU legislation. However, this legislation does not cover the entire range of water management functions, for example there are no requirements in respect of irrigation, or water scarcity and drought. Therefore in order to achieve a fully integrated approach to water management, the planning process must encompass aspects that are not covered by EU legislation as well as those that are. This fully integrated approach to water management planning is the core principle behind the new Water Law (2010) and the approach to approximation in the Republic of Serbia.

The Water Framework Directive (WFD) (2000/60/EC) dominates EU legislation in the water sector by:

- » Establishing environmental objectives;
- » Proscribing a planning process for water management that entails:
 - » Monitoring, assessment and analysis of pressures and impacts;
 - » Preparation and implementation of six yearly river basin management plans designed to achieve the environmental objectives.

Associated directives on environmental quality standards, dangerous substances and groundwater supplement the WFD, as do the requirements of other directives:

- » Mandatory water quality standards for specific uses: drinking water and bathing water;
- » Controls over sources of pollution: urban wastewater, nitrates from agriculture;
- » Key environmental legislation; the Industrial Emissions Directive, environmental impact assessment.

In addition to these measures, the Acquis also requires the preparation of six-yearly flood risk management plans.

IMPORTANT LINKAGES

The Acquis in the field of water is broad, onerous, complex to administer and expensive to implement. The complexity entailed in administering the legislation arises in part from the requirement to address the many factors that influence the water cycle, notably:

- » Industrial activities regulated under the IPPC (IED) regime and associated legislation;
- » Agricultural activities including provisions of the Common Agricultural Policy pertaining to good agricultural and environmental conditions (cross-compliance);
- » Urban and transport infrastructure including modifications to drainage patterns, water quality and the morphology of water courses.

The Acquis leaves (in accordance with the subsidiarity principle) a number of key matters in the hands of Member States, most notably:

- » Water resource allocation (although this is indirectly addressed in the WFD, which imposes constraints on total resource use by virtue of the need to attain ecological objectives);
- » Which areas of Member State territory are to be supplied with drinking water from central “public” systems as opposed to “own sources” such as private wells;
- » The level of flood risk protection that is provided to persons and property.

The Acquis does not impose specific requirements for institutional provisions in the water sector, but relies on Member States to put in place “appropriate arrangements” through the designation of competent authorities.

STATE OF PLAY

MATFWM (the Republican Water Directorate) is competent for issues related to integrated water management.

The current legislation in the field of water is not fully harmonised with the Acquis, but steps are currently being taken to rectify this. Concordance has been improved greatly by the introduction of the new Water Law (2010), which achieves partial transposition of many elements of the Acquis, and makes provision for a large body of secondary legislation to be in place by the end of 2012. Some items of this secondary legislation have already been completed and the remaining items are in process. This secondary legislation will however not suffice to complete the transposition process; the new Water Law will have to be revised as well. Whilst it is clear in the Law who is in charge of drawing up basin management plans, “appropriate arrangements” to implement them are lacking. Moreover, there are a number of aspects of the Law pertaining to legal certainty that have to be addressed. For instance, the legal regime of assets (riparian land and constructions) seems to be conducive of litigation, and thus jeopardizing the effectiveness required for genuine transposition. A number of obligations arising from the Acquis will be given effect through amendments of other legislation including that relating to drinking water, to agricultural practices (in accordance with the Nitrates Directive (91/676/EC) in particular) and to municipal services (requirement for the provision of wastewater collection systems in urban agglomerations of over 2,000 population equivalent).

Serbia has state bodies assigned to all aspects of water management. As is the case in many Member States, these institutional provisions are complex and entail a number of institutions at both the central and local level. The provisions for water management planning established under the Water Law (2010) require a range of separate but harmonised plans (including water management, flood risk management, pollution prevention) and entail planning on the basis of both administratively appropriate and hydrologically derived boundaries. The use of administrative boundaries is crucial since all plans must be harmonised with land use plans, which are adopted by local administrations. In order for these provisions to be implemented effectively and efficiently, coordination and cooperation will be required within and between state institutions, most notably the MATFWM (principally

the Water Directorate), the MEMSP, the Autonomous Provinces, the Public Water Enterprises and subordinate institutions of the two key Ministries.

The levels of practical implementation in the water sector are highly variable. As an active participant in the International Commission on the Protection of the Danube River, Serbia has already contributed to the practical implementation of the Water Framework Directive. Further contributions will be achieved through the water management plans, the first “preliminary” iterations of which are scheduled for 2012. However, Serbia is currently failing to achieve compliance with the main pollution control requirements specified in the Urban Waste Water Treatment Directive (UWWTD) (91/271/EC), the IPPC (now IED) Directive and the Nitrates Directive. This non-compliance also results in failures to achieve the environmental objectives of the Water Framework Directive. Statistical Office data indicates:

- » Of the 2.5 million households in Serbia, 1.3 million are connected to public sewerage;
- » Of the 365 million m³ of wastewater discharged in 2009 only 51 million m³ were treated (mostly only to primary standards).

Reasonable compliance is achieved with the requirements of the Drinking Water Directive (98/83/EC) in many areas, but a serious problem arises in the AP of Vojvodina with arsenic contamination. Similarly the existing system of flood risk management achieves reasonable compliance with the aims of the Flood Risks Directive (2007/60/EC), albeit that formal compliance has yet to be fully achieved.

Water services are provided by Public Utility Companies, which are established on municipal administrative divisions. Much of the water supply and wastewater infrastructure has not been well maintained in recent decades and there is a substantial maintenance backlog. Many PUCs do not achieve cost recovery for the water services that they provide, partly as a result of the relatively low tariffs that are charged and partly because of lower than optimal scales of operation and non-specialised operational practices with a lower degree of efficiency.

CHALLENGES

Serbia is faced, as were many earlier entrants to the EU, with very substantial challenges in this sector, most importantly:

- » The need to ensure integrated planning and implementation in a sector which has a large number of interest groups;
- » The need to provide the necessary infrastructure for compliance including the construction of new systems and the replacement of significant portions of the existing infrastructure – it is estimated that the investment burden (in 2010 prices) is in the region of €5.5 billion for approximation in the water sector;
- » The need to ensure the financial sustainability of water services companies such that operational, maintenance and asset replacement costs can be met in the future (full cost recovery is achieved).

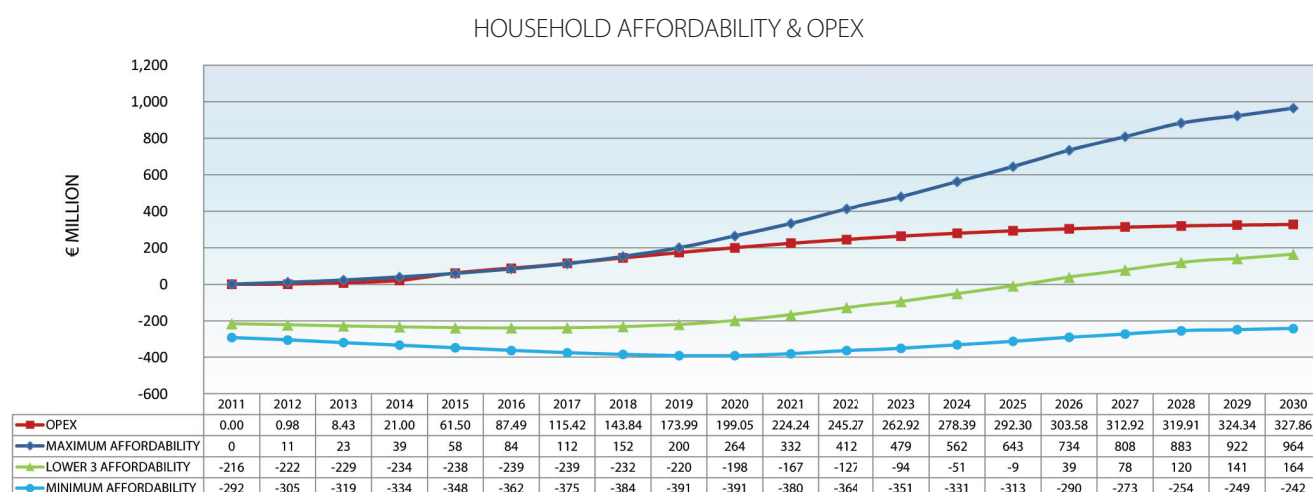
The degree of success achieved in meeting the financial challenges is strongly dependent on:

- » Improvements in financial planning for the sector at both the central and local level;
- » The establishment of an effective and efficient project development system (“pipeline”);
- » Access to external sources of support such as the EU and other donors;
- » Adequate public funding;
- » The practical implementation of the tariff reform measures in the Water Law (Article 157), in particular the willingness of Local Self Governments to abide by the requirements and raise tariffs despite the negative reactions from consumers.

As discussed in Chapter 4, there are “affordability constraints” in respect of the last two items in this list in the form of limits to public sector spending and to the proportion of income that citizens can reasonably be expected to spend on utility services, including water. The future level of these constraints is highly dependent on the economic development of the country.

The sequencing of investments necessary for approximation, and their related OPEX costs, has been tailored to meet the projected affordability constraints, so that OPEX costs are always covered by affordable user charges, as is required for sustainable financial planning. The evolution of affordability at different levels (Maximum is 4% of average income, Medium is 4% of the three lower income deciles and Minimum is 4% of the lowest decile, i.e. the 10% poorest segment of the population) is shown in Figure 11.

Figure 11: Household Income (HHI) Affordability and Operating Costs (OPEX)



The OPEX costs associated to the investments planned are just covered by maximum affordability until 2019, when income levels are expected to be sufficient to generate excess capacity.

STRATEGY

The overall strategy of Serbia in the sector is to continue to determine its own priorities, principally those that contribute to socio-economic welfare, whilst continuing to honour its commitments under international agreements and make continued progress towards compliance with EU legislation. In the long-term the key objectives can be summarised as:

- » Fully compliant and affordable centralised public water supply to at least 93% of the inhabitants of Serbia;
- » Provision of affordable wastewater collection and appropriate treatment to all agglomerations over 2,000 population equivalent.

The achievement of these objectives entails a number of choices in respect of specific aspects of approximation for the short and medium term.

Transposition

In order to complete the process of transposition Serbia will continue with the programme of secondary legislation under the new Water Law (2010) such that the vast majority of provisions are transposed by no later than the end of 2012. The deadlines for compliance with specific provisions will be established in the light of priorities established in the Water Management Strategy (2012) and the implementation programmes accompanying the Water Management Plans (2012). Realistic deadlines will be set for full compliance with the UWWTD. Intermediate objectives will be established as milestones. The Water Law itself will have to be revised by 2014, so as to achieve full transposition in the short term.

Implementation

Serbia will utilise integrated water resource management planning as the key process for managing developments in the sector. As stated in the Water Law, the first "preliminary" iteration of plans will be produced by the end of 2012 and will be updated every 6 years, such that the first updated plan will be prepared before accession.

The socio-economic development needs of Serbia suggest that the order of importance given to the priority objectives in the sector should be:

- » The provision of reliable, adequate and health safe public supplies of drinking water to the population;
- » The achievement of adequate levels of flood protection;
- » The availability of adequate water resources for commercial and industrial uses (including irrigation);
- » The efficient removal of waste water from urban areas;
- » The protection of the environment from waste water pollution³⁰.

³⁰ This priority order is a reflection of general objectives and is not necessarily directly applicable to the means of achievement. For example, if the most cost effective means of ensuring the safety of a drinking water supply is to remove waste water pollution, then the pollution reduction measure would be prioritised (in accordance with the economic assessment undertaken during the water management planning process).

This approach will be embodied in the Water Management Strategy and the Water Management Plans. As a consequence of this overall strategic direction, and given the prevailing financial constraints, Serbia is faced with strategic choices that pertain directly to the requirements of approximation:

- » Member State determination – subsidiarity principle
 - » The proportion of the rural population, particularly in sparsely populated areas, which will be connected to centralised public water supplies;
 - » The levels of flood protection that are to be achieved;
 - » The allocation of water resources for potable and non-potable use;
 - » Establishment of affordability criteria in respect of water service tariffs;
- » Member State obligation – subject to legal interpretation and negotiation;
 - » Designation of Nitrate Vulnerable Zones³¹;
 - » Designation of Sensitive Areas under the UWWTD³².
- » Collective Agreement – subject to negotiation between Serbia and the European Union;
 - » Transitional periods requested for achievement of compliance: UWWTD;
 - » The priority assigned to agglomerations: the approach taken in the original compliance timetable of the Directive, “large agglomerations first”, has been the default approach adopted in previous accession negotiations. However, Serbia could propose an alternative prioritisation scheme based on a long term compliance programme derived from the implementation programmes associated with the Water Management Plans.

In addition to these, one crucial choice that pertains directly to the process of approximation (rather than to its requirements) is the organisation of the water service sector and the matter of Public Utility Company reform. Legislation addressing PUC reform including ownership of assets, corporatisation and governance, tariff policies, regionalisation and private sector participation is under consideration. In the Water Law (Article 157) it is foreseen that the Government will establish a reference price that will take into account the cost incurred for the delivery of water services. Secondary legislation pursuant to these provisions is in preparation. In addition PUC reform needs to seek means by which to achieve higher levels of efficiency in the sector, comparable with the benchmarks established in the European Union. This will entail consideration of, *inter alia*:

- » Separation of function: most PUCs currently operate a range of services including both water and solid waste management: Would it be best for these functions to be separated in order to create “water only” PUCs?
- » Scale: PUCs currently operate at the municipal level; in many cases this results in operations that are smaller than the generally accepted level at which reasonable economies of scale are achieved. Would it be best to consolidate smaller PUCs into larger operating units at the multi-municipal (e.g. district) level?

These matters will continue to be evaluated in the course of the legislative process of PUC reform.

Financing

An outline financing strategy for the sector has been derived using the approach described above (Chapter 4). The starting point for the strategy entailed estimation of:

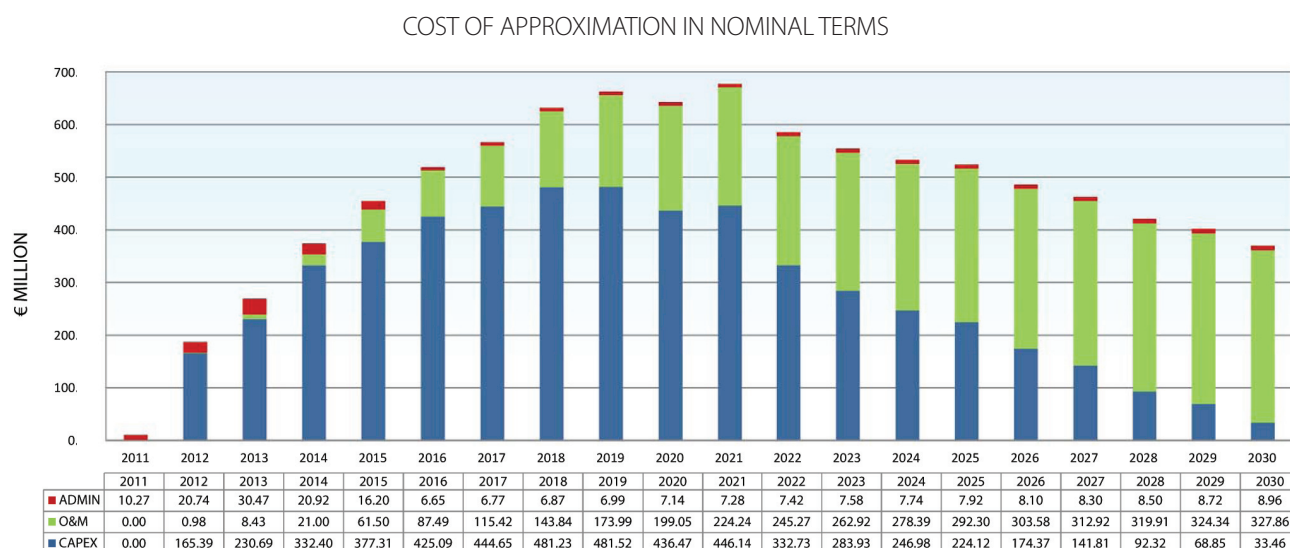
- » Capital investment needs: estimated by considering the “gap” between the current state of infrastructure provision and a future “fully compliant” state: in 2010 prices the capital investment requirements are estimated to be in the region of:
 - » €1.3 billion for drinking water;
 - » €3.3 billion for waste water;
 - » €0.9 billion for reduction of water pollution by agriculture.
- » Operational costs: estimated on the basis of standard cost functions linked to the infrastructure provisions leading to water and waste water prices comparable with other compliant systems in the region.

³¹ Article 3.3 of the Nitrates Directive states: When any waters identified by a Member State in accordance with paragraph 1 are affected by pollution from waters from another Member State draining directly or indirectly into them, the Member States whose waters are affected may notify the other Member States and the Commission of the relevant facts. The Member States concerned shall organize, where appropriate with the Commission, the concertation [sic] necessary to identify the sources in question and the measures to be taken to protect the waters that are affected in order to ensure conformity with this Directive.

³² Near identical provisions to those quoted here for the Nitrates Directive are contained in the UWWTD: Article 5.5 and Article 9.

The multiannual cost flows that correspond to this approximation scenario are indicated in Figure 12 in nominal terms.

Figure 12: Multiannual Cost Flows of Reaching Approximation in the Water Sector (in € in nominal terms)



The means by which these two categories of costs could be met have been considered. Capital costs can be met from a range of sources, including local sources (PUCs, municipal budgets), national sources (water funds, SEPF, central government budget) and external sources (EU grants, other donors), aided by bank facilities (loans from EIB, EBRD...). Estimates of projected available finance from these sources have been made, subject to the generally accepted limits on the level of public sector expenditure.

For operational costs the situation is less complex, since the vast majority of these costs, including staff, energy, materials, regular maintenance and other “day-to-day” expenses, need to be met from sales revenues (user charges) within the sector. Leaving aside measures to minimise operational expenditure, the key mechanism for achieving this “cost recovery” is the adjustment of user charges. However, user charges are subject to a number of constraints:

- » The requirement for charges to be **affordable** on average: in the case of domestic consumers a limit of 4% of average household income is taken as the upper limit of expenditure on total combined services (water and waste water, including taxes and fees);
- » The requirement for **socially responsible** systems of support to avoid water poverty in low-income groups;
- » The requirement for charges to be **equitable** between user groups (domestic, industrial, commercial);
- » The requirement for changes in prices to be made gradually so as to be **acceptable** for consumers (a real terms year-on-year increase in prices of no more than 10% has been considered).

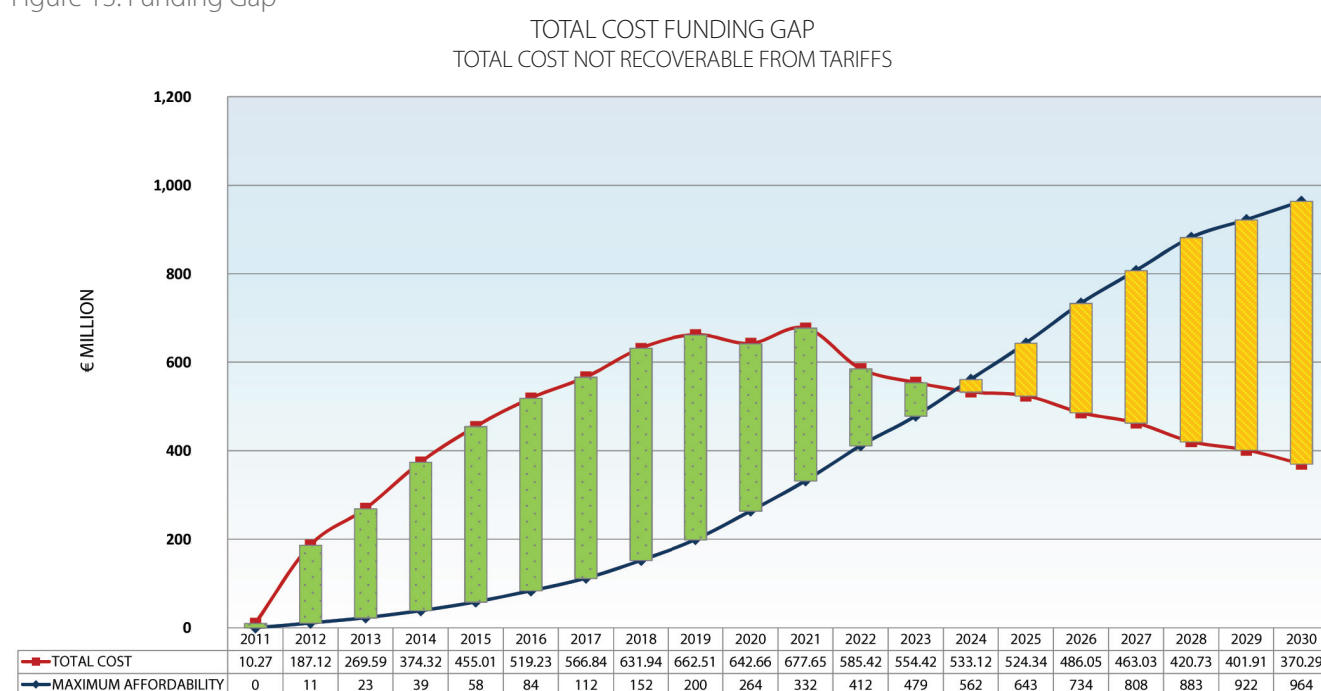
By assuming reasonable forecasts for the development of both national budget capacity and household income, and applying the constraints outlined above, an “achievable” sequence of investment and commissioning has been derived. This sequence is based on effective implementation of Article 157 of the Water Law cost recovery tariff provisions and significant commitments of public resources in the short and medium term.

The sequence entails:

- » Water Supply:
 - » Achievement of drinking water quality compliance in existing systems before accession;
 - » Extension of existing systems and construction of new systems to achieve desired coverage by 2030.
- » Waste water collection and treatment:
 - » Investment programme commitments to the end of 2030.

This sequence, which is designed to be feasible, nevertheless implies large funding needs which cannot be covered by affordable user charges until 2024, as is illustrated below in Figure 13 depicting the Funding Gap, or part of the approximation effort that cannot be covered by user charges.

Figure 13: Funding Gap



In considering the implications of this schedule for compliance and transitional periods, Serbia would seek to apply:

- » Where necessary the derogation provisions of the Drinking Water Directive (Article 9) with reference to the date of accession;
- » The provisions of Article 4.4 of the Water Framework Directive such that the final programme of measures for achievement of the Directive's environmental objectives be made operational within three years of the final (fourth) River Basin Management Plan. Given the schedule for river basin management planning established in the Water Law (WFD plus three), this would entail a final deadline for operationalisation of measures pursuant to Article 11 of the WFD of 2033.

This sequence will entail the establishment of staged transitional periods in respect of the UWWTD with the final stage ending in the period 2030-2033.

Within the state administration, working groups will be established to manage the Water Framework and associated directives, Urban Waste Water Treatment Directive, Nitrates Directive, Groundwater Directive, and the Drinking Water (98/83/EC) and Bathing Water (76/160/EEC) Directives. The working groups will be under the politically managed Chapter 27 Sub-working group. Membership of the working groups would include MATFWM, MEMSP (including legal, technical and C&S), Ministry of Health, Ministry of Finance, Water Directorate, SEPF, SEPA, PHIs, AP Vojvodina, Hydro-meteorological Institute of the Republic of Serbia, Public water management companies "Srbijavode", "Vode Vojvodina" and "Beogradvode", water management Institute "Jaroslav Černi", Institute for Biological Research "Siniša Stanković" as well as the City of Belgrade and LSGs and PUCs. The group for the Urban Waste Water Treatment Directive should discuss implementation jointly with the group responsible for the Sewage Sludge Directive (86/278/EEC).

5.8 WASTE MANAGEMENT

INTRODUCTION

European Union legislation in the field of waste is organised into three groups comprising a wide range of legal instruments, which can be grouped into three broad categories:

- » Framework legislation (including legislation on shipments of waste);
- » Legislation on waste treatment operations;
- » Legislation pertaining to specific waste streams.

Three of the Directives are expected to be especially complex and expensive to transpose and implement in Serbia:

- » The Waste Framework Directive (2008/98/EC);
- » The Landfill Directive (1999/31/EC), and
- » The Packaging and Packaging Waste Directive (94/62/EC).

A principle underlying the legislation is the reduction of waste going to final disposal in landfills through the application of a waste management hierarchy:

- » Prevention;
- » Preparation for re-use;
- » Recycling;
- » Recovery operations (notably energy recovery);
- » Disposal.

In this regard there are restrictions on the amount of biodegradable waste that can be sent to landfill at given times with the final target being a reduction in the amount of landfilled biodegradable waste of at least 65% compared to 1995 levels. The legislation thus increases the difficulty and expense of using landfills and, therefore, provides an incentive to seek more environmentally sound means of managing waste according to the hierarchy.

Compliance with the Directive on Packaging Waste can be particularly challenging given the widespread occurrence of packaging waste and the requirement for Member States to apply the waste hierarchy to all packaging wastes by introducing re-use, return and collection schemes in order to achieve the following targets:

- » Between 55 and 80% by weight of packaging waste to be recycled;
- » Specific recycling targets of
 - » 60% for glass, paper and board;
 - » 50% for metals;
 - » 22.5% for plastics and
 - » 15% for wood.

IMPORTANT LINKAGES

The issue of waste management is linked with other elements of the Acquis in a number of respects:

- » The production of industrial waste is in part regulated under the Industrial Pollution Prevention and Control regime (soon to be superseded by the Industrial Emissions Directive, 2010/75/EU) whereby the selection of Best Available Techniques for any industrial facility and the associated facility authorisation includes consideration of waste production as an influential factor.
- » The Industrial Emissions Directive 2010/75/EU also replaces the Waste Incineration Directive (2000/76/EC) and brings waste incineration fully into the industrial emissions regime. Moreover, the IED will also require landfills specified in Annex I of the Directive³³ to be subject to the IED permitting regime.
- » Irrespective of the permitting regime, the impact of the waste disposal operations, particularly landfill, needs to be regulated in accordance with the requirements of the River Basin Management Plans prepared pursuant to the Water Framework Directive (2000/60/EC).
- » The disposal and treatment of waste can produce emissions of several greenhouse gases (GHGs), which contribute to global climate change. The most significant GHG gas produced from waste is methane released during the breakdown of organic matter in landfills. Measures to reduce such emissions need to be employed as part of the climate change mitigation programme.

It is also of note that waste management is considered to be a “service of general economic interest”³⁴ and as such is subject to European Union rules on state aid, public procurement and the internal market³⁵.

³³ Landfills, as defined in Article 2(g) of Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste, receiving more than 10 tonnes of waste per day or with a total capacity exceeding 25 000 tonnes, excluding landfills of inert waste.

³⁴ Article 106 of the Treaty on the Functioning of the European Union.

³⁵ See for example Commission Staff Working Document, SEC(2010) 1545 final, Brussels, 7.12.2010.

STATE OF PLAY

Currently only approximately 60% (2009 estimate) of the Serbian population is provided with organised waste collection services and coverage is particularly low in rural areas. The vast majority of the waste collected is disposed of to landfill, of which there are 164 registered landfills and over four thousand unauthorised dump sites. Of the registered landfills six (Kikinda, Lapovo, Leskovac, Vranje, Jagodina, Pančevo), are sanitary landfills, serving about 16% of the population. A further 4 sanitary landfills are currently being commissioned, which will bring the total population served to 30% (60 municipalities). Other types of management and disposal operations such as incineration or mechanical and biological treatment (MBT) are not currently used. Conditions vary markedly between municipalities, but in many instances the waste collection equipment (trucks, trailers, compactors) is at, or close to, the end of its economic lifespan.

Separate collection of recyclable materials is at an early stage, with very few schemes in place for municipal waste. However implementation of the packaging waste legislation is proceeding and a number of packaging organisations have been established. The scheme is though meeting with some resistance from operators, few of which have yet registered in the system and, as yet, inspection is not sufficiently developed to enforce widespread compliance.

Serbian legislation requires registration (“from the cradle to the grave”) for all hazardous waste through the use of a “Hazardous Waste Movement Document”. The actual management of hazardous waste is however compromised by inadequate facilities and to remedy this preparations are underway for the establishment of a Hazardous Waste Management Facility³⁶. The envisaged Facility would predominantly manage inorganic hazardous wastes from Serbian industry (excluding any kind of nuclear, explosives and medical waste components).

Serbia’s policy to improve waste management is set out in the 2009 National Waste Management Strategy (2009), which includes short-term and long-term objectives for solid waste management and a target date of 2020 for the provision of adequate waste management services to more than 90% of the Serbian Population. A programme for the development of infrastructure to achieve the specified objectives is included in the strategy and the costs of the proposed actions have been estimated. Whilst this strategy identifies incineration and MBT as viable options in the longer term, in the short to medium term landfill is seen as the main means for municipal waste disposal.

The Serbian Laws on Waste Management and Packaging Waste, and the associated secondary legislation, transpose large portions of the EU legislation on waste and further secondary legislation is envisaged. It is of note that the legislation establishes targets for the reduction of biodegradable waste to landfill³⁷:

- » 2012-2016 – reduction of 25%
- » 2017-2019 – reduction of 50% and
- » 2020-2026 – reduction of 65%.

Whilst this body of legislation represents substantial progress in the achievement of transposition, there remain a number of areas where further legislative action will be required, including “end-of-waste status”, bio-waste, mining waste and sewage sludge. Moreover, the planning provisions of the Law on Waste Management do not adequately address the obligation contained in the Waste Framework Directive to draw up Waste Management Plans. Amendment of the Law on Waste Management will be required to complete transposition.

The Ministry of Environment, Mining and Spatial Planning is the key institution in the waste sector, having responsibilities for policy, legislation and control (permitting). In particular the Ministry has the lead role in ensuring approximation, including transposition of the Acquis. The Ministry is assisted by the Serbian Environmental Protection Agency, which is responsible for data collection/reporting. In Vojvodina the administration of the Autonomous Province has responsibility for administration and control. Practical implementation of waste collection and management is vested in the Local Self Government Units.

These institutional arrangements present a number of issues. The current arrangement whereby the MEMSP acts as both a policy body and an implementing entity does not provide for appropriate separation of functions. However, the situation at the local level is of even greater concern. As indicated in sections 3 and 4, although most municipalities have established Public Utility Companies (PUCs) to provide waste management services,

³⁶ <http://www.hwmf.rs>

³⁷ Although numerically comparable with the EU Landfill Directive targets, the “reference year” is different (1995 in the case of the Landfill Directive)

most of these are too small to achieve the technical or cost efficiencies required of a modern waste management operation. Moreover, the smaller PUCs are often multi-functional, having responsibilities for a range of other services such as street cleansing. The PUCs also face considerable financial difficulties as a result of the current approach to tariff setting in many municipalities. Tariffs vary widely between municipalities; they are cross-subsidised generally from industry to the domestic sector (Households); and they often bear no direct relation to service levels, actual costs or affordability.

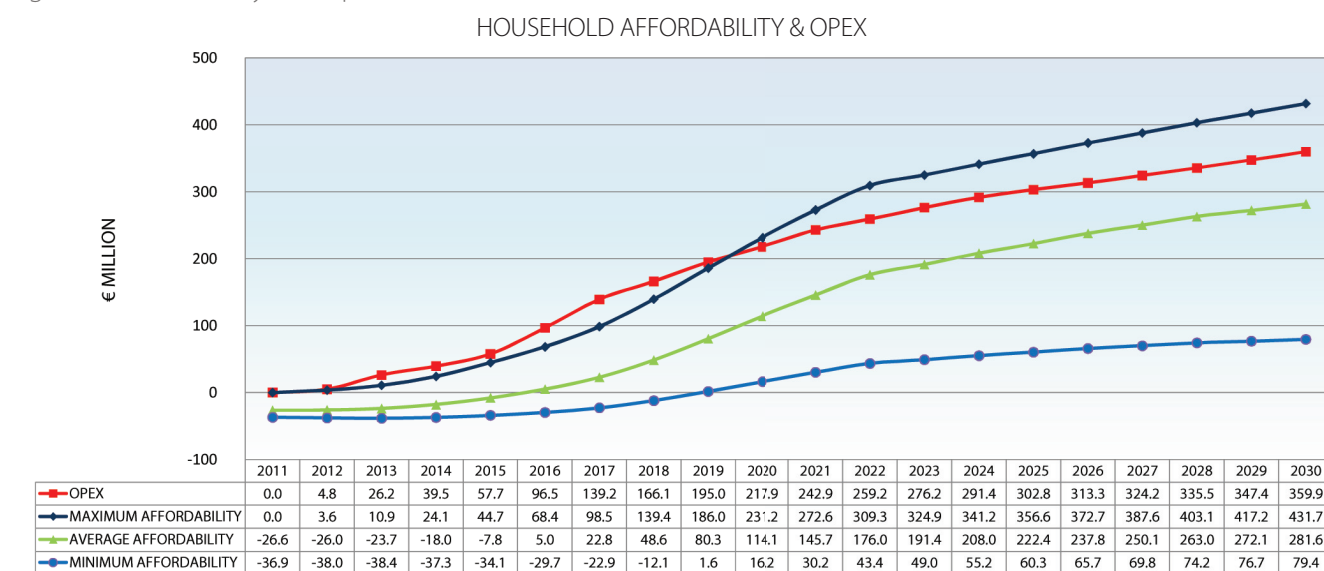
CHALLENGES

In common with the experiences of recent Accession Countries, the relatively weak current infrastructure provision and service levels suggests that full approximation with all aspects of the waste management Acquis needs to be seen as a long-term objective for which transitional periods are likely to be required.

The key challenges are financial and organisational. Although substantial - at some €800 million (in 2010 prices) - the capital investment needs of the sector should be manageable. However, a more serious constraint arises from the need to ensure that operation and maintenance costs are met. Failure to meet these costs would render the waste management system financially unsustainable and result in deterioration over time in both service and environmental performance.

As for the water sector, the affordability of the user charges required to cover the estimated total operational costs (OPEX) in the waste sector were analysed for three different levels of affordability³⁸ (Maximum: is 1.5% of average Household Income, Medium is 1.5% of the average income of three lower income deciles and Minimum is 1.5% of the lowest, or poorest, income decile).

Figure 14: Affordability and Operational Costs



As shown in Figure 14 the OPEX (red line) is greater than the maximum level of tariff revenue (blue line) for the period 2011-2019: i.e. the Strategy is not "affordable" from an operational cost perspective in this period. Thereafter (2020-) the maximum level of tariff revenue is greater than the predicted operational costs and full cost recovery can be achieved. The implications of this analysis are that until 2019, the waste strategy will require cross-subsidisation from other environmental sectors to meet operation and maintenance costs.

It should also be noted that, the operational (and indeed capital) cost estimates are based upon the assumption of the efficient implementation of the National Waste Management Strategy. Efficiency in this regard requires the greatest possible economies of scale to be achieved. The current arrangements whereby waste management services are organised at a municipal level and delivered by small multi-functional PUCs cannot be expected to deliver the necessary economies of scale. Thus regionalisation of the system of municipal waste management is a pre-requisite for efficient implementation but, in the absence of regional administrations, this entails significant political and institutional challenges, as cooperation between municipalities in the field of waste management is not well established

³⁸ A gradual escalation of tariffs was assumed which is both considered more acceptable and less likely to result in sharp falls in revenue as a result of increased non-payment rates.

The need to constrain OPEX (particularly, but also CAPEX) has two further implications. First, is the emphasis in the short- to medium-term on landfill as the main disposal option. Currently both OPEX³⁹ and CAPEX for more advanced techniques (e.g. pyrolysis) are considerably higher than those associated with sanitary landfill. In the longer term if current and further research and development bears fruit and brings down costs and or scale requirements the relative balance between technologies may change but for the moment this cannot be predicted.

The second implication is the importance of raising public awareness to the importance and benefits of waste segregation, recycling and waste minimisation. These can be cheap methods of reducing waste going to landfills.

STRATEGY

The core approach to approximation in the waste sector comprises the continued implementation of the National Waste Management Strategy. The key objectives of the Strategy are:

- » Complete transposition of European Union legislation;
- » Municipal solid waste collection in place for more than 90% of the population by 2020;
- » Fully compliant municipal solid waste landfills in place for more than 90% of the population by 2020;
- » Reduction in the quantities of biodegradable waste disposed to landfill in line with the Landfill Directive targets by 2026;
- » Achievement of EU recovery and re-cycling targets by 2025;
- » Commissioning of a hazardous waste management facility by 2014;
- » Full cost recovery from user charges for municipal waste collection and management by no later than 2022.

Initially management and co-ordination of the strategy will be implemented through the establishment of working groups for the Waste Framework and associated directives. The working groups will be under the politically managed Chapter 27 Sub-working group. Membership of the working groups could include MEMSP (including legal, technical and C&S), Ministry of Health, Ministry of Finance, SEPF, SEPA, AP Vojvodina, City of Belgrade and LSGs and PUCs.

Transposition

Full transposition will require amendment of the Law on Waste Management. Therefore a review of the Law and its associated secondary legislation will be undertaken in the short term and amendments necessary to achieve full harmonisation introduced. The review will also seek to streamline the legal framework so as to avoid duplication, complication and “gold plating” (the introduction of requirements that go beyond those introduced by the Acquis).

In concert with the legal review, legislative coordination will be needed so as to ensure that only one environmental permit is required at any site. Multiple regulations are inefficient for both the regulators and the regulated. To this end the provisions of the Industrial Emissions Directive will be applied to all relevant (non-inert) landfills (new and existing).

Implementation

Although the current National Waste Management Strategy is well developed, it will benefit from further refinements, in particular:

- » Enhancement of the provisions for separate collection of different packaging waste at the source with their pre-treatment in regional sorting plants to generate marketable recyclables;
- » Optimisation of measures and instruments to reduce the amount of waste (particularly biodegradable waste) disposed to landfill including a combined strategy entailing home composting in rural areas, separate collection of bio-waste and composting of bio-waste in central composting plants in large cities;
- » Optimisation of the number and size of future municipal waste landfills with a view to achieving further efficiencies in total (capital and operational) costs – a benchmark of 400,000 inhabitants is appropriate (leading to a total of about 15 – 20 municipal waste landfills);
- » Measures to enhance inter-municipal cooperation so as to avoid barriers to implementation of a regional approach;
- » Review of national targets for reduction of biodegradable waste to landfill to take full account of the EU reference year (1995).

³⁹ See for example Bystrom, Jaspers Working Paper on Mechanical and Biological Treatment, 2010

The introduction of new legislation will be accompanied by monitoring and enforcement measures to ensure acceptable levels of implementation.

A strong registration system for hazardous waste (“from the cradle to the grave”) will be implemented. The “Hazardous Waste Movement Document” will be linked to a registry managed and overseen by a dedicated control and surveillance unit.

Efforts to integrate all companies subject to the Packaging and Packaging Waste Management Law into the system will be intensified. Non-registration will be subject to appropriate enforcement measures.

The system of reporting the quantities of special waste will be modified in the short term. It is presently reliant on the reported quantities of the importers-producers-operators with a very low level of verification. The same applies to the granting of incentives, where fraud is a clear possibility.

The organisation of the waste collection and treatment service sector and the matter of PUC reform are critical to the implementation of the Strategy. Legislation addressing PUC reform including ownership of assets, corporatisation and governance, tariff policies, regionalisation and private sector participation is under consideration. Secondary legislation pursuant to these provisions is in preparation. In addition PUC reform needs to seek means by which to achieve higher levels of efficiency in the sector, comparable with the benchmarks established in the European Union. This will entail consideration of, *inter alia*:

- » Separation of function: most PUCs currently operate a range of services including both water and solid waste management, amongst others. It is considered best practice that these functions be separated in order to create specialised, more efficient PUCs;
- » Scale: many PUCs currently operate at the municipal level; in many cases this results in operations that are smaller than the generally accepted level at which reasonable economies of scale are achieved. It will be best to consolidate smaller PUCs into larger operating units at the multi-municipal (e.g. district) level).

These matters will continue to be evaluated in the course of the legislative process of PUC reform.

Financing

As specified in the National Waste Management Strategy, a very wide range of practical and infrastructure measures is required. The most critical measures are clearly:

- » Municipal Solid Waste Collection:
 - » Investment in collection infrastructure to increase municipal waste collection rates and efficiency of collection;
 - » Investment in separate collection systems (particularly for packaging waste from households) – predominantly bring points – for (at least) paper, plastic and glass;
 - » Investment in measures to support rural and suburban domestic composting schemes (diversion of biodegradable waste from the municipal waste stream).
- » Municipal Solid Waste Disposal:
 - » Sanitary Landfills.
- » Construction Waste:
 - » Processing facilities for recovery of re-usable materials (end of waste).
- » Hazardous Waste Management:
 - » Multi-functional hazardous waste management facility.
- » End of Life Vehicles:
 - » Processing facilities for recovery of re-usable materials (end of waste).

A number of other smaller investments are required to achieve practical implementation of other aspects of the Acquis.

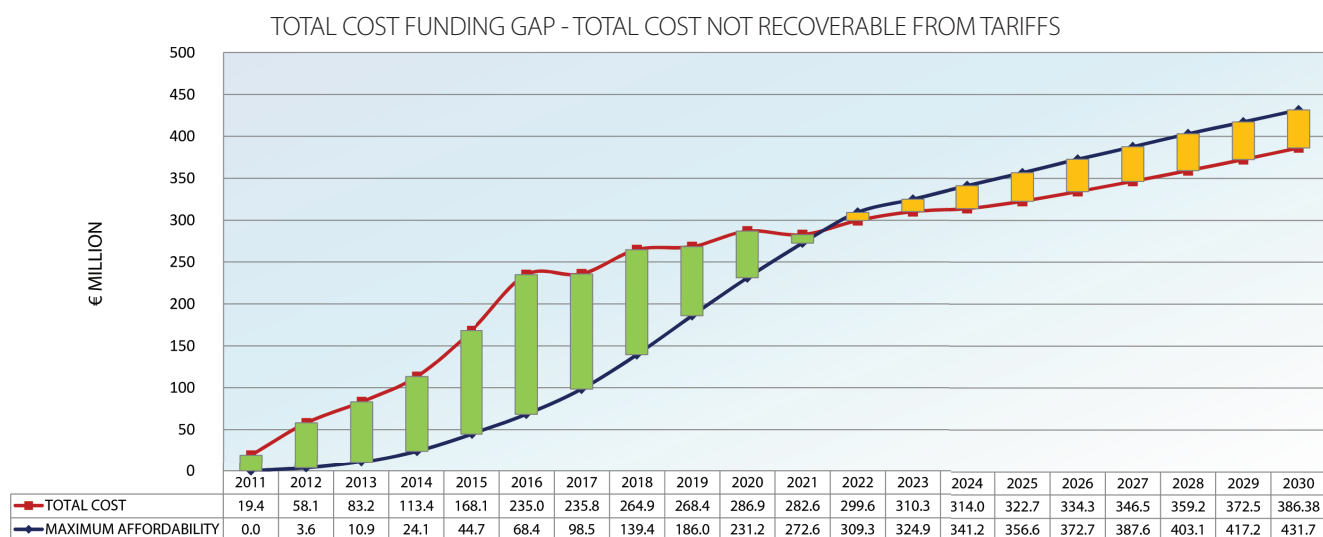
A financial strategy for implementation of the practical measures outlined above has been derived. Capital investment needs have been estimated by considering the “gap” between the current state of infrastructure provision and a future “fully compliant” state: in 2010 prices the capital investment requirements are estimated to be in the region of:

- » €601 million for the MSW system (combination of Landfill, Packaging, Batteries and Waste Electronic and Electrical Equipment);
- » €66 million for Construction Waste;
- » €42 million for Hazardous Waste;
- » €34 million for End of Life Vehicles (ELV);
- » €13 million for other directives.

Operational costs have also been estimated on the basis of standard cost functions linked to the infrastructure.

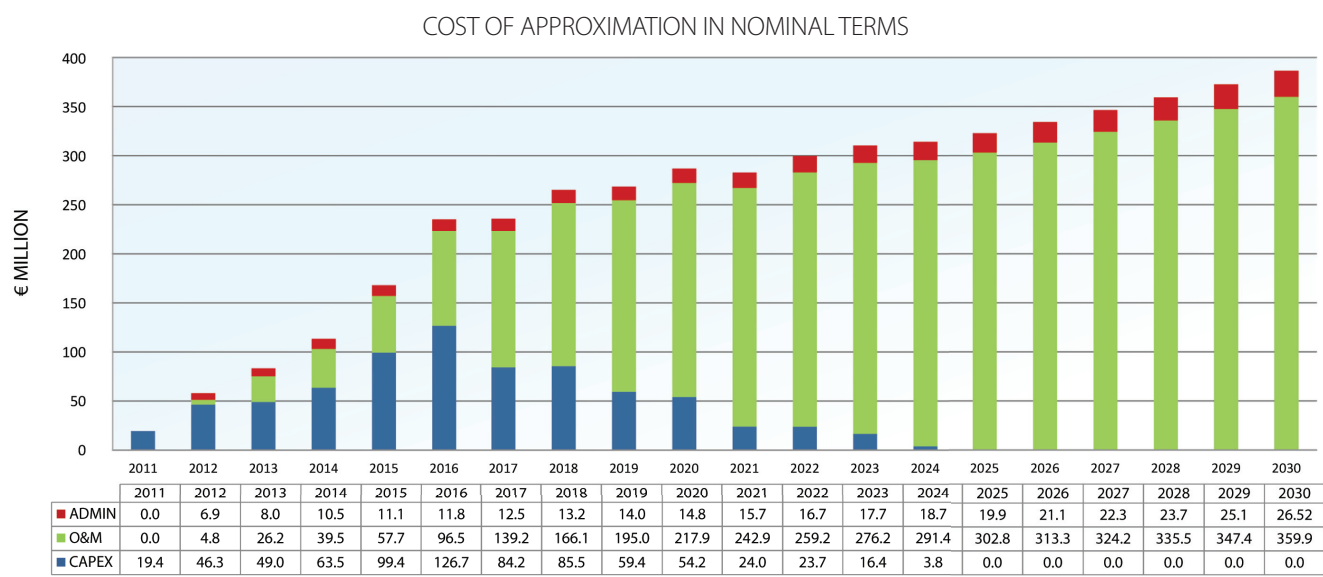
As discussed previously, the operational costs associated with the implementation of the National Waste Management Strategy investment programme (as currently defined) cannot be fully met from the revenues of user charges. This results in a “Funding Gap” as shown in Figure 15. Whilst the failure to achieve full cost recovery is not sustainable, the levels of shortfall for the period to 2020 are considered to be manageable, especially if operational subsidies are used as a transitional measure.

Figure 15: Total Cost Funding Gap in the Waste Sector



In view of this, the programme contained in the National Waste Management Strategy is still considered to be achievable. Based on reasonable forecasts for the development of both national budget capacity and household income, a possible sequence of investment and commissioning has been derived. This sequence is based on effective implementation of tariff provisions to move towards cost recovery and significant commitments of public resources in the short and medium term. The sequence endeavours to respect the investment programme set out in the National Waste Management Strategy, albeit with some minor modifications to limit the funding gap. The multiannual cost flows that correspond to this sequence are indicated in Figure 16 in nominal terms.

Figure 16: Multiannual Cost Flows of Reaching Approximation in the Waste Sector (in € in nominal terms)



As with the other environmental sectors, the means by which each of these categories of costs could be met have been considered. Estimates of projected available finance from these sources have been made, subject to the generally accepted limits on the level of public sector expenditure. The level of public sector support required is further analysed in Table 19, with indications of the expected sources of Public Finance⁴⁰.

Table 19: Required Levels of Public Sector Support in the Waste Sector

PUBLIC SECTOR SUPPORT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2025	2030
Required from Public Sector € MM	-13.22	-35.17	-47.57	-60.13	-87.84	-146.67	-125.39	-114.42	-75.64	-49.63	32.14	44.25
DOMESTIC FUNDING SOURCES												
MESP	4.99	5.23	5.50	5.77	6.06	6.36	6.68	7.01	7.37	7.73	9.87	12.60
SEPA	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.03
SEPF (ECOFUND)	52.33	80.47	96.56	114.07	119.77	125.76	132.05	138.65	145.58	152.86	195.09	248.99
LSU	2.25	2.36	2.48	2.60	2.73	2.87	3.02	3.17	3.32	3.49	4.45	5.69
NIP (or equivalent)	0.19	0.20	0.21	0.22	0.23	0.25	0.26	0.27	0.29	0.30	0.38	0.49
PUBLIC SECTOR RESOURCES												
Public Sector Financing Needs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Excess Funds Carried Forward	46.45	99.57	156.76	219.30	260.27	248.85	265.47	300.17	381.10	495.86	1,525.23	2,949.47

* The SEPF net Revenues are prudently estimated as a growing proportion of the budgeted amounts

The investment sequence described above would require the agreement of staged transitional periods in respect of MSW with the final stage ending in the period 2021-2024. However, this scenario is the “best scenario if all goes according to plan”. It must therefore be considered as “optimistic” and to some extent “idealised”.

When preparing the Directive Specific Implementation Plans further analysis, using the financial planning model, will be undertaken to evaluate the risks of transactional and implementation delays.

On the basis of this a “prudently achievable scenario” will be determined and documented. This prudent scenario will then form the basis of a negotiation strategy. In preparing the prudent scenario it is expected that service targets will be postponed slightly in some areas in order to ensure realism, to minimise the financing gap and to reduce the need for cross-subsidisation from other sectors

⁴⁰ Overall, the expected contributions from the SEPF imply that there will be excess Public Sector financial resources for waste. This indicates a need for close monitoring and –possibly– structural reform of the SEPF, so as to introduce necessary flexibility to ensure no part of scarce total affordability is “trapped” in the fund.



CHAPTER 6

FRAMEWORK FOR MONITORING APPROXIMATION PROGRESS AND FOR NEGOTIATION

The processes of approximation and accession negotiations are self-standing, yet closely linked. They have to be mutually informed about the progress of the other one, since e.g. evolution in the extent of planned transitional periods directly impacts on economic, but also legislative planning.

6.1 MONITORING OF APPROXIMATION PROGRESS

It is proposed that MEMSP retains overall coordination and tracking of approximation progress across the whole environmental Acquis. This will be carried out by the Chapter 27 Sub-working group with the input from working groups chaired by the part⁴¹ of the ministry or agency assigned to lead on the particular item of EU legislation.

These working groups will meet as frequently as necessary (indicative frequencies are included in the Sectoral Strategies) and will include representatives of every relevant stakeholder. An indicative list of stakeholders is also included in the Sectoral Strategies. The working groups will discuss progress and delays, and report to the Chapter 27 Sub-working group via the relevant ESR. The chairpersons should also bring the results of the work to the attention of “their” Assistant Minister(s). The Chapter 27 Sub-working group informs the negotiator for Chapter 27 (see below).

In the sector strategies, the main legal requirements and institutions involved are set out for each directive. These institutions are going to have to work together in order to ensure the process of approximation can be completed and to ensure that the Serbian negotiator of Chapter 27 is kept fully informed of progress in transposition and implementation. Equally the negotiator must be kept informed of any delays and, if these cannot be resolved, to bring them to the attention of the Minister for resolution.

The working groups should be free to identify changes in legislation, institutional arrangements, work practice, communications, coordination practice, funding requirements and training needs. These issues should, in turn and as appropriate, be brought to the attention of the relevant Assistant Minister and the Chapter 27 Sub-working group.

Each directive or regulation should have a person who is responsible for monitoring progress across all institutions in relation to that particular directive or regulation. Such persons should be appointed as the chairperson of the working group and given the authority to call regular meetings to be attended by representatives of each institution involved. Each representative should have a deputy. Failure by any institution to attend a meeting should be noted as a “delay” by the chairperson and reported to both the chairperson of the Chapter 27 Sub-working group and the negotiator.

Working groups chair persons should organise meetings of all representatives usually on a monthly basis, with the frequency of such meetings either increased or decreased depending on the level of progress made and the needs of approximation planning or progress in negotiations.

The frequency of meetings and the membership of the working groups can be changed as appropriate and in some cases it may prove more effective to combine working groups.

The ultimate responsibility for the successful performance of these working groups lies with the State Secretary that chairs the Chapter 27 Sub-working group.

6.2 FRAMEWORK FOR NEGOTIATIONS

After receiving candidate status, negotiations with the EU may be opened. The negotiations on Chapter 27 may take several years. The speed of the negotiation process will be determined by Serbia’s capacity to present its position skilfully and to make coherent requests for transition periods backed by well researched evidence.

The composition of the Republic of Serbia negotiating team will be decided by the Government, but a membership of a representative of MEMSP and other ministries competent for certain issues is likely and very appropriate. The negotiator for the environment should be a senior person in the MEMSP structure. It could be the Chairman of the Chapter 27 Sub-working group but if another option is chosen, this chairman should be the deputy negotiator, to ensure the smooth interaction between the two processes.

The process of negotiation includes multilateral and bilateral screening followed by the submission of Serbia’s position paper and the expression of the EU’s common position. Serbia will be asked to provide additional

⁴¹ A ‘part’ in this case can be a group, section, department, administration or directorate

information which will lead to a revised common position being adopted by the EU. This information and position activity may repeat over several rounds. Once all aspects have been cleared the negotiations on the environment chapter will be provisionally closed.

After closing negotiations on all the chapters of the Acquis the European Council will decide on accession. After accession Serbia will pursue full implementation in accordance with the negotiation results, i.e. with the transitional periods agreed.

As is apparent from previous EU enlargements, transitional periods in Chapter 27 will only be granted for heavy-investment directives. The requests will have to be as specific as possible, and backed by thorough implementation plans building on the state of play. While transitional periods can have a form of a general prolongation of the implementation deadline for some directives, for others intermediate targets or specific types of installations, regions, environmental parameters etc. will need to be established. To define and agree these specifications is one of the key objectives of the negotiation process.

Possible requests for transitional periods for selected cost-intensive environmental measures have been outlined through the economic model and are summarised in section 4.2.2 above. These include:

1. Urban wastewater will require a transition period to 2030;⁴²
2. Nitrates until 2025;⁴³
3. Drinking water will not require a transition period for reaching quality standards, achievable before 2019, the assumed accession date. Extension of the service, however, to the entire population is only expected by 2030;⁴⁴
4. A fully compliant MSW system which integrates the Landfill, Packaging, WEEE (2002/96/EC) and Batteries (2006/66/EC) directives, will require a transition period to 2024, due mainly to the impact of high OPEX costs;
5. Compliance with the Emission Values on SO₂ in both Thermal Power Plants and Heating Plants is set, in accordance with the new schedule for all existing members, to 30 June 2020 with a special transition period to compliance or closure, at a reduced operating rate, for then not compliant installations, to 31 December 2023. It must be noted that compliance schedules for LCPs are negotiated on an installation by installation basis and require specific data for the individual plants;
6. Remediation of Industrial Pollution and Disposal of special waste from Thermal Power Plants and Heating Plants is expected to comply by 2022.

Directives that are not within the “Heavy Investment” bundles were not assumed to be granted transition periods and are assumed to be complied with before the assumed accession date set for 1 January 2019.

It should be noted that the possible implications of transition periods identified above were essentially used for the development of the economic model, the identification of the challenges to be met and the potential ways of overcoming them.

Further consideration of the need for transition periods and the presentation of arguments for those deemed necessary will be made during the negotiations. Much clearer specification is required as regards precise provisions of the Acquis (e.g. the transitional period for municipal solid waste management stretches across several directives), the current situation and the steps to be taken in gradual implementation on the path to full compliance. It is planned that such analytical work and drafting of Directive Specific Implementation Plans will commence without delay after the adoption of the NEAS, rather than in reaction to the request by the EU to become more specific. Having this information in the hand, Serbia’s negotiators may be able to significantly increase the speed of negotiations.

While transitional periods will only relate to a fraction of the environment Acquis and other work on approximation will probably be perceived as overwhelming the importance of this subject, the final agreement on the set of transitional periods will be the prominent issue in the whole environmental negotiations and an indicator of success of the whole process, including from the political and media perspectives. It is therefore recommended that high attention is paid to the definition of transitional periods from this moment on, regardless of the seemingly long perspective envisaged for full implementation of these pieces of the Acquis.

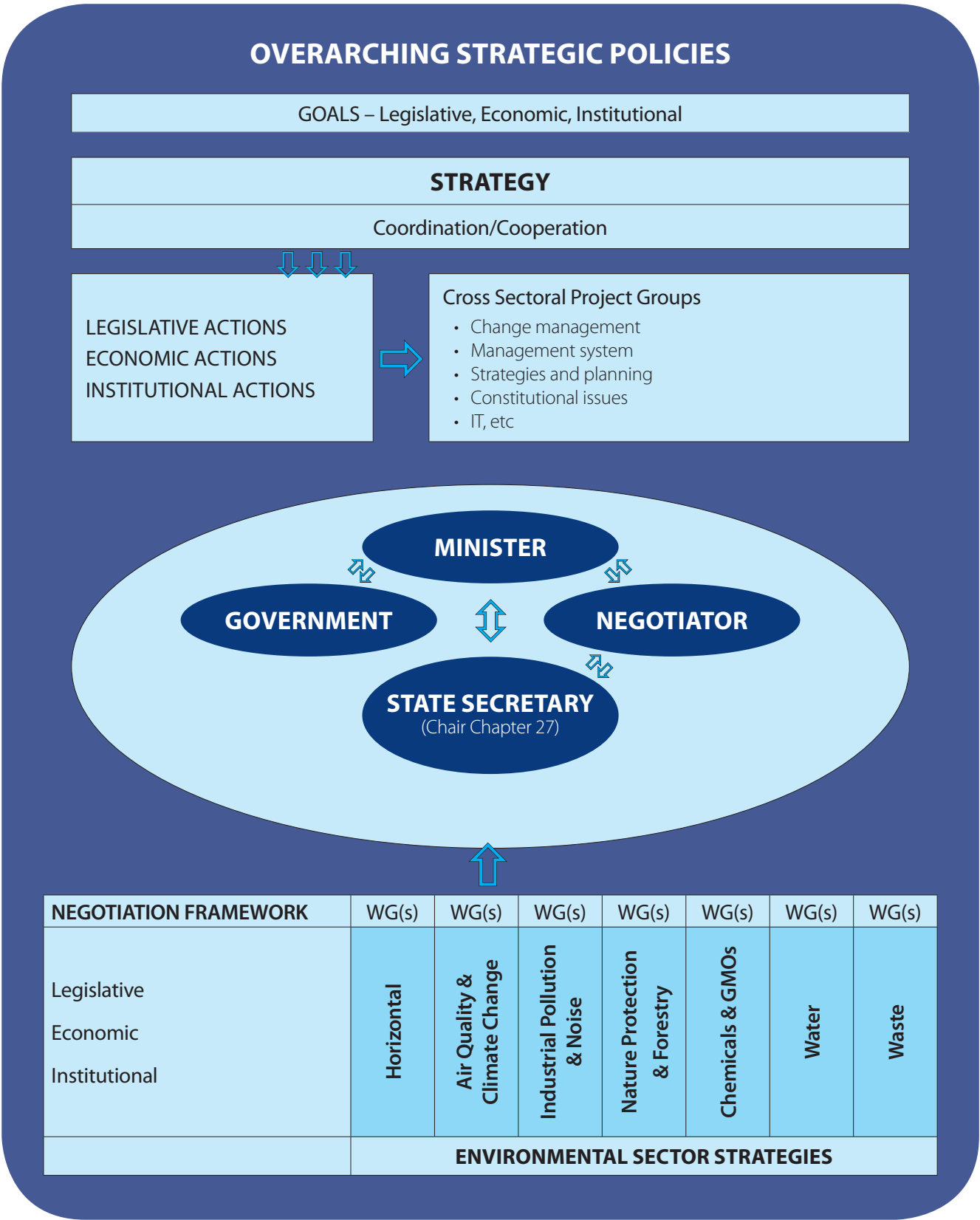
⁴² The economic model has been developed on the basis of the optimistic forecast for the transitional period; however, it is likely that the transitional period for waste water would be postponed to 2037, and for the nitrates to 2030, which will significantly impact on the economic model and the projection of costs

⁴³ Ibid

⁴⁴ Ibid

ANNEX 1 - NEAS STRUCTURE

OBJECTIVE: APPROXIMATION TO ENVIRONMENTAL ACQUIS



ANNEX 2 - LIST OF DOCUMENTS CONSULTED

Draft Sector Strategy – HORIZONTAL

Draft Sector Strategy – AIR QUALITY AND CLIMATE CHANGE

Draft Sector Strategy – INDUSTRIAL POLLUTION AND NOISE

Draft Sector Strategy – NATURE PROTECTION

Draft Sector Strategy – CHEMICALS AND GMOs

Draft Sector Strategy – WATER

Draft Sector Strategy – WASTE

Serbia's Priorities under the EU Environmental Acquis

Legal Gap Analysis

Draft Guide for Environmental Law Approximation and Stakeholder Consultations

Socio Economic Study

Financing Sources for Approximation

Institutional Responsibilities Report

Responsibilities of Institutions within the System of Environmental Protection

Approximation Communications Plan

SOURCES OF DATA

STATISTICAL OFFICE OF THE REPUBLIC OF SERBIA

Statistical Yearbook of Serbia 2009

- » Chapter 4. Population Table 4.7 Area, Population and Households, by censuses
- » Chapter 4. Population, Table 4.8 Settlements by size and inhabitant's number, by census 2002
- » Chapter 5. Employment and earnings, Table 5.4 Population by activity, 2008
- » Chapter 5. Employment and Earnings, Table 5.18. Average Salaries and Indices of Nominal and Real Average Salaries 2007 and 2008

Municipalities of Serbia 2009, 2010

Living Standard Measurements Study 2002-2007

Household Budget Survey 2007

- » Chapter 2.1. Available household budget 2007 (monthly average per household)
- » Chapter 3.1. Individual consumption of household 2007 (monthly average per household)

Household Budget Survey 2008

- » Chapter 2.1. Available household budget 2008 (monthly average per household)
- » Chapter 3.1. Individual consumption of household 2008 (monthly average per household)

Demographic Yearbook 2008

- » Population Data Base, Projections of population of Serbia 2007-2032 - medium variant of fertility (expected migration, common mortality)

Communication No. 180/2010

- » Table 1. Population by activity
- » Table 3. Activity Rate, Employment Rate, Unemployment Rate and Inactivity Rate, April 2010
- » Table 9a. Employed persons by activities, June 2010

Communication No. 78/2010

- » Household Budget Survey 2009, Final results

Communication No. 161/2010

- » Household Budget Survey 2010, Preliminary results for the 1st quarter

Statistical Pocketbook of Serbia 2010

MINISTRY OF FINANCE

Memorandum on the Budget and economic and fiscal policy for the year 2011, including projections for the years 2012 and 2013

Analysis of Macroeconomic and Fiscal Trends during 2009

INSTITUTE OF SOCIAL STUDIES OF THE REPUBLIC OF SERBIA

Population and Households in Serbia by census 2002

» Chapter 3. Table 3.1-1 Level and dynamics of urbanization

SAMUEL FRANKHAUSER, TATJANA TEPIĆ -

Can poor consumers pay for energy and water? (2005)

MINISTRY OF AGRICULTURE, FORESTRY AND WATER MANAGEMENT

Water Management Master Plan, 2002

Instruments For Water Sector Development In The Republic Of Serbia Phase One (Draft)

MINISTRY OF ENVIRONMENT AND SPATIAL PLANNING

National Strategy for Waste Management 2009-2018, revised version

» Chapter 4.2. Solid waste, 4.2.1. Data on solid waste quantities

MINISTRY OF MINING AND ENERGY

Energy Sector Development Strategy of the Republic Of Serbia by 2015

SERBIAN ENVIRONMENTAL PROTECTION FUND

Midterm work program of SEPF for period 2006-2009, (www.sepf.gov.rs)

Annual Programmes and Reports of SEPF for 2008, 2009, 2010 (www.sepf.gov.rs)

SERBIAN ENVIRONMENTAL PROTECTION AGENCY

Environment in Serbia - indicator based survey (2007)

NATIONAL ASSEMBLY OF THE REPUBLIC OF SERBIA

Law on Budget of the Republic of Serbia for 2007, OG RS No. 58/07

Law on Budget of the Republic of Serbia for 2008, OG RS No. 123/07, 102/08

Law on Budget of the Republic of Serbia for 2009, OG RS No. 120/08, 31/09, 111/09

Law on Budget of the Republic of Serbia for 2010, OG RS No. 107/09, 91/10

Law on Environmental Protection, Law on the Amendments of the Law on Environmental Protection, OG RS No. 135/04, 36/09

Law on the Environmental Protection Fund of the Republic of Serbia, OG RS No. 72/09

Law on Waste Management, OG RS No. 36/09, 88/10

Law on Packaging and Packaging Waste, OG RS No. 36/09

Law on the Protection and Sustainable Use of Fish Stock, OG RS No. 36/09

Law on Water, OG RS No. 30/10

Law on Budget System, OG RS No. 54/09, 73/10, 101/10

Law on Ministries, OG RS No. 65/08

GOVERNMENT OF THE REPUBLIC OF SERBIA

Needs of the Republic of Serbia 2008-2010

National Programme For Integration With The European Union (NPI)

National Programme for Environmental Protection - final (2010-01-21)

National Sustainable Development Strategy

Action Plan For The Implementation Of The National Sustainable Development Strategy Of The Republic Of Serbia 2009 – 2017

2009 Progress Report On Implementation Of National Sustainable Development Strategy (Draft)

Decree on types of pollution and criteria for calculating the fees for environmental pollution, OG RS No. 113/05, 6/07, 8/10, 102/10

Decree on criteria and conditions for return, exemption or reduction of payment of fee for environmental pollution, OG RS No. 113/05, 24/10

Decree on putting under control the use and trade of wild flora and fauna, OG RS No. 31/05, 45/05, 22/07, 38/08, 9/10

Decree on the amount and conditions for the allocation of the incentive funds, OG RS No. 88/09, 67/10, 101/10

Decree on the products which become special waste streams after use, OG RS No. 54/10

Decree on criteria for calculating fees for packaging or packaged products and exemption from these fees, OG RS No. 08/10

mitsubishi UFJ SECURITIES

CDM – Agriculture Sector

CDM – Waste Sector

ALEXANDER HORST, CONSULTANT

CDM – Strategy for the Forestry Sector in Serbia (draft)

SINGIDUNUM UNIVERSITY FACULTY OF ECONOMICS, FINANCE AND ADMINISTRATION FEFA MIHAILO CRNOBRNJA, PH.D., ANA S. TRBOVICH, PH.D

Impact Assessment of Serbia's EU accession (2009-10)

DREPR, DR. MARK REDMAN, COR VAN OERS AND REINDER TORENBEEK

Serbia DREPR - Nitrates - 2nd draft final report

COMMISSION OF THE EUROPEAN COMMUNITIES

Serbia Progress report 2009

UNDP

Human Rights Based Approach (HRBA) To Improving Water Governance In Europe & CIS

EU, SERBIA

Stabilization and Association Agreement

FACULTY OF SCIENCES, UNIVERSITY OF NOVI SAD

Strategy of water supply and protection of water in AP Vojvodina

MINISTRY OF ENVIRONMENT AND FORESTRY, REPUBLIC OF TURKEY

EU Integrated Environmental Approximation Strategy (2007-2023)

PROJECT MANAGEMENT LTD, IRELAND

Strategy for EU Environmental Law Approximation, Croatia. National Environmental Approximation Strategy (NEAS)

THE REGIONAL ENVIRONMENTAL CENTER FOR CENTRAL AND EASTERN EUROPE

Environmental Enforcement and Compliance in South Eastern Europe

WORLD BANK

Serbia, An Agenda for Economic Growth and Employment (2004-12)

ANNEX 3 - STRATEGIC APPROXIMATION PYRAMID

