

ENVIRONMENTAL APPROXIMATION STRATEGY OF REPUBLIKA SRPSKA

Banjaluka, November 2016

Table of Contents

ABBREVIATIONS.....	8
INTRODUCTION	13
KEY ELEMENTS OF REPUBLIKA SRPSKA ENVIRONMENTAL APPROXIMATION	16
III INSTITUTIONAL FRAMEWORK REGARDING ENVIRONMENTAL APPROXIMATION OF REPUBLIKA SRPSKA.....	19
1. INTRODUCTORY NOTES.....	19
2. ENVIRONMENTAL INSTITUTIONS OF REPUBLIKA SRPSKA	20
2.1. Introductory notes	20
2.2. MINSITRY OF ECONOMIC RELATIONS AND REGIONAL COOPERATION OF RS (MERRC RS).....	21
2.3. MINISTRY OF SPATIAL DEVELOPMENT, CONSTRUCTION AND ECOLOGY (RS MSDCAE).....	22
2.3.1. INTER-ENTITY BODY	23
2.4. RS MINISTRY OF AGRICULTURE, FORESTRY AND WATER MANAGEMENT (RS MAFWM)	23
□ ORGANISING THE INTEGRAL WATER MANAGEMENT;.....	23
□ PRESCRIBING THE CONDITIONS OF WATER SUPPLY, COLLECTION AND TREATMENT OF UTILITIES WASTEWATER.....	23
THE SAID DUTIES ARE DISCHARGED WITHIN THE FOLLOWING ORGANISATIONAL UNITS OF THE ADMINISTRATION BODY:	23
2.5. MINISTRY OF INDUSTRY, ENERGY AND MINING OF RS (RS MIEM).....	25
THE SAID DUTIES ARE DISCHARGED WITHIN THE FOLLOWING ORGANISATIONAL UNITS OF THE ADMINISTRATION BODY:	26
2.6. MINISTRY OF HEALTH AND SOCIAL PROTECTION OF REPUBLIKA SRPSKA (RS MHSP)	27
2.7. RS MINISTRY OF FINANCE (RS MF).....	28
2.8. REPUBLIC SECRETARIAT OF LEGISLATION.....	29
2.9. PUBLIC INSTITUTION “VODE SRPSKE” WATERS OF SRPSKA.....	29
2.10. REPUBLIC HYDROMETEOROLOGICAL INSTITUTE OF REPUBLIKA SRPSKA (RHMI RS)	30
2.11. REPUBLIC ADMINISTRATION FOR INSPECTION (INSPECTORATE OF REPUBLIKA SRPSKA)	31
2.12. REPUBLIC INSTITUTE OF STATISTICS OF REPUBLIKA SRPSKA (RIS RS)	32
2.13. REPUBLIC INSTITUTE FOR PROTECTION OF CULTURAL-HISTORICAL AND NATURAL HERITAGE (RIOCHNH).....	32
2.14. ENVIRONMENTAL PROTECTION AND ENERGY EFFICIENCY FUND OF REPUBLIKA SRPSKA (RS FUND).....	32
2.15. PHI „PUBLIC HEALTH INSTITUTE OF REPUBLIKA SRPSKA.....	33
IV STATE OF APPROXIMATION OF ENVIRONMENTAL LEGISLATION OF REPUBLIKA SRPSKA BY SECTORS.....	33
1. LEGAL AND INSTITUTIONAL ASPECTS	33
GENERAL REMARKS	33
2. HORIZONATAL ISSUES.....	36
2.1. SCOPE OF TRANSPOSITION	36
2.2. OVERVIEW OF TRANSPOSITION	38
2.1. ISSUES PERTAINING TO ENVIRONMENTAL PROTECTION IN THE DEVELOPMENT OF CERTAIN PLANS AND PROGRAMS.....	38
2.2. ISSUES RELATED TO THE ENVIRONMENT IN THE DEVLOPMENT OF CERTAIN PROJECTS	39

2.2. ENSURING FREE PUBLIC ACCESS TO ENVIRONMENTAL INFORMATION	40
2.2. ENSURING PUBLIC PARTICIPATION IN DECISION-MAKING	40
2.2. ESTABLISHING THE SYSTEM OF ENVIRONMENTAL LIABILITY	41
2.2. ESTABLISHING AND FUNCTIONING OF THE INFRASTRUCTURE FOR SPATIAL PLANNING INFORMATION	41
2.2. ENSURING PROTECTION OF ENVIRONMENT THROUGH CRIMINAL	41
3. WATER MANAGEMENT	45
3.1. SCOPE OF TRANSPOSITION	45
3.2. OVERVIEW OF TRANSPOSITION	47
3.3. IDENTIFIED GAPS	51
3.4. RECOMMENDATIONS/PRIORITIES	54
3.5. INSTITUTIONAL ADAPTATION REQUIREMENTS	54
4. WASTE MANAGEMENT	58
4.1. SCOPE OF TRANSPOSITION	58
4.2. OVERVIEW OF TRANSPOSITION	61
4.3. IDENTIFIED GAPS	63
4.4. RECOMMENDATIONS / PRIORITIES	64
4.5. INSTITUTIONAL ADAPTATION REQUIREMENTS	65
5. AIR QUALITY AND CLIMATE CHANGES	65
5.1. SCOPE OF TRANSPOSITION	65
5.2. OVERVIEW OF TRANSPOSITION	71
5.2.1. AIR QUALITY	71
5.2.2. EMISSIONS INTO AIR	73
5.2.3. STANDARDS FOR FULES AND LEGAL INSTRUMENTS FOR GHG	73
5.3. IDENTIFIED GAPS	74
5.4. RECOMMENDATIONS/PRIORITIES	75
5.5. INSTITUTIONAL ADAPTATION REQUIREMENTS	75
6. INDUSTRIAL POLLUTION	76
6.1. SCOPE OF TRANSPOSITION	76
□ REGULATION (EC) NO 1221/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 25 NOVEMBER 2009 ON THE VOLUNTARY PARTICIPATION BY ORGANISATIONS IN A COMMUNITY ECO-MANAGEMENT AND AUDIT SCHEME – EMAS	77
□ REGULATION (EC) NO 66/2010 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 25 NOVEMBER 2009 ON THE EU ECOLABEL – 2012/481/EU: COMMISSION DECISION OF 16 AUGUST 2012 ESTABLISHING THE ECOLOGICAL CRITERIA FOR THE AWARD OF THE EU ECOLABEL FOR PRINTED PAPER – 2012/448/EU: COMMISSION DECISION OF 12 JULY 2012 ESTABLISHING THE ECOLOGICAL CRITERIA FOR THE AWARD OF THE EU ECOLABEL FOR NEWSPRINT PAPER – ECO- LABEL	77
THIS REGULATION LAYS DOWN RULES FOR THE ESTABLISHMENT AND APPLICATION OF THE VOLUNTARY EU ECOLABEL SCHEME	77
6.2. OVERVIEW OF TRANSPOSITION	77
6.3. IDENTIFIED GAPS	79
6.4. RECOMMENDATIONS/PRIORITIES	79
6.5. INSTITUTIONAL ADAPTATION REQUIREMENTS	81
7. CHEMICALS	82
7.1. SCOPE TRANSPOSITION	82
7.2. OVERVIEW OF TRANSPOSITION	84
7.3. IDENTIFIED GAPS	86
7.4. RECOMMENDATIONS/PRIORITIES	86
7.5. INSTITUTIONAL ADAPTATION REQUIREMENTS	87

8. PROTECTION OF NATURE.....	88
8.1. SCOPE OF TRANSPOSITION	88
8.2. OVERVIEW OF TRANSPOSITION	89
8.3. IDENTIFIED GAPS	90
8.4. RECOMMENDATIONS/PRIORITIES	91
8.5. INSTITUTIONAL ADAPTATION REQUIREMENTS	91
9. ENVIRONMENTAL NOISE	92
9.1. SCOPE OF TRANSPOSITION	92
EU LEGISLATION ON ENVIRONMENTAL NOISE CONTROL STIPULATES THE OBLIGATION OF MSS TO DEVISE STRATEGIC NOISE MAPS USING HARMONISED NOISE INDICATORS. IN ORDER TO REDUCE NOISE WHERE THE PERMITTED NOISE LEVELS ARE EXCEEDED AND TO MAINTAIN NOISE LEVEL WHERE QUALITY IS GOOD, COMPETENT AUTHORITIES ARE EXPECTED TO DRAW UP ACTION PLANS. REDUCTION OF NOISE IN OUTDOOR EQUIPMENT AND ITS PROPER MARKING AND ASSESSMENT IS NECESSARY FOR EXPORT FROM BIH OUTDOOR PRODUCTS TO THE EU MARKET. AND FINALLY, LEGAL INSTRUMENTS ON TRAFFIC, AIRPLANE, AND RAIL WAY NOISE ARE EXPECTED TO REDUCE NOISE EMITTED FROM CARS, MOTORCYCLES, AIRPLANES (ESPECIALLY AROUND LARGE AIRPORTS) AND RAIL WAY SYSTEMS.....	
9.2. OVERVIEW OF TRANSPOSITION	94
9.3. IDENTIFIED GAPS	95
Based on the given review, the following gaps have been identified in the RS legislation relative to the protection from noise.....	
• Directive on assessment and environmental sound and noise management has not yet been transposed and	95
• there are no regulations on the level of noise produced by equipment for use outdoors.	95
9.4. RECOMMENDATIONS/PRIORITIES	95
9.5. INSTITUTIONAL ADAPTATION REQUIREMENTS	95
V ECONOMIC ASPECTS OF ENVIRONMENTAL APPROXIMATION.....	96
1. BASELINE	96
1.1. PRESENT CONDITIONS FROM THE ECONOMIC/ FINANCIAL	96
1.2. COMPARISON OF AVERAGE EU AND REPUBLIKA SRPSKA.....	96
2. THE COST OF APPROXIMATION	100
2.1. DEFINITION.....	100
2.2. SCOPE AND METHODOLOGY OF COST ANALYSIS	101
2.2.1. INTRODUCTORY NOTES	101
2.2.2. FOCUS ON HEAVY INVESTMENT DIRECTIVES	103
2.2.3. DEFINITION OF CAPITAL, OEPERATIVE AND ADMINISTRATIVE COSTS	103
2.2.3.1. ADMINISTRATIVE COSTS	103
2.2.3.2. Investment expenditures and operating and maintenance expenditures	104
2.2.4. ESTABLISHING MULITANNUAL COST TARGETS AND MULTIANNUAL COST FLOWS.....	104
2.2.5. DESCRIPTION OF THE MODEL TOOL.....	105
2.3. 107	
2.3. COST APPROXIMATION BY SECTORS.....	107
2.3.1. WATER MANAGEMENT.....	107
2.3.1.1. Baseline	107
2.3.1.2. Rationale for the cost estimate	108
2.3.1.3. Unit costs	110
2.3.1.3.1. General remarks	110
2.3.1.3.2. Urban wastewater	110
2.3.1.3.2.1. Collection networks	110
2.3.1.3.2.2. Treatment plants	111

2.3.1.3.3. Drinking water.....	111
2.3.1.3.3.1. Introductory notes.....	111
2.3.1.3.3.2. Water supply network.....	111
2.3.1.3.3.3. Treatment	111
2.3.1.4. PROTECTION FROM FLOODS	111
2.3.1.5. TARGETS FOR COMPLIANCE	112
2.3.1.5.1. Introductory notes.....	112
2.3.1.5.2. Drinking water.....	112
2.3.1.5.3. Urban wastewater	113
2.3.1.5.4. Flood protection	115
2.3.1.6. COSTS OF APPROXIMATION	116
2.3.1.6.1. Drinking water.....	116
2.3.1.6.2. Urban wastewater	117
2.3.1.6.3. Flood protection	118
2.3.1.7. CONSIDERATION FOR FINANCING	120
2.3.2. WASTE MANAGEMENT	121
2.3.2.1. BASELINE	121
2.3.2.2. RATIONALE FOR THE COST ESTIMATE	121
2.3.2.3. UNIT COSTS.....	122
2.3.2.3.1. Introductory notes.....	122
2.3.2.3.2. Case study	122
2.3.2.3.3. Feasibility study	123
2.3.2.3.4. International references.....	124
2.3.2.3.5. Adjustments of these references to the conditions in RS	124
2.3.2.4. TARGETS OF COMPLIANCE.....	126
2.3.2.5. COSTS OF APPROXIMATION	127
2.3.2.6. CONSIDERATIONS FOR FINANCING	129
2.3.3. EMISSIONS IN AIR (DIE)	129
2.3.3.1. BASELINE.....	129
2.3.3.2. RATIONALE FOR COST ESTIMATE.....	130
2.3.3.3. ABATEMENT COSTS	131
2.3.3.4. Targets for compliance	132
2.3.3.4.1. Cost of approximation	132
2.3.4. NATURE AND BIOLOGICAL DIVERSITY PROTECTION.....	135
2.3.4.1. BASELINE	135
2.3.4.2. RATIONALE FOR COSTS ASSESSMENT	136
2.3.4.3. UNIT COSTS.....	136
2.3.4.4. TARGETS FOR COMPLIANCE	137
2.3.4.5. COSTS OF APPROXIMATION	139
2.3.4.6. CONSIDERATIONS FOR FINANCING	141
2.3.5. OTHER SECTORS	141
2.3.5.1. NOISE	141
2.3.5.1.1. Baseline.....	141
2.3.5.1.2. Costs of approximation.....	142
2.3.5.1.3. Environmental noise maps for agglomerations and transport	143
2.3.5.2. CHEMICALS	144
2.3.5.2.1. Baseline.....	144
2.3.5.2.2. Targets for compliance	145
2.3.5.2.3. Financing the costs	148
2.4. TOTAL COSTS OF APPROXIMATION AND DISTRIBUTION BY SECTORS	148
2.4.1. TOTAL COSTS OF APPROXIMATION IN MULTI ANNUAL FLOW FORMAT	148
2.4.2. TOTAL COSTS OF APPROXIMATION AND DISTRIBUTION BY SECTORS	149
2.4.3. COST OF APPROXIMATION AND DISTRIBUTION BY SECTORS	151
3. ECONOMIC AND FINANCIAL APPROXIMATION STRATEGY.....	154
3.1. BASELINE	154

3.2. AFFORDABILITY CONSTRAINTS.....	154
3.3. TRANSITION PERIODS FOR FULL COMPLIANCE	156
3.4. IMPACT ON REPUBLIKA SRPSKA.....	157
3.4.1. BURDEN ON CONSUMERS.....	158
3.4.2. BURDEN ON REPUBLIKA SRPSKA AS A WHOLE	159
3.5. FINANCING PLAN OF APPROXIMATION.....	160
3.5.1. FINANCING PLAN FOR APPROXIMATION	160
3.5.2. FINANCING THE GAP.....	160
4. BENEFITS OF IMPLEMENTING THE ACQUIS.....	163
4.1. DEFINITION OF BENEFITS.....	163
4.2. METHODOLOGY	163
4.2.1. TECHNIQUES	163
4.2.2. MONETISATION	164
4.3. RESULTS OF THE BENEFITS CALCULATIONS.....	164
4.3.1. BASELINE.....	164
4.3.2. RESULTS.....	165
4.3.3. COST BENEFIT ANALYSIS.....	166
4.4. CONCLUSIONS AND RECOMMENDATIONS ON THE USE OF THESE BENEFIT ESTIMATES	167
5. CONCLUSIONS AND RECOMMENDATIONS	168
5.1. GENERAL RECOMMENDATIONS.....	168
5.2. RESPONSIBLE INSTITUTIONS IN REPUBLIKA SRPSKA.....	169
5.2.1. STRATEGIC IMPACT IN THE SHORT TERM	169
5.2.2. MAIN REQUIREMENTS IN THE ECONOMIC AND FINANCIAL FIELDS IN RELATION TO THE OPERATIVE STRUCTURE TO THE INDIRECT MANAGEMENT SYSTEM.....	169
5.2.3. CONCLUSIONS.....	170
5.2.4. DIRECTIVE SPECIFIC IMPLEMENTATION PLAN.....	170
5.3. RECOMMENDED MEASURES	171
5.3.1. SHORT TERM MEASURES RECOMMENDED	171
5.3.2. MEDIUM TERM MEASURES RECOMMENDED	171
VI SUPPORT ACTIONS FOR APPROXIMATION	172
VII CLOSING REMARKS.....	172
ANNEX I: LIST OF EU ENVIRONMENTAL ACQUIS LEGISLATIVE INSTRUMENTS	175
HORIZONTAL LEGISLATION.....	175
WATER MANAGEMENT	176
WASTE MANAGEMENT.....	177
AIR QUALITY AND CLIMATE CHANGE	180
INDUSTRIAL POLLUTION	183
CHEMICALS	184
NATURE PROTECTION	186
ENVIRONMENTAL NOISE	186
ANNEX II: THE LIST OF SOURCES OF BIH INTERNATIONAL ENVIRONMENTAL OBLIGATIONS [EXISTING & POTENTIAL].....	189
GLOBAL RELEVANCE TREATIES.....	189
COUNCIL OF EUROPE TREATIES	194

UN-ECE TREATIES	195
OTHER TREATIES	199
ANNEX III – REGULATIONS RELEVANT TO THE REPUBLIKA SRPSKA INSTITUTIONS COMPETENT FOR ENVIRONEMNTAL PROTECTION	201
ANNEX IV – REPUBLIKA SRPSKA POLICY AND REGULATIONS INSTRUMENTS IN THE FIELD OF ENVIRONMENTAL PROTECTION	202

ABBREVIATIONS

AAQ	Ambient Air Quality [Directive]
AAUs	Assigned Amount Units
AIMCS	Animal Identification, Movement and Control
AP(s)	Action Plan(s)
APID(s)	Action Plan(s) for Implementation of DSIP(s)
API Regulation	Action Plan for Implementation of Regulation
BAT	Best Available Techniques
BAU	Business as Usual
BEP	<i>Best Environmental Practice</i>
BHDCA	Bosnia and Herzegovina Directorate of Civil Aviation
BiH	Bosnia and Herzegovina
BREFs	BAT Reference Documents
Capex	Capital Expenditure [investment cost]
CBA	Cost Benefit Analysis
CBD	Convention on Biological Diversity
CCS	Carbon Capture and Storage [Directive]
CDM	Clean Development Mechanism [Kyoto context]
CERs	Certified Emission Reductions
CITL	Community Independent Transaction Log [GHG context]
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CLRTAP	Convention on Long-Range Transboundary Air Pollution
CO₂	Carbon Dioxide
CoP	Conference of the Parties [to an international treaty]
DEI	Directorate for European Integrations
DIS	Decentralized Implementation System [EU aid context]
DNA	Designated National Authority
DS	Dangerous Substances
DSIP(s)	Directive Specific Implementation Plan(s)

DW	Drinking water
EAS	Environmental Approximation Strategy
EBRD	European Bank for Reconstruction and Development)
EC	European Commission or European Community in the legislative context
ECAIP	Environmental Cost Assessment and Investment Plan
ECHA	European Chemical Agency
ECJ	European Court of Justice
EEA	European Environment Agency
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EIONET	European Environment Information and Observation Network
EIS	Environmental Impact Study
EnvIS	An EU IPA Project – Strengthening of Bosnia and Herzegovina Environmental Institutions and Preparation for Pre-Accession Funds (Europe Aid/128786/C/SER/BA)
EPU	Economic Policy Unit
ETC	European Topic Centres
ETS	Emission Trading Scheme [in EU]
ELV	Emission Limit Values
EMAS	Environmental Management and Audit Scheme
E-PRTR	European Pollutant Release and Transfer Register
EPU	Economic Policy Unit
ERUs	Emission Reduction Units
EU	European Union
EUD IN BiH	European Union Delegation in BiH
FBiH	Federation of Bosnia and Herzegovina
FCTs	Full Cost Recovery Tariffs
FMoH	Federal Ministry of Health
FMoAWMF	Federal Ministry of Agriculture, Water Management and Forestry
FMoET	Federal Ministry of Environment and Tourism
GDP	Gross Domestic Product
GEF	Global Environmental Fund
GHG	Green House Gases

GLP	Good Laboratory Practice
GW	Ground Water
HH	Household [e.g.: income; expenditure]
HHI	Household Incomes
HW	Hazardous Waste
ICAO	International Civil Aviation Organization
IE	International Expert
IED	Industrial Emissions Directive
IFIs	International Financial Institutions
IGA	Institutional Gap Analysis
INSPIRE	Infrastructure for Spatial Information [EU Directive]
IPA	Instrument for Pre-Accession Assistance [EU]
IPC	Integrated Pollution Control
IP(s)	Implementation Plan(s)
IPPC	Integrated Pollution Prevention and Control
ISO	International Organization for Standardization
IT	Information Technology
ITL	Independent transaction log [GHG context]
ITL	Independent transaction log [GHG context]
JI	Joint Implementation (mechanism) [Kyoto context]
KfW	Kreditanstalt für Wiederaufbau [bank group]
LCP	Large Combustion Plant
LE	Local Expert
LEAP	Local Environmental Action Plan
LGA	Legal Gap Analysis
LSG	Local Self-Government
LSGU	Local Self-Government Unit
MAPP	Major-accident Prevention Policy
MAT	Maximum Affordable Tariff
MCE	Main Component Element (EEA context)
MoCEPPE	Ministry of Physical Planning, Civil Engineering, and Ecology (RS)
MoFTER	Ministry of Foreign Trade and Economic Relations [BiH]

MoU	Memorandum of Understanding
MS(s)	Member State(s)
MTC	Ministry of Communication and Transport [BiH]
NAP	National Action Plan
NEC	National Emissions Ceiling
NFP	National Focal Point
NMVOCs	Non-methane Volatile Organic Compounds
NPAA	National Programme for Adoption of Acquis
NO_x	Nitrate Oxides
NRC	National Reference Centre [EEA]
NTC	National Topic Centre [EEA]
NPV	Net Present Value
ODS	Ozone Depleting Substances
OECD	Organisation for Cooperation and Development
OP	Operational Programme
O&M	Operation and Maintenance
Opex	Operational Expenditure (O & M costs)
PCB	Polychlorinated biphenyls
PC	Public Company
PCT	Polychlorinated terphenyls
PM_[10; 2,5]	Particulate Matters
POPs	Persistent Organic Pollutants
PPP	Purchase Price Parity
PPs	Phyto-pharmaceuticals
PRTR	Pollutant Release and Transfer Register
PUCs	Public Utility Company(ies)
RAINS	Regional Air Pollution and Simulation model
RB	River Basin
RBD	River Basin District
REL	Region with Established Sanitary Level Landfills
REACH	EU Regulation on Registration, Evaluation, Authorisation and Restriction of chemicals
RMAS	Regions where there is an inter-municipal agreement

ROD	Reporting Obligations Data Base [EU]
RS	Republika Srpska
RSIP	Regulation Specific Implementation Plan
RWC	Region with Work Commenced [in establishing Sanitary Level Landfills]
SAA	Stabilisation and Association Agreement
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SEE	South Eastern Europe
SIEFs	Substance Information Exchange Forums [context of chemicals]
SO2	Sulphur Dioxide
SPA	Special Protection Area
SRD	Standardized Reporting Directive
SRDSIP	Standardized Reporting Directive Specific Plan
SW	Surface Water
TA	Technical Assistance
TEC	Treaty of European Community
TEU	Treaty of European Union
TFEU	Treaty on the Functioning of the European Union
TOC	Table of Concordance
TO2	Titan Dioxide
ToR	Terms of Reference
UMZs	Urban Morphological Zones (agglomerations [UWWT context])
UNECE	United Nations Economic Commission for Europe
UNFCCC	United Nations Framework Convention on Climate Change
UNGHS	UN Globally Harmonised System of Classification and Labelling of Chemicals
UWWT	Urban Wastewater [Directive] 91/271/EEC
VOCs	Volatile Organic Compounds
WEEE	Waste Electrical and Electronic Equipment
WFD	Water Framework Directive 2000/60/EC
WI	Waste Incineration
WQOs	Water Quality Objectives
WS	Water Service
WVTA	Whole Vehicle Type-Approval

INTRODUCTION

The realisation of IPA Project (2011-2014) – Strengthening of Bosnia and Herzegovina Environmental Institutions and Preparation for Pre-Accession Funds – (hereinafter: EnvIS), which was financed by the European Union, delivered the total of 54 pieces of working materials which are intended to determine the proposals of strategic and planning documents and environmental protection policies in Republika Srpska, FBiH, Brčko District and for the institutions of Bosnia and Herzegovina in accordance with constitutions and legislative frameworks.

During the review of the Indicative Strategy Paper for BiH for the period 2014-2020, the EU gave the opportunity to BiH to include the environmental protection sector in the IPA II financing program under the condition that BiH adopts four strategic papers of EU approximation (one for Republika Srpska, Federation of Bosnia and Herzegovina, Brčko District and the state level of Bosnia and Herzegovina) the working materials of which were made within EnvIS Project.

EU environmental policy (known as Chapter 27) comprises rather extensive parts of European regulations (the so-called *acquis communautaire*) that were generated in decades and became the globally most complex system of environmental regulations. A high degree of environmental protection is one of the basic goals integrated into EU agreements along with the principles of sustainable development and integration of environmental protection into all policies. Its cross-cutting character is consistent with the fact that a large number of directives in Republika Srpska, as part of the EU *acquis*, fall within the competence of the Ministry of Physical Planning, Civil Engineering and Ecology of Republika Srpska (hereinafter: RS MoCEPPE) and other Republika Srpska institutions.

The latest instances of the EU enlargements showed that the negotiations relative to Chapter 27 were the most difficult, and not only because of the scope of legislation and its cross-cutting character. Bearing in mind the scope of the environmental issue in Republika Srpska and the present state of infrastructure it is possible that this section of the EU *acquis* will be the most expensive. This chapter also contains politically sensitive aspects such as reactions to the cross-border pollution, issues related to internal market and foreign trade rules.

The goals of the Environmental Approximation of Republika Srpska (hereinafter: the approximation program) are twofold: primarily, to tackle the issues of complexity of all challenges pertaining to the implementation of EU environmental legislation in Republika Srpska and secondly, to provide healthy grounds for accession negotiations in relation to Chapter 27. The Strategy aims to cover all challenges of the EU accession in terms of legislation, determining the scope of changes that will be necessary in the organization and work of environmental institutions, as well as setting the approach to overcoming of financial gaps which are the consequence of "business as usual or usual practice" until a full harmonization with the EU *acquis* is reached.

The approximation program was developed upon the results of EnvIS Project, which was financed by the EU for the purpose of approximation process related to Chapter 27, which will also later be important in the accession negotiations about the said Chapter. For the purpose of developing the approximation program, certain aspects of legislation harmonization within ECRAN project were also used¹.

The EU *acquis* should be transposed into the Republika Srpska legislation in the scope which is supported by current capacities with the aim to have the entire Chapter 27 transposed by the moment of EU integration.

¹ Progress Monitoring of the Transposition and Implementation of the EU Environmental and Climate Acquis, Environment and Climate Regional Accession Network (ECRAN).

The implementation should be focused on the EU requirements – working on approximation and implementation of EU acquis should be one of priorities, financial and human resources should be distributed so as to meet the requirements particularly with regard to respecting the budgetary restrictions and number of employees in the state sector.

The accession date itself is a very important element in the planning of requests for transitional periods for certain directives and for planning of the overall approximation costs. However, although it is now too soon to have a precise date of EU accession, this Strategy is based on the cost assessment entailing from a gradual process of EU acquis adoption.

Institutional challenges are also important. Adaptation to the EU acquis should be one of priorities, particularly the enforcement of regulations harmonized with the community law. To that regard, MINISTRY OF PHYSICAL PLANNING, CIVIL ENGINEERING AND ECOLOGY RS and other RS environmental institutions, within their respective competence and joint activities in the Working group 27 Chapter 27 – Environment, have the joint task to set the basic environmental protection which will be upgraded by the legal enactments Harmonized with the European standards in this field.

Structure of the Working group 27 Chapter 27 – Environment, will be very important in that regard and it can effectively increase the approximation planning, support the negotiations and coordinate the implementation. It will be complemented by the working groups for the implementation of separate directives that will be chaired mainly by representatives of Chapter 27 relevant institutions with the role to provide for a platform of efficient cooperation between ministries.

At the end of accession negotiations a transitional period will be agreed for the implementation of directives which require significant finances ("tough directives"). According to currently available economic information and in line with their further specification in plans for the enforcement of separate directives and economic strategies, a transitional period shall be required for wastewater treatment plants, waste storage plants, landfills, solid waste plants and chosen industrial plants. As for all other components of EU acquis, a full harmonisation will be necessary.

The enforcement of EU environmental legislation in Republika Srpska will not be easy at all, nor will it be cheap. Also, it will not be possible to enforce it immediately. It is important to emphasise the need for a realistic estimation of financing and enforcing the EU acquis so that once they are introduced into Republika Srpska legal system it does not only constitute an official obligation prescribed by Brussels but a program for achieving a better state of environment and better life quality for all citizens of Republika Srpska.

The adaptation program is focused on Chapter 27 of the EU acquis and is aimed at making sure that Republika Srpska within BiH is ready to lead negotiations with the European Commission and European Council as efficiently as possible, and to meet its obligations which stem from the SAA between the European Community and its members State and Bosnia and Herzegovina. This Agreement replaced the Provisional Agreement on 1 June 2015 which was in force from 2008 (Official Gazette of BiH-international treaties", Vol 10/08). According to the signed SAA, Republika Srpska continued meeting the obligations that are defined under Article 108 of the SAA. The said Article reads that "The Parties shall develop and strengthen their cooperation in the environmental field with the vital task of halting further degradation and start improving the environmental situation with the aim of sustainable development. The Parties shall, in particular, establish cooperation with the aim of strengthening administrative structures and procedures to ensure strategic planning of environment issues and coordination between relevant actors and shall focus on the alignment of Bosnia and Herzegovina's legislation to the Community acquis."

The decision on the coordination system of European integration in BiH ("Official Gazette of BiH", Vol:72/16) (hereinafter: the Decision) defines the institutional and operative system and the manner of coordination of activities carried out by BiH institutions related to the integration of BiH into the

European Union, joint bodies in the coordination system, the composition of those bodies, their competences and mutual relations. The reason why the said Decision is rendered pertains to the execution of contracted obligations under SAA concluded between the European Community and its Members States and Bosnia and Herzegovina, as well as other obligations in the european integration process.

The coordination of european integration process in BiH is based on the principles of abiding by the existing internal legal and political structure of BIHand protecting of constitutional competences of each authoritz level and their institutions in certain fields encompassed by the European integration.

Taking into account that the Strategy is the document needed for the execution of obligations in the european integration process, the authors of the documents at all lelvels and institutions must implement and consistently enforce the decision on the coordination system of European integration in BiH aimed at efficient enforcement of vertical coordination of the european integration in BiH through joint bodies.

For the purpose of Republika Srpska legislation approximation, the EU acquis in the field of environment is grouped in several groups dealing with the following :

- Horizontal (cross-cutting) issues;
- Water Management;
- Waste Management;
- Air Quality and Climate Change;
- Industrial Pollution;
- Chemicals;
- Nature Protection; and
- Environmental Noise.

The list of EU legal instruments that make up the eight environmental sub-sectors is contained in ANNEX I to this Strategy.

The list of relevant legal instruments of Republika Srpska which contain numerous provisions harmonized with the EU acquis is contained in Annex IV to this Strategy.

The analytical work that preceded drafting of EAS has comprised performing legal, institutional and economic gap analyses. The legal aspects investigated have comprised:

- Reviewing of Republika Srpska environmental legislation in eight sub-sectors identified in the EU environmental acquis;
- Identification of potential and existing gaps in environmental legislation; and
- Proposing / recommending short-term and mid-term priorities for activities.

Parts of approximation program, which pertain to different environmental sectors, contain relevant overviews of existing competences of Republika Srpska institutions for various environmental issues. In comparison with EU requirements, these overviews may serve as initial incoming information for the estimation of approximation of Republika Srpska environmental institutions achieve a successful transposition of EU environmental legislation.

The research into current situation was the first step in designing an overall strategy /planning/coordinating framework for environmental approximation in Republika Srpska.

The main source of information were legal instruments (regulations, directives and decisions) and legislation (constitutions, laws and bylaws) currently in force in Republika Srpska, as well as data and information gathered from various reports, plans and other documents pertaining to a greater or lesser degree to the environment.

Besides investigation of legal and institutional aspects of approximation, the background documentary basis for development of the text of the Strategy was supplemented also with scrutiny of the economic and financial aspects of approximation.

KEY ELEMENTS OF REPUBLIKA SRPSKA ENVIRONMENTAL APPROXIMATION

Various policy instruments relating to the environmental issues should be adopted in order to ensure a favourable climate in society and public administration at all levels supporting for the development, implementing and enforcing of environmental legislation harmonized with EU environmental acquis and undertaking of other necessary measures.

Such environmental legislation and other measures should be aimed at initiating changes that would lead towards providing a high level of environmental protection and protection of human health and achieving sustainable development of the entire county. The most important policy instruments that can be found in the practice of the EU and which are recommended to be developed, adopted and implemented by the countries candidate for EU membership are:

- Strategies;
- Sectoral policies; and
- Action Plans.

Having adopted such policy and plan instruments, a candidate country provides a clear insight into its state of environment, required intervention (whether legislative, institutional, financial or other) and also provide a clear and certain basis for EU to plan its technical and financial assistance to the environmental sector in forthcoming period. At the moment, such policy instruments are missing in Republika Srpska within Bosnia and Herzegovina. The development of the approximation program is a response to such a situation.

Table I gives an overview of Republika Srpska strategic documents.

Table I: REPUBLIKA SRPSKA STRATEGIES

No.	Title	Adoptedby/ year	Published
1	Strategy of Nature Protection	National Assembly /2011	("Official Gazzete of Republika Srpska", Vol 65/11)
2	Strategy of Chemical Safety 2012-2016	National Assembly /2012.	("Official Gazzete of Republika Srpska", Vol 49/12)
3.	Strategy of Air Protection in	National	("Official Gazzete of Republika

	Republika Srpska	Assembly /2011.	Srpska", Vol 37/11.
4.	Strategy of Integral Water Management	National Assembly / 2016.	("Official Gazzete of Republika Srpska", Vol 17/16)

Besides that, other strategic documents are being developed in Republika Srpska such as Strategy of waste management for the period 2017-2027.

However, the said strategic documents, as well as other policy and planning documents such as local environmental action plans (LEAP), which are in the focus of this document, make an insufficient approximation framework for the period 2014 – 2020 and for appropriate planning of EU technical and financial assistance which should be secured in that period. Therefore, a certain number of special strategic, planning and policy instruments, stated in Table II below, should be adopted in Republika Srpska with the aim of meeting the international obligations assumed under the signed SAA and other international environmental treaties for the purpose of approximating its environmental policy with the EU environmental policy, mentioned in the 7th EU Environment Action Programme².

**Table II: POLICY AND STRATEGY INSTRUMENTS WHICH
REPUBLICA SRPSKA SHOULD ADOPT**

No	Some type	Remark
1	ENVIRONMENTAL APPROXIMATION STRATEGY OF REPUBLIKA SRPSKA	<i>Goal:</i> Approximation of Republika Srpska regulations with the EU acquis. Extending support to BiH in meeting of international obligations in line with constitutional competences and obligations assumed under SAA. <i>Purpose:</i> providing for requirements for a coordinated and harmonized transposition, application and enforcement of EU environmental acquis. Scope: eight sub-sectors of EU environmental acquis (horizontal legislation; Water Management; Waste Management; Air Quality and Climate Change; Industrial Pollution; Chemicals; Nature Protection; and Environmental Noise).
2	ACTION PLANS FOR CERTAIN (COMPLEX) DIRECTIVES, REGULATIVES OR ENTIRE EU ENVIRONMENTAL LEGISLATION (APID)	<i>Goal:</i> Approximation of Republika Srpska regulations with the EU acquis. Extending support to BiH in meeting of international obligations in line with constitutional competences and obligations assumed under SAA; <i>Purpose:</i> Providing for a full harmonisation of Republika Srpska with the EU acquis, in accordance with relevant regulations and sector specific plans.

² Decision No 1386/2013/EU of the European Parliament and the Council of 20 November 2013 on General Union Environment Action Programme to 2020 "Living well, within the limits of our planet"

3.	ACTIVITIES PLAN FOR THE IMPLEMENTATION OF INTERNATIONAL TREATIES RELATIVE TO THE ENVIRONMENT	<i>Goal:</i> Approximation of Republika Srpska regulations with the EU acquis. Extending support to BiH in meeting of international obligations in line with constitutional competences and obligations assumed under SAA; <i>Purpose:</i> extending support in meeting of international obligations related to the environment in the territory of Republika Srpska.
4.	RS ENVIRONMENTAL PROTECTION POLICY	<i>Goal:</i> develop Republika Srpska policy for a high level of environmental protection and protection of human health in line with 7 Activities program for environmental protection, following the obligations of BiH entailing from the SAA.

With regard to monitoring of the environment and transmitting of information that can be used in the enforcement of the EU environmental policy, the European Environmental Agency (EEA) was established by the Council Regulation (EEC) No 1210/90 of 7 May 1990, amended twice, by Council Regulation (EC) No 933/1999 of 29 April 1999 and by Council Regulation (EC) No 1641/2003 of 22 July 2003), with the aim of setting up an European Environmental Information and Observation Network (EIONET).

Priority is given to the following areas of work

- Air quality and climate changes;
- Water quality, pollutants and water resources;
- The state of the soil, of the fauna and flora, and of biotopes;
- Use of land and natural resources;
- Waste management;
- Noise emissions;
- Chemical substances which are hazardous for the environment;
- Coastal and marine protection.

With regard to EIONET and the relations and duty to transmit the information and report to the European Environmental Agency, the Strategy will plan the activities within the adopted coordination system in the process of European integration in Bosnia and Herzegovina relative to the environment, for the purpose of which the working group 27. Chapter 27 - Environment shall be established to discuss these issues.

In that regard, Republika Srpska shall provide for the effective monitoring and reporting on the approximation of Republika Srpska legislation with the EU acquis in line with the Decision on the Coordination System of the European Union integration in BiH.

III INSTITUTIONAL FRAMEWORK REGARDING ENVIRONMENTAL APPROXIMATION OF REPUBLIKA SRPSKA

1. INTRODUCTORY NOTES

The Constitution of Republika Srpska contains principle provisions which designate and provide for the environmental protection, that is, the system of protection and enhancement of environment, protect and incite rational use of natural wealth for the purpose of protection and enhancement of life quality and environmental restoration in the general interest, and people have the right to healthy environment and everyone has a statutory obligation to protect and enhance the environment according to their possibilities.³ For the purpose of regulating the field of environmental protection, constitutional provisions also provide for an institutional framework according to which the National Assembly of Republika Srpska has the authority to enact laws and other regulations, and the Government of Republika Srpska is authorised, among others, to propose laws, other regulations and general acts and to ensure their implementation, as well as to enact decrees, decisions and other law enforcement acts.

Republika Srpska consists of 64 local self-government units (municipalities and towns) (hereinafter: LSGUs). Republika Srpska Constitution does not foresee a division of powers between Republika Srpska and its LSGUs with regard to the issues of environmental protection. LSGUs in Republika Srpska shall within the scope of their competence and in line with the law, among other things, attend to specific need of citizens with regard to the environmental protection.

Pursuant to Article 12 of the Law on Republic Administration, administration duties in Republika Srpska are discharged by ministries, administration bodies and Republic administration organisations of Republika Srpska. Ministries are established for one or more mutually related administration fields, depending on a type, importance and scope of those duties and a need to provide for a development strategy of Republika Srpska. Administrative organisations may be established within a ministry for the purpose of discharging certain duties from the ministry scope of work, which by its nature, integrity and manner of discharging require certain level of independence and a special organisation (secretariats, institutes, directorates, funds, agencies and centers). Administration organisations are established for expert and related administrative duties, which by their nature require a higher level of independence.

Pursuant to Article 66 of the Law on Republic Administration, administration bodies in Republika Srpska are responsible for the enforcement of policies which comprise, among other things, the ecological development. Pursuant to Article 69 of this Law, administration bodies have the authority to enact rulebooks, orders and instructions. Chapter V of the said Law contains the provisions concerning the organisational structure of administration bodies. In line with the said provisions, a minister is in charge of a ministry and a minister has assistants who are in charge of certain areas of work (department). An administrative organisation is managed by a director.

The laws referred to in Table III are relevant to the work of the RS administration bodies:

Table III : LEGISLATION

No.	Title
1.	LAW ON THE GOVERNMENT OF REPUBLIKA SRPSKA („Official Gazette of Republika Srpska”, Vol. 118/08)

³ (Official Gazette of Republika Srpska Vol 21/92 – revised, 28/94, 8/96, 13/96, 15/96, 16/96, 21/96, 21/02, 26/02, 30/02, 31/02, 69/02, 31/03, 98/03, 115/05, 117/05)

No.	Title
2.	LAW ON RS ADMINISTRATION („Official Gazette of Republika Srpska”, Vol. 118/08, 11/09, 74/10, 86/10, 24/12, 121/12, 15/16 I 57/16)
3.	LAW ON PUBLIC SERVICES SYSTEM („Official Gazette of Republika Srpska”, Vol. 68/07 and 109/12)
4.	LAW ON GENERAL ADMINISTRATIVE PROCEDURE ("Official Gazette of Republika Srpska”, Vol. 13/02, 87/07 i 50/10)
5.	LAW ON ADMINISTRATIVE DISPUTES ("Official Gazette of Republika Srpska”, Vol. 109/05 I 63/11)
5.	LAW ON CIVIL SERVANTS ("Official Gazette of Republika Srpska”, Vol. 118/08, 117/11, 37/12 and 57/16)

The list of Republika Srpska regulations which regulate the work of Republika Srpska administration bodies in the filed of environment can be found in Annex III to this document.

2. ENVIRONMENTAL INSTITUTIONS OF REPUBLIKA SRPSKA

2.1. Introductory notes

Republika Srpska is the entity which is not divided into regions and it executes its responsibilities through entity level bodies and local self-government units (municipalities and towns). Republika Srpska is responsible for all the functions and responsibilities , save for those that were exclusively invested in BIH institutions under the BIH Constitution, or taken over by BIH based on agreements with the entities.

The Republika Srpska Constitution contains all the powers vested in Republika Srpska, the following ones are important for the subject of this document:

- Organisation, competence and functioning of institutions,
- Environmental protection,
- Public information system,
- International cooperation, with the exception of the one transferred to institutions of Bosnia and Herzegovina, and
- Financing the exercise of rights and duties of the Republic.

Republika Srpska authorities have the power to develop policies, adopt and apply laws and bylaws and to provide for constitutionality and legality.

With regard to this document, the following administration bodies and institutions of Republika Srpska are the most important ones:

- Ministry of Economic Relations and Regional Cooperation of RS,
- Ministry of Physical Planning, Civil Engineering and Ecology of RS,
- Ministry of Agriculture, Forestry and Water Management of RS,
- Ministry of Health and Social Protection of RS,

- Ministry of Industry, Energy and Mining of RS,
- Ministry of Finances of RS,
- RS Secretariat for Legislation;
- RS Administration for Inspection
- Public institution "Vode Srpske" /Waters of Srpska/
- RS Institute of Cultural-Historical and Natural Heritage;
- RS Hydrometeorological Institute.
- RS Institute of Statistics
- Environmental Protection and Energy Efficiency Fund of Republika Srpska
- RS Institute of Public Health

The Ministry of Economic Relations and Regional Cooperation is the Coordinator for European integration in Republika Srpska.

Pursuant to the Constitution of Republika Srpska and laws that regulate administrative activities at the level of Republika Srpska, the tasks of the Government and RS Administration are as follows:

- To enact laws,
- To carry out development activities,
- To enforce laws, other regulations and general enactments,
- To organize and coordinate the work of administration,
- To conduct administrative supervision,
- To monitor the situation,
- To decide in administrative procedure on the rights and obligations of parties to the proceedings,
- To act in minor offense proceedings,
- To take care of public services, and
- To conduct other expert administration duties.

For the purpose of executing its responsibilities (rights and duties) stemming from the Constitution and laws, administrative bodies may adopt secondary legislation.

2.2. MINISTRY OF ECONOMIC RELATIONS AND REGIONAL COOPERATION OF RS (MERRC RS)

The powers vested in MERRC RS by the Law on RS Administration include among other things the following:

- Coordinate activities related to the execution of obligations of the Ministry stemming from the stabilization and accession process;
- Coordinate activities of the Ministry with regard to the use of funds that the European Union gives at disposal of BiH;
- Enhance economic and other forms of cooperation with the regions of Europe and world;

- Initiate, prepare and propose agreements and protocols for the establishment and development of inter-regional cooperation and monitoring of its enforcement.
- Coordinate activities to provide for cross-sectoral cooperation in the harmonization of laws and other regulations of Republika Srpska with EU legislation, expert support to those who propose laws in the process of legislation approximation, verification of the level of approximation between draft and proposal laws and other regulations of RS with the EU legislation.

The said duties are discharged within the following organizational units of this administrative body:

- a) department for economic cooperation,
- b) department for European integration and
- v) department for regional and institutional cooperation.

2.3. MINISTRY OF SPATIAL DEVELOPMENT, CONSTRUCTION AND ECOLOGY (RS MSDCaE)

Competences of RS **MoCEPPE** are set forward in the Law on Republic Administration and among other things, they comprise:

- Integral protection and enhancement of environmental protection and nature in general;
- Research, planning and management through environmental protection measures;
- Comprehensive protection of estates of general interest, natural wealth and resources, natural and cultural heritage, participation in development and realisation of program enactments at international and national level in the field of environmental protection;
- Realisation and coordination of expert cooperation and exchange of experiences with international and national organs and organisations and nongovernmental organisations in the field of environmental protection;
- Participation in the realisation of projects financed by international financial organisations in the field of environmental protection;
- Development of laws and bylaws that fall under the Ministry competence;
- Participation in the process of European integration through financing projects and programs in the field of physical planning, civil engineering and ecology.

The said duties are discharged within the following organisational units of this administration body:

a) Department of urban development and physical planning discharges the duties in the field of urban development and physical planning and other expert duties in integral physical planning and development, enforcement of Republika Srpska Spatial plan, administrative supervision, revision and issuance of approvals to spatial plans of local selfgovernment units and special areas, to urban development and regulation plans, revision of physical planning documentation, development programs and investment technical documentation of special interest to Republika Srpska urban planning, establishment of a single central database about the areas of Republika Srpska and the like.

b) Department of civil engineering discharges the duties of research and professional training, construction and development of construction land, production of construction material, development and services in civil engineering, building apartments and financing, residential relations, acquiring of ownership right over apartment buildings and apartments in common ownership, maintenance and management of buildings and common parts of buildings, residential and utilities activities, establishment and keeping of a single central database on issued approvals for construction and the like.

v) Department of environmental protection discharges the duties of integral protection and enhancement of environmental protection, research, planning and management through environmental protection measures, protection of natural resources and of natural and cultural heritage, participation in development and realisation of program enactments at international and national level in the field of environmental protection, exchange of experiences with international and national organs and organisations and nongovernmental organisations in the field of environmental protection and Development of laws and bylaws in the field of environmental protection.

g) Department of project coordination and development takes part in the process of european integration thorough financing projects and programs in the field of physical planning, civil engineering and ecology, study and analysis in the field of project and development coordination, procurement during the project realisation, financial duties, technical duties, technical supervision and control in the course of project realisation and the like.

2.3.1. INTER-ENTITY BODY

Within the scope of common goals and interests in the field of environmental protection, Republika Srpska establishes cooperation and coordination with the Federation of BiH and BD via Inter-entity body for environmental protection which is established in accordance with the Law on Environmental Protection.

The inter-entity body deals with all environmental protection issues that require a harmonised approach of the entities.

2.4. RS MINISTRY OF AGRICULTURE, FORESTRY AND WATER MANAGEMENT (RS MAFWM)

Competences of RS MAFWM are prescribed by the Law on the Republic Administration and among others, they include the following:

- Defining, implementing, monitoring and evaluating the incentive measures for the development of agriculture and rural areas;
- Harmonising local agricultural policy and regulations with European Union regulations and other international standards;
- Executing obligations that entail from trade agreements;
- Organising and carrying out activities in the field of land policy, protection, development and use of agricultural land;
- Enhancement of plants health and protection from detrimental organisms;
- Enhancement of measures of animal health protection;
- Defining the financing of forestry and hunting;
- Regulating the relations and conditions of production, trade and use of forestry seeds and forestry planting material, forestry ecology, protection of forests from natural disasters and anthropogenic impacts;
- Organising the integral water management;
- Prescribing the conditions of water supply, collection and treatment of utilities wastewater.

The said duties are discharged within the following organisational units of the administration body:

a) Department of Agriculture, Food Industry and Rural Development, carries out the activities in the field of land policy, protection of management and use of agricultural land, agro-ecology, protection and enhancement of plants health, prevention of introduction and expansion of caranteen and economically detrimental organisms, issuing decisions and approvals in the field of plants health

protection, registration of means for protection and nurturing of plants, issuance of permits for import, production and trade in means used for the health of plants, controlling the production of plants, seeds and seeding materials, issuance of permits for import, production and trade in plants, seeds and seeding material, lists of types, means for plant nurturing and other tasks prescribed by the Law. This Department comprises of the Division for Agricultural Policy, Rural Development, and International Cooperation, Division of Livestock Production, Division of Plant Production, Division of Agricultural Land and Division of Food Industry.

b) Department for expert services in agriculture carries out expert and other duties such as providing of expert counselling, knowledge, instructions and practical skills to agricultural producers and other clients, transferring knowledge on agricultural production with a view of preserving the environment, inciting the rural areas development and enhancing the quality of life in villages.

v) Veterinary Department carries out the duties that pertain to: organising of animal health protection and carrying out of veterinary duties, removal, prevention, elimination and eradication of animal contagious diseases, prevention of types of illness that are common to humans and animals, animal reproduction, application of hygienic and technological measures in animal breeding and cattle production, and protection of human environment in the field of animal breeding and trade, production and trade in products, raw materials and remains of animal origin and fodder.

g) department of forestry and hunting discharges the duties related to determination and enforcement of development policy in the field of forestry and hunting, management and holding of forestry and hunting resources, enhancement and use of forests and wildlife, development of strategic documents, plans and programs for management and holding of forests and hunting grounds, monitoring of the implementation of planning documents, keeping of register, providing for an inventory of forests in large areas, keeping the records and cadastre of forests, monitoring of health status of forests, monitoring the expenditure of funds earmarked for forests, expert coordination of duties that are related to private forests and measures of support to forest owners, general regional forest development and hunting planning activities, providing for information on the status of wood and other forest products, cooperation in applied research, implementation of standards and transfer of knowledge in forestry, promotion of interest groups in the process of planning and sustainable holding of forest resources regardless of the form of ownership.

d) Department of Water Management is in charge, among other things, of the following:

- organising and preparing of the Integra Water Management Strategy for the territory of Republika Srpska,
- organising and preparing of the district river basins management plans and updating them on a six-year basis,
- organising and preparing of the program of measures taking into account the economic analysis results for the purpose of achieving the goals of environmental and waters protection within management plans or the said program,
- organising and preparing of the flood defense plans, through a public institution;
- organising and preparing of the restoration program after a detrimental impact of waters, through a public institution;
- preparing and proposing the regulations concerning the public participation in the water management for the Republika Srpska Government,

- determining the instructions relative to the contents and methods of water management balance, for Republika Srpska and district river basins, organising its application and preparing the plan of water regime for Republika Srpska,
- preparing of plans of water protection, proposing of programs of systematic control of water and wastewater and other regulations about the control methods and defining the regulations with detrimental and hazardous substances and sanitary technical control of water,
- prescribing the requirements for the institutions that deal with or are authorised to deal with ground and surface waters quality control,
- determining and proposing to the Government the basic rates of general and special water management fees,
- keeping of integral water information system of Republika Srpska (WIS), takes care of development of cadastre of polluters, water management facilities and water resources per certain categories,
- enacting bylaws for categorising of water structure types and bodies and their status,
- enacting bylaws to regulate monitoring and implementation of measures and activities in order to prevent a degradation of surface and ground water status,
- enacting bylaws relative to the requirements of limited use of public water estate,
- also, enacting bylaws in accordance with the Law,
- defining erosive zones, irrigation zones,
- determining the need and proposing the Government a number of and organisation of public companies in the field of waters.

đ) Secretariat of the Ministry deals with legislative, personell, organisational, financial-planning and accounting, analytical-informative, accessory and technical issues.

2.5. MINISTRY OF INDUSTRY, ENERGY AND MINING OF RS (RS MIEM)

Competences of RS MIEM are set forward in the Law on the Republic Administration and include, among other things, the execution of administrative and other expert duties pertaining to the following:

- Production of base chemical products and processing of chemical products;
- Collection and primary processing of industrial waste;
- Enforcing electric energy policy and planning and implementing the strategies;
- Exploitation of resources for the purpose of electric energy production;
- Granting concessions for research, construction and exploitation of energy installations;
- Production and promotion of bio-fuels;
- Promotion of renewable energy sources; and
- Geological research and exploitation of natural mineral resources.

The Ministry is included in meeting of BiH obligations which are assumed by ratification of the Agreement on Energy Community.⁴

⁴ Agreement on establishment of the energy community of 25 October 2005 was signed in Athens by the European Community and nine parties from south eastern Europe. Following the ratification, the Agreement became effective on 1

The said duties are discharged within the following organisational units of the administration body:

- a) Department of electric power discharges the duties that pertain to the strategic development and enhancement of the field of electric energy; provide for the conditions in which electric energy companies may operate and function, monitor and analyse the work of electric energy companies with the state capital and propose measures and activities to Republika Srpska Government as the owner or member of the assembly of shareholders; providing for regulatory and incentive conditions for energy production and use of renewable energy sources, strategic planning and harmonising the development of electric energy sectors, rational use of energy and energy efficiency, energy balances.
- b) Department of energy generating products discharges the duties that pertain to strategic development and enhancement in the field of energy generating products; providing for conditions in which oil and gas industry companies can operate and function; providing for regulatory and incentive conditions for the production and procurement of energy generating products, production and use of energy generating products from renewable energy sources; strategic planning and harmonisation of the development in the oil, oil derivatives and natural gas sector; rational use of energy generating products and energy efficiency; energy balances, as well as other duties that fall under the scope the departments duties.
- v) Department of Mining and Geology discharges the duties that pertain to the development and enhancement of mining and geological research, exploitation of mineral raw materials, geological research work, strategic planning and rational use of mineral raw materials, verification of reserves of mineral raw materials, conducting the procedure of concession granting, development of laws and bylaws in the field of mining and geology, other administrative and expert duties that fall under the Department competence.
- g) Department of industry carries out the duties that pertain to the strategic management of industrial development; creating measures and programs of economic policy of industrial development, creating and implementing measures and programs aimed at enhancing the competition and sustainable industrial development, as well as other duties under its competence.
- d) Department of small and medium enterprise and entrepreneurship development discharges the duties that pertain to monitoring of the developmental achievements and best practices in the world; strategic planning of small and medium enterprise and entrepreneurship development; supervision and monitoring of realisation of directions strategic of development, through cooperation and coordination with relevant Republika Srpska institutions; creating measures and programs of economic policy of small and medium enterprise and entrepreneurship development; creating and implementing measures and programs aimed at enhancing the competitiveness of small and medium enterprises and entrepreneurship, cooperation and coordination with relevant institutions (MSTIEO, DEI, DEK and various projects) with aim of defining and implementing the common policies in meeting the international obligations; as well as other duties under its competence.
- đ) Department of Legal Affairs and European Integration carries out the duties that pertain to legal affairs under the Ministry competence, participation in the development of laws and other regulations under the Ministry competence, activities involving the monitoring and assessment of the regulations impact, giving opinions and explanations about the implementation of laws and other regulations,

July 2006. With a view to meeting the goals under the Agreement, each party is expected to implement the EU acquis which pertains to energy, environment, competition and renewable energy in line with specific situations in each country signatory. On 27 July 2006, BiH Presidency adopted the Decision on ratification of the Agreement on establishment of the energy community (Official Gazette of BiH – international treaties, Vol 9/06).

coordination and cooperation with the public attorney office in disputes under the ministry competence, decision making in administrative and other matters, approximation of legislation under the Ministry competence with the EU legislation and participation in those activities at the level of BIH, monitoring of the process of accession to the EU and other international integrations, monitoring and coordination of infrastructure quality; as well as other duties under its competence.

2.6. MINISTRY OF HEALTH AND SOCIAL PROTECTION OF REPUBLIKA SRPSKA (RS MHSP)

Competences of RS MHSP are set forward in the Law on the Republic Administration and include, among other things, administrative and other duties that pertain to promotion, enhancement and protection of human health, public health, health protection, health system, pharmacy, social, family and child protection, by way of:

- Monitoring modern achievements in the public health development with the aim of developing public health with the aim of developing of public health in Republika Srpska,
- Planning and preparing of strategic planning documents in the field of public health,
- Harmonisation and meeting of the conditions in the process of European integration in the field of public health,
- Enhancing the system of health protection quality,
- Professional training of health workers and health associates,
- Planning and financing of health protection,
- Planning and functioning of the system of social, family and child protection,
- Monitoring of production and trade in medicines, chemicals, biocides and medical means and
- Harmonization and proposing of laws and bylaws in line with the European Union acquis and carrying out other duties.

The aforementioned duties are discharged within: Department of planning, analysis, financing and implementation of projects, Department of public health, international relations and European integration, Department of health protection, Department of pharmacy and Department of social, family and child protection.

a) department of planning, analysis, financing and implementation of projects carries out the duties related to financing of health protection in Republika Srpska, setting of priorities for financing of health protection, total finances for all levels of health protection and the like. Its internal organisational unit is called the Division of planning, analysis and financing.

b) Department of public health, international relations and European integration follows the modern achievements in the development of public health in the EU countries, countries in the region and other countries around the globe with the aim of developing the public health in Republika Srpska in accordance with the recommendations of the World Health Organisation and the like. Its internal organisational units are called the Division of public health and Division of international relations and European integration.

v) Department of health protection participates in the preparation and implementation of health policies, strategies, programmes and projects aimed at successful enforcement of health protection with

a view of enhancing human health, organise an expert supervision of health institutions, enhances the system of health protection quality, follows health technologies and technologies of medical waste management. Internal organisational units are the Division of Primary health protection, Division of hospital health protection and Division of legal affairs.

g) Department of pharmacy discharges the duties in the field of pharmacy and chemicals, planning and coordinating of activities with regard to the use of medicines and medical means in health protection at all levels, coordinating of activities regarding the use of chemicals, preparing of documentation for the enforcement of international treaties on cooperation and coordination in the field of pharmacy and chemicals, keeping of the register of legal entities and natural persons in the field of pharmacy and chemicals, establishing cooperation with health institutions, organs and institutions of Republika Srpska, Federation of BiH, BiH and other countries, international, governmental and non-governmental organisations. Internal organisational units are the Division of Chemicals and Division of Pharmacy.

d) Department of social, family and child protection discharges the duties in the field of social, family-legal and child protection, expert supervision of the social protection institutions, rendering expert support in development of policies, strategies, programmes and projects that pertain to enhancement of social, family and child protection and the like.

2.7. RS MINISTRY OF FINANCE (RS MF)

Competences of RS MF are prescribed by the Law on the Republic Administration and they include, among other things, administrative and other expert duties that pertain to:

- Drafting of laws and bylaws that regulate the field of public investments,
- Drafting of strategic development programmes;
- Carrying out study-analytical and other duties that pertain to the preparation, selection, monitoring and evaluating public investments;
- Collecting, categorizing and updating of the data concerning new and ongoing projects, selecting and analysing them;
- Carrying out the duties related to the establishment and management of mechanisms for managing the finances allocated to technical assistance and European Union funds;
- Providing for monitoring and implementation of measures needed for the establishment of european standards in the financial sector in accordance with economic criteria related to the process of stabilization and accession to the European Union;

The said duties are discharged within the following organisational units:

a) Department of macroeconomic analysis and policy,

b) Department of fiscal system,

v) Department of financial system,

g) Department of budget and public finance,

d) Department of investment management,

đ) Department of debt management,

e) Department of treasury,

- ž) Department of legal affairs,
- z) Department of accounting and audit,
- i) Central unit for harmonisation of financial management, control and internal audit (CJH),
- j) Department of programming and coordinating a financial support from the European Union.

2.8. REPUBLIC SECRETARIAT OF LEGISLATION

Republic secretariat of legislation is an independent republic administrative organisation that carries out expert duties that, among other things, include:

- Building, monitoring and enhancing of the Republic legal system,
- Informing the RS Government concerning the implementation of constitutionality and legality;
- Providing for consistency of laws, other regulations and general enactments with the Constitution and legal system in the procedure of their enactments giving expert opinions on drafts and proposals of laws and other regulations that are being sent to the RS Government;
- Preparing of laws and other regulations that fall under the competence of the Secretariat;

2.9. PUBLIC INSTITUTION “VODE SRPSKE” WATERS OF SRPSKA

Public institution “Vode Srpske” is established in January 2013 by the Decision of Republika serpska Government establishing the public institution "Vode Srpske" within the Ministry of Agriculture, Forestry and Water Management of Republika Srpska.

Public institution “Vode Srpske” is in charge of preparing and implementation of all plans and programmes of the competent Ministry. To that regards, it renders an annual plan of work which requires an approval of the Ministry and is accepted by the Government. The Public institution discharges the following duties among others:

- participating in the preparation of the Strategy of Integral Water Management in the territory of Republika Srpska,
- drafting or preparing the plans of district river basins management and updating them on a six year basis,
- drafting or preparing programmes of measures taking into account the results of economic analyses with a view of achieving the goals of environmental and waters protection, within plans of management or before;
- participating in the preparation of the flood defence plans,
- participating in the preparation of the organisation and preparation of restoration programs from adverse effects of waters,
- participating in the preparation of the draft regulations relative to public participation in the water management,
- participating in the preparation of the instructions concerning the contents and methods of water management balance for Republika Srpska and district river basins, organising the enforcement and preparation of the water regime plan for Republika Srpska,
- participating in the preparation of the water protection plans, proposing the programmes for systematic water and wastewater control and other regulations concerning the methods of control and definging of regulations with detrimental and hazrdous substances and sanitary-technical water control,
- participating in the preparation of the requirements for the istitutions that deal with or ae authorised to deal with the ground and surface waters quality control,
- participating in the preparation of the proposals for basic rates of general and special water management fees,
- keeping the water information system of Republika Srpska (RVIS) in its territory,
- participating in the preparation of the bylaws concerning the catalogisation of water structures and bodies types and the status thereof,

- participating in the preparation of the bylaws that regulate the monitoring and enforcement of measures and activities with a view of preventing the derogation of the surface and ground water status, as well as other regulations enacted by the Government or competent Ministry,
- organising the water status monitoring,
- issuing water enactments within the scope of its competence,
- monitoring the payments of water fees and implementing the regulations which prescribe user pays and polluter pays principles,
- participating in the preparation of separate reports in accordance with the Law on waters,
- enacting the programme, plan of work and budget for each year and reports on the work in the preceding year,
- participating in cooperation regarding the issues of coordination in providing for the development and enforcement of integral water management plans with responsible authorities from the Federation of BiH,
- manages the work and coordinate the work of branch offices at certain river basins,
- entrusting authorised expert legal entities with the execution of expert-technical duties under the conditions prescribed by the competent ministry, and
- carries out other duties defined by the Law on Waters and Law on the Republic Administration.

The public institution is entrusted with duties and activities of general interest (preparation and enforcement of flood defence, development of riverbeds and riverbanks, management of water structures and systems in the interest of Republika Srpska, estimate and management of the risk of floods, as well as other duties prescribed by the Law.

2.10. REPUBLIC HYDROMETEOROLOGICAL INSTITUTE OF REPUBLIKA SRPSKA (RHMI RS)

RHMI RS is part of the Ministry of Agriculture, Forestry and Water Management of Republika Srpska and it represents a republic administrative organisation with competences prescribed by the Law on the Republic Administration.

RHMI RS discharges expert duties which, among other things, pertain to:

- Establishing, maintaining and developing a meteorological and hydro-meteorological observation, telecommunication and analytical-forecasting system of the Republic;
- Systematic meteorological, climatological, agro-meteorological and hydrological measurements and observation of the monitoring of air quality, emissions into the air and waters;
- Establishing and maintaining the banks of observed and measured hydrological and meteorological data and data concerning the air and water quality, permanent keeping and publishing of the data;
- Monitoring, research, analysing and forecasting the status and changes in the air and water, and issuing hydrological and meteorological analyses, forecasts and warnings about the occurrence of atmospheric and hydrological disasters;
- Connecting the Republic with international hydrometeorological information systems, international data exchange and execution of other international obligations in the field of meteorology, hydrology and environmental protection.

RHMI RS is made of three sectors: Meteorology Sector, Hydrology and Environmental Protection Sector and Sismology Sector. Within the Hydrology and Environmental Protection Sector, the Division of Environmental Protection discharges the duties of establishing and managing the air quality monitoring in Republika Srpska, monitoring of emissions into the air, developing the inventory of gases with a greenhouse effect, inventory of unintentionally release long-lasting organic polluting

substances, inventory of emission according to UNECE/CLRTAP, establishing and keeping of the register of plants and polluters, establishing and keeping of the air quality information system and exchanging the data with the European Environmental Agency (EEA) and European Information and Observation Network (EIONET).

2.11. REPUBLIC ADMINISTRATION FOR INSPECTION (INSPECTORATE OF REPUBLIKA SRPSKA)

Inspectorate of Republika Srpska is an independent republic administration that discharges inspection, administration, expert and other duties, incites a social discipline in the enforcement of laws and regulations. The RS Law on Inspection vested the inspection powers in the Republic Administration for Inspections (Inspectorate). More extensive provisions of the RS Inspectorate work are set forth in the Law on Inspections.

The Inspectorate discharges inspections, administrative, expert and other duties by way of inspectors organised as follows:

- a) Food inspection,
- b) Market inspection,
- v) Agricultural inspection,
- g) Forestry inspection,
- d) Veterinary inspection,
- đ) Water inspection,
- e) Technical inspection,
- ž) Traffic inspection,
- z) Urban development-construction and ecological inspection,
- i) Labour inspection,
- j) Health inspection,
- k) Education inspection and
- l) Inspection of fire safety.

The Inspectorate also discharges the duty of inspection supervision of whether the environmental regulations are abided by, as well as other related regulations (environmental segments), such as regularity of drinking water and maintenance of spring, means of protection of plants, fertilizers and land cultivators, protection of agricultural land and protection of health of plants, forests and forestry, hunting (protection of protected species of wildlife), protection of nature and national parks in the field of forestry and hunting, protection and welfare of animals, veterinary medicine and additives, slaughter house waste, protection of water, protection of nature in the field of waters, medicines and medical means, chemicals, biocides, water for sanitary and recreational needs, spa waters, storing of explosive substances, trade and plants for tanking and storing of incendiary liquids and gases and use of incendiary liquids and gases.

The inspection system of Republika Srpska is made of the inspection from the Inspectorate and inspection in the local self-government units.

Local self-government units discharge the entrusted tasks of inspection supervision per principle of functional connection with inspections of the Inspectorate. Local self-government units within an administrative service have a special organisational unit for inspection tasks. Inspection supervision is carried out by inspectors of the Inspectorate (Republic inspectors) in the entire territory of Republika Srpska. Inspection supervisions tasks, when entrusted with a local self-government unit, are discharges by inspectors of the local self-government unit such as: food inspector, market inspector, tourism inspector, agricultural inspector, veterinary inspector, waters inspector, road traffic inspector, urban development-civil engineering inspector, ecology inspector, sanitary protection inspector and labour inspector.

2.12. REPUBLIC INSTITUTE OF STATISTICS OF REPUBLIKA SRPSKA (RIS RS)

RIS RS is a Republic administrative organisation within the RS Ministry of Finance with the competences prescribed by the Law on the Republic Administration and Law on Statistics of Republika Srpska⁵.

RIS RS discharges expert duties that pertain to the generation of statistical data:

- Preparing, collecting, keeping, processing, analysing and distributing statistical data based on a single methodology and single statistical standards;
- Keeping, maintaining and developing administrative and statistical registers and constructing of statistical information-technology system and
- Keeping of database.

2.13. REPUBLIC INSTITUTE FOR PROTECTION OF CULTURAL-HISTORICAL AND NATURAL HERITAGE (RIOCHNH)

RIOCHNH is a Republic administrative organisation within the RS Ministry of education and culture with the competences prescribed by the Law on the Republic Administration which include, among other things:

- Determining, registering, researching and evaluating real estate, movables and parts of nature which are under protection as cultural-historical or natural heritage;
- Participating in the procedure of declaring an estate protected;
- Keeping of central register of protected estate;
- Drafting of projects for restoration, reconstruction and conservation of cultural-historical and natural heritage;
- Issuing permits for taking out of an estate on a temporary basis.

2.14. ENVIRONMENTAL PROTECTION AND ENERGY EFFICIENCY FUND OF REPUBLIKA SRPSKA (RS FUND)

RS FUND is a legal entity with public authorities whose rights, obligations and responsibilities are prescribed in the Law on the Fund and environmental financing of Republika Srpska, and among other things, conduct the collection of funds and financing of preparation, enforcement and development of programmes, projects and similar activities in the field of preservation, sustainable use, protection and enhancement of environment and especially:

- Expert and other duties related to the collection, management and use of finances;

⁵ (Official Gazette of Republika Srpska Vol 85/03)

- Initiating, financing, mediating and controlling the realisation of projects within the scope of the Fund;
- Mediating in the provision of finances for environmental protection, energy efficiency and renewable energy sources from the funds of international organisations, financial institutions and bodies, as well as foreign legal entities and natural persons;
- Continuous monitoring of programmes, projects and other activities through measurable effects of environmental protection, quantity of saved energy and money and reduction of polluters emissions;
- Keeping separate databases on programmes, projects and similar activities in the field of environmental protection, energy efficiency and renewable energy sources, and on necessary and available finances to achieve the said.

2.15. PHI „PUBLIC HEALTH INSTITUTE OF REPUBLIKA SRPSKA“

PHI „Public Health Institute of Republika Srpska“ „, in line with the Law on Health Protection (Official Gazette of Republika Srpska Vol 106/09 and 44/15), is a public health institution in the field of public health. The Institute discharges social-medical, hygiene-ecology, epidemiological and microbiological activities. The headquarters of the Public Health Institute of Republika Srpska is located in Banjaluka while regional centers are in Doboj, Istočno Sarajevo, Foča, Zvornik and Trebinje.

The internal organization of the Institute comprise the following organisational units:

- administrations,
- services of general and legal affairs,
- services of economic and financial affairs,
- epidemiology services,
- robiology services,
- hygiene services,
- sanitary chemistry service,
- services for social medicine, organisation and services of health,
- center for protection from radiation,
- center of health management.

IV STATE OF APPROXIMATION OF ENVIRONMENTAL LEGISLATION OF REPUBLIKA SRPSKA BY SECTORS

1. LEGAL AND INSTITUTIONAL ASPECTS

GENERAL REMARKS

This chapter contains an extensive overview and assessment of legal, institutional and economic aspects of Republika Srpska regulations relative to environmental protection, relevant to the approximation to the EU environmental acquis. To wit, the process of transposition of environmental legislation has begun in 2002 in Republika Srpska. The following laws have been adopted since then:

- Law on Environmental Protection⁶ governs the protection of the environment for the purpose of its preservation, decrease of risks for human life and health, as well as ensuring and improving the quality of life, protection of all environmental elements, informing and access to information in the field of environmental protection, environment planning and protection, strategic environmental impact assessment, procedures for issuing environmental permits and prevention of large-scale disasters, ecosystem labelling and environmental protection management, financing of activities related to the environment, issues related to damage caused to the environment, including rights and obligations of natural and legal persons performing activities under this Law;
- Law on Nature Protection⁷ governs the protection of the environment and preservation of nature, biological, geological and landscape diversity as a part of the environment;
- Law on Air Protection⁸ which governs the protection of air from the pollution in order to protect human health, climate and the environment from the harmful effects of air pollution (protection of air from pollution caused by radioactive substances, industrial accidents and natural disasters, is regulated by a special law);
- Law on Waste management⁹ governs the waste categories and waste management to promote and ensure the prevention of waste, including processing of waste for reuse and recycling, etc
- Law on Environmental Protection Fund of Republika Srpska¹⁰ (hereinafter: Law on the Fund) is created for the purpose of collecting and allocating of financial resources for the protection of environment in the territory of Republika Srpska;
- Law on National Parks¹¹ governs the issues relevant for protection, development, improvement, management, financing and sustainable use of national parks in the territory of Republika Srpska;
- Law on National Park „Kozara“¹² governs the borders, protection regimes, management, protection and development of National Park „Kozara“;
- Law on National Park „Sutjeska“¹³ governs the borders, protection regimes, management, protection and development of National Park „Sutjeska“;
- Law on Utility Activities¹⁴ governs the utilities serving the special public interest, including organisation of conducting utility activities and the manner of their financing in RS;
- Law on Chemicals¹⁵ governs the classification, packaging and labelling of dangerous chemicals, exchange of information on chemicals, restrictions and prohibition of substances of concern, import and export conditions for chemicals, etc.;
- Law on Biocides¹⁶ regulates the conditions for marketing and use of biocides, related to the assessment of biocide risk and efficacy for the purpose of issuing permits for placing biocides on the market, research and development, conditions for import and safe use, etc.;
- Law on Spatial Development and Construction¹⁷ governs the system of physical planning and spatial development, preparation, drafting and enactment of spatial development documents, location conditions, construction land development, issuance of construction permits, types and contents of technical documentation, construction of facilities and mutual relations of participants in the construction, use and removal of facilities, legalisation of facilities, supervision of the application of this law, competence and work of Chamber of Engineering, and other issues important to the spatial, construction land and construction of facilities;
- Law on Waters¹⁸ governs the issues of integrated water management within the Republika Srpska territory;

⁶ (Official Gazette of Republika Srpska, Vol 71/12 and 79/15)

⁷ (Official Gazette of Republika Srpska, Vol 20/14)

⁸ (Official Gazette of Republika Srpska, Vol 124/11)

⁹ (Official Gazette of Republika Srpska, Vol 111/13 and 106/15)

¹⁰ (Official Gazette of Republika Srpska, Vol 117/11, 63/14 and 93/16)

¹¹ (Official Gazette of Republika Srpska, Vol 75/10)

¹² (Official Gazette of Republika Srpska, Vol 121/12)

¹³ (Official Gazette of Republika Srpska, Vol 121/12)

¹⁴ (Official Gazette of Republika Srpska, Vol 25/09)

¹⁵ (Official Gazette of Republika Srpska, Vol 25/09)

¹⁶ (Official Gazette of Republika Srpska, Vol 37/09)

¹⁷ (Official Gazette of Republika Srpska, Vol 40/13, 106/15 and 3/16)

¹⁸ (Official Gazette of Republika Srpska, Vol 50/06, 92/09 and 121/12)

- Law on Agricultural Land¹⁹ governs the planning, protection, landscaping and use of agricultural land and other issues relevant for the protection, landscaping and use of agricultural land as a property of public interest;
- Law on Plant Protection Products²⁰ governs the plant protection issues and conducting of activities of the public interest in the field of plant protection products;
- Law on Mineral Fertilisers²¹ governs the issues related to mineral fertilisers and their classification, including quality requirements, testing, phytosanitary controls, etc. in the environmental protection context;
- Law on Forests²² governs the policies in the field of management of forests and forest land in RS, including other issues of importance to the forest and forest land;
- Law on Reproductive Material of Forest Trees²³ defines the policies of the initial forest reproductive material in the context of the assessment and recognition of the initial material, production, control, transport and use;
- Law on Fishery²⁴ governs the cultivation and protection of fish, transport and use of fish, fish eggs, crustaceans and other animals in the fishing waters of RS, etc;
- Law on hunting²⁵ governs the management of hunting resources and hunting grounds, ownership over wildlife, systematic categorization of wildlife and its protection, hunting grounds, etc.;
- Law on Tobacco²⁶ governs the conditions and methods of production and processing of tobacco and processed tobacco, classification and labelling of tobacco products in the RS, etc.;
- Law on Energy²⁷ governs the basics of the Republika Srpska energy policy and ensuring prerequisites for safe and quality power supply to customers based on the principles of competitive energy markets and sustainable development, with the efficient use of energy and environmental protection;
- Law on Mining of Republika Srpska²⁸ governs the conditions and methods for extraction of mineral resources from the soil and on its surface, in the river or lake bottom or beneath, and other issues related to the use of mineral resources in the territory of RS and taking into account environmental protection and sustainable development;
- Law on Geological Exploration of Republika Srpska²⁹ governs the subject and purpose of geological explorations, conditions and manner of their programming, planning and execution, including determination of geological characteristics of the soil for the facilities construction, spatial planning, protection and improvement of the environment, based on principles of permanent balanced development;
- Law on Oil and Oil derivatives³⁰ and Law on Pipeline Transportation of Gaseous and Liquid Hydrocarbons and Distribution of Gaseous Hydrocarbons³¹ which regulate activities in the fields of oil and oil derivatives, transportation and distribution of gaseous and liquid hydrocarbons, conditions for security of supply and transport; construction, use and maintenance of energy facilities in accordance with the environmental protection regulations;
- Law on Renewable Sources and Efficient Cogeneration³² governs the planning and inciting the production and consumption of energy from renewable sources and in efficient cogeneration, technologies for the use of renewable energy sources, incentive measures for the production of electricity by use of renewable energy sources and in efficient cogeneration, construction of

¹⁹ (Official Gazette of Republika Srpska, Vol 93/06, 86/07, 14/10 and 5/12)

²⁰ (Official Gazette of Republika Srpska, Vol 52/09)

²¹ (Official Gazette of Republika Srpska, Vol 24/12)

²² (Official Gazette of Republika Srpska, Vol 75/08 and 60/13)

²³ (Official Gazette of Republika Srpska, Vol 60/09)

²⁴ (Official Gazette of Republika Srpska, Vol 72/12)

²⁵ (Official Gazette of Republika Srpska, Vol 60/09 and 50/13)

²⁶ (Official Gazette of Republika Srpska, Vol 72/12)

²⁷ (Official Gazette of Republika Srpska, Vol 49/09)

²⁸ (Official Gazette of Republika Srpska, Vol 59/12)

²⁹ (Official Gazette of Republika Srpska, Vol 110/13)

³⁰ (Official Gazette of Republika Srpska, Vol 36/09 and 102/12)

³¹ (Official Gazette of Republika Srpska, Vol 52/12)

³² (Official Gazette of Republika Srpska, Vol /13, 108/13 and 79/15)

facilities for electricity production from renewable energy sources and other issues important to this filed;

- Law on Gas³³ governs the activities in the field of natural gas, conditions for security of supply, construction, use and maintenance of energy facilities in accordance with the environmental protection regulations;
- Law on Tourism³⁴ also deals with environmental protection in the context of establishing tourism policies in the RS, sustainable tourism development, implementation of uniform standards for the provision of tourism services, while ensuring the efficient use of tourist facilities and resources.

Competent authorities in Republika Srpska additionally adopted numerous bylaws with the aim of enforcement of the said laws. Knowing the fact that the approximation of other countries with the EU acquis is a process that repeats and lasts for years, it is reasonable to expect that all the existing environmental regulations in the RS will be (extensively) revised in future in the process of approximation with the EU acquis.

The preceding chapter gives an overview of the legal instruments in Republika Srpska which govern the establishment, competences and functioning of institutions in Republika Srpska. It is limited to the institutions that are vested with legislative and executive powers.

An overview of regulations that deal with the establishment of the system institutions and provisions that define powers and duties of institutions, underlines the principles which obligate all institutions to provide for the enforcement of the Constitution, laws and bylaws, and to act efficiently and rationally in the execution of their tasks in order to apply the highest standards in meeting specific needs of the society.

Republika Srpska institutions are established pursuant to the regulations that define a specific field of administration. Institutional framework depends on the scope to which the EU acquis is transposed into the legal system of Republika Srpska. An overview of Republika Srpska environmental institutions showed the cases of good institutional structures but also some cases where institutions are not in place yet. In executing their competences, Republika Srpska environmental institutions cooperate with institutions in BiH and institutions of FBiH and BD BiH.

2. HORIZONTAL ISSUES

2.1. SCOPE OF TRANSPOSITION

The horizontal legislation of the environmental acquis is the part of environmental legislation that set out the basic rules applied to the entire environmental sector.

The horizontal EU legislation includes:

- *Regulation (EU) No 1293/2013 of the European Parliament and of the Council of 11 December 2013 on the establishment of a Programme for the Environment and Climate Action (LIFE) and repealing Regulation (EC) No 614/2007 -LIFE Regulation*

This Regulation establishes a financial instrument for the environment („LIFE+”). The basic goal of LIFE+ instrument is to contribute the enforcement, supplementing and developing policies and environmental acquis including the integration of environment into other policies

³³ (Official Gazette of Republika Srpska, Vol 86/07 and 121/12)

³⁴ (Official Gazette of Republika Srpska, Vol 70/11 and 67/13)

thereby supporting a sustainable development. Instrument LIFE+ especially extends support to the implementation of 6th OAP-a, including thematic strategies, financing measures and projects in member states which add additional value at the European level.

- *Directive 2001/42/EC of The European Parliament and of The Council of 27 June 2001 on the assessment The requirements regarding environmental concerns in development of plans and programmes*

The purpose of the Directive is to ensure a high level of environmental protection and contribute to the integration of environmental issues into the development and adoption of plans and programmes with the aim of supporting a sustainable development providing for an impact assessment of certain plans and programmes that could have significant results in the environment.

- *Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (which codified the Council Directive of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment that was amended by Council Directive 97/11/EC, Directive 2003/35/EC, Directive 2009/31/EC) as amended by Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment*

This Directive pertains to the assessment of impact that certain public and private projects may have on the environment.

- *The Directive 2003/4/EC of the European Parliament and of The Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC*

The goals of this Directive are:

- (a) to ensure that all environmental information held by public authorities shall be free for access and to determine basic terms and requirements, as well as practical solutions for the exercise of the right to free access
- (b) to ensure that all environmental information are increasingly available and more distributed in public in order to reach the highest possible systematic availability and distribution of environmental information. To that regard, the use of electronic communication and or electronic technology should be promoted wherever it is available.

Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC

This Directive was adopted in order to provide full compliance of the EU legislation with the Aarhus Convention particularly by:

- (a) providing for public participation in drawing up certain plans and programmes relating to the environment;
- (b) enhancement of public participation and prescribing provisions concerning the access to justice within the Directives of the Council 85/337/EEC and 96/61/EC.

- *Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, amended by the Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries and Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and Directive 2013/30/EU of the European Parliament and of the Council of 12 June 2013 on safety of offshore oil and gas operations*

The purpose of this Directive is to set the framework for environmental responsibility which is founded on polluter pays principle, with regard to the prevention and remedying of environmental damage ini.

- *Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE).*

The purpose of the Directive is to provide general rules for the establishment of infrastructure for spatial information in the European Community for the needs of the community environmental policy and policies and activities that might have an impact on the environment.

- *Directive 2008/99/EC of the European Parliament and of the Council of 19 November 2008 on the protection of the environment through criminal law (text relevant to EEA),*

This Directive sets forth the measures in criminal law for the purpose of more efficient environmental protection.

2.2. OVERVIEW OF TRANSPOSITION

.2.1. ISSUES PERTAINING TO ENVIRONMENTAL PROTECTION IN THE DEVELOPMENT OF CERTAIN PLANS AND PROGRAMS

The requirements regarding environmental concerns in development of plans and programmes are established by Directive 2001/42/EC of The European Parliament and of The Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment. Appropriate transposition has mainly been done thorough the Law on environmental protection.

ECRAN Report³⁵ on progress BiH has made in terms of transposition and implementation of EU environmental legislation for the period 01.05.2015. – 30.04.2016 states that this Directive has been fully transposed.

The Law on Environmental Protection establishes a general obligation to carry out a strategic impact assessment on the environment for plans and programmes that constitute the framework for approval of future development projects determined by the legislation that regulates the environmental impact assessment. Republika Srpska adopted the Law on Environmental Protection in July 2012. The most important improvements introduces by this Law are prescribed under Chapter VI, titled the Strategic environmental impact assessment. This Chapter determines the obligation of the authorities competent

³⁵ Progress Report 11 Bosnia and Herzegovina, year 19 May 2015- April 2016

for the preparation of plans and programmes to carry out the environmental impact assessment and adopt certain public plans and programmes.

By this Law, Republika Srpska established a good statutory platform for full transposition of the EU requirements from the Directive on strategic environmental impact assessment SEIA. The Law contains the definitions in line with the Directive on SEEA, as well as a complete list of the sectors which require strategic assessment for all public plans and programmes. The Law prescribes the obligation to determine whether the plans or programmes will probably have a major environmental impact, either by the analysis of each specific case or determining the types of plans or programmes or a combination of the two. In each case, the relevant criteria must be taken into account in order to ensure that the plans that will probably have a significant impact on the environment be included in SEEA-u. The Law foresees the preparation of reports on strategic environmental assessment impact in cases of developing plans and programmes that will probably have a significant impact on the environment. In addition to the description of potential impacts that plans and programmes may have on the environment, the Law establishes the obligation for the report to also refer to public consultations that took place in the decision making process. The Law also sets a ground for the adoption of at least two regulations to precisely define the criteria applied to the decision making about the implementation of strategic assessment of plans and programmes and the contents of the reports on strategic assessment.

The aforementioned regulations have been enacted. The Rulebook on the contents of the report on strategic assessment of environmental impact and the Rulebook on the criteria for decision making on the need to carry out the strategic assessment of environmental impact are published in Official Gazzete of Republika Srpska Vol 28/13.

Additionally, bearing in mind the complexity of the entire set of horizontal legislation and strong connection of legal enactments that make the EU horizontal legislation, an additional screening is needed (in the next phase of reiteration) for the entire sector in the legislation of Republika Srpska.

2.2. ISSUES RELATED TO THE ENVIRONMENT IN THE DEVELOPMENT OF CERTAIN PROJECTS

All procedural aspects EEA should be regulated by the law itself. The procedural steps should include all revisions related to the access to environmental information, public participation in the decision making process and access to justice.

Transposition of the Directive EEA into the legal system of Republika Srpska has been conducted through:

- The Law on Environmental Protection,
- The Rulebook on projects that are subject to environmental impact assessment and criteria for the decision making on the need to carry out and the scope of the environmental impact assessment and
- The instruction on the contents of the environmental impact assessment.

The basic provisions of the Law on Environmental Protection lays down the obligation of the project implementer to initiate the administrative procedure of environmental impact assessment (EEA), and establishes the rules to determine what needs to be done in the context of the procedure EEA. All procedural aspects of EEA are regulated by the Law. Procedural steps contain also the provisions relative to the access to information and participation of the parties and the public in the decision making process.

The Rulebook contains the lists that are consistent with the lists in Annex I and Annex II to the Directive. *The Instruction on the contents of the environmental impact assessment study* precisely determines the elements of the environmental impact assessment study. As stated in the ECRANA reports relative to monitoring of the transposition progress and enforcement of the EU environmental acquis in Republika Srpska, the harmonisation of the Republike Srpske legislation with the Directive on EEA is at a high level. *The Rulebook* contains the provisions on the EEA procedure even for the projects not listed in Annexes I and II to the Directive on EEA. Due to specific character of the site or other potential project sensitivity, pursuant to this provision, such a project can be viewed within the EEA procedure.

The basic difference between the Republika Srpska legislation on EEA and the EU Directive on EEA are the gaps pertaining to the provisions which require the environmental authorities to ensure a free access to information and participation of the public in the decision making on EEA. The Law does not foresee a participation of the public in the screening procedure but the obtaining of opinions from competent authorities and organisations. The only statutory ground for participation of stakeholders is a general provision (one of the principles) that reads that the public has the right to participate in all procedures related to the environment which are carried out by public administrative authorities.

Republika Srpska environmental legislation establishes the obligation for the decision approving the study to provide a reasoning that will state whether the remarks of stakeholders or interested public were taken into account and which ones, including the remarks of other Entity, Brčko District or other state.

2.2. ENSURING FREE PUBLIC ACCESS TO ENVIRONMENTAL INFORMATION

The Directive 2003/4/EC of the European Parliament and of The Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC is the main EU legal instrument regulating free access to environmental information in accordance with Aarhus Convention.

BiH joined the Aarhus Convention and assumed the obligation to harmonize its legislation with the requirements for free access to information. The most important legislation in RS which transpose the Directive is the following:

- Law on Environmental Protection and
- Law on Free Access to Information of Republika Srpska;

Law on Free Access to Information of Republika Srpska deals with all information, not only the information related to the environment. The EU legislation requirements for a free access to information are very high and assume a good organisation of the administration, as well as certain tradition in the exercise of democratic rights.

Law on Environmental Protection also introduces certain rights related to a free access to environmental information. A free access to environmental information is one of the principles as the basis for environment protection in Republika Srpska.

2.2. ENSURING PUBLIC PARTICIPATION IN DECISION-MAKING

The main EU legal instrument regulating public participation in the decision-making process and access to justice in environmental matters is Directive 2003/35/EC of the European Parliament and of

the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC. This Directive was adopted in order to provide full compliance of the EU legislation with the Aarhus Convention.

Republika Srpska transposed the Directive 2003/35/EC, mainly by way of the Law on Environmental Protection. In addition, some other sector laws contain certain provisions which partly transpose provisions of the Directive in some areas (waste management, air quality, nature protection).

2.2. ESTABLISHING THE SYSTEM OF ENVIRONMENTAL LIABILITY

The requirement for MSs to establish a system of environmental liability is established by the Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, as amended by Directive 2006/21/EC AND 2009/31/EC. Actually, the process of transposition of the Directive into the legal system of Republika Srpska has not started yet and it is necessary to develop a set of provisions with the aim of transposing this Directive including the provisions related to the definition of adverse effects of certain activities and the measures to prevent such activities.

2.2. ESTABLISHING AND FUNCTIONING OF THE INFRASTRUCTURE FOR SPATIAL PLANNING INFORMATION

This part of the EU horizontal environmental legislation is regulated by the Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE). RS has not yet transposed the requirements of this Directive. Despite the fact that the establishment of information system on the environment is required under the Law on Environmental Protection and the information system for spatial planning and use of land is required under the Law on Physical planning and construction³⁶, these two information systems are not defined in the manner to follow the purpose of the Directive on INSPIRE.

It is necessary to set new mutually compatible information systems aimed at providing adequate mechanisms and criteria for exchange of information in accordance with the purpose of the Directive on INSPIRE.

2.2. ENSURING PROTECTION OF ENVIRONMENT THROUGH CRIMINAL LAW

This very specific EU requirement is regulated by the Directive 2008/99/EC (protection of the environment through criminal law). The Criminal Code of Republika Srpska contains the provisions that define the criminal offenses, action of certain public bodies in case of a criminal offense and sanctions that follow if the criminal offense is proven under a valid judgment of a court. A criminal offense may be defined exclusively under the law.

The Criminal Code determined only a limited number of criminal offenses, but it is possible that the laws dealing with specific fields will prescribe criminal offenses.

The Criminal Code prescribes³⁷ the criminal offense of damaging or destroying public facilities, and Chapter 33 prescribes the criminal offenses³⁸ against the environment. For example, Article 418 reads

³⁶ (Official Gazette of Republika Srpska, Vol 44/13)

³⁷ In Article 405.

³⁸ Article 415 - 437

that an official or responsible person who, in breach of legislation on the protection, preservation and improvement of environment authorises construction, putting into operation or use of facilities or plants that pollute the environment shall be punished by imprisonment for a term between three months to three years. Article 428 prescribes that: an official or responsible person who fails to comply with the decision of the competent body on measures for the protection of the environment shall be punished by a fine or imprisonment for a term not exceeding two years.

Besides that, the Law on Environmental Protection and other existing laws on environmental protection prescribe the criminal offenses which include the actions which have an adverse effect on the environment.

Despite the said efforts to prescribe the criminal offenses against environment by the legislation of Republika Srpska, the approximation of the legal system of Republika Srpska with this Directive is at a very low level.

Existing legislation of Republika Srpska for horizontal issues in the field of environmental protection is listed in Annex IV herewith.

2.3. IDENTIFIED GAPS

Republika Srpska has reached a certain level of transposition in three horizontal directives into its legal system. However, the following gaps have been identified:

With regard to the *Directive 2003/4/EC (free access to environmental information)*, Republika Srpska legislation does not provide an adequate definition in compliance with the Directive. Republika Srpska established a definition of environmental information, but there is neither a definition of environmental information under the control of an authority, nor a definition of a party requesting the information.

Besides the definitions there are other inconsistencies between Republika Srpska legislation and the Directive, in relation to the following:

- A requirement referred to in Article 3.4 of the Directive which foresees the obligation of an authority in case the information is requested in a certain format;
- Requirements of Article 3.5 c) of the Directive relative to the appointment of an information officer and establishment of registers of certain information; it also provides for the establishment and maintenance of devices for the analysis of requested environmental information. A new Law on Environmental Protection is a step forward to that regard but a full compliance with the relevant provisions of the Directive has not yet been reached;
- Provisions related to costs of information provided, are not fully in compliance with the Directive.

A general conclusion may be drawn that legislation of Republika Srpska on free access to environmental information are widely applicable to several situations. However, a detailed analysis of all legal instruments is needed (of their complexity). Only based on a detailed analysis would it be possible to evaluate if the legal prerequisites have been met to reach the objective of free access to environmental information in compliance with the EU acquis. A research into internal relations amongst various legal enactments that pertain to free access to environmental is crucial in the context of full approximation of Republika Srpska legal system to the requirements of this Directive.

Besides the gaps identified in the transposition of the *Directive on EEA*, the following needs to be mentioned:

- Lack of provisions relative to the access to environmental information and public participation in the screening procedure;
- Partial harmonisation with the requirements under Article 9.1 of the Directive, which prescribes that an environmental authority must provide to the public a reasonable explanation for the issuance or non issuance of the permit for SUO, underlining the importance of consultations with the public in a decision making process.

The most important gaps identified with regard to the transposition of the Directive 2003/35/EC are as follows:

- Republika Srpska legislation provide a definition of the public but the definition is not in full compliance with the definition provided under the Directive 2003/35/EC;
- The Law which regulates the principles of environmental protection regulates the right of the public (early and effective possibilities) to participate in the preparation and modification or revision of needed plans or programmes. This provision transposed the requirement of Article 2.2. of the Directive. However, further text of the Law does not provide for operational mechanisms that would enable the exercise of this right;
- Republika Srpska legislation does not give a ground for a timely and adequate distribution of information about specific activities that need to be carried out and to involve the public in the decision making process. As a consequence, there is a lack of provisions to ensure the public exercise its right to participate in the process at the moment when all options are still open;
- The public has the possibility to participate in certain stages of the administrative procedure, but such participation is not in full compliance with the Directive. RS legislation does not provide a ground for consultations nor do they introduce the obligation of the competent authority to report on as to how the public opinion was taken into account in the decision making process. In comparison with SEEA, as mentioned, the new Law introduces some improvements with regard to SEEA procedure.

Requirements of the said Directive prescribe that member states must ensure a consistent access to the issue of public participation in various activities. This means that a full transposition of the Directive should be reached through a complex screening of EEA legislation and subsequent improvements. Provisions on the right to access information about the process and the right to participate in the process should be prescribed in all enactments that deal with the procedures relative to the environmental affairs.

The transposition of all other horizontal directives is still in a very early stage or has not yet started.

The main enactments of Republika Srpska that regulate certain horizontal issues in the field of environmental protection are mentioned in Annex I hereto.

2.4. RECOMMENDATIONS/PRIORITIES

On the basis of the aforementioned findings, the following recommendations may be made:

- The Ministry should start drafting and adopting new regulations with a view to a full transposition of the EU acquis in the field of horizontal issues. Considering the fact that Republika Srpska legislation provides the ground for further improvements in this field, the work on new legislation or amendments to the existing ones, should be completed in line with the Ministry's work plan.
- in the course of developing new legislation, the Ministry should involve other Republika Srpska authorities competent for certain activities in his sector.

2.5. INSTITUTIONAL ADPTATION REQUIREMENTS

Pursuant to the Law on the Republic Administration, responsibilities for the environment, lie with not only the Ministry Of Physical Planning, Civil Engineering And Ecology of RS, but also several other administrative authorities of Republika Srpska. The Ministry Of Physical Planning, Civil Engineering And Ecology of RS has the Department for Environmental Protection. The Ministry is competent for the coordination of all environmental activities, which might fall under the competence of other administrative authority in Republika Srpska, in line with the Law on the Republic Administration (e.g., MZSZ RS, Ministry of Agriculture, Forestry and Water Management RS, etc.).

Ministry Of Physical Planning, Civil Engineering And Ecology of RS is competent for the activities in the screening process and decision making in the EEA procedure. The Law on Environmental Protection contains certain elements of EEA procedure and subsidiary application of the provisions of the Law on General Administrative Procedure.

With regard to SEEA, within the preparation of plans and programmes that might have environmental impact, decision making is the responsibility of the authority competent for the adoption of plans and programmes. Ministry Of Physical Planning, Civil Engineering And Ecology of RS is competent for giving the opinion on SEEA related report and reports on consultations. SEEA is a part of the plan or programme which is subject to adoption.

The Law on Free Access to Information regulate the obligations of RS institutions to provide for a free access to the information in their possession. The Law lays down the list of exceptions to free access to information which must be treated restrictively.

The Law on Environmental Protection defines the concept of environmental information and prescribes the obligation of public authorities to provide for a free access to information both upon their own initiative or upon a request of the party. In cases when the information is given upon a request of the party, the rules of the Law on General Administrative Procedure are followed.

RS Ministry of Physical Planning, Civil Engineering and Ecology is the most important authority with regard to the exercise of the right to free access to information. The Law on Environmental Protection introduced a principle of public participation in the procedures related to the environmental protection. Administrative authorities have the obligation to offer the public timely information related to the procedures so to ensure the resources for active participation of public in the procedures, facilitate a public discussion of the subject of the procedure and give a written explanation of whether the comments and suggestions of the public were taken into account in the decision making or elsewhere. The Ministry competent for environmental issues is also competent for carrying out the EEA procedures and active participation of the public in the procedures that pertain to the environmental issues.

Republika Srpska has not transposed the Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage, and therefore it has not determined a specific institution that would be invested with those powers.

The environmental protection under the criminal law is one of the functions of RS judicial authorities. There is no provision to define the authority that would be responsible for keeping of the records on offenses against the environment and enforced judgements.

Within its competences, Republika Srpska has the obligation to participate in the preparation (collection, validation, transfer) of the said data/information/reports which the responsible BiH

authorities need to send to the EU authorities in accordance with the Directive 91/692/EEC on Reporting.

The Fund for the Environment and Energy Efficiency of Republika Srpska has been established pursuant to the Law on the Fund and Financing of Environmental Protection. The Fund carries out all activities related to fund raising and financing of programmes, projects and activities related to the preservation, sustainable use, protection and improvement of the environment, and energy efficiency. The Fund is a legal entity with public competences. Ministry Of Physical Plannig, Civil Enngineering And Ecology of RS carries out a supervision of the Fund's work.

This sector needs further strengthening of the existing administrative capacities, both quantity and quality wise, and enhancing the coopeartion between the administrative authorities at Republika Srpska level and relevant institutions in the entire BiH.

3. WATER MANAGEMENT

3.1. SCOPE OF TRANSPOSITION

The following EU directives constitute the core of the EU water acquis:

- *Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, as last amended by Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 (WFD).*

This Directive sets out the rules on how countries develop water policy, including determination of river districts, defining of water bodies, setting out of environmental quality objectives (EQOs) for water, preparation of river basin management plans, consideration on economic consequences and inclusion of interested parties and the general public in the decision making process related to water management.

- *Council Directive 91/271/EEC of 21 May 1991 concerning urban wastewater treatment, as last amended by 1882/2002, Regulation (EC) No 596/2009 and the Directive of the commission (EU) 2015/1787;*

The Directive provides for requirements for protection of the environment from the adverse effects of the discharges of urban and industrial wastewaters. The Directive regulates collection, treatment and discharge of urban wastewaters and treatment and discharge of wastewaters from certain industrial sectors;

- *Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption, as last amended by Regulation (EC) No 1882/2002, Regulation (EC) 596/2009 of the European Parliament and of the Council of 18 June 2009 and the Commission Directive (EC) No. 2015/1787;*

The purpose of the Directive is to protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean. In other words, DWD aims to ensure that drinking water is free from micro-organisms, parasites and substances, which constitute a danger to human health;

- *Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources, as amended by Regulation (EC) No 1882/2003 of the European Parliament and of the Council of 29 September 2003 and by*

Regulation (EC) No 1137/2008 of the European Parliament and of the Council of 22 October 2008 (Nitrate Directive)

The aim of this Directive is reduction of water pollution caused or induced by nitrates originating from agricultural sources, and prevention of such further pollution. The Directive applies to surface freshwater and fresh groundwater, estuaries, coastal waters and marine waters.

- *Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration (Groundwater Directive)*
- This Directive, from the WFD, fully covers the requirements regarding the protection of groundwater against pollution by certain dangerous substances. The Directive 2014/80/EEC of 20 June 2014 amended Annex II of the Directive 2006/118/EC. The proposal is at the moment of preparation of EAS under the scrutiny of the Council and European Parliament;³⁹
- *Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC, as last amended by Regulation (EC) No 596/2009 of the European Parliament and of the Council of 18 June 2009 (Bathing Water Directive)*

The Bathing Water Directive lays down provisions for the monitoring and classification of bathing water quality, management of bathing water quality, and provisions regarding informing the public on bathing water quality.

- *Directive 2006/44/EC of the European Parliament and of the Council of 6 September 2006 on the quality of freshwaters needing protection or improvement in order to support fish life (codified version replacing and repealing Council Directive 78/659/EEC on the quality of freshwaters needing protection or improvement in order to support fish life amended by Regulation (EC) No 1137/2008 of the European Parliament and of the Council of 22 October 2008) (Freshwater Fish Water Directive)*

The Freshwater Fish Directive is aimed at protection and improvement of the quality of running and standing fresh waters which support, or which, if pollution were reduced or eliminated, would become capable of supporting, fish belonging to indigenous species thus offering a natural diversity and supporting species the presence of which is judged desirable for water management purposes by the competent authorities.

- *Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks (Flood Directive)*

This Directive provides for the development of plans in case of flooding and measures to prevent the impact of flooding. The Directive also reinforces the rights of the public to access information and to have right to participate in the planning process.

- *Commission Directive 2009/90/EC of 31 July 2009 laying down, pursuant to Directive 2000/60/EC of the European Parliament and of the Council, technical specifications for chemical analysis and monitoring of water status - Monitoring of water status*

This Directive provides for technical specifications for chemical analysis and monitoring of water status in line with Article 8(3) of the Directive 2000/60/EC. It sets forth the minimum criteria to be applied by member states when monitoring the water status, sediment and biota, as well as the rules to prove the quality of the analytical results.

³⁹<http://ec.europa.eu/environment/water/water-framework/groundwater/review.htm>. available 09.06.2014.

- *Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC of the European Parliament and of the Council – Environmental Quality Standards*

This Directive provides for the environmental quality standards (EQS) for priority substances and other polluting substances foreseen under Article 16 of the Directive 2000/60/EC, with the aim of achieving a good chemical status of surface waters and in line with the provisions and purpose of Article 4 of the Directive.

- *Directive 2006/11/EC of the European Parliament and of the Council of 15 February 2006 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community – Discharge of Dangerous Substances*

Pursuant to this Directive, member states undertake appropriate measures to eliminate the water pollution referred to in Article 1 caused by dangerous substances from families or groups of substances from the List I Annex I and to reduce pollution of the water by the said dangerous substances from families or groups of substances from the List II Annex I Aneksa I in line with this Directive.

- Commission Directive 2003/40/EC of 16 May 2003 establishing the list, concentration limits and labelling requirements for the constituents of natural mineral waters and the conditions for using ozone-enriched air for the treatment of natural mineral waters and spring waters

This Directive establishes the list of constituents of natural mineral waters that may pose threat to human health, concentration limits, deadlines for the application of the limits and labelling requirements for all constituents. These constituents must be naturally present in the water and cannot be a consequence of the pollution at the source.

- *Directive 2009/54/EC of the European Parliament and of the Council of 18 June 2009 on the exploitation and marketing of natural mineral waters*

This Directive pertains to the waters that are exploited from the ground of member states and which are recognised by a responsible authority of the respective member state as natural mineral waters satisfying the provisions of Annex I, section I. This Directive also pertains to waters exploited from the ground of a third country, imported to the EU and recognised as natural mineral waters by a responsible authority of a member state.

3.2. OVERVIEW OF TRANSPOSITION

The exclusive competence for water management in the territory of Republika Srpska lies with the authorities of Republika Srpska.

Pursuant to the Law on Waters of Republika Srpska which was enacted in 2006, the administrative and managing function is placed within the scope of Republika Srpska authorities. It reads that the laws and strategies in the field of waters are enacted by a legislative authority, namely the National Assembly of Republika Srpska, while the Government of Republika Srpska is in charge of enacting the management plans for district river basins in the territory of Republika Srpska upon a proposal of

the Public Institution *Vode Srpske*. A cooperation, proper consultations and coordination of certain issues are foreseen for the procedure of enacting the said regulations and documents.

The Integral Water Management Strategy in RS was rendered pursuant to the RS Law on Waters⁴⁰, which largely transposed the Directive 2000/60/EC (ODV) into the Republika Srpska legal system. Pursuant to the said law, the Government of Republika Srpska and Ministry of Agriculture, Forestry and Water Management RS rendered several secondary regulations to regulate the issues related to water management with a view to enforcing the Law.

A classification of waters and categorisation of watercourses is made for the purpose of harmonising and comparing the assessment of the level of antropogenic polluting effects on the ecological function of water in surface watercourses, determination of the benefits of water quality in watercourses for the existing or planned use, setting of objectives for each district or section of river basin and particularly for the purpose of controlling the success of all protection measures taken in order to prevent and deterioration of the status and to improve or recover the water quality in surface watercourses including artificial and heavily modified water bodies in the manner prescribe under the Decree on Classification of Waters and categorisation of Watercourses.⁴¹ The aforementioned Decree does not prescribe the limit values for all biological quality elements, nor does it prescribe the type specific limit of physical-chemical parameters that support certain ecological status. The Decree does not define the limit values for each substance in the list of priority substances.

The Water Agency for Sava River Basin and Water Agency for Trepinja River Basin have been established pursuant to the Law on Waters with the competence for water management. In early 2013, the said Agencies merged into one – Public Institution *Vode Srpske* [Waters of Srpska]

The Law on waters prohibits the release of wastewaters into water bodies. Besides that, the Rules on Conditions for Discharging Wastewater into Surface Waters⁴² define the conditions for discharge of wastewater or waste effluents into surface waters, and limit values of adverse and hazardous substances that can be discharged into surface waters.

Republika Srpska introduced the conditions and requirements the laboratory must meet in order to gain the status of a reference and/or certified laboratory.

Pursuant to the Law on Waters, the competence for water management or realisation of the program of monitoring the state of waters lies with the Public Institution *Vode Srpske*. All activities of monitoring the state of waters may be carried out only by specialised institutions in the field of waters and environment which meet professional criteria prescribed by the Rules on the conditions to be met by water management laboratories as legal entities or within legal entities that carry out some types of research into the surface, ground and wastewaters.

The Law on Waters regulates the protection of drinking water springs which falls within the competence of local self-government units (municipalities and towns) and their public utilities companies.

According to the Law on waters areas of swimming water – swim sites are areas intended for organized swimming and areas where swimming is not prohibited and is traditionally practiced. Municipalities must define and report such areas if the areas are protected from pollution and other factors that may have an impact on the water quality. According to the Decree on Classification of

⁴⁰ (Official Gazette of Republika Srpska, Vol 50/06, 92/09 and 121/12)

⁴¹(Official Gazette of Republika Srpska, Vol 42/01)

⁴²(Official Gazette of Republika Srpska, Vol 44/01)

Waters and Categorization of Watercourses, second class waters in their natural state can be used for bathing.

Health safety of drinking water in Republika Srpska is controlled on the basis of the Rulebook on health safety of drinking water⁴³. This Rulebook prescribes the health safety of drinking water, health safety of table water, natural mineral and natural spring water and requirements related to personnel, premises and equipment to be met by a public health institution in charge of controlling the health safety of drinking water, table water, natural mineral and natural spring water.

With the view of ensuring an efficient protection of waters, the Law on Waters defines the obligation to obtain administrative water law acts (water guidelines, water approvals and water permits) for the following activities regardless of their impacts:

- 1) capturing of waters in all fields and activities and particularly but not limited to:
 1. industry and energetics,
 2. agriculture,
 3. water supply,
 4. catering businesses which use water in technological procedures and discharge wastewater
 5. touristic activities, etc.
- 2) discharge of wastewater into surface waters,
- 3) Artificial recharge of ground water
- 4) extracting material from watercourses,
- 5) construction of facilities for the use of hydroenergy,
- 6) permanent raising of water level and as a result thereof flooding of the soil
- 7) construction of flood protection facilities,
- 8) construction of roads, railways and dirt roads,
- 9) building bridges or other structures over, along or inside the watercourse or water land,
- 10) construction or development of landfills,
- 11) in the procedure of concession granting,
- 12) transport of hazardous substances and products containing those substances which reach the water after the use.

In addition to the said activities, water regulations are issued for all other activities that may:

- 1) temporarily or permanently derogate the water quality or disturb the improvement of the existing quality ;
- 2) have adverse effect on aquatic and semiaquatic ecosystems;
- 3) increase the risk of floods or erosion, or
- 4) to significantly:
 1. reduce the water quantity,
 2. change watercourse morphology,
 3. alter depth, water level or flow of watercourses,
 4. and hinder the use of surface water for recreational purposes.

The water law act⁴⁴ is issued for all activities that may:

- 1) temporarily or permanently derogate the water quality or disturb the improvement of the existing quality ;

⁴³ (Official Gazette of Republika Srpska, Vol 75/15)

⁴⁴ Original titles of the water law acts are: водне смјернице, водна сагласност и водна дозвола (water guidelines, water approval and water permit).

- 2) adverse effects on aquatic and semiaquatic ecosystems;
- 3) increase the risk of floods or erosion, or
- 4) to significantly:
 1. reduce the water quantity,
 2. change watercourse morphology,
 3. alter depth, water level or flow of watercourses,
 4. and hinder the use of surface water for recreational purposes.

Upon a proposal of the Republic Civil Protection Administration, the Government of Republika Srpska adopts an action plan every year in the preparation and enforcement of measures of protection and rescue from floods in RS. The latest plan was adopted in 2016 and its implementation is ongoing. It is a basic document for coordination and implementation of additional or special annual tasks and activities of the Republic bodies, towns /municipalities, businesses, other legal entities and citizens' associations that discharge the flood protection and rescue measures.

According to Law on Waters, the protection against harmful effects of water is related to defence against floods and ice on watercourses and erosion and flash flood protection. Article 91 of the Law defines the vulnerable areas – flooding areas identified by the RS Government according to the proposal of the RS Ministry of Agriculture, Forestry and Water Management. The Law defines the 'the flooding area' (Article 92). Tasks of the RS, local units of self-government and citizens in relation to the protection against harmful effects of water (Article 94) are as follows: planning and implementation of protection (Article 95), plan of protection against harmful effects of water (Article 96), emergency protective measures against harmful effects of water (Article 97), implementation of plans for protection against harmful effects of water (Article 98), scope of protection against harmful effects of water (Article 99), monitoring, forecasting and early warning (Article 100), tasks of competent bodies in case of increased degree of vulnerability (Article 101), tasks of competent bodies in relation to intervention in the event of natural disasters due to harmful effects of water (Article 102), tasks of competent bodies in connection with remediation of consequences of harmful effects of waters (Article 103), prohibitions in flooding area (Article 105), penalties for prohibited acts and activities (Article 107), responsibility of competent bodies for water management for water damage management (Article 109).

RS Minister of Agriculture, Forestry and Water Management issues an Order on the main Operational Flood Defence Plan for each year.

The Law on Waters defines the tasks of Republika Srpska, local self government units and population with regard to harmful impact of waters:

- Ensuring the protection measures plan,
- Construction and management of water infrastructure (embankments, dams, partitions, facilities for the stabilisation of bottom and banks for disposal of internal waters) in accordance with the powers vested in them by the Law on Waters.

The aforementioned measures and activities are carried out also outside the vulnerable area, at the level of the entire river basin, if they increase the level of protection.

For the purpose of protection from harmful effects of waters and floods, the activities, measures and works are being planned as needed to prevent or decrease the consequences of harmful effects of water⁴⁵, including the following activities:

- Maintenance, reconstruction and construction of protection facilities and plants,

⁴⁵ Article 95.

- Maintenance of the main channel network, secondary channel network, tertiary channel network which serves to dispose of water and all category roads that belong to the system,
- Maintenance of the defense embankments stability,
- Maintenance and prevention of violating the stability of riverbeds, accumulations, retentions, dams and the like,
- Measures that will be undertaken prior to and in case of flood danger or harmful effects of waters,
- Data on equipment and materials that will be prepared for the discharge of activities,
- Allocation of duties and appointment of responsible persons and competent legal entities determined by this law,
- Responsibilities and powers for undertaking of certain activities and communication and liaison with other sectoral participants,
- Designation of a district river basin, basin, watercourse, sector and section where the activities are undertaken in view of the protection from harmful effects of waters,
- Measures that will be undertaken during and prior to the defense from floods,
- Water status of the rate of water state at certain sectors and sections where the preparatory and implementation of flood defense actions start,
- Manner of informing the competent authorities and
- Manner of maintaining the relations, and the like.

The existing legislation of Republika Srpska for the field of water management is listed in Annex IV hereto.

3.3. IDENTIFIED GAPS

1. Framework Water Directive 2000/60/EC is partly transposed into the Law on Waters. The development of management plans for the rivers Sava and Trepinja reached its final stage. For the purpose of full transposition of this Directive into the Republika Srpska legislation the key requirements of the Directives related to the issues below should be implemented:

- explicit definitions,
- protected areas,
- monitoring of the water quality in relation to the achievement of ecological goals for surface waters, ground waters and protected areas,
- identification of all water bodies,
- combined approach for pointy and diffusive polluters,
- full implementation of Annex I-X to the Framework Water Directive (for example, a register of protected areas is not established in the manner prescribed by Article 6 (1) and Annex IV to the Directive),
- and others.

2. Directive 91/271/EEC concerning urban wastewater treatment is partly transposed into the Republika Srpska legislation.

Among other things, an important starting parameter for the implementation of this Directive is to provide a definition of agglomeration as an area in which population and or business activities are sufficiently concentrated so that urban wastewater can be collected and disposed to the urban wastewater treatment plant or to the final point of discharge.

- The Law on Waters prescribes the obligation of local self governments to provide for and organise urban wastewater treatment, while the Rulebook on treatment and disposal of wastewater for towns and agglomerations without public sewer system prescribe the rules for planning, construction, supervision, treatment and disposal of wastewater, and the technical requirements for the facilities used for those purposes. The objective of these rules is to protect waters from pollution, unhindered and harmless use of water, protection of human health, flora and fauna, environmental protection, by way of control, limitation and prohibition of introducing dangerous and harmful substances into water. The Rulebook also prescribes the deadline for the said activities. A concept of agglomeration is not defined, but the concept of inhabitade area with certain population thresholds and deadlines for the activities.

- Provisions of Aneksa I-III have not been transposed in the manner prescribed by the Directive,
- defined the actions of legal and physical persons and competent bodies in planning, construction, monitoring, treatment and wastewater disposal in cities and settlements without public sewerage, as well as conditions for such facilities.

- Article 4 of this Directive has not been transposed into the legislation of Republika Srpska in the manner prescribed by the Directive,

- Directive on environmental protection, and particularly soil in the usage of sewer sludge has not not been transposed into the legislation of Republika Srpska,

- and others.

2. Directive 2006/7/EC concerning the management of bathing water quality: has been transposed into Republika Srpska legislation in a minor percent According to the Law on waters areas of swimming water – swim sites are areas intended for organized swimming and areas where swimming is not prohibited and is traditionally practiced. These are declared by local units of self-government, but only if they are protected from pollution and other forms of use or phenomena that could affect the quality of swimming water, i.e. if activities which could endanger health or lives of swimmers are limited or prohibited in these areas. It is forbidden to build permanent or temporary buildings or other obstructions that would prevent free flow of water, and free passage over water land, i.e. prevent free access to banks and beds of rivers, natural lakes and reservoirs in these areas. According to the Decree on Classification of Waters and Categorisation of Watercourses, second class waters in their natural state can be used for bathing. This Decree defined the allowed limit values for the parameters for prescribed class of water. Swimming sites are shown and defined in a water management plan, and spatial planning documents. Ministry of Agriculture, Water and Forestry, in cooperation with the Ministry of Health and Social Welfare, provides detailed criteria for swimming pools and swimming sites.

4. Directive 2006/44/EC on the quality of freshwaters needing protection or improvement in order to support fish life has not been transposed into the legislation of Republika Srpska.

5. Directive 98/83/EC on the quality of water intended for human consumption: transposition of this Directive into the legislation of Republika Srpska is at its early stage. Parameter values for health safety of drinking water have not been fully transposed in the manner prescribed by Annex I to this Directive. The Ministry of Health and Social Protection of Republika Srpska is competent for the

transposition of this Directive. PHI Institute of Public Health is competent for monitoring of drinking water.

6. Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources: has not been significantly transposed into the legislation of Republika Srpska. For the purpose of full transposition of this Directive into the legislation of Republika Srpska the key requirements of the Directive have to be met in relation to the following:

- Article 70 of the Law on Waters defines the types of protected areas and includes the eutrophication prone areas and areas vulnerable to nitrates. Article 78 of the Law defines that the RS Ministry of Agriculture, Forestry and Water Management, in cooperation with the ministry competent for ecology, will prescribe methods to determine the areas vulnerable and less vulnerable to eutrophication and nitrates. Article 81 of the Law provides obligation and limitations of activities in the vulnerable areas and, among other things, requires application of good agricultural practices in the vulnerable areas. Article 82 of the Law states that the RS Ministry of Agriculture, Forestry and Water Management prescribes the method of monitoring water condition in the vulnerable areas, including the activities on waters and activities in the vulnerable areas.

The said provisions of the Directive have not yet been transposed into the legislation of Republika Srpska,

- Code of good agricultural practices has not been transposed in the manner prescribed by this Directive. Article 59 of the Law on waters defines the obligation to adopt legislation on the rules of good agricultural practice in the areas where waters are polluted by nitrates and plant protection products or in the areas where there is a risk of such pollution. A part of the Code of good agricultural practices pursuant to this Directive, which pertain to the use of fertilisers, is defined by the Rulebook on conditions, manner and methods of examining the agricultural land fertility and determination of the quantity of mineral fertilisers and the period in Chapter: Basic principles of good agricultural practice for the use of fertilisers.

- Ministry Of Agriculture, Forestry And Water Management of RS has not adopted regulations to regulate the issues related to areas vulnerable to nitrates and monitoring of the water status within those areas. There is no monitoring programme for nitrates which would be in compliance with this Directive but the monitoring of water quality status related to nitrates is contained in the supervision and operation monitoring of surface waters in RS.

7. Directive 2006/118/EC on the protection of groundwater against pollution and deterioration: has not been transposed into the legislation of Republika Srpska.

8. Directive on the assessment and management of flood risks 2007/60/EC: has not been transposed into the legislation of Republika Srpska

9. Directive 2009/90/EC on technical specifications for chemical analysis and monitoring of water status: has not been transposed into the legislation of Republika Srpska.

10. Directive 2008/105/EC on environmental quality standards in the field of water policy: has not been transposed into the legislation of Republika Srpska.

11. Directive 2006/11/EC: on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community has not been significantly transposed into the legislation of Republika Srpska.

12. Directive 2003/40/EC establishing the list, concentration limits and labelling requirements for the constituents of natural mineral waters and the conditions for using ozone-enriched air for the treatment

of natural mineral waters and spring waters: has not been significantly transposed into the legislation of Republika Srpska.

13. Directive 2009/54/EC on the exploitation and marketing of natural mineral waters: has not been significantly transposed into the legislation of Republika Srpska.

3.4. RECOMMENDATIONS/PRIORITIES

Bearing in mind the legal analysis, the following recommendations may be made:

- Ministry Of Agriculture, Forestry And Water Management of RS, as a coordinator of transposition of the EU water acquis, should inform other Ministries in RS (especially MZSZ RS and Ministry Of Physical Planning, Civil Engineering And Ecology of RS) about the participation of RS in the development of DSIP at the level of BiH and relevant APID RS; that task should be carried out as soon as possible in coordination with the Ministry of Foreign Affairs and Economic Relations;
- Once the said coordination is ensured in Republika Srpska, an active participation in the development of DSIP for each Directive related to water management;
- In the process of preparation of DSIP and APID and later in the development and amendments and addenda to the legislation in Republika Srpska, Ministry Of Agriculture, Forestry And Water Management of RS should take into account the conclusions, follow the amendments to the EU water acquis and amend the existing water legislation accordingly, aiming at full compliance with the EU water acquis; this is a continuous process;
- After developing DSIP and APID in the field of waters, the implementation of planned measures should start (including the amendments to the existing laws on waters). The said DSIP and APID should be developed in the period of 2-4 years. Same as with the preparation of DSIP, Ministry Of Agriculture, Forestry And Water Management should act as a coordinator (of transposition activities) at the level of RS and lead the consultations with other ministries involved.

3.5. INSTITUTIONAL ADAPTATION REQUIREMENTS

When transposing the EU water acquis into a legal system of a country, a member state is obligated to:

- To determine the authorities that will manage (for example):
 - Determination of river basins;
 - Preparation of river basin management plans;
 - Identification of water for bathing, shell fish and freshwater fish;
 - Identification of inhabited areas;
 - Identification of the areas vulnerable to nitrate pollution;
 - Determination of a target water quality status;
 - Determination of water quality status standards;
 - Determination of limit values of emissions;
- Ensure operating the water management institutional framework on the river basin basis;
- Ensure organizations with expertise and resources to act as competent authorities;
- Collect the necessary data capable of being assessed on a river basin basis;

- Ensure that there are organizations capable of undertaking sampling programmes and laboratories (able to deploy accredited and standardized methods in analysing water and effluents);
- Establish clear links between competent control authority and other organizations which have responsibilities for issues that affect quality of water;
- Identify clearly the responsibilities for setting and meeting water quality objectives and limit values and issuing permits;
- Ensure power of competent authorities legally to enter premises, inspect and take samples, control industrial effluents, regulate urban wastewater discharges, regulate the quality of drinking water and control activities within river basins;
- Ensure there are arrangements established for monitoring, surveillance and review of water and affluent quality;
- Ensure an adequate data procession system is in place;
- Ensure there is an adequate system / means of consulting / reporting with the EU Commission, public organisations effected by river basin action plans and other countries where trans-boundary issues are concerned.

Competences of RS Ministry of Agriculture, Forestry and Water Management among others include the following:

organising and preparing of the Integra Water Management Strategy for the territory of Republika Srpska,

- organising and preparing of the district river basins management plans and updating them on a six-year basis,
- organising and preparing of the program of measures taking into account the economic analysis results for the purpose of achieving the goals of environmental and waters protection within management plans or the said program,
- organising and preparing of the flood defense plans, through a public institution;
- organising and preparing of the restoration program after a detrimental impact of waters, through a public institution;
- preparing and proposing the regulations concerning the public participation in the water management for the Republika Srpska Government,
- determining the instructions relative to the contents and methods of water management balance, for Republika Srpska and district river basins, organising its application and preparing the plan of water regime for Republika Srpska,
- preparing of plans of water protection, proposing of programs of systematic control of water and wastewater and other regulations about the control methods and defining the regulations with detrimental and hazardous substances and sanitary technical control of water,
- prescribing the requirements for the institutions that deal with or are authorised to deal with ground and surface waters quality control,
- determining and proposing to the Government the basic rates of general and special water management fees,
- keeping of integral water information system of Republika Srpska (WIS), takes care of development of cadastre of polluters, water management facilities and water resources per certain categories,
- enacting bylaws for categorising of water structure types and bodies and their status,

- enacting bylaws to regulate monitoring and implementation of measures and activities in order to prevent a degradation of surface and ground water status,
- enacting bylaws relative to the requirements of limited use of public water estate,
- also, enacting bylaws in accordance with the Law,
- defining erosive zones, irrigation zones,
- determining the need and proposing the Government a number of and organisation of public companies in the field of waters.

Public institution "Vode Srpske" within the Ministry of Agriculture, Forestry and Water Management of Republika Srpska, carries out the following: implementation of tasks in the domain of water-management sector, organize the collection, management and distribution of data on water resources, organize monitoring of the current state and water usage, the hydrology state, the qualitative state, the environmental state, the condition of the groundwater, prepare river basin management plans, other duties related to water management as prescribed by the Law on Waters, prepare plans, elaborate studies and projects to prevent and reduce the harmful effects of water, take urgent measures to prevent or reduce the occurrence of adverse effects by floods, major draughts, bank erosions of water bodies and organize the implementation of plans, undertakes urgent measures to prevent or reduce harmful effects of incident pollution and prepare the plans for such measures or orders their preparation in its area, issue water management legal acts, organize the manner, procedure, calculation, payment and delayed payment of special water management acts, participate in report drafting in accordance with the Law on Waters and bylaws, drafting of the policy in the waters sector and legislation that pertains to water, promote, organize and assist the research work in the field of water resources and sustainable management thereof, raising the public awareness about sustainable use of water resources, protection of waters and water ecosystems, participating in the coordination of development and implementation of integral water management plans along with responsible organisations in the Federation of BiH for the needs of Bosnia and Herzegovina, and with international authorities for the international river basins.

Public institution „Vode Srpske” was established in early 2003 by merger of two water agencies and other public companies (water management companies) that are responsible for waters and it is divided into several sectors and branch offices :

Water management sector for Sava:

- division for water estate management, protection from waters and supervision of hydro technical facilities

- division for protection and use of waters, issuance of water management acts and RVIS

- section for irrigations

- subsection for Sava flooding area

- subsection for flooding areas of Semberija and Posavina

- subsection for flooding area of Ivanjsko Polje

- Water management sector for Trebišnjica:

- division for preparation and processing of water management acts, calculation and collection of water management fees

- division water estate management, protection from waters, protection and use of waters

- Supervision of hydrological facilities

- Sector for Economic Legal Affairs

- for legal and general affairs
- for collection and monitoring of water management fees
- for financial accounting affairs

- Branch offices:

- Branch Office Banja Luka
- Branch Office Doboj
- Branch Office Prijedor
- Branch Office Zvornik
- Branch Office Višegrad

Considering the scope of duties, number of employed expert personnel, and having an insight in the information and technical support, it is clear that employment of experts is needed, as well as procurement of software packages and tools and permanent training of employees.

With a view to discussing the issues in the sector of water management that are important for every district river basin, and in order to review different needs and interests and propose measures for improvement and development of the waters sector, especially district river basins, the Law on Waters of RS prescribes the establishment of the Council for district river basins as the top counselling authority:

- Council for district river basin of Save; and
- Council for district river basin of Trebišnjica.

The Council carries out the following:

- participate in drafting of water management plans prior to the adoption procedure,
- review and give opinion on any strategic document of other sectors in the district river basin under the impact of the waters sector or having an impact on the waters sector ,
- review and give opinion on any issue of the interest for river basin or sub basin which are related to interentity cooperation,
- review and give opinion on any issue of the interest for both river basins related to the use or protection of water resources ,
- review and give opinion on any issue from waters sector that is important for Republika Srpska, BiH, interentity cooperation or international obligations.

MINISTRY OF PHYSICAL PLANNING, CIVIL ENGINEERING AND ECOLOGY RS carries out administrative, expert and technical tasks of protection, preservation and improvement of the environment or waters as one of the most significant media of the environment.

The RS Ministry of Health and Social Protection carries out administrative, expert and technical tasks of in accordance with law. With regard to the environment, Ministry of Health and Social Protection is competent for health safety of drinking water. Institute of Public Health of Republika Srpska is a public health institution with scope of work and activities regulated under the RS Law on Health Protection (Official Gazette of Republika Srpska Vol 106/09 and 44/15). Pursuant to the Law

on Health Protection, the Institute represents a public health institution which carries out social-medical, hygienic-ecological, epidemiological and microbiological activities. The Institute also preforms bacteriological, parasitological, serological, toxicological, and chemical and virology examinations and tests related to the production and distribution of food, water, air and general use objects, as well as the laboratory control of radiation, radionuclides in the air, soil, water and food.

The Law on Local SelfGovernment of Republika Srpska prescribes that the local self government units extend public utiities services of water supply, collection and treatment of wastewater. In order to implement these tasks, local self government authorities may establish a company for specific purposes or transfer the duties to another legal entity.

Pursuant to the Law on Waters, the local self government units participate in the procedure of issuance of legal acts in the sector of water management.

Republika Srpska authorities and the local self government units, within their competence, manage the water resources as an estate of public interest and are responsible for the protection from damage, destruction or irresponsible or illegal use in accordance with the Law on waters and other laws.

4. WASTE MANAGEMENT

4.1. SCOPE OF TRANSPOSITION

The EU acquis in the field of waste management comprises the following regulations:

- *Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (The Waste Framework Directive)*

This Directive determines the measures of protection of environment and human health by preventing or reducing adverse effects of waste generation and management and reducing total effects of the use of resources and improvement of the efficiency of that use.

- *The Commission Decision 2000/532/EC of 3 May 2000 establishing a List of Wastes as amended by Commission Decision 2001/118/EC of 16 January 2001, Commission Decision 2001/119/EC of 22 January 2001, and Council Decision 2001/573/EC of 23 July 2001 / The List of Waste*

This Decision determines the List of waste and prescribes the features of hazardous waste.

- *Regulation (EC) No 2150/2002 of the European Parliament and of the Council of 25 November 2002 on waste statistics and later amended with Commission Regulation (EC) No 574/2004 of 23 February 2004 amending Annexes I and III, Commission Regulation (EC) No 783/2005 of 24 May 2005 amending Annex II, Regulation (EC) No 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE, Regulation (EC) No 221/2009 of the European Parliament and of the Council of 11 March 2009, as regards the implementing powers conferred on the Commission, and Commission Regulation (EU) No 849/2010 of 27 September 2010 - Waste Statistics*

The purpose of this Regulation is to set a framework for the preparation of statistics relative to the generation, treatment and disposal of waste.

- *Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste amended with Regulation (EC) No 1882/2003 and Regulation (EC) No 1137/2008 regarding specific criteria for the storage of metallic mercury considered as waste, the Council Decision 2003/33/EC of*

19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to the Directive 1999/31/EC – The Landfill Directive

The purpose of this Directive is to prescribe strict operational and technical requirements on waste and landfills, ensure measures, procedures and guidelines for reduction of adverse effects on the environment or the reduction of adverse effects to largest possible degree, particularly with the aim of preventing or reducing the adverse effects of the landfill of waste on the environment, in particular on surface water, groundwater, soil and air and global environment, including the greenhouse effect, and any threat to human health that might be caused by waste disposal during the entire existence of landfill.

- *Directive 94/62/EC of 20 December 1994 on packaging and packaging waste amended by Regulation (EC) No 1882/2003 of the European Parliament and of the Council of 29 September 2003, Directive 2004/12/EC of the European Parliament and of the Council of 11 February 2004, Directive 2005/20/EC of the European Parliament and of the Council of 9 March 2005, Regulation (EC) No 219/2009 of the European Parliament and of the Council of 11 March 2009 -The Packaging Waste Directive*

This Directive aims at harmonising the regulations on packaging and packaging waste management in order to prevent their effects on the environment in all members states or to reduce such effect taking into account a high level of environmental protection, on the one hand, and ensuring the functioning of the internal market by avoiding obstacles to trade and distortion and restriction of competition in the Community, on the other hand. To that regard, this Directive determines the measures which are primarily aimed at preventing of the packaging waste and additional fundamental principles or recover, recycling and other forms of treatment of packaging waste which would result in the reduced disposal of such waste.

- *Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-of life vehicles amended by Commission Decision 2002/525/EC of 27 June 2002, Commission Decision 2005/63/EC of 24 January 2005, Commission Decision 2005/438/EC of 10 June 2005, Council Decision 2005/673/EC of 20 September 2005, Directive 2008/33/EC of the European Parliament and of the Council of 11 March 2008, Commission Decision 2008/689/EC of 1 August 2008, Directive 2008/112/EC of the European Parliament and of the Council of 16 December 2008, Commission Decision 2010/115/EU of 23 February 2010, Commission Directive 2011/37/EU of 30 March 2011. (Directive on End-of-Life Vehicles)*

This Directive lays down measures aimed at preventing the generation of waste from vehicles by ensuring the collection of end-of-life-vehicles, their treatment under environmentally sound conditions and the reuse and recovery of component materials from dismantled vehicles, and at improvement of the impact of all businesses that deal with vehicles during the cycle of life and particularly businesses directly involved in the waste vehicles treatment.

- *Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC later amended by Directive 2008/12/EC of the European Parliament and of the Council of 11 March 2008, Directive 2008/103/EC of the European Parliament and of the Council of 19 November 2008 -Directive on batteries and accumulators*

This Directive determines the rules of placing the batteries and accumulators on the market and especially prohibits placing on the market of these batteries and accumulators that contain hazardous substances and special rules for collection, treatment and disposal of waste

batteries and accumulators which supplement the respective waste legislation of the Community with the aim of promoting a high level of collection and recycling of waste batteries and accumulators. This Directive aims to improve ecological efficiency of batteries and accumulators and activities of all business dealing with the life cycle of batteries and accumulators such as producers, distributors and end users and especially those businesses involved in the treatment and recycling of waste batteries and accumulators.

- *Commission Decision 2008/763/EC of 29 September 2008 establishing, pursuant to Directive 2006/66/EC of the European Parliament and of the Council, a common methodology for the calculation of annual sales of portable batteries and accumulators to end-users, Commission Decision 2009/603/EC of 5 August 2009 establishing requirements for registration of producers of batteries and accumulators in accordance with Directive 2006/66/EC of the European Parliament and of the Council, Commission Decision 2009/851/EC of 25 November 2009 establishing a questionnaire for Member States reports on the implementation of Directive 2006/66/EC of the European Parliament and of the Council on batteries and accumulators and waste batteries and accumulators*

This Decision established a general methodology for the calculation of annual sales of batteries and accumulators to end users.

- *Council Directive 96/59/EC of 16 September 1996 on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCB/PCT) amended by Regulation (EC) No 596/2009 of the European Parliament and of the Council of 18 June 2009 - the Disposal of PCBs and PCTs Directive*

The purpose of this Directive is to harmonise legislation of member states relative to a controlled disposal of PCB, decontamination or removal of the equipment that contains PCB and/or disposal of used PCBs so that they are totally eliminated.

- *Regulation (EC) No 850/2004 on persistent organic pollutants amending Directive 757/2010 of 24 August 200, amending Annexes I and III, and Regulation (EC) No 756/2010 of 24 August 2010 amending Annexes IV and V.*

The purpose of this Directive is to protect human health and environment from persistent organic pollutants by prohibiting, entirely revoking in the shortest possible term or limiting the generation, placing on the market and use of substances that are the subject to Stockholm Convention on persistent organic pollutants.

- *Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries and amending Directive 2004/35/EC, and Regulation (EC) No 596/2009, as amended by Commission Decisions 2009/335/EC, 2009/337/EC, 2009/358/EC, 2009/359/EC, and 2009/360/EC – Mining Waste Directive*

This Directive determines the measures, procedures and guidelines for prevention or reduction of any adverse effects on the environment, especially water, air, soil, fauna, flora, landscape or any related threat to human health that result from the management of extractive industry waste.

- *Council Directive 86/278/EEC of 12 June 1986 on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture, as amended by Council Directive 91/692/EEC of 23 December 1991, Council Regulation EC/807/2003 of 14 April 2003 and Regulation EC/219/2009 of the European Parliament and of the Council of 11 March 2009 – Sewage Sludge Directive*

The purpose of this Directive is to regulate the use of sludge from wastewater treatment devices in agriculture in as much as to prevent adverse effects on soil, plants, animals and humans, thereby encouraging the proper use of such sludge.

- *Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste, as amended by the following: Commission Regulation EC/1379/2007 of 26 November 2007, Commission Regulation (EC) No EC/669/2008 of 15 July 2008, Regulation EC/219/2009 of the European Parliament and of the Council of 11 March 2009, Commission Regulation (EC) No EC/308/2009 of 15 April 2009, Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009, Commission Regulation (EU) No 413/2010 of 12 May 2010, Commission Regulation (EC) No 664/2011 of 11 July 2011 and Regulation (EU) 135/2012 of 16 February 2012 – Shipment of Waste*

This Regulation determines the procedure and regimes of controlling the waste shipments, depending on the origin, destination and route, types of shipped waste and type of processing applied to the waste at the destination.

- *Commission Regulation (EC) No 1418/2007 of 29 November 2007 concerning the export for recovery of certain waste listed in Annex III or IIIA to Regulation (EC) No 1013/2006 of the European Parliament and of the Council to certain countries to which the OECD Decision on the control of transboundary movements of wastes does not apply, as amended by Regulation (EC) 740/2008, Regulation (EC) 967/2008 and Regulation (EU) 674/2012*

This Regulation on the export of certain waste intended for treatment prescribed the list of waste for treatment and procedures.

- *The European Parliament and the Council adopted Directive 2012/19/EU of 4 July 2012 on waste electrical and electronic equipment - WEEE*

This Directive determines the measures of protection of the environment and human health by preventing or reducing adverse effects of *waste electrical and electronic equipment (WEEE)* and management of that waste and reduction of total effects of the use of resources and improvement of efficiency of that use.

- *Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants amended by Regulation (EC) 293/2016 of the European Parliament and Council of 1 March 2016 and Regulation (EC) 460/2016 of 30 March 2016 amending Annexes IV and V of the Regulation (EC) 850/2004.*

The objective of the Directive is to protect human health and the environment from persistent organic pollutants by prohibiting, phasing out as soon as possible, or restricting the production, placing on the market and use of substances subject to the Stockholm Convention on Persistent Organic Pollutants, with a view to eliminating where feasible as soon as possible, releases of such substances, and by establishing provisions regarding waste consisting of, containing or contaminated by any of these substance.

4.2. OVERVIEW OF TRANSPOSITION

The most important instruments for the transposition of EU acquis into the legislation of Republika Srpska are the Law on Waste Management and bylaws enacted thereupon.

- Law on Waste Management fulfilled the transposition of the Framework waste Directive in the part related to: exceptions to the regulations of waste management; definitions of basic terms in the field of waste management; hierarchy waste management; waste management activities; waste management principles; categories of waste; issuance of waste management permit; waste management plans; keeping of register on waste; inspection control. The Law also transposed the Directive on Landfills in the part related to the landfill categories.
- Rulebook on waste categories, examination and classification of waste transposed the Framework Waste Directive in the part that pertains to the procedures of waste collection, waste processing and features that make waste hazardous. This bylaw is also harmonised with the Commission Decision 2000/532/EC so it fully transposed the European catalogue of waste and all features that make waste hazardous;
- The Decree on Waste Disposal at Landfills transposed the Directive on Landfills in the part that prescribes the exceptions to the implementation, types of waste that may be disposed at landfill, procedure of reception of waste at landfills; building of landfills; technical requirements for landfill project designing, building and putting into operation; monitoring the work of landfills.
- The Decree on Management of packaging and packaging waste transposed the Directive on packaging waste with regard to the definition of basic terms in packaging waste management, requirements for designing, production and use of packaging, limitation of heavy metals concentration in packaging;
- The Decree on waste lists and documents for transboundary movement of waste transposed the Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste in the part that prescribes the contents and layout of a notification form related to transboundary movement of waste, document on transboundary movement of waste, document that follows transboundary movement of nonhazardous waste which does not require a permit, lists of hazardous and non hazardous waste. Also, the Decree is harmonised with the Framework waste Directive with regard to disposal operations and reuse of waste operations.
- Rulebook on General and Special Documentation submitted along with the request for permit to import, export and transport waste contains the provisions that transposed the contents of the Regulation (EC) 1013/2006 of the European Parliament and Council of 14 June 2006 on Shipments of Waste regarding: exception to the implementation in case of a sample of non hazardous waste for transboundary movement for the laboratory purposes; documentation for transboundary movement of waste; administrative costs of notification on transboundary movement and provisions related to the language in which the forms are filled in in cases of waste transboundary shipment.

Transposition of the Directive on Batteries and Accumulators, Directive on waste vehicle and Directive on PCB/PCT is at a very early stage (some provisions are contained in the Law on waste Management). The Law on Waste Management has not transposed the Directive on Sewerage Sludge since the Law does not tackle the issue of sludge from sewerage systems.

The Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries (mining waste) which incurs one of the largest waste costs in the EU. It involves materials that must be removed to gain access to the mineral resource, such

as topsoil, overburden and waste rock, as well as tailings remaining after minerals have been largely extracted from the ore. These impacts can have lasting environmental and socio-economic consequences and be extremely difficult and costly to address through remedial measures. Therefore, wastes from the extractive industries have to be properly managed in order to ensure in particular the long-term stability of disposal facilities and to prevent or minimise any water and soil pollution arising from acid or alkaline drainage and leaching of heavy metals.

The Directive on Mining Waste has not been transposed by the Law on Waste Management considering that the mining waste derived from exploration, excavation, processing and storing of mineral raw materials, as well as quarries waste constitutes one of exceptions to the application of this Law.

Waste management permits are issued for one or more activities of waste management, and they include: waste collection permit, waste transport permit, waste storing permit, waste treatment permit and waste disposal permit. Responsible persons which carry out the activities of waste management have the obligation to make waste management plans by way of authorised legal entities. Considering that the said plants also need to have an ecological permit, best available techniques must be used.

The transport of waste in the territory of Republika Srpska is regulated by the Law on Waste Management, Rulebook of forms of documents on hazardous waste movement and instructions for filling and the Rulebook on forms of documents on waste movement and instructions for filling.

The international transport of waste outside the territory of Republika Srpska is extensively regulated by the Decree on Waste Lists and documents for transboundary movement of waste and Rulebook on General and Special Documentation submitted along with the request for permit to import, export and transport waste.

The existing legislation of Republika Srpska in the field of waste management is mentioned in Annex IV hereto.

4.3. IDENTIFIED GAPS

Based on the aforementioned review, the following gaps in the Republika Srpska legislation related to waste management may be identified:

- Not regulated issue of side effects,
- Not regulated issue of the end of the waste status,
- Gaps in the registration of polluters for example, there is no register on:
 - Plants that professionally deal with waste collection and transportation;
 - Plants that are not subject to a permit issuance,
- No obligation to develop the waste prevention plan,
- Lack of legislation on management of POPs waste,
- Lack of legislation on management of PCB/PCT,
- Lack of legislation on management of waste oils,
- Lack of legislation on management waste vehicles,
- Lack of legislation on collection and treatment of waste batteries and accumulators;
- Lack of legislation on management of asbestos waste, management of waste fluorescent pipes and management of TiO₂;

4.4. RECOMMENDATIONS / PRIORITIES

Considering the aforementioned, the following recommendations may be made:

- The Law on Waste Management of Republika Srpska set a legislative framework for the waste management. However, all bylaws have not been rendered yet although the Law provided a legal ground for that. For example, there is a lack of regulations on individual flows of waste and a new regulation for thermic treatment of waste. Therefore, bylaws need to be adopted to regulate the following:
 - waste vehicles,
 - waste oils,
 - waste batteries and accumulators;
 - PCB/PCT waste – must contain provisions relative to the adoption of plans of decontamination and or disposal of goods registered by the competent authority,
 - waste electronic equipment,
 - waste tyres;
 - waste fluorescent pipes that contain mercury;
 - POPs waste;
 - waste that contain asbestos,
 - medical waste, and
 - titanium dioxide waste and
 - thermic waste treatment.
- amendments to the Law on Waste Management should be developed in the forthcoming period including among others the issue of the end of waste status and side effects.
- Waste Management Strategy needs to be adopted.
- A new enactment to regulate the issue of packaging and packaging waste management should be rendered.
- A New Law on Mining or amendments to the existing one should be adopted, as well as bylaws that will clearly define the term of mining waste and mining waste management.

Considering the competence of the MAFWM, a legal ground should be established for the adoption of sewage sludge regulations, the text of the Rulebook on animal waste and other non-hazardous materials of natural origin should be amended to include the provisions on safekeeping of the data on quantities, composition and features of sludge produced and delivered for use in agriculture and other places where sludge is used and soil where it is used, according to special procedures for taking of samples and analysis.

Short term priorities should be the following:

- Considering the divided competences between Ministry Of Physical Planning, Civil Engineering And Ecology of RS and Ministry of Agriculture, Forestry and Water Management RS, a legal ground should be defined for the adoption of regulation on sewage sludge. The regulation should contain among others the provisions on keeping the records of quantities, composition and features of sludge which is delivered for the use in agriculture and other places of its use. Ministry Of Agriculture, Forestry And Water Management should establish and keep the register and a competent authority should be appointed for these issues;

- Ministry Of Physical Planning, Civil Engineering And Ecology RS is already appointed as a competent authority for waste vehicles, waste oils, waste batteries and accumulators, PCB/PCT and waste electronic equipment. It should discharge its role after the Minister of Ministry Of Physical Planning, Civil Engineering And Ecology of RS adopts relevant bylaws to regulate the said flows of waste, on the basis of the Law on Waste Management; and
- See into a possibility to merge the procedure for issuance of waste management permits with I and the issuance of ecological permit to plants (such as landfills), issued by Ministry Of Physical Planning, Civil Engineering And Ecology of RS. The Inspectorate of RS should implement the control. This will streamline the procedures and provide for a better use of scarce resources for permits issuance and inspection.

4.5. INSTITUTIONAL ADAPTATION REQUIREMENTS

Pursuant to the Law on Waste Management, MINISTRY OF PHYSICAL PLANNING, CIVIL ENGINEERING AND ECOLOGY RS is the competent authority for many aspects of waste management, such as issuance of waste management permits. The Inspectorate of RS controls the waste management permits that were issued by the MINISTRY OF PHYSICAL PLANNING, CIVIL ENGINEERING AND ECOLOGY RS. In addition to the Law on waste Management, the management of communal waste is regulated also by the Law on Utilities Activities. Local self government units are competent for communal waste management in Republika Srpska. The Inspectorate of Republika Srpska is competent for controls and inspections in line with the Law on Waste Management and special regulations that regulate the competence of inspection authorities.

The waste management sector needs further strengthening of existing administrative capacities I, both in quantity and quality, and enhancement of cooperation between the administrative authorities of Republika Srpska and cooperation with relevant authorities in the entire BiH.

Currently there is no regulation on sewerage sludge and therefore there is no authority designated to resolve the issue of sewerage waste.

5. AIR QUALITY AND CLIMATE CHANGES

5.1. SCOPE OF TRANSPOSITION

The EU acquis in the field of air quality and climate changes comprises the following regulations:

- *Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe (the AAQ Directive)*

This Directive determines the measures aimed at:

1. defining and establishing objectives for ambient air quality designed to avoid, prevent or reduce harmful effects on human health and the environment as a whole;
2. assessing the ambient air quality in Member States on the basis of common methods and criteria;
3. obtaining information on ambient air quality in order to help combat air pollution and nuisance and to monitor long-term trends and improvements resulting from national and Community measures;
4. ensuring that such information on ambient air quality is made available to the public;
5. maintaining air quality where it is good and improving it in other cases;
6. promoting increased cooperation between the Member States in reducing air pollution.

- *Directive 2004/107/EC of the European Parliament and of the Council of 15 December 2004 relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air, amended by the Regulation (EC) 219/2009 relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air*

The objectives of this Directive are to establish a target value for the concentration of arsenic, cadmium, nickel and benzo(a)pyrene in ambient air so as to avoid, prevent or reduce harmful effects of arsenic, cadmium, nickel and polycyclic aromatic hydrocarbons on human health and the environment as a whole; ensure, with respect to arsenic, cadmium, nickel and polycyclic aromatic hydrocarbons, that ambient air quality is maintained where it is good and that it is improved in other cases; determine common methods and criteria for the assessment of concentrations of arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air as well as of the deposition of arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbon; ensure that adequate information on concentrations of arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air as well as on the deposition of arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons is obtained and ensure that it is made available to the public.

- *Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants, as amended by Directive 2006/105/EC of 20 November 2006 and Regulation EC/219/2009 of the European Parliament and of the Council of 11 March 2009 - NEC Directive*

The objective of this Directive is to limit emissions of acidifying and eutrophying pollutants and ozone precursors in order to improve the protection in the Community of the environment and human health against risks of adverse effects from acidification, soil eutrophication and ground-level ozone and to move towards the long-term objectives of not exceeding critical levels and loads and of effective protection of all people against recognised health risks from air pollution by establishing national emission ceilings,

- *Directive 94/63/EC of 20 December 1994 on the control of volatile organic compound (VOC) emissions resulting from the storage of petrol and its distribution from terminals to service stations, as amended by Regulations EC/1882/2003 and EC/1137/2008 - VOC Petrol Directive*

This Directive is applied to procedures, appliances, vehicles and vessels used for storing, decanting and transporting of petrol from one terminal to another or from a terminal to a petrol station.

- *Directive 2009/126/EC of the European Parliament and of the Council of 21 October 2009 on Stage II petrol vapour recovery during refuelling of motor vehicles at service stations - VOC Petrol Stage II Directive*

This Directive determines the measures aimed at reducing the quantity of petrol vapour released into the ambient air while decanting petrol to motor vehicles at petrol stations.

- *Directive 2004/42/EC of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC, as amended by Directive 2008/112/EC and Regulation EC/1137/2008 - Paints Directive*

The purpose of this Directive is to limit the total content of VOCs in certain paints and varnishes and vehicle refinishing products in order to prevent or reduce air pollution resulting from the contribution of VOCs to the formation of tropospheric ozone.

- *Directive 97/68/EC of the European Parliament and of the Council of 16 December 1997 on the approximation of the laws of the Member States relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery, as amended by Directives 2001/63/EC, 2002/88/EC, 2004/26/EC and 2006/105/EC, Regulation (EC) 596/2009 Directive 2010/26/EU, Directive 2011/88/EU and Directive 2012/46/EU - Non-road machinery Directive*

This Directive aims at approximating the laws of the Member States relating to emission standards and type-approval procedures for engines to be installed in non-road mobile machinery. It will contribute to the smooth functioning of the internal market, while protecting human health and the environment.

- *Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants, amended by the Regulation (EC) 293/2016 of the European Parliament and Council of 1 March 2016 and Regulation (EC) 460/2016 of 30 March 2016 amending Annexes IV and V of the Regulation (EC) 850/2004*

The objective of this Regulation is to protect human health and the environment from persistent organic pollutants by prohibiting, phasing out as soon as possible, or restricting the production, placing on the market and use of substances subject to the Stockholm Convention on Persistent Organic Pollutants, with a view to eliminating where feasible as soon as possible, releases of such substances, and by establishing provisions regarding waste consisting of, containing or contaminated by any of these substance.

- *Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC, as amended by Council Directives 2000/71/EC of 7 November 2000, 2003/17/EC of the European Parliament and of the Council of 3 March 2003, Regulation (EC) No 1882/2003 of the European Parliament and of the Council of 29 September 2003, Directive 2009/30/EC of the European Parliament and of the Council of 23 April 2009 amending the Directive 98/70/EC in terms of specification of petrol, diesel fuels and gas oil, Directive 2011/63/EU amending the Directive 98/70/EC or the purpose of its adaptation to technical progress, Directive 98/70/EC of the European Parliament and of the Council relating to the quality of petrol and diesel fuel and the Directive of the Council 1999/32/EC of 26 April 1999 relating to a reduction in the sulphur content of certain liquid fuels and amending Directive 93/12/EEC).*

This Directive sets technical specifications on health and environmental grounds for fuels to be used for vehicles equipped with positive-ignition and compression-ignition engine taking into account technical requirements of such engines and target values for the reduction of emission of greenhouse gases during their life cycle. It defines the provisions of marketing of petrol and diesel fuels, changes in the offer of crude oils and oil derivatives in unforeseen

circumstances which would make harder to abide by the requirements of fuel specification under this Directive.

- *Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community – Directive on trade emissions*

This Directive also provides for the reductions of greenhouse gas emissions to be increased so as to contribute to the levels of reductions that are considered scientifically necessary to avoid dangerous climate change.

- *Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council, amended by the Regulation (EU) No 206/2014 as regards global warming potentials for non CO₂ greenhouse gases – Regulation on reporting of GHG emissions*

This Regulation lays down rules for the monitoring and reporting of greenhouse gas emissions and activity data pursuant to Directive 2003/87/EC.

- *Commission Regulation (EU) No 600/2012 of 21 June 2012 on the verification of greenhouse gas emission reports and tonne-kilometre reports and the accreditation of verifiers pursuant to Directive 2003/87/EC of the European Parliament and the Council – Regulation on the verification of greenhouse gas emission reports*

This Regulation lays down provisions for the verification of reports submitted pursuant to Directive 2003/87/EC and for the accreditation and supervision of verifiers.

- *Commission Regulation (EC) No 994/2008 of 8 October 2008 for a standardised and secured system of registries pursuant to Directive 2003/87/EC of the European Parliament and of the Council and Decision No 280/2004/EC of the European Parliament and of the Council – Regulation on registers*

This Regulation lays down the standardised and secured registries system consisting of registries, and the Community independent transaction log.

- *Commission Regulation (EU) No 82/2010 of 28 January 2010 amending Regulation (EC) No 748/2009 on the list of aircraft operators which performed an aviation activity listed in Annex I to Directive 2003/87/EC on or after 1 January 2006 specifying the administering Member State for each aircraft operator Regulation on Aviation*

This Regulation defines the list of aircraft operators which conduct an aircrafts activity mentioned in Annex I to the Directive 2003/87/EC.

- *Commission Decision 2009/450/EC of 8 June 2009 on the detailed interpretation of the aviation activities listed in Annex I to Directive 2003/87/EC of the European Parliament and of the Council - Aviation Decision*

This Decision provides the detailed interpretation of aviation activities listed in Annex I to the Directive 2003/87/EC of the European Parliament and Council.

- *Commission Decision 2006/780/EC of 13 November 2006 on avoiding double counting of greenhouse gas emission reductions under the Community emissions trading scheme for project activities under the Kyoto Protocol pursuant to Directive 2003/87/EC of the European Parliament and of the Council - Decision on double counting*

This Decision provides for avoiding double counting of greenhouse gas emission reductions under the Community emissions trading scheme for project activities under the Kyoto Protocol.

- *Commission Decision 2007/589/EC of 18 July 2007 establishing guidelines for the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council - Decision monitoring and reporting*

This Decision determines the guidelines for the monitoring and reporting of greenhouse gas emissions.

- *Commission Decision 2010/2/EU of 24 December 2009 determining, pursuant to Directive 2003/87/EC of the European Parliament and of the Council, a list of sectors and subsectors which are deemed to be exposed to a significant risk of carbon leakage as amended by Decisions 2011/745/EU and 2012/498/EU - Decision on risk of carbon leakage*

This Decision determines the list of sectors and subsectors deemed to be exposed to a significant risk of carbon leakage.

- *Directive 1999/94/EC of the European Parliament and of the Council of 13 December 1999 relating to the availability of consumer information on fuel economy and CO₂ emissions in respect of the marketing of new passenger cars, as amended by Directive 2003/73/EC, Regulation (EC) No 1882/2003 and Regulation (EC) No 1137/2008,- Consumer Information Directive*

The purpose of this Directive is to ensure that information relating to the fuel economy and CO₂ emissions of new passenger cars offered for sale or lease in the Community is made available to consumers in order to enable consumers to make an informed choice.

- *Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006 - Storage of carbon dioxide Directive*

This Directive establishes a legal framework for the environmentally safe geological storage of carbon dioxide (CO₂) to contribute to the fight against climate changes. The purpose of environmentally safe geological storage of CO₂ is permanent containment of CO₂ in such a way as to prevent and, where this is not possible, eliminate as far as possible negative effects and any risk to the environment and human health.

- *Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO₂ emissions from light-duty vehicles - Passenger cars emissions Regulation*

This Regulation establishes CO₂ emissions performance requirements for new passenger cars in order to ensure the proper functioning of the internal market and to achieve the overall objective of the European Community of 120 g CO₂/km as average emissions for the new car fleet. This Regulation sets the average CO₂ emissions for new passenger cars at 130 g CO₂/km, by means of improvement in vehicle motor technology, as measured in accordance with Regulation (EC) No 715/2007 and its implementing measures and innovative technologies.

- *Decision No 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol and its implementing provisions Commission Decision 2005/166/EC - Monitoring Mechanism Decision*

This Decision determines monitoring all anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol on substances that deplete the ozone layer in the Member States; evaluating progress towards meeting commitments in respect of these emissions by sources and removals by sinks; implementing the UNFCCC and the Kyoto Protocol, as regards national programmes, greenhouse gas inventories, national systems and registries of the Community and its Member States, and the relevant procedures under the Kyoto Protocol; and ensuring the timeliness, completeness, accuracy, consistency, comparability and transparency of reporting by the Community and its Member States to the UNFCCC Secretariat.

- *Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020 - Effort Sharing Decision*

This Decision lays down the minimum contribution of Member States to meeting the greenhouse gas emission reduction commitment of the Community for the period from 2013 to 2020 for greenhouse gas emissions covered by this Decision, and rules on making these contributions and for the evaluation thereof.

- *Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer (recast), as amended by Commission Regulation (EU) No 744/2010 of 18 August 2010 - Regulation on ozone depleting substances*

This Regulation lays down rules on the production, import, export, placing on the market, use, recovery, recycling, reclamation and destruction of substances that deplete the ozone layer, on the reporting of information related to those substances and on the import, export, placing on the market and use of products and equipment containing or relying on those substances.

- *Commission Directive 2010/79/EU of 19 November 2010 on the adaptation to technical progress of Annex III to Directive 2004/42/EC of the European Parliament and of the Council on the limitation of emissions of volatile organic compounds*

This Directive provide for the adaptation to technical progress of Annex III to Directive 2004/42/EC of the European Parliament and Council relative to limitation of emissions of volatile organic compounds.

- *Commission Implementing Regulation (EU) 2015/2066 of 17 November 2015 establishing, , minimum requirements and the conditions for mutual recognition for the certification of natural persons carrying out installation, servicing, maintenance, repair or decommissioning of electrical switchgear containing fluorinated greenhouse gases or recovery of fluorinated greenhouse gases from stationary electrical switchgear, pursuant to Regulation (EU) No 517/2014 of the European Parliament and of the Council (Text with EEA relevance)*

This Regulation establishes minimum requirements for the certification of natural persons carrying out installation, servicing, maintenance, repair, decommissioning of electrical

switchgear containing fluorinated greenhouse gases or recovery of fluorinated greenhouse gases from stationary electrical switchgear, as well as the conditions for mutual recognition of certificates issued in accordance with those requirements.

- *Commission Implementing Regulation (EU) 2015/2067 of 17 November 2015 establishing, pursuant to Regulation (EU) No 517/2014 of the European Parliament and of the Council, minimum requirements and the conditions for mutual recognition for the certification of natural persons as regards stationary refrigeration, air conditioning and heat pump equipment, and refrigeration units of refrigerated trucks and trailers, containing fluorinated greenhouse gases and for the certification of companies as regards stationary refrigeration, air conditioning and heat pump equipment, containing fluorinated greenhouse gases (Text with EEA relevance)*

This Regulation establishes minimum requirements for the certification of natural persons carrying out the activities in relation to refrigeration units of refrigerated trucks and trailers, stationary refrigeration, air conditioning and heat pump equipment containing fluorinated greenhouse gases and certification of companies carrying out the activities in relation to stationary refrigeration, air conditioning and heat pump equipment containing fluorinated greenhouse gases as well as the conditions for mutual recognition of certificates issued in accordance with those requirements.

- *Regulation (EU) No 517/2014 of the European Parliament and of the Council of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/*

This Regulation regulates the issue of fluorinated greenhouse gases.

- *Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Text with EEA relevance*

This Directive regulates the industrial emission that cause pollution.

5.2. OVERVIEW OF TRANSPOSITION

5.2.1. AIR QUALITY

The Law on Air Protection provided a legal ground for the air quality protection and management and determination of measures, the manner of organising and controlling the protection measures and improvement of air quality as a nature estate of general interest which is subject to special protection. It is worth noting that the provisions of this Law are not applied to pollution caused by radioactive substances, industrial accidents and natural disasters. The Law provides for the establishment of zones and agglomerations with defined boundaries of inhabited areas with the aim of evaluating and managing the air quality, which from the point of view of control, maintenance and improvement of the air quality status makes a specific functional unit. For the purpose of monitoring the air quality, Republika Srpska established a republic network of measuring stations or measuring spots. The Republic network is an integral part of monitoring the environmental quality and is funded from the budget of Republika Srpska. Monitoring of air quality in the Republic network is performed by the Republic administrative organisation for hydrological and meteorological issues and authorised legal entities. According to the Law, zones and agglomerations with defined boundaries of inhabited areas are determined by the Government of Republika Srpska. The Law prescribes that, upon a proposal of the Ministry, for the purpose of managing the air quality, the Government of Republika Srpska prescribes the air quality values, sets the deadlines for reaching the limit values and target values in case they are exceeded. Air protection policy and planning instruments include the following

documents: Air Protection Strategy, Air Quality Plans, Short-term Action Plans, operators' plans for reducing emissions from stationary plants and RS programme for gradual decrease of maximum annual republic emissions of pollutants. In case that the concentration of certain polluting substances is exceeded and detrimental to human health, the Ministry and competent local self government units must inform the public via radio, television, daily papers, internet and other appropriate way.

This Law is harmonised with the following European Union regulations: *Directive 2004/107/EC of the European Parliament and of the Council of 15 December 2004 relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air, Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe, Directive on Trade of Emissions, Commission Regulation (EU) No 2015/2066/EC, Commission Regulation (EU) No 2015/2067, Regulation on Substance that Damage Ozone Layer, Regulation on GHG, Directive 2001/81/EC of the European Parliament and of the Council on national emission ceilings for certain atmospheric pollutants, Directive on Industrial Emissions.*

The Law on Air Protection is harmonised with the said EU air protection and air quality management acquis, among others with regard to the following segments:

- general goals and measures for air quality protection and management,
- defining of terms,
- legal grounds for the enactment of bylaws,
- issue of responsibility for protection and enhancement of the air quality,
- control of the operations of newly built plants after an ecological permit is obtained
- job categories required the experts to take examinations in relation to the operation with stationary cooling and air condition systems which contain GHG.

The Decree on conditions of air quality monitoring defines the conditions for the air quality monitoring in the territory of Republika Srpska. To wit, the Decree reached a compliance with the Directive 2008/50/EC on ambient air quality and cleaner air for Europe with regard to definition of terms, competences for monitoring and collection of data and criteria for the implementation of monitoring.

The Decree on establishment of the Republic network of measuring stations and measuring spots of Republika Srpska prescribes the number and layout of measuring spots in a certain zone and agglomeration, scope, type and frequency of measurements for the purpose of monitoring the air quality at the level of Republika Srpska. This regulation transposed the Directive 2008/50/EC on ambient air quality and cleaner air for Europe with regard to the network structure structure of measuring spots and responsibility for the monitoring of air quality within the Republic network.

Decree on values of air quality regulates the values of air quality in Republika Srpska. The Decree is harmonised with the Directive 2008/50/EC on ambient air quality and cleaner air for Europe in as much as it sets the same objective as the Directive and at the same time regulates the issue of measuring of concentrations of sulphur dioxide, nitrogen-dioxide and nitrogen oxide, particulate matters (PM10, PM2,5), lead, benzene and carbon monoxide, tropospheric ozone, arsenic, cadmium, nickel and benzo(a)pyrene in the air and the determination of criteria for assessment of the said concentrations.

The Decree on determination of zones and agglomerations in the territory of Republika Srpska in order to control the maintenance of the state or enhancement of the air quality. This regulation has reached a full compliance with the Directive 2008/50/EC on ambient air quality and cleaner air for Europe.

5.2.2. EMISSIONS INTO AIR

The Rulebook on measures for prevention and reduction of air pollution and enhancement of the air quality was rendered pursuant to the Law on Air Protection and it regulates the manner, procedure, frequency and methodology for measuring of polluting substances emissions into the air and limit values of pollutant emissions from stationary sources of pollution, criteria for the establishment of measuring spots for the establishment of emission, the assessment procedure for emission results and compliance with the prescribed norms, contents of reporting on conducted emission measurements and balance of emissions, manner of delivering the data on emissions for the needs of information system and submission of the data.

The said Rulebook transposed the Directive on Industrial Emissions and the compliance has been reached in terms of the following:

- development of these acts,
- definition of terms,
- limit values of emissions to air,
- allowed excession of limit values for large plants,
- programme for the reduction of pollutant emissions into the air,
- plan for the reduction of eng large combustion plants,
- monitoring of emissions, and
- procedures of measuring and assessing the measurement results of emissions from combustion plants.

The Rulebook on the conditions for limitation and prohibition of production, sales and use of chemicals was rendered on the basis of the Law on Chemicals and prescribes the maximum values allowed for volatile organic compounds (VOC) in coats (paints and varnishes) plastered on buildings, their equipment and fitted parts, and in vehicle refinishing products in compliance with the Directive 2004/42/EC.

5.2.3. STANDARDS FOR FULES AND LEGAL INSTRUMENTS FOR GHG

The Decision on Quality of liquid oil fuels stipulates, in the territory of Bosnia and Herzegovina, including Republika Srpska, stipulating the conditions and quality which need to be attained by liquid oil fuels used in the territory of BiH in engines with internal combustion as well as liquid fuels intended for combustion producing heat. (Official Gazette of BiH Vol: 27/2, 28/04, 16/05, 14/06, 22/07, 101/08, 71/09, 58/10 and 73/10). The Decision prescribes the following:

- standards setting physical and chemical characteristics of liquid oil fuels,
- fuel emission limit values,
- procedure and methods examining these characteristics,
- marking and proving that the quality of fuel is in accordance with the requirements of the Decision,
- As well as monitoring and the method of selecting competent authorities which will implement requirements of the Decision, including requirements for their competency.

The procedure of determining whether the compliance of liquid oil fuels is in line with the programme and in compliance with the Decision. The programme is enacted at least once a year by the entity

ministries for energy and it prescribes the scope of monitoring, of liquid oil fuel quality for each supplier, and the procedure of sampling the liquid oil fuels. The scope of minimum monitoring for one season in each BiH entity is defined under the said Decision.

The evaluation of liquid oil fuels compliance is made by inspection authorities appointed by the Ministry of Foreign Trade and Economic Relations of BiH, with the services of examination laboratories. The inspection supervision of the enforcement of this decision is under the competence of entitiz inspection authorities.

Prevention an reduction of air pollution that impacts climate changes is enforced by:

- application of the measures for reduction of GHG emissions
- monitoring of GHG emisisions from source and monitoring the removed quantities of these gases.

The Fuel Quality Directive defines technical specifications on health and environmental grounds for fuels to be used with positive ignition and compression-ignition engines, taking account of the technical requirements of those engines, and a target for reduction of life cycle greenhouse gas emissions. It stipulates provisions on placing on the market of petrol and diesel, what actions need to be taken in case of sudden change of supply of crude oils or petroleum, as a result of an exceptional event, which renders it difficult for the refineries in a MS to respect the fuel specification requirement of the Directive. MSs are obliged to designate the supplier or suppliers responsible for monitoring and reporting life cycle greenhouse gas emissions per unit of energy from fuel and energy supplied. The sulphur content in liquid fuels Directive aims to reduce emissions of sulphur dioxide resulting from combustion of certain types of liquid fuels by imposing limits on the sulphur content of such fuels. The Directive prevents the use of fuel oils and gas oil if their sulphur content exceeds 1% and 0.1% by mass respectively. The Directive also contains provisions on, inter alia, possible derogations, compliance checking, and reporting.

The GHG legal instruments consist of various instruments whose purpose is to combat climate change mainly through reduction of emissions of GHG, but not excluding the other methods such as carbon capture and storage. These community laws should be transposed into the Republika Srpska legislation.

Republika Srpska regulations on the air quality and climate changes are mentioned in Annex IV hereto.

5.3. IDENTIFIED GAPS

Based on the conducted analysis, the following gaps are identified in the application of the regulations in this sector:

- Local self government units have not established in their territories a local network of measuring stations or measuring spots for monitoring of air quality,
- Due to insufficient financing to the network for air quality monitoring there is an insufficient number of measuring stations and measuring spots in certain zones and agglomerations,
- Rulebook on the use and handling of equipment and appliances that contain fluorine gases has not been enacted ,
- EU climate changes regulation has not been transposed in the natinal legislation.

5.4. RECOMMENDATIONS/PRIORITIES

Bearing in mind the aforementioned, the following recommendations may be made:

- For the purpose of harmonisation of the Law on Air Protection with *acquis communautaire*, the Law on amendments to the Law on Air Protection is in the procedure of adoption. The said amendments introduce provisions that will eliminate the gaps of the existing Law by way of new standards for air quality and protection improvement,
- Capacity building in competent institutions, personnel, technical and financial wise
- Securing permanent source of financing,
- Permanent training of personnel in the competent institutions,
- Putting in place administrative procedures and protocols with FBiH and BD relative to the exchange of information, reporting on international obligations,
- Harmonisation of legislation with FBiH and BD for the purpose of harmonising the system of monitoring and efficient reporting,
- Defining the structure of reporting system on EEA and EIONET,
- Establishing the information system of air protection *informacionog sistema* to ensure the efficient informing, notifying and reporting system
- Harmonisation of Republika Srpska legislation with the EU climate changes *acquis*,
- Defining the competent institutions for discharging of obligations under UNFCCC and EU with regard to climate changes,
- Capacity building in the existing institutions,
- Training of operators with regard to meeting the EU obligations,
- Putting in place administrative procedures and protocols with FBiH and BD relative to the exchange of information, reporting on international obligations,
- Simplifying the reporting system on polluting substances in the air in accordance with the Directive 2008/50/EC, 2001/80/EC and reporting obligations to LRTAP, UNFCCC, Convention, MMR Regulation and Protocol PRTR, in order to avoid conflicts and overlapping in the reporting system and achieve a more efficient use of resources,
- Capacity building in the competent institutions in the field of air quality management, emission in air and climate changes, and
- securing permanent source of financing for the establishment, maintenance and enhancement of the air quality management system, emissions to air and climate changes.

5.5. INSTITUTIONAL ADAPTATION REQUIREMENTS

Pursuant to the Law on Air Protection, the authorities competent for the enforcement of the Law are Ministry Of Physical Planning, Civil Engineering And Ecology RS, local self government units and RHMZ RS. Pursuant to the Law, inspections are conducted by the Republika Srpska Inspectorate and local self government unit inspectors.

Ministry Of Physical Planning, Civil Engineering And Ecology of RS and the RS Ministry of Industry, Energy and Mining are the competent institutions for transposition, enforcement and

execution of the Directive on volatile organic compounds (VOC) from petrol⁴⁶, on Stage II petrol vapour recovery during refuelling of motor vehicles at service stations⁴⁷.

Pursuant to the Law on Air Protection, the authority with the competence for the Directive on Paints⁴⁸, is the Ministry in charge of chemicals / Ministry of Health and Social Protection of Republika Srpska and it determines the maximum values allowed for volatile organic compounds (VOC) in coats (paints and varnishes) plastered on buildings, their equipment and fitted parts, and in vehicle refinishing products.

The RS Hydro Meteorological Institute keeps an Inventory of emissions of greenhouse gas emissions in accordance with the Law on Air Protection. This inventory is considered a part of the information system for environmental protection of Republika Srpska.

Climate changes sector needs further strengthening of existing administrative capacities, both in quantity and quality, and enhancement of cooperation between the administrative authorities of Republika Srpska and cooperation with relevant authorities in the entire BiH.

6. INDUSTRIAL POLLUTION

6.1. SCOPE OF TRANSPOSITION

The EU acquis in the field of industrial pollution comprises the following regulation:

- *Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)– IED*

IED is a result of a recast procedure that amended and integrated in one text the following directives: Directive 2008/1/EC on the integrated pollution prevention and control (the IPPC Directive); Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants (the LCP Directive); Directive 2000/76/EC on the incineration of waste (the WI Directive); Directive 1999/13/EC on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations (the VOC Solvents Emissions Directive); Three Titanium Dioxide Directives (Directive 78/176/EEC on disposal, Directive 82/883/EEC on monitoring and surveillance, and Directive 92/112/EEC on programs for the reduction of pollution).

- *Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances amending and subsequently repealing Council Directive 96/82/EC (Seveso III).*

This Directive III (2012/18/EU) lays down rules for the prevention of major accidents which involve dangerous substances, and the limitation of their consequences for human health and the environment, with a view to ensuring a high level of protection throughout the Union in a consistent and effective manner. A list of hazardous substances is given in Annex I to the Directive. Operators should have a general obligation to take all necessary measures to prevent major accidents, to mitigate their consequences to human health and environment. Operators should provide the competent authority with information on all items mentioned in the Directive. Operators should also draw up a major-accident prevention policy (MAPP) and implement it in practice. The safety report, among other things, shows that MAPP and safety management system are implemented in practice. The final deadline to all institutions is 1 June 2018 to compile them. Furthermore, operators must adopt an internal emergency plan

⁴⁶ 94/63/EC.

⁴⁷ 2009/126/EC.

⁴⁸ 2004/42/EC.

(with the information listed in Annex IV to the Directive) which also needs to be adopted before 1 June 2018. setting out the operator's overall approach and measures, including appropriate safety.

Member states shall ensure that the prevention of major accidents which involve dangerous substances, and the limitation of their consequences for human health and the environment are taken into account when developing plans for the use of land (that is, the selection of locations for new institutions, transport roads, etc.). The public must have an access to, among others, the Report on Safety and the List of hazardous substances, and must be given an opportunity to take part in the decision-making process. The Directive also defines the actions to be taken by the operators and member states in case of major accidents. The Directive requires the member states to conduct an inspection and prescribes the basic rules for such inspections.

- *Regulation (EC) No 166/2006 of the European Parliament and of the Council of 18 January 2006 concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC, amending the Regulation (EC) No 596/2009 of the European Parliament and Council of 18 June 2009 - E-PRTR*

This Regulation encompasses the data on release of specified pollutants and off-site transfer of waste which needs to be reported by operators. The E-PRTR Regulation contains provisions on quality assurance and assessment of reported information. Its overall aim is to allow public access to information that it stores.

- *Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme – EMAS*

Regulation (EC) No 66/2010 of the European Parliament and of the Council of 25 November 2009 on the EU Eco label and Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a EU eco-management and audit scheme (EMAS) established eco-labelling and eco-management and audit schemes in EU as voluntary schemes. The aim of eco-labelling is promotion of certain products, which have a potential for a lower negative impact on environment in comparison to other products from the same product group. Eco labelling in essence is intended for consumers and it informs them of environmental impact of the products. EMAS is a management tool for companies and other organisations for evaluation, reporting, and improvement of their environmental performance. In essence, EMAS is an EU version of the ISO 14001 standard.

- *Regulation (EC) No 66/2010 of the European Parliament and of the Council of 25 November 2009 on the EU Ecolabel – 2012/481/EU: Commission Decision of 16 August 2012 establishing the ecological criteria for the award of the EU Ecolabel for printed paper – 2012/448/EU: Commission Decision of 12 July 2012 establishing the ecological criteria for the award of the EU Ecolabel for newsprint paper – Eco-Label*

This Regulation lays down rules for the establishment and application of the voluntary EU Ecolabel scheme.

6.2. OVERVIEW OF TRANSPOSITION

The Law on Environmental Protection contains provisions on the issuance of ecological permit. Plants, as defined by the Rulebook, must possess an ecological permit. In addition to the ecological permit, they need to obtain water management acts and waste management permit. The Law on Environmental Protection does not foresee an integration of the permit issuance procedure.

GVE must be determined in accordance with adopted standards of best available techniques (BAT). However, a lack of best available techniques was identified. BAT documents are in place for five sectors only in food industry and they are all prepared within the EU financed projects in BiH.

A procedure of permit revision is in place and the Law on Environmental Protection contains very detailed provisions on participation of public in the decision making process. Monitoring and inspection procedures are in place as well.

Also, the Law on Environmental Protection contains provisions on the termination of operations of plants that possess an ecological permit. According to the Law, a transboundary procedure is not instituted if a transboundary procedure of EEA had been conducted. The Law on Environmental Protection also prescribed the establishment of a register of issued ecological permits.

The Law also provides a legal ground for the adoption of Rulebook that regulates the issue of Register.

According to the information obtained by IPA 2007 support to the Project of committed IPPC directive in BiH, the issuance procedure for ecological permits has not been integrated in BiH.

Provisions that transpose the Directive Seveso II transposed a majority of provisions but not extensively. Pursuant to the relevant provisions of the Law on Environmental Protection, a responsible person in a plant that was issued an ecological permit and includes hazardous substances mentioned in the Rulebook, has the duty to adopt a large scale accident prevention plan, duty to develop reports on security and to develop internal and external emergency plans. Besides that, the development of spatial plans must take into account the goals to prevent large scale accidents, reports on security and internal and external emergency plans, and ensure regular and extraordinary revisions of the safety status.

The Law also foresees provisions on public access to information and participation in the decision making process, and on activities that need to be undertaken, responsible person and competent authority. Considering that the issues of large scale accidents and issuance of ecological permits are integrated in one procedure, the inspection is conducted as a part of the inspection of ecological permits.

A comparison of thresholds for hazardous substances established by the Rulebook on plants that may be built and put into operation only if they have an ecological permit with thresholds established by Seveso III Directive leads to a conclusion that the thresholds are significantly lower in RS than the one required by the EU.

The aforementioned IPPC project provided several new draft laws and bylaws (including amendments to some existing regulations) which, according to the Project findings, should increase the level of transposition of the Directive on Industrial Emissions from current 47% to 97%, transposing fully the Regulation on European Register of discharge and transfer of polluting substances and will increase the level of transposition of Seveso III Directive. Also, new regulations would make an approach with two categories in the issuance of ecological permits (permit A and permit B – large scale accidents and major accidents), with a view to raising of general standard of environmental protection.

The Law on Environmental Protection provides a legal ground for a bylaw which transposes the Regulation E-PRTR, and adopted in 2007- *Rulebook on Methodology and Manner of Keeping the Register of plants and polluters*.⁴⁹ This Register is in the process of being established. The obligation to report to PRTR Registrar RS is currently prescribed by the ecological permit. The public does not

⁴⁹ Official Gazette of Republika Srpska, Vol 92/07.

have an internet access to information in the Register and the system for data transfer to the EU institutions does not exist.

The Law on Environmental Protection contains provisions about eco labels and EMAS and it provides a legal ground for the adoption of the Rulebook on eco labels which was adopted.

Republika Srpska industrial pollution legislation is mentioned in Annex IV hereto.

6.3. IDENTIFIED GAPS

Based on the analysis, the following gaps have been identified:

- Thresholds for plants which must have an ecological permit are significantly lower than the ones demanded by the EU (Annex I to the Directive on Industrial Emissions);
- Despite the fact that the Law on Environmental Protection provides for an integrated issuance of permits, procedures for issuance of relevant permits are not integrated (priority is given to water protection, several different permits must be issued, revision procedures are not in conformity, inspection is conducted separately) according to IPA 2007 Project findings, Support to implementation of the Directive on IPPC in BiH;
- There are no reference documents for BAT; the only existing documents were made in the EU financed projects in BiH.
- Monitoring is not in full conformity with requests of DEI (Directive on Industrial Emissions) (no requests for: monitoring that would be conducted at least once in 10 years for the land, unless monitoring is based on a systematic assessment of pollution risks
- Relevant parts of the Directive on industrial emissions pertaining to large plants for combustion, waste incineration, and volatile organic compounds have not been fully transposed (large incendiary plants – no rules on collection, geological storing of carbon dioxide, waste incineration – no provisions on activities that need to be taken in case of malfunctions, limit values of emissions; volatile organic compounds – no provisions on activities that should be taken in case the threshold is exceeded);
- No regulations on TiO_2 ;
- Thresholds for hazardous substances are significantly lower in RS than the ones demanded by the EU;
- Provisions of RS regulations on large scale accidents are not sufficiently detailed (contents on safety report, development of emergency plans);
- Rulebook on methodology and manner of keeping the registers on plants and polluters requires the reports to contain more information than it is demanded in the Decree on European register of discharge and transfer of polluting substances (for example questionnaires collecting the data on incineration plants, plants that do not turn incineration on, diffuse discharge, road transportation outside the site connected to economic unit and detailed information on the operation of the economic unit);
- Internet access to information about the registers on plants and polluters (obligatory request of the Regulation European register of discharge and transfer of polluting substances) has not been provided;

6.4. RECOMMENDATIONS/PRIORITIES

Bearing in mind the conclusions the following recommendations may be made:

- Plants which are issued a permit should be divided in two categories. A category plants would include those subject to imposed requirements of IPKZ (Directive on Industrial Emissions) while B category plants would be subject to a milder procedure;
- To see into possibilities of integrating procedures of issuance of ecological and water permits. Integration of the said two permits (as well as separate inspections) into one would be an ideal solution;
- New regulations on BAT (best available techniques) should be adopted;
- New regulation on waste incineration and volatile organic compounds should be adopted, or the existing regulations should be amended;
- The Law on Environmental Protection should amend the provisions related to large scale accidents so to reach a full transposition of Directive Seveso III requirements;
- Thresholds for hazardous substances should be harmonised with those prescribed by the EU; higher thresholds should be applied than the ones currently in place;
- Existing Rulebook on Registers of plants and polluters should be replaced with a new one, which should be adopted in order to reach full conformity with the Decree on European register of discharge and transfer of polluting substances and Kyev Protocol on register of and transfer of polluting substances which would be in full conformity with other regulations on register of discharge and transfer of polluting substances in FBiH and BD BiH. The obligation of submitting reports to the register of discharge and transfer of polluting substances should be included in issued ecological permits. Finally, the purpose of the Register should include availability of the data to the public access;
- New regulations on industrial pollution, as mentioned in IPA project IPPC, should be considered so to encompass the adoption of bylaws :
 - In line with the Law on Environmental Protection:
 - Rulebook on Register of discharge and transfer of polluting substances;
 - Instruction on keeping the Register of discharge and transfer of polluting substances;
 - Amendments to the Law on Air Protection that enables the adoption of:
 - Rulebook on conditions for operation of plants that produce titanium dioxide;
 - Rulebook on volatile organic compounds - amendments;
 - Amendments to the Law on Waste management;
 - Rulebook on conditions for operation of waste incineration plants and plants that use waste as a main or accessory fuel;
- Capacity building of the competent institutions,
- Ensuring permanent sources of financing.

Adoption of the said regulations would lead to full transposition and easier enforcement of the Directive on Industrial Emissions, Seveso III Directive and demands of the European register of discharge and transfer of polluting substances in the territory of RS.

6.5. INSTITUTIONAL ADAPTATION REQUIREMENTS

Ecological permits in RS (although not fully) include the demands of the Directive on (DIE). Issuance of ecological permits is an administrative corner stone in the control system of industrial pollution in RS. Pursuant to the Law on Environmental Protection⁵⁰, Ministry Of Physical Planning, Civil Engineering And Ecology is a competent authority for issuance (later for revision too) of ecological permits. On the basis of the Law, Minister of Ministry Of Physical Planning, Civil Engineering And Ecology of RS enacted the Rulebook on plants that may be constructed and put in operation only if they have an ecological permit⁵¹, that defines plants and facilities that must have an ecological permit. It is worth noting that the Law on Environmental Protection prescribes that the competent bodies in local self government units issue and revise ecological permits to plants and facilities that are below the threshold prescribed by the Rulebook.

Pursuant to the Law on Environmental Protection and Law on waters,⁵² the issuance of instruments that determine the conditions for water protection must be included in the issuance procedure for water management approval that will be issued by Public institution *Vode Srpske* or bodies of local self government units competent for the issuance of administrative instruments related to waters, depending on the type of plants. The investor is obligated to submit special requests for the issuance of such administrative instruments related to waters and ecological permit, in accordance with the Law.

Pursuant to the Law on Spatial Development and Construction, an ecological permit and water management approval are the prerequisites for a construction permit issued by Ministry Of Physical Planning, Civil Engineering And Ecology of RS or bodies of local self government competent for spatial development. Objective of prevention of large scale accidents must be taken into account when developing spatial plans.

In accordance with the Rulebook on activities and manner of developemtn of best available techniques (BAT) that reach the standards of high quality environment⁵³, BAT will be developed by working groups appointed by the Minister Ministry Of Physical Plannig, Civil Enngineering And Ecology, and this Ministry shall adopt BAT in a form of technical instructions.

The control of implementation of ecological permits and administrative instruments for waters shall is done by ecological and water inspections from the RS Inspectorate. The inspection itself is largely done separately. Organisatio of controls/inspections is regulated by the Law on Inspections and their obigations are prescribed under the Law on inspections, Law on Environmental Protection and Law on waters.

Pursuant to the Rulebook on methodology and manner of keeping the register of plants and polluters⁵⁴, the Register is kept by the Republic Hydro Meteorological Institute of Republika Srpska.

Pursuant to the Law on Environmental Protection, Ministry of Physical Planning, Civil Engineering And Ecology of RS is competent for eco labelling. Also, the said Law prescribes that Ministry Of Physical Planning, Civil Engineering And Ecology of RS is competent for EMAS too.

⁵⁰ Official Gazette of Republika Srpska, Vol 71/12

⁵¹ Official Gazette of Republika Srpska, Vol 7/06.

⁵² Official Gazette of Republika Srpska, Vol 50/06, 98/09, 111/12

⁵³ Official Gazette of Republika Srpska, Vol 22/08

⁵⁴ Offical Gazette of Republika Srpska, Vol 124/12)

7. CHEMICALS

7.1. SCOPE TRANSPOSITION

The field of chemicals in the European Union is regulated by the following regulations:

- *Regulation EC/1907/2006 of the European Parliament and Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) – REACH*

The purpose of this Regulation is to ensure a high level of protection of human health and the environment, including the promotion of alternative methods for assessment of hazards of substances, as well as the free circulation of substances on the internal market while enhancing competitiveness and innovation. The provisions of this Regulation apply to the manufacture, placing on the market or use of such substances and mixtures. This Regulation is based on the principle that it is for manufacturers, importers and downstream users to ensure that they manufacture, place on the market or use such substances that do not adversely affect human health or the environment. Its provisions are underpinned by the precautionary principle.

- *Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, by which the Globally harmonised system of classification and marking of chemicals of the United Nations is implemented in the European Union*

The purpose of this Regulation is to ensure a high level of protection of human health and the environment as well as the free movement of substances, mixtures and articles by harmonising the criteria for classification of substances and mixtures, and the rules on labelling and packaging for hazardous substances and mixtures. This Regulation provides the obligation for manufacturers, importers and downstream users to classify substances and mixtures placed on the market, to label and package substances and mixtures placed on the market, and to notify the Agency of such classifications and label elements. It provides for the establishing a list of substances with their harmonised classifications and labelling elements, establishing a classification and labelling inventory of substances.

- *Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals (repealed Regulation EC/689/2008) of the European Parliament and of the Council of 17 June 2008 concerning the export and import of hazardous chemicals*

The objectives of this Regulation are to implement the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade promote shared responsibility and cooperative efforts in the international movement of hazardous chemicals in order to protect human health and the environment from potential harm.

- *Council Regulation (EC) No 440/2008 of 30 May 2008 laying down test methods pursuant to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)*

This Regulation defines the methods of examining the chemicals for the purpose of meeting the obligations under the Regulation (EC) No 1907/2006 (REACH).

- *Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents*

This Regulation establishes rules designed to achieve the free movement of detergents and surfactants for detergents in the internal market while, at the same time, ensuring a high degree of protection of the environment and human health. For this purpose, this Regulation harmonises the following rules for the placing on the market of detergents and of surfactants for detergents, biodegradability of surfactants in detergents, restrictions or bans on surfactants on grounds of biodegradability, the additional labelling of detergents, and restrictions of phosphorus and phosphonates in laundry detergents for general use and machine dish washer.

- *Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC by which the Stockholm Convention is implemented in the European Union*

Taking into account, in particular, the precautionary principle, the objective of this Regulation is to protect human health and the environment from persistent organic pollutants by prohibiting, phasing out as soon as possible, or restricting the production, placing on the market and use of substances subject to the Stockholm Convention on Persistent Organic Pollutants, and by minimising, with a view to eliminating where feasible as soon as possible, releases of such substances, and by establishing provisions regarding waste consisting of, containing or contaminated by any of these substances.

- *Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products*

The purpose of this Directive is to limit the total content of VOCs in certain paints and varnishes and vehicle refinishing products in order to prevent or reduce air pollution resulting from the contribution of VOCs to the formation of tropospheric ozone certain paints and varnishes and vehicle refinishing products.

- *Directive 2004/10/EC of the European Parliament and of the Council of 11 February 2004 on the harmonisation of laws, regulations and administrative provisions relating to the application of the principles of good laboratory practice and the verification of their applications for tests on chemical substances*

This Directive prescribes the principles of good laboratory practice to be applied when laboratories carry out tests on chemical products.

- *Directive 2004/9/EC of the European Parliament and of the Council of 11 February 2004 on the inspection and verification of good laboratory practice*

This Directive shall apply to the inspection and verification of the organisational processes and the conditions under which laboratory is carried on all chemicals in accordance good laboratory practice principles.

- *Council Directive 87/217/EEC of 19 March 1987 on the prevention and reduction of environmental pollution by asbestos, amended by the Directive 91/692/EEZ and Regulation EZ/807/2003*

The objective of this Directive is to lay down measures with a view to preventing and reducing pollution by asbestos in the interests of the protection of human health and the environment.

- *Regulation (EC) No 1102/2008 of the European Parliament and of the Council of 22 October 2008 on the banning of exports of metallic mercury and certain mercury compounds and mixtures and the safe storage of metallic mercury*

The objective of this Directive is to prohibit the exports of metallic mercury and certain mercury compounds and mixtures. The regulation prescribed the provisions on proper disposal of mercury deemed as waste and its storing.

- *Directive 2010/63/EU on the protection of animals used for scientific purposes*

This Directive establishes measures for the protection of animals used for scientific or educational purposes, and prescribes the replacement and reduction of the use of animals in procedures and conditions under which animals can be used for these purposes.

- *Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products repealing the Directive 98/8/EC of the European Parliament and of the Council of 16 February 1998 concerning the placing of biocidal products on the market.*

The purpose of this Regulation is to improve the functioning of the internal market through the harmonisation of the rules on the making available on the market and the use of biocidal products, whilst ensuring a high level of protection of both human and animal health and the environment. It sets the rules for establishment at Union level of a list of active substances which may be used in biocidal products, the authorisation of biocidal products, the mutual recognition of authorisations within the Union, the making available on the market and the use of biocidal products within one or more Member States or the Union and placing on the market of treated articles.

- *Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides*

This Directive establishes a framework to achieve a sustainable use of pesticides by reducing the risks and impacts of pesticide use on human health and the environment and promoting the use of integrated pest management and of alternative approaches or techniques such as non-chemical alternatives to pesticides.

7.2. OVERVIEW OF TRANSPOSITION

The sector of chemicals in the EU is regulated by the regulations of internal market and environmental regulations and that is why this issue is treated in Chapter 1 and Chapter 27. This sector is mainly regulated by regulations that are also defined by centralised procedure in the EU and are applicable to member states only. These provisions cannot be transposed in the legislation of Republika Srpska, but the preparatory procedures for their future application were amended and established.

The sector of chemicals in Republika Srpska is regulated by the *Law on Chemicals*⁵⁵. This Law regulates classification, packaging and labelling of hazardous chemicals; exchange of data on chemicals through Safety Data Sheet (Safety Data Sheet - SDS), an integrated inventory of chemicals produced and imported; good laboratory practice; restrictions and prohibition of substances causing concern, conditions for import and export of chemicals which are subject to prior approval procedure; authorization to perform activities of production, transport and use of hazardous chemicals; systematic monitoring of chemicals; placing detergents on the market; monitoring and other issues of importance for the safe management of chemicals. Provisions of this Law were harmonized with the EU legislation in this sector, that is, the Regulation 1907/2006 (REACH), Regulation 1272/2008 (CLP), Regulation 689/2008, Regulation 648/2004, Regulation 440/2008, Directive 2004/9/EZ and Directive 2004/10/EZ.

⁵⁵ Official Gazette of Republika Srpska, Vol 25/09

RS Chemical Safety Strategy 2012- 2016 has been adopted pursuant to the Law. The objective of the Strategy is more efficient and more transparent implementation of policies in the field of safe use of chemicals, protection of public health and environmental protection through establishment of the main strategic goals and measures for establishment of a rational, efficient, dynamic and integrated system of chemical safety.

The chemicals sector is extensively regulated by bylaws⁵⁶ that are updated on a regular basis in accordance with amendments to the EU legislation with which they are harmonised.

The Rulebook on classification, packaging and labelling of chemicals and certain products in Republika Srpska implemented a globally harmonised system of classification and labelling of chemicals of the United Nations, in the same manner as prescribed by the EU Regulation 1272/2008. All annexes to the said EU Regulation have been transposed through annexes to the Rulebook. In line with the deadline set in the Rulebook, RS applies the system of classification and labelling of chemicals in line with the Directives 67/548/EEZ (DSD) and 1999/45/EZ (DPD). The list of harmonised classification and labelling of hazardous substances referred to in Annex VI to the Regulation 1272/2008 has been assumed by a bylaw.

The Law on Chemicals prescribes that the RS Ministry of Health and Social Protection keeps Integrated Inventory of Chemicals consisting of Inventory of Chemicals, Inventory of Biocides and Inventory of Pesticides.

The Law prescribes the implementation of the Regulation (EC) 689/2008, which has been transposed by the Rulebook on the prior notification procedure and prior informed consent procedure on the occasions of import and export of certain hazardous chemicals and products. Schedule 1 to the Rulebook contains the list of chemicals for a prior notification procedure (Section 1) and the list of chemicals for prior informed consent procedure (Section 2). The Ministry of Health and Social Protection is responsible for the implementation of the Rulebook in cooperation with the designated national authority (DNA) BiH for the implementation of Rotterdam Convention.

The control of export and import of hazardous chemicals and biocides is conducted pursuant to the Law on Chemicals and Law on Biocides and in line with the Rulebook on the contents of reports in the procedure of supervision of import of chemicals and the Rulesbook on the contents of reports in the procedure of supervision of import of biocides.

The Law on Chemicals prescribed that new tests of dangerous substances should be performed without use of vertebrates wherever possible, and prohibited tests on primates. The Rulebook on classification, packaging and labelling of chemicals and specific products prescribed that new animal testing for classification of substances and mixtures are performed only if there is no other alternative. The Rulebook on principles of good laboratory practice which were adopted on the basis of the Law on Chemicals, prescribed the conditions to be provided for storage, accommodation, processing and handling of biological testing systems used in laboratory testing of chemicals and products. These Rules are harmonized with the provisions of Directive 2004/10/EC.

The Law on Chemicals is based on the principle of precaution which refers to the fact that manufacturers, importers and end-users of chemicals must ensure that they produce, place on the market and use substances that are not detrimental to human health or the environment.

The issue of biocides (pesticides that are not used in agriculture) in RS is regulated by the *Law on Biocides*. This Law regulates conditions for placing of biocides on the market and use of biocides, which are related to the following: risk assessment and efficiency of biocides, which are necessary for

⁵⁶ List of regulations for the chemicals sector can be found in Annex I

adoption of a license, research and development; classification; packaging; labelling; advertising and safety data sheet; conditions for import of biocides; safe use; approval for production and transport of biocides; biocides records; prohibitions and restrictions; availability of data; supervision and other issues of importance for safe placing on the market and use of biocides.

This Law has transposed the requirements of the Directive 98/8/EC.

The RS Ministry of Health and Social Protection is responsible for implementation of the Law on Chemicals and the Law on Biocides, and the RS Administration for Inspection is responsible for implementation supervision through their chemicals and biocides inspectors.

Republika Srpska legislation that regulate the sector of chemicals is mentioned in Annex IV hereto.

7.3. IDENTIFIED GAPS

Based on the analysis the following gaps have been identified when it comes to the application of chemicals regulations in Republika Srpska:

- The Federation of BiH and Brčko District have not enacted complementary legislation which is a significant problem to Republika Srpska in the implementation of regulations. Bearing in mind the single market of BiH, inconsistency of regulations results in the chemicals placed on a single market under different conditions.
- Inconsistency of regulations in terms of prohibitions and limitations, and classification and labelling of chemicals is not only an obstacle to the sales of said products, but also a potential threat to citizens' health.
- Insufficient capacities in the authorities competent for the implementation of chemicals regulations aggravate the implementation of regulations and slow down regular updating with the amendments to the EU legislation with which they were harmonised.
- There are no preconditions for a continued enhancement of the chemicals management system, which implies training of employees, development of necessary IT systems for a more efficient data management and development of laboratory capacities.
- Considering that some issues related to the management of chemicals are under the competence of several departments (for example labor, traffic, environment, industry), the existing cross departmental cooperation is not sufficient to resolve the open issues.
- There is no designated competent authority in BiH with a duty to coordinate the issues in the chemicals sector, and so the information and inquiries by EU institutions in relation to this sector are not sent to proper institutions, thus making the communication and reporting process harder.

7.4. RECOMMENDATIONS/PRIORITIES

Bearing in mind the review, the following recommendations may be made:

- A revision of the existing regulations is needed with the aim of their further harmonisation with the EU legislation.
- Establish a regular cooperation with competent authorities in FBiH and BD for the purpose of harmonising the regulations in this sector and harmonised implementation.
- Work towards the capacity building of the authorities in charge of implementing the chemicals legislation, both quantity and quality wise.

- Provide for conditions and financing continuous enhancement of the chemicals management system (training of employees, development of necessary IT systems for more efficient data management, laboratory capacities building).
- Enhance cross sectoral cooperation between the authorities in charge of various issues that are important for safe chemicals management.
- Define the competent authority in BiH in charge of coordinating the issues in the chemicals sector. Bearing in mind that the sector of chemicals and biocides in BiH falls under the competence of ministries of health, a need is recognised to define a coordination role of the Ministry of Civil Affairs which is in charge of coordinating the issues in the sector of health. On the other hand, the coordination of environmental issues, especially with regard to international treaties in this section is conducted by MSTEО, and so it is necessary to define internal relations for the purpose of efficient coordination in the sector of chemicals.

7.5. INSTITUTIONAL ADAPTATION REQUIREMENTS

Pursuant to the Law on the Republic Administration, the RS Ministry of Health and Social Protection is competent and it coordinates the transposition of EU requirements regarding chemicals.

Activities under the jurisdiction of this Ministry are carried out within: Division of Health Care, Division of Pharmacy, Division for Planning and Financing, Division of Public Health, International Relations and European Integration and Division for Social, Family and Child Protection.

The Division of Pharmacy performs tasks related to pharmaceuticals and chemicals, use of drugs and medical devices in health care at all levels, coordinates activities related to the use of chemicals in RS, implementation of international agreements on cooperation and coordination in the field of pharmaceuticals and chemicals, keeping a register of legal entities in the field of pharmacy and chemicals, use of medications, cooperates with medical institutions, agencies, and institutions of RS and FBiH, BiH and other countries. Internal organisational units are: Department of Chemicals and Department of Pharmacy, and with 8 RS Institute for Geological Survey Division of Electric Power RS Ministry Of Industry, Energy And Mining Secretariat Integration function Division of Energy Generating Products Division of Industry Division for Development of SMEs and Entrepreneurship Division of Mining and Geology Division for Legal Affairs and European Integration RS Standardisation and Metrology Institute 44 systematized work posts. In the Department of Chemicals there are 2 senior associates for chemicals employed, out of 3 systemized work post.

The tasks of inspection supervision are carried out by inspectors for chemicals and biocides in Health Inspection of the Republic Administration for Inspections of Republika Srpska. There are currently three Republic inspectors for chemicals and biocides. A part of inspection supervision in the territory of its local self government is conducted by health inspectors who are employed in those local self government units.

For the purpose of adequate implementation of regulations in the sector of chemicals, it is necessary to build capacities, both in quantity and quality. Also it is necessary to improve cross departmental cooperation at the level of Republika Srpska, and also with other competent bodies in BiH.

8. PROTECTION OF NATURE

8.1. SCOPE OF TRANSPOSITION

The EU acquis in the field of nature protection includes numerous legislation that regulate this issue. The enactment of community law regulating the nature protection includes:

- *Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, as amended by Directives 97/62/EC and 2006/105/EC and Regulation (EC) 1882/2003 establishes European ecological network of sites (Natura 2000) and ensured that selected habitats and species are protected in such a manner as to provide protection to species and the site itself in a “favourable conservation status”. Also, the Directive provides for a legal basis for strict protection of certain species that are of high concern for conservation in Europe.*

The aim of this Directive shall be to contribute towards ensuring bio-diversity through the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States to which the Treaty applies.

- *The Directive 2009/147/EC of the European Parliament and of The Council of 30 November 2009 on the conservation of wild birds (codified version of Directive 79/406/EEC and its amendments) requires MSs to protect wild birds and their habitats. MSs are required to designate and manage special protection areas and also to prohibit certain activities that may cause harm to the sites and species.*

This Directive relates to the conservation of all species of naturally occurring birds in the wild state in the European territory of the Member States to which the Treaty applies. It covers the protection, management and control of these species and lays down rules for their exploitation. It applies to birds, their eggs, nests and habitats.

- *The Council Regulation (EC) No 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade therein is aimed at providing for the legal basis for implementation of the CITES Convention, i.e. to regulate trade of certain plants and animal species that are or may be threatened by trade. This Regulation enables implementation of the CITES Convention in EU despite the fact that the EU is not a Party to the Convention.⁵⁷*

The objective of this Regulation is to protect species of wild fauna and flora and ensure their preservation by regulating trade in that field.

- *The Council Directive 1999/22/EC of 29 March 1999 relating to the keeping of wild animals in zoos set out the rules for licensing and inspection of zoos. The main requirement of the Directive is enforcing a licensing regime that would ensure the application of adequate measures, including the closure of the zoo if requirements are breached. The Directive also requires imposing of effective, proportionate and dissuasive penalties for zoo management.*

⁵⁷ EU cannot become a party to the Convention due to the formal reasons – parties to the Convention may be only the countries, not groups or associations of the countries.

- *Council Regulation (EEC) No 3254/91 of 4 November 1991 prohibiting the use of leghold traps prohibits the use of leghold traps and limits the import of pelts of animals caught by these traps*

This Regulation prescribes the prohibition of leghold traps and the prohibition to use leghold traps and it limits the import of pelts of animals caught by these traps.

- *Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community – INSPIRE Directive*

The purpose of this Directive is to lay down general rules aimed at the establishment of the Infrastructure for Spatial Information in the European Community for the purposes of Community environmental policies and policies or activities which may have an impact on the environment.

8.2. OVERVIEW OF TRANSPOSITION

Protection of nature in Republika Srpska is defined by the Law on Nature Protection, Law on National Parks, Law on National Park „Sutjeska“, Law on National Park „Kozara“, as well as bylaws in the sector of nature. The Law on Nature Protection defines the protection and preservation of nature, biological, geological and landscape diversity as parts of the environment, in conformity with the Directive on the conservation of natural habitats and of wild fauna and flora and the Directive 2009/147/EC on the conservation of wild birds. This Law is harmonised with the Directive of the Council 92/43/EEC in the part that pertains to the definition of preservation, natural habitats, priority habitat, and habitat, endangered, vulnerable, rare and endemic types. Also the said Directive is transposed by the Law on Nature Protection with regard to the following as well:

- determination of objectives of nature protection,
- defining general measures of nature protection,
- defining the ecological network,
- determination of European ecological network of sites (Natura 2000) ,
- prescribing legal grounds for the enactment of bylaws,
- determination of landscape protection, preservation of ecosystems
- defining of measures for inspection supervision,
- prescribing legal grounds for the declaration procedure of protected species, strictly protected and protected wildlife species and the measures for their preservation,
- undertaking of research and activities aimed at preservation of protected natural areas,
- prescribing reintroduction and introduction of non native species, and
- determination of general measures of nature protection.

Directive 2009/147/EC on the conservation of wild birds has been transposed in the Law on Nature Protection with regard to the following:

- defining the objectives, scope and measures for protection of wild birds,
- determination of the criteria for selecting of wild bird species that will be subject to special measures of conservation,
- prescribing conditions for transboundary trade in wild species,
- determining exceptions in terms of using of protected wild species,
- determining research activities in terms of monitoring the state, and
- prescribing the prohibition of introduction of species of birds which do not occur naturally.

The Law on National Park „Sutjeska“ and the Law on National Park „Kozara“ transposed the Directive on the conservation of natural habitats and of wild fauna and flora with regard to determination of objectives to develop the respective sector, measures for protection and development of national parks, management of national parks and enactment of the management plan of national parks, supervision of the implementation of regulations and prohibition and restriction needed for meeting the management objectives. These legal acts also transposed the INSPIRE Directive with regard to spatial data (size, exterior boundaries, cartography, cadastral and other data), and definition of zone boundaries and protection regime in protected areas.

The Decree on red list of protected species of flora and fauna in Republika Srpska has transposed the Directive on the conservation of natural habitats and of wild fauna and flora and the Directive 2009/147/EC on the conservation of wild birds.

The Rulebook on contents, determination and implementation of measures for management of protected areas is harmonised with the Directive on the conservation of natural habitats in as much as it defined the manner in which measures for management of protected areas will be implemented.

Acts related to the declaration of protected areas are rendered on the basis of the Law on Nature Protection and they also transpose the EU acquis in the sector of nature protection.

The sector of nature protection in Republika Srpska is regulated by the legislation mentioned in Annex IV hereto.

8.3. IDENTIFIED GAPS

Republika Srpska has transposed a part of the EU acquis in the sector of nature protection. However, based on the analysis, the following gaps have been identified in the legislation of Republika Srpska:

- Republika Srpska has partly transposed definition from the EU nature protection acquis;
- Establishment of necessary measures for preservation, prevention of degradation, or introduction of such measures and steps in spatial plans and management plans have been transposed only partly;
- Supervision of the preservation level of natural habitats and species has been only partly transposed;
- Transposition of the Directive on wild birds has been partly done.
- The Law foresees that upon a proposal of the environmental Minister of the Republika Srpska Government renders a decree to determine wild species, strictly protected wild species or protected wild species. The decree has not been rendered.

- The existing Decree on the red list of protected flora and fauna of Republika Srpska does not contain categories of vulnerability.

8.4. RECOMMENDATIONS/PRIORITIES

Bearing in mind current state in the sector of nature protection, in line with laws and bylaws, the following recommendations and priorities may be defined:

- Additional harmonisation of the Law on Nature Protection with the respective EU legislation
- Enactment of bylaws:
 - Decree to determine the ecological network and the manner of management and financing,
 - Decree to determine wild species, strictly protected or protected wild species,
 - Decree on the red book,
 - Decree to determine wild species strictly protected or protected wild species,
 - Decree to prescribe the procedure, contents, deadline and implementation of the acceptability assessment,
 - Rulebook to extensively prescribe the conditions for import, export, introduction, transit, breeding of wild species,
 - Rulebook to extensively prescribe the information system management,
 - Rulebook to prescribe the manner of marking the protected areas
 - Rulebook to extensively prescribe the conditions that the protected area manager must meet
 - Rulebook to prescribe the criteria for identification of landscape and the manner of assessment of their significant and specific features,
 - Rulebook to extensively prescribe the manner of establishment of Inventories of geo heritage facilities in Republika Srpska,
 - Rulebook to determine compensation measures,
 - Rulebook to determine the criteria to single out endangered, rare and vulnerable habitats and types of habitats of special importance,
- The existing decree on the red list of protected flora and fauna species in Republika Srpska should be amended so to include the categories of endangerment.

8.5. INSTITUTIONAL ADAPTATION REQUIREMENTS

Jurisdiction over the protection of nature in the RS is largely entrusted to the Ministry of Physical Planning, Civil Engineering and Ecology. Duties of nature protection under the competence of local self government units are discharged by the local self government unit bodies and the environmental protection department of the local self government unit.

Expert duties in nature protection are discharged by the RS Institute for Protection of Cultural and Natural Heritage, and as needed by other expert and scientific organisations in line with the Law on Nature Protection.

Protected areas are managed by a legal entity that meets professional, staffing and organisational requirements to carry out the duties of preservation, enhancement and promotion of natural and other values and sustainable use of protected areas. A manager is designated by the act on protection. A public institution manages national parks.

Inspection duties are discharged by the Republic Administration for Inspections of RS – Inspectorate of Republika Srpska.

The sector of nature protection requires further building of administrative capacities in Republika Srpska, both in quantity and quality and enhancement of cooperation between administrative bodies at the level of Republika Srpska, as well as cooperation with the relevant authorities in the entire BiH.

9. ENVIRONMENTAL NOISE

9.1. SCOPE OF TRANSPOSITION

EU legislation on environmental noise control stipulates the obligation of MSs to devise strategic noise maps using harmonised noise indicators. In order to reduce noise where the permitted noise levels are exceeded and to maintain noise level where quality is good, competent authorities are expected to draw up action plans. Reduction of noise in outdoor equipment and its proper marking and assessment is necessary for export from BiH outdoor products to the EU market. And finally, legal instruments on traffic, airplane, and railway noise are expected to reduce noise emitted from cars, motorcycles, airplanes (especially around large airports) and railway systems

- *Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise*

Declaration by the Commission in the Conciliation Committee on the Directive relating to the assessment and management of environmental noise (Environmental Noise Directive) applies to noise to which humans are exposed in urban areas and in the countryside, but excludes noise from domestic activities, workplace noise, noise inside transport vehicles and noise due to military activities. The Directive requires MSs to use four defined noise indicators for the purpose of noise mapping, as defined in Annex I of the Directive– three of which apply to daytime (L_{day}), evening (L_{evening}) and night-time (L_{night}) exposure, while the fourth (L_{den}) is a weighted average of the other three. The Commission is required to establish a common assessment measures for L_{night} and L_{den} until which time their values shall be determined by means of the methods set out in Annex II to the Directive. For acoustic planning (i.e. planned measures to reduce future noise) and noise zoning, indicators other than L_{night} and L_{den} can be used.

- *Directive 2000/14/EC of the European Parliament and of the Council of 8 May 2000 on the approximation of the laws of the Member States relating to the noise emission in the environment by equipment for use outdoors, as amended by Directive 2005/88/EC and Regulation (EC) 219/2009 (Outdoor Equipment Directive)*

This Directive stipulates noise emission standards, conformity assessment procedures, technical documentation and collection of data concerning the noise emission in the environment of equipment for use outdoors. The Directive applies to equipment for use outdoors as listed (limit values given for 22 pieces of equipment) and defined (definitions for 55 pieces of equipment) in the Directive.

- *Council Directive 92/23/EEC of 31 March 1992 relating to tires for motor vehicles and their trailers and to their fitting (Motor Vehicles Tyres Directive), as amended by Directive 2001/43/EC of the European Parliament and of the Council of 27 June 2001 relating to tyres for motor vehicles and their trailers and to their fitting, and by Commission Directive 2005/11/EC of 16 February 2005*

This Directive includes the adaptation to technical progress. It lays down rules on tyres concerning not only their characteristics but also the requirements for the equipment of vehicles and their trailers with regard to their tyres;

- *Council Directive 70/157/EEC of 6 February 1970 on the approximation of the laws of the Member States relating to the permissible sound level and the exhaust system of motor vehicles (Motor Vehicles Directive), which has been amended by: Commission Directive 73/350/EEC, Council Directive 77/212/EEC, Commission Directive 81/334/EEC, Commission Directive 84/372/EEC, Council Directive 84/424/EEC, Council Directive 87/354/EEC, Commission Directive 89/491/EEC; Council Directive 92/97/EEC, Commission Directive 96/20/EC, Commission Directive 99/101/EC, Commission Directive 2007/734/EC.*

This Directive reduced noise limits which are shown in dB(A) in the annexes to the Directive. Also this Directive introduced refinements to the testing procedure;

- *Council Directive 97/24/EC of 17 June 1997 on certain components or characteristics of two or three-wheel motor vehicles (Motorcycle Noise Directive) lays down testing and type approval procedures and emission limits for noise for two and three-wheeled vehicles (motorcycles, mopeds, and tricycles). This Directive has been amended by Directive 2002/51/EC, Commission Directive 2003/77/EC, Commission Directive 2005/30/EC, Commission Directive 2006/120/EC, Commission Directive 2006/27/EC, Commission Directive 2006/72/EC, Commission Directive 2009/108/EC and*
- *Regulation (EC) No 1222/2009 of the European Parliament and of the Council of 25 November 2009 on the labelling of tyres with respect to fuel efficiency and other essential parameters), amended by Regulation 228/2011 and Regulation 1235/2011 applies to C1, C2, and C3 tyres, lists responsibilities of tyre and vehicle suppliers and distributors and requires MSs to assess declared external rolling noise class and measured value within the meaning of Annex I, Part C, in accordance with the procedure set out in Annex IV of the Regulation.*

The airplane noise legal instruments comprise the:

- *Council Directive 80/51/EEC of 20 December 1979 on the limitation of noise emissions from subsonic aircraft (Subsonic Aircraft Noise Directive), as amended by Directive 83/206/EEC ;*
- *Council Directive 89/629/EEC of 4 December 1989 on the limitation of noise emission from civil subsonic jet aeroplanes (Civil Subsonic Jet Aeroplanes Directive) as amended by Directive*

92/14/EC on the limitation of the operation of aeroplanes covered by Part II, Chapter 2, Volume 1 of Annex 16 to the Convention on International Civil Aviation, as amended by Directive 98/20/EC and Directive 1999/28/EC and

- *Directive 2002/30/EC of the European Parliament and of the Council of 26 March 2002 on the establishment of rules and procedures with regard to the introduction of noise-related operating restrictions at Community airports (Airport Noise Directive), as amended by Regulation (EC) No 1137/2008, which lays down common rules for prohibiting the noisiest aircraft from European airports.*

The Directives ensure that MSs Implement the noise standards for subsonic aircrafts, which have been agreed, but without mandatory force, within the International Civil Aviation Organization (ICAO). They also implement certain recommendations of the European Civil Aviation Conference. The Directives differ from the other noise Directives by not precluding the imposition of stricter measures by MSs.

- Directive 2008/57/EC on the interoperability of the rail system within the Community, as amended by Directive 2009/131/EC amending Annex VII to Directive 2008/57/EC, Directive 2011/18/EU amending Annexes II, V and VI to Directive 2008/57/EC, Directive 2013/9/EU amending Annex III to Directive 2008/57/EC (Directive on interoperability of the European Rail system); and

- *Commission Decision 2011/229/EU of 4 April 2011 concerning the technical specifications of interoperability relating to the subsystem 'rolling stock – noise' of the trans-European conventional rail system, as amended by Commission Decision of 23 July 2012 concerning technical specifications for interoperability*

In accordance with these legal instruments Technical Specification for Interoperability apply to the rolling stock of the trans-European conventional rail system.

The Law on Environmental Protection⁵⁸ prescribed that the user of noise sources may use the sources along with applying the prescribe measures for the reduction of noise. With regard to the emission of noise, the 1989 Rulebook on allowed limits of noise intensity⁵⁹ is applied.

9.2. OVERVIEW OF TRANSPOSITION

Transposition of the EU acquis in the sector of noise into the legal system of Republika Srpska is a very low level. The requirements about the legislation on noise have not been met.

The noise legislation of Republika Srpska is mentioned in Annex IV to this document.

⁵⁸ Official Gazette of RS. 71/12 - Article 23)

⁵⁹ Official Gazette of SRBiH Vol 46/89)

9.3. IDENTIFIED GAPS

Based on the given review, the following gaps have been identified in the RS legislation relative to the protection from noise

- Directive on assessment and environmental sound and noise management has not yet been transposed and
- there are no regulations on the level of noise produced by equipment for use outdoors.

9.4. RECOMMENDATIONS/PRIORITIES

Bearing in mind the aforementioned conclusions, the following recommendations and priorities may be defined:

- Regulation on noise that needs to be adopted should:
 - Contain the provisions on the use of four noise indicators for mapping of noise, tj. L_{dan} , $L_{veče}$, $L_{noć}$, and L_{dvn} and the assessment standards;
 - Provide for the development of strategic noise maps and action plans for inhabited areas with population over 100,000, roads used by over three million vehicles per year and railways used by over 30,000 trains;
 - Noise maps and action plans must be reviewed and revised on a five year basis;
 - Contain the provisions on public participation and cooperation with FBiH and BD BiH institutions as well as with neighbouring countries with regard to action plans for boundary area;
 - Transpose the noise provisions from the Directive *odredbe o buci iz Direktive* the noise emission in the environment by equipment for use outdoors, as it is not possible to place the equipment on the EU market if the equipment produced in RS does not meet the requirements of the said Directive;⁶⁰
 - Authorised expert body must supervise the procedure of conformity assessment;
 - When regulating the noise from mobile sources, the existing regulations must be taken into account;

9.5. INSTITUTIONAL ADAPTATION REQUIREMENTS

MINISTRY OF PHYSICAL PLANNING, CIVIL ENGINEERING AND ECOLOGY RS is a competent authority for the control of noise in line with the Law on Environmental Protection. The Law on Noise will extensively regulate the real obligations of relevant institutions in Republika Srpska.

⁶⁰ Allowed equipment must have a CE label and a conformity statement (criteria are determined in Annex II to Outdoor Equipment Noise Directive). These products must undergo the procedure of conformity assessment in line with Annexes VI, VI and VIII to the Outdoor Equipment Noise Directive.

V ECONOMIC ASPECTS OF ENVIRONMENTAL APPROXIMATION

1. BASELINE

1.1. PRESENT CONDITIONS FROM THE ECONOMIC/ FINANCIAL PERSPECTIVE

A fundamental aspect of any strategy is the determination of its cost. This is defined as the economic gap or cost of approximation.

In meeting the requirements of the *acquis* towards Bosnia and Herzegovina, RS faces a strong challenge in the field of economics and finance. The amount of investment and operating & maintenance costs required to bridge the economic gap is substantial and the time required to do so, lengthy and limited by numerous constraints in the fields of consumer affordability, national limitations on investment capacity in environmental projects, donor funds, sustainable financing capacities, etc.

The experience of the new EU MSs (2004 & 2007) is a clear warning sign of what BiH should attempt to avoid. MSs that joined the EU in 2004 have in many cases encountered serious difficulties in absorbing structural and cohesion funding and in some cases deficiencies in preparation, tendering or implementation have resulted in financial corrections applied by the Commission. After their accession in 2007 Romania and Bulgaria became net contributors to the EU Budget on account of the slow mobilization of EU grants. This has been caused by inadequate financial planning and poor grant programming, which has led to below 10% of available funds being drawn down over their first three years of membership, as reported in the most recent KPMG Progress Report “EU funds in Central & Eastern Europe” published April 2012 and based on information available at Eurostat.⁶¹

Economic and financial planning capacity is as yet developed to a relatively low level within the various RS institutions and to nothing like the scale and degree of specialization that will be required for rapid and successful mobilization of EU grants, other donor contributions and financing mechanisms from international finance institutions (IFIs). Staff with a strong economic background will be required in the ministries to ensure economic and financial analysis and planning capacities. Failure to develop this in anticipation will slow down and impair the efficiency of the mobilization of the key EU grant support and the necessary cost recovery from user charges and economic instruments. Given the magnitude of the figures involved, the opportunity cost to BiH of inefficiency in these areas can be very high.

1.2. COMPARISON OF AVERAGE EU AND REPUBLIKA SRPSKA

The first step in establishing the economic gap is to define the starting point. Although the cost of each heavy investment directive is calculated through a model tool, which will be outlined below in this Chapter, a summary of some basic parameters, which illustrate the existing differences between BiH and average EU, have been included in the Tables IV and V below:

Table IV: COMPARATIVE INDICATORS

⁶¹ “EU Funds in Central & Eastern Europe”, KPMG Progress Report 2007-2012, April 2012, available at: <http://www.kpmg.com/CEE/en/IssuesAndInsights/ArticlesPublications/Documents/eu-funds-in-central-and-eastern-europe-2012.pdf>

(Base years for data, 2006-2012)

	<i>Units</i>	RS	EU 27	BiH compared to EU27 average
GENERAL				
Population	Million	1,33	502,5	0,26%
GDP/Capita	€	3.365	23.296	14,45%
Inflation	KM/€	2,1%	2%	---
Household Income	€/Household	7.282	33.150	22%
Household Expenditure on Utilities⁶²	%	8,9%	18,30%	48,63%
Expenditure on Environment	% of GDP	0,27%	1,76%	15,34%
ENVIRONMENT				
Drinking Water Supply	% of Population Served	65%	93%	69,9%
Purified Drinking Water Supply	% of Population Served	64%	100%	64%
Urban Wastewater Collected	% of Population Served	46%	93%	49,5%
Urban Wastewater Treated	% of Wastewater Treated	4%	87%	4,5%
Municipal Solid Waste Collected	% of Population Served	83%	99%	82%
Compliant Treatment (Lfill/Incin)	% of MSW	Nema podataka	99%	---
Municipal Solid Waste Recycled	% of MSW	Nema podataka	43,50%	---
Emissions NOx	Kg/Capita	21,1	20,59	102%
Emissions SO2	Kg/Capita	118,4	11,62	1,019%
Emissions CO2	Tons/Capita	3.37	9,90	34%

⁶²According to the 2010 EU survey, EU 27 HH expenditure on Housing and Utilities amounts to 33.1% and this does not differentiate between Housing Costs “per se” and Utilities. In a 2006 survey, housing costs are estimated 14.8% of HHI. In this Table, a “best project estimate” has been made for only utilities, combining these two sources.

Table V: KEY ASSUMPTIONS & LEVELS OF COMPLIANCE TARGETTED

	<i>Units</i>	RS	Assumptions
GENERAL			
Population	Million	1.33	In decrease 0,3%
GDP/Capita	€	3.365	GDP increase; 1% -2013; 3,5%-2014; 5%...
Inflation	KM/€	2,1%	KM and € assumed 2% in €
Household Income	€/Household	7.282	Assumed per inflation rate + 40% BDP
Household Expenditure on Utilities *	%	8,9%	Applied threshold of 25%
Expenditure on Environment	% of GDP	0,27%	Applied threshold of od 3%
ENVIRONMENT			
Drinking Water Supply	% of Population Served	65%	Assumed reach 93%
Purified Drinking Water Supply	% of Population Served	64%	Assumed reach 100%
Urban Wastewater Collected	% of Population Served	46%	Assumed reach 90%
Urban Wastewater Treated	% of Wastewater Treated	4%	Assumed reach 99%
Municipal Solid Waste Collected	% of Population Served	83%	Assumed reach 99%
Compliant Treatment (Lfill/Incin)	% of MSW	No data	Assumed reach 99%
Municipal Solid Waste Recycled	% of MSW	No data	Assumed reach 43,5%
Emissions NOx	Kg/Capita	21,05	No. linear reduction EU

Emissions SO2	Kg/Capita	118,4	Assumed targets for 2025
Emissions CO2	Tons/Capita	3,37	17,8 NOx; 11,5 SO2; 8,0 CO2

The indicators for RS are approximately comparable to those of Central / Western Balkan states. The greatest gaps are in GDP per capita and household income, less than a sixth of EU average.

In the field of environment, the largest (and most expensive) gaps are in urban wastewater treatment, less than 4% at present, and in the industrial emissions control, specifically in SO2 emissions, which are very high, mostly on account of the export oriented energy generation industry and the fact that it uses a high proportion of low quality coal as fuel.

Solid waste management, with upgrading and construction of compliant landfills, closure of existing dumping sites, closure of illegal landfills, rehabilitation of the more extensive and older landfills, and the development of a modern collection and transport system, will also tap a significant amount of very scarce resources.

Overall, the present state of the environmental infrastructure leads to a conclusion that a lengthy transition period and proportionally high investment shall be required to achieve compliance in these investment heavy directives.

2. THE COST OF APPROXIMATION

2.1. DEFINITION

The approximation process implies a range of additional costs and benefits for the economy of RS.

The costs of the environmental approximation process are wide-ranging and will result, basically, from:

- The increased administrative burden to transpose, implement, enforce and monitor the EU acquis;
- Large investments in capital equipment, plant etc needed to implement and comply with the acquis;
- The operating and maintenance costs (O&M) associated with the operation of these investments.

These costs will be borne by:

- RS budget;
- Local self-government units budgets;
- Industry, both public sector and private;
- Households through various cost-recovery mechanisms, including especially tariffs for public utility services.

It is important to note that the cost of approximation is defined as the “additional cost to RS of adopting the acquis” and not to be confused with the total environmental costs for RS, which may include policies that are not directly derived from the application of said acquis.

Care must also be taken to ensure when comparing cost estimates, that the methodologies are the same and that they refer to the same items. Also note whether the cost estimates are in nominal terms or in Net Present Value (NPV) terms and whether they include operating expenses or only investments.

Cost estimates are like statistics; they all have a scientific basis, but are often misunderstood and/or misused.

2.2. SCOPE AND METHODOLOGY OF COST ANALYSIS

2.2.1. INTRODUCTORY NOTES

There are two broad methods employed to estimate the cost of approximation and, in general, regulatory Impact:

- The bottom to top approach. This consists in an extrapolation of costs based on collected data through surveys and sector specific cost references. The partial database thus established is then extrapolated to the whole of the directive/environmental sector concerned;
- The top to bottom approach, or macro-econometric analysis. In this case impacts are estimated on the basis of pollutants to be removed or populations to be served by new or improved standards. Volumes and unit costs derived from domestic and international references.

The bottom to top approach is generally employed when extensive data is available and the directive being evaluated impacts on a specific sector with a limited number of stakeholders. Its strength lies in being an industry sourced estimate with hard data derived from the operators. Its weakness lies in that the extrapolation exercise may cause a large magnitude of error if the core data is insufficient, not representative or has been derived from a reference base that differs widely from the idiosyncratic conditions prevailing in the beneficiary region/country.

The top to bottom, macro-econometric approach is employed when the directives evaluated are complex, have a wide reaching impact and, especially, affect the population significantly and must be timed so as not to exceed affordability thresholds.

In the case of the heavy investment directives, with a very complex impact on the population through interactive emissions to air, water and through solid waste accumulation, which have a direct and harmful impact on health and for which abatement costs will primarily be cost recovered through the public via tariff increases (for waste, water, electricity) and increases in the costs of affected products, (cement, petrol, chemical products), the macro-econometric approach is essential.

In this cost estimate, in fact, both approaches have been employed, the macro for the heavy investment directives and the micro to complement the gaps and better define the macro national level approach.

The model tools developed for the macro-econometric exercise was applied to each area of emissions individually. Thus, there are three major model tools:

- Emissions to air;
- Emissions to water;
- Solid waste management;

In addition a fourth model has been developed for nature and biodiversity protection due to the fact that it is one of the key elements of the environmental policy of EU, although from the cost of approximation point of view, it is not a significantly costly sector.

The cost of approximation of horizontal legislation, and cost of approximation of the noise and chemicals sectors have been estimated on the basis of proportionality to similar transition economies, as there is insufficient data for a domestically based extrapolation. This however does not significantly affect the orders of magnitude and time-frame required for compliance.

The results of the modelling tools are presented in a multi-annual cost stream that permits linking such a cost stream to the affordability thresholds. This, in turn, ensures that the implementation of the approximation process does not:

- Establish a non-feasible time-frame that implies that operating costs are greater than maximum affordability, i.e. that maximum cost recovery is insufficient to cover operating expenses;
- That significant cross-subsidization from one environmental sector to another occurs, which would compromise heavily a necessarily harmonic implementation, given the interactive nature of environment

These factors must be taken into account in order to elaborate a feasible, credible national policy.

The evaluation of costs has been performed in two stages:

- A preliminary analysis based on existing studies, statistics and the budgets of different institutions, especially in the case of the heavy investment directives. This initial estimate will provide a baseline figure that will allow establishing the framework for the more elaborate directive by directive or sector by sector cost analysis. This “baseline scenario” derived from existing information will also allow performing an overall macroeconomic analysis to establish a preliminary estimate of the timeframes required for full transposition of the directives contained in the acquis from the investment point of view, relating the investment needs to financial and economic capacities of RS.
- A best to date cost of approximation evaluation for the sectors is indicated above.

The starting point of these considerations is line 1) above and the procedure, basically, involved:

- Evaluating in depth the existing sector figures to ascertain the methodology of the cost estimates already performed;
- Preparation of a matrix of unit costs that will be derived from the baseline scenario, the existing feasibility studies for ongoing projects and, by default, in those cases where specific to BiH unit costs cannot be obtained, the best possible estimates should be given, based on conditions in BiH and the experience of the crucial and senior experts in various transition economies in which they have performed these types of analyses;
- These pieces of information will be collected and, together with a vast array of necessary assumptions and sector specific parameters, integrated into a calculation model;
- Then a customized model to needs and priorities of RS is designed and includes a clear module of input parameters for policy manipulation on a sector by sector basis. This is the interface used by analysers. A further final simplified results module, including graphs for easy visualization, will permit gratifying manipulation of the model for estimating the impacts of different policy decisions.

The intention here was to provide a user-friendly core model that will allow environmental authorities in BiH to readily understand the underlying concepts so as to gain full ownership of this analytical tool. They can subsequently expand and update each sector model as more detailed information becomes available and their own capacities evolve.

This will be especially useful once the negotiation process on accession commences between EU and BiH and different scenarios have to be created for harmonizing policies.

Establishing a timeframe

Full compliance with all aspects of the environmental acquis cannot be expected until all the investments required under the heavy investment directives are completed. For this, as evidenced by experience in other transition countries, a period of approximately 20 to 30 years is required. Hence, in principle, a 30-year period has been adopted for the EAS cost analysis. The specific transition and implementation period for each heavy Investment directive should fall within this general timeframe

2.2.2. FOCUS ON HEAVY INVESTMENT DIRECTIVES

As is a constant with environmental issues, all directives have impacts across more than one sector. Part of the challenge of the industrial pollution sector is, for instance, solved by a set of Directives dealing with municipal solid waste, or by the UWWT Directive. This is why it is standard practice to focus on the heavy investment directives and to calculate what is “left over” for the specific sectors.

The heavy investment directives account, in general, for around 85% of all costs and are the ones that have the greatest impact on the population and are thus limited in their implementation by both the affordability thresholds of households and those at institutional budget level.

2.2.3. DEFINITION OF CAPITAL, OPERATIVE AND ADMINISTRATIVE COSTS

2.2.3.1. Administrative costs

Some of the administrative expenses estimated for the environmental sectors will be incurred in the horizontal legislation. A more precise calculation of administrative costs can be made once the institutions dealing with the various issues regarding approximation are more clearly defined. For the purposes of EAS, these costs have been estimated on the basis of prior experience in other transition economies.

In the overall cost assessment, figures for the additional administrative costs will be included for each of the sectors covered by EAS.

Note that these assumed figures should not constitute the basis for planning purposes – they will be calculated solely to provide an initial indication of the scale of additional resourcing that may be required. Relevant institutions will need to examine carefully at a later stage, the actual level of resources existing and those needed in future and take appropriate actions. All additional administrative costs will be attributed to RS as well in EAS and the implementing instruments that need to be developed.

Where possible the additional administrative costs, over and above current levels, will be estimated through a “bottom-up” approach. This involves:

- Estimating the numbers of additional staff needed;
- Taking an average figure for the annual salary wage costs of a professional staff member;
- Adding an overhead cost equal to a % of the annual salaries of professional staff.
 - Overhead costs to be included in this % estimate are, inter alia:
 - Non-wage costs incurred in employing additional professional staff (recruitment, insurance, pension contributions, sick pay etc);

- Office space and office-based equipment (computers and peripherals, furniture etc) for the additional staff complements, including operating and maintenance costs. The expenditure of acquiring additional building space and office equipment are included (m2 additional space/average cost/m2);
- Professional development through training. This cost will be ongoing, though likely to reduce in later years from an initially high level;
- Salaries and associated costs of employing non-professional support staff, needed to relieve professional staff from non-productive activity;
- Travel and related costs incurred by professional and other staff in fulfilment of their duties.

2.2.3.2. Investment expenditures and operating and maintenance expenditures

All relevant available information relating to investments and O&M costs in the environmental sector have been collected, commencing with, inter alia, the most updated “longlist” and shortlist of environmental projects, the budgets included for each sector in all other existing databases and any other information from TA projects in order to produce an overall baseline cost estimate (see the introductory remarks).

Subsequent to this, in order to fulfil the objectives implicit in establishing the economic gap, we have established that:

- Distribute the data collected into the environmental sectors;
- Collected additional cost specific information available on investments and O&M, together with details on the methodology employed in making these project cost estimates (e.g. feasibility studies);
- Prepared a matrix of unit costs to be applied to each sector;
- The same procedure has been followed for both investments and re-investments (Capex) and O&M, (Opex) costs;
- The resulting unit costs, identified projects and identified gaps, will be processed in the cost of approximation model for each sector, providing a specific cost estimate for each heavy investment directive/sector of the EAS.

2.2.4. ESTABLISHING MULTIANNUAL COST TARGETS AND MULTIANNUAL COST FLOWS

The following parameters have been integrated into a model

- The multiannual cost flows on a directive/sector basis;
- The multiannual potential cost recovery on a directive/sector basis;
- Assumptions on macroeconomic and socioeconomic parameters;
- Mobilization rates for cost recovery;

- Assumptions on EU grant mobilization rates and donor funding;
- Projection of domestic finance resources;
- Projections of finance from IFIs, other project finance and private investment;
- Other technical parameters necessary for making the model operative

The model tool is designed to adjust all flows to variations in any of the inputs, notably to target dates for full compliance.

Wherever possible the existing strategic and planning documents in RS have been taken into account. When such Action Plans imply periods that do not comply with the Affordability constraint for O&M costs, or are more stringent than required for EU members themselves, the target dates have been lengthened to provide plausible and reasonable full compliance targets for RS, from the economic point of view.

This sensitivity analysis is an iterative process that has been applied to assist in determining reasonable targets for full compliance of the evaluated directives/sectors. It will serve the purpose of establishing an order of magnitude that will be subsequently needed for the realisation of the EAS.

2.2.5. DESCRIPTION OF THE MODEL TOOL

The cost of approximation model has been designed so as to, in the most user-friendly and with the simplest mechanics possible, fulfil all initial requirements for EAS, but also to go somewhat further, incorporating some value adding features, such as:

- Clearly identifiable data input sheets, which can, as data available rapidly evolves (which is an absolutely realistic scenario) be readily modified. The data input sheets are:
 - Socioeconomic data.
 - Macroeconomic parameters.
 - Sector fact sheet.
 - Unit cost references

These data sheets serve the double purpose of feeding specific data into the calculation module, as required for different directives/sectors, and also of collecting in an orderly, accessible mode, the contextual information on which these data inputs are based.

- Extensive database for references. The unit costs have been derived from three sources:
 - International references. Including those of the neighbouring transition economies that have joined the EU in 2004/2007 and those of the relatively recent approximation cost estimates for Croatia, Macedonia and Turkey;
 - Specific to RS partial cost estimates from various sources and twinning project estimates;
 - Feasibility studies completed for infrastructure projects plus other local sources of relevance

This has enabled the EnvIS Project to derive reasoned and reasonable unit costs for the purpose of EAS, which are termed “best reference RS unit costs”. Like all the features of the model, these unit costs can, on an ongoing basis, be easily modified to reflect evolving data.

Conceptually it must be clear that the use of a model is open ended, that is, it must be adapted to evolving conditions, and this is especially more so in the early stage of accession in which we find ourselves in RS.

Special features of the model tools are:

- A dual affordability constraints input sheet. This basically is an affordability calculation, consistent with that used for large infrastructure projects for applications to EU structural funds, for both countrywide affordability (set as limits to % of GDP) and user affordability (set as % of household income). Thus the transitional periods estimated will incorporate a double check, to ensure overall affordability at the level of RS is not exceeded and that user charges remain within the affordability limits of households.
- A policy tool. This is a sensitivity analysis module that permits the user to evaluate the impact of a change in the compliance targets upon the multi-annual investment plans and the affordability constraints. This will be of particular strategic use when negotiating Chapter 27, and, undoubtedly, adds value to EAS.
- The model will be an aggregation model. This will permit to disaggregate cost calculations from national estimates to sector estimates and to the level of directives, or bundles of directives. This will be of special use to ensure that any partial modification of data in any aspect of any directive can be harmoniously integrated into the total;
- Directives linked to sources of finance. From the Sources of Finance Report and that of economic instruments for use in BiH a model tool for EAS and implementation instruments will be completed, deriving a database listing sources of finance (including as such economic instruments), and a preferred link to such sources of finance for each specific directive or bundle of directives will be created. Thus, financial plans can readily be upgraded or updated as specific additional information, or new regulations that imply modifications in economic instruments, come into force.

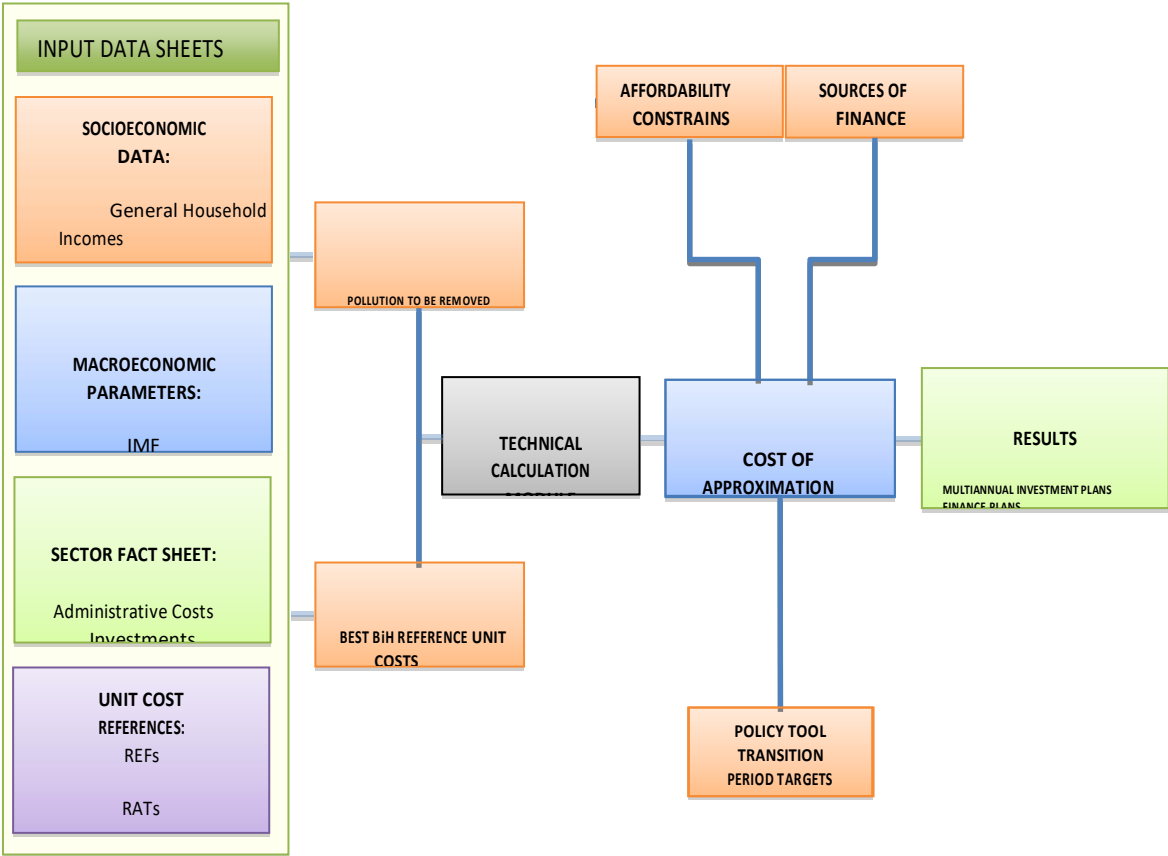
NOTE: The model tools were developed for estimating only the cost for the economic gap analysis. Linkage and full functions were undertaken partially for EAS.

For further clarification, the architecture of the EAS model in graphic format hereby is attached.

Graph I: ARCHITECTURE OF THE EAS COST OF APPROXIMATION MODEL

2.3.

2.3. COST APPROXIMATION BY SECTORS



2.3.1. WATER MANAGEMENT

2.3.1.1. Baseline

In terms of the proportion of total environmental approximation costs, water management is by far the largest environmental sub-sector. The sector is covered by a large body of EU legislation. However, it must be noted that 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.

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

- Establishing environmental objectives;
- Providing for a planning process for water management;
- Monitoring, assessment and analysis of pressures and impacts;
- Preparation and implementation of river basin management plans designed to achieve the environmental objectives

Associated directives on environmental quality standards, hazardous 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;
- 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. Bearing in mind the floods in May 2014, which resulted in human losses and considerable material damage throughout the country, a consistent and coherent policy in BiH focused on climate changes and their impact on the environment and society should be obligatorily developed in a short-term period and should cover all administrative level.

2.3.1.2. Rationale for the cost estimate

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 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 principle of subsidiarity) a certain number of key matters in the hands of MSs, 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 a MS 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.

This sector also has the greatest implications for other sectors, as water is the recipient of pollution from many sources and abating pollution in the aquatic environment implies a close interaction with the polluters and an integrated management of the water cycle and river basins.

There is a backlog of necessary investments in the bulk water sector, which must be addressed before service levels to the public can be effectively extended.

Differentiating clearly all these components is technically complicated and there are many undefined areas between what must be undertaken on account of compliance and what is a national policy not driven by the adoption of the acquis. The cost estimates compliance on quality and extension of the system is the basic assumption and, as has been explained previously, the cost estimate is made for the established 20 years period to 2033.

Table VI: DEFINITION OF THE EXISTING GAPS

Water services	Total of (in %)	RS	EU
Drinking Water Supply	%Population Served	65%	93%
Purified Drinking Water Supply	%Population Served	64%	100%
Urban Wastewater Collected	%Population Served	46%	93%
Urban Wastewater Treated	% Wastewater Treated	4%	87%

For all these directives a specific model tool has been developed, estimating the cost to bridge this gap in service levels. In addition, the flood risk management Directive must be implemented, and although this constitutes mostly a domestic priority, to be implemented in some measure urgently without need of the acquis as a driver, (one of the undefined areas), it has been included in the analysis; the cost estimate for this directive is derived from the information available to RS contained in the documents prepared to define the strategy and policy of water management.

Thus the water management cost of approximation calculation will consist of three differentiated parts:

- Drinking water, both in quality and extension of the service to the level comparable with EU levels;
- Urban wastewater, including both collection and treatment;
- Flood protection in three phases:
 - Short-term enhancement of the existing infrastructure;
 - First approximation phase, by 2020 along with the construction of priority infrastructure;
 - Full compliance, under this Strategy foreseen by 2033 although the BiH Strategy mentions the year to 2035.

NOTE: It is important to keep in mind that for the purposes of the economic gap analysis, a 20 year period (as is common practice) has been established. When these calculations are subsequently related to the affordability and other constraints, in EAS) and its implementation instruments to be completed, this initial period will probably be modified, so as to construct a feasible plan that does not contravene such constraints. Thus these calculations will be modified upon development of the EAS and the DSIPs.

2.3.1.3. Unit costs

2.3.1.3.1. General remarks

The cost estimation process would ideally have been done by examining each urban morphological zone or agglomeration in detail and obtaining data on the existing water infrastructure (and its condition) in the area – i.e. an asset inventory.

This approach is currently not unfeasible in RS due to insufficient data and lack of reliable census and its distribution in water agglomerations.

Therefore the approach taken is based on the best available information for those agglomerations in excess of 10.000 populations and a secondary extrapolation of those municipalities below this level for which population estimates are unavailable.

The impact on this cost of approximation estimate will not be substantial. In fact, the tailoring of the cost streams to the affordability constraints at all levels will have a greater impact.

The analysis performed is based on populations served as divided into the following categories:

I Agglomerations with population > 100.000;

II Agglomerations between 50.000 and 99.999;

III Agglomerations between 10.000 and 49.999;

IV Agglomerations between 2.000 and 9.999;

V Agglomerations < 1.999 persons (not included in the UWWD).

The process, or methodology employed to make the cost estimates in relation to these agglomeration types, is explained below.

2.3.1.3.2. Urban wastewater

2.3.1.3.2.1. Collection networks

The network cost is the sum, for each different pipe size (1 to n) of the pipe length times the unit cost for that diameter of pipe. The pipe distribution is linked to the type and size of the agglomeration.

The unit costs for laying of pipes are derived from a large number of references and calibrated to recent projects in the region, and they represent a function of the pipe diameter. The length of pipe required is determined on the basis of the total length of the network and standard engineering assumptions concerning the need for specific diameters at pre-defined load levels.

The total network length is a function of the size of the area served and the density of population. Again this function is derived on the basis of existing data and is calibrated to the population density levels found typically in urban areas.

Overall, the use of this approach allows an estimation of network cost on the basis of area and population density information. This total network cost is then assigned to either existing assets or “future investment” on the basis of available % coverage data. This yields an estimate of the cost of future network extension.

An allowance is added to this for the renovation of existing networks.

2.3.1.3.2.2. Treatment plants

In the case of treatment plants a similar function is used to estimate the cost of treatment works on the basis of size and type of treatment. For large UMZs, a tertiary treatment is assumed to be required. For medium UMZs, a conventional secondary treatment is assumed to be required.

For small UMZs, a conventional secondary or unconventional treatment is assumed to be required – the choice between these options is based on size and land availability (smaller UMZs in areas with flat relief being better suited to unconventional methods).

As before, the incremental cost is taken to be total costs less the value of existing assets, with some allowance for renovation. In the case of both wastewater collection and wastewater treatment, similarly derived cost functions are used to estimate the operational costs.

2.3.1.3.3. Drinking water

2.3.1.3.3.1. Introductory notes

For the Drinking Water Directive, a similar approach was taken, but with some noticeable differences. Firstly the Directive does not specify any “compliance unit” as such. Moreover, the Directive does not oblige MSs to provide drinking water supplies to any or all (or part) of its population. What the Directive does do is stating the standards, which must be achieved when a public supply is operated. In short, it is up to a MS to decide how wide the coverage should be.

In order to make a cost estimate the following approach was taken.

The current connection rates are established for large, medium and small urban and rural areas. The future objective is taken as being coverage of 96% of the population, which would certainly be acceptable as full coverage from the EU perspective. Cities will mainly use surface water springs, while smaller zones will use ground water sources. Treatment requirements for these different sources have also been assumed.

2.3.1.3.3.2. Water supply network

The estimate of costs follows a similar conceptual approach to that used for the UWWTD, i.e. that supply network cost is a function of the size and density of the service area. The transmission network required is proportional to the size of the supply network.

2.3.1.3.3.3. Treatment

Treatment again is a function of size and type of treatment, with the type of treatment being determined by the type of source (SW or GW). The “f” functions have again been derived from a range of data available internationally and then back calibrated to project experience in the region.

Incremental cost is again the total cost less the existing assets where the existing assets are valued on the basis of reported coverage and assumed condition (i.e. there is a renovation allowance built into the calculation).

As with UWWTD, the operational costs are derived similarly using standard cost functions calibrated to regional conditions.

2.3.1.4. PROTECTION FROM FLOODS

The cost has been estimated on the basis of Water Management Strategy RS/BiH , subsection related to the protection from floods.

The cost estimates included therein have been adjusted to be compatible with the multi-annual cost flow methodology employed in this cost of approximation estimate.

2.3.1.5. TARGETS FOR COMPLIANCE

2.3.1.5.1. Introductory notes

Although it must be recognized as premature to establish targets for compliance and the following Table simply constitutes a best to date estimate, it is important to have a methodology and an order of magnitude so as to determine more accurately future policy as the position of RS becomes clearer. In this case, the targets for compliance have been established as a % population to be served by a fully compliant system.

NOTE: Model tools linking cost to population served are considered essential to determine the approximation cost and its subsequent strategy, implementation instruments and approximation policy. They reflect the commitment that RS will have to assume vis a vis the accession treaty. In the case of flood protection, this is not the case, and thus a reasonably sequenced investment schedule has been deemed sufficient.

2.3.1.5.2. Drinking water

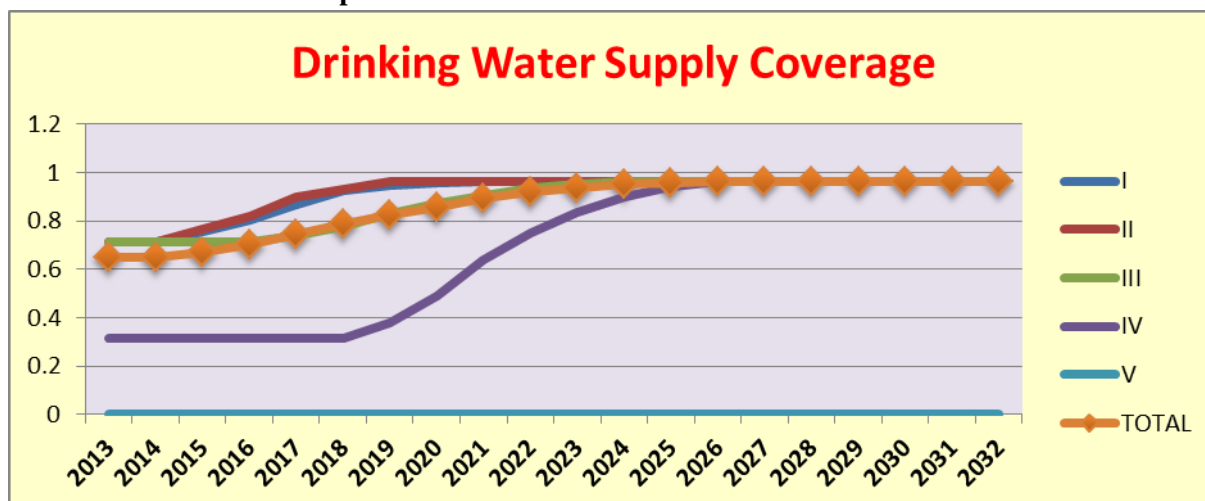
The target initially established is to 2025. The objectives to be attained are coverage of 96% of the population and provision of water to full compliance standards to that segment.

Table VII: DRINKING WATER TARGETS FOR COMPLIANCE

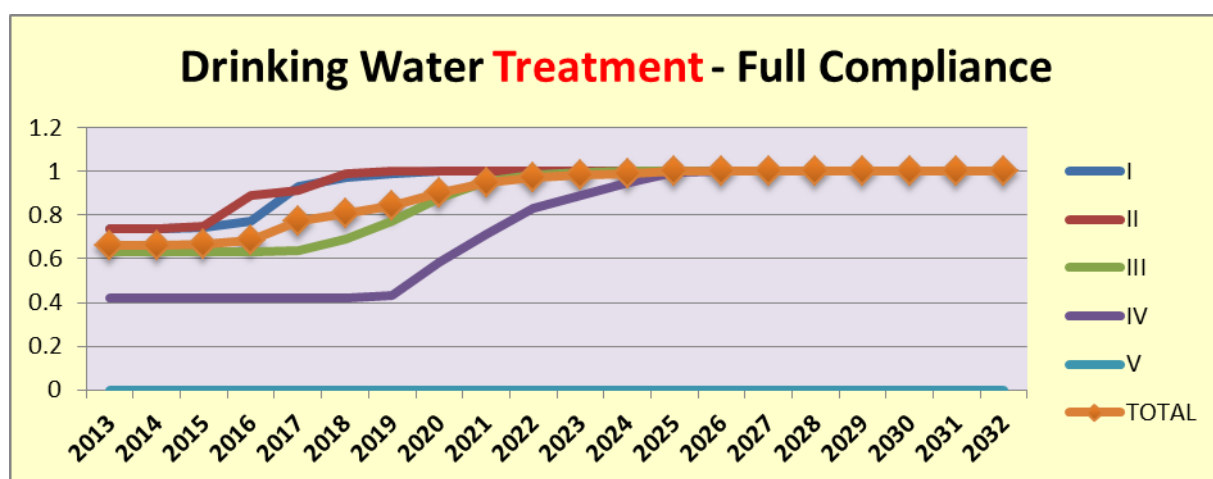
Concept	Municipality/Agglomeration	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Drinking Water Supply As % of Population	I	71%	71%	75%	80%	86%	92%	95%	96%	96%	96%	96%	96%	96%
	II	71%	71%	77%	82%	90%	93%	96%	96%	96%	96%	96%	96%	96%
	III	71%	71%	71%	71%	74%	78%	83%	87%	91%	93%	95%	96%	96%
	IV	32%	32%	32%	32%	32%	32%	38%	49%	64%	75%	83%	90%	94%
	V	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	TOTAL	65%	65%	67%	70%	74%	79%	82%	86%	89%	92%	94%	95%	96%
Water Purification As % of Population	I	74%	74%	75%	77%	93%	97%	99%	100%	100%	100%	100%	100%	100%
	II	74%	74%	75%	89%	91%	99%	100%	100%	100%	100%	100%	100%	100%
	III	63%	63%	63%	63%	64%	69%	77%	88%	95%	98%	100%	100%	100%
	IV	42%	42%	42%	42%	42%	42%	43%	58%	71%	83%	89%	95%	100%
	V	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	TOTAL	66%	66%	67%	68%	77%	81%	85%	90%	95%	97%	98%	99%	100%

Below the convergence of the different types of agglomerations is illustrated graphically, both for coverage and quality standards.

Graph II: DRINKING WATER SUPPLY COVERAGE



Graph III: DRINKING WATER TREATMENT – FULL COMPLIANCE



2.3.1.5.3. Urban wastewater

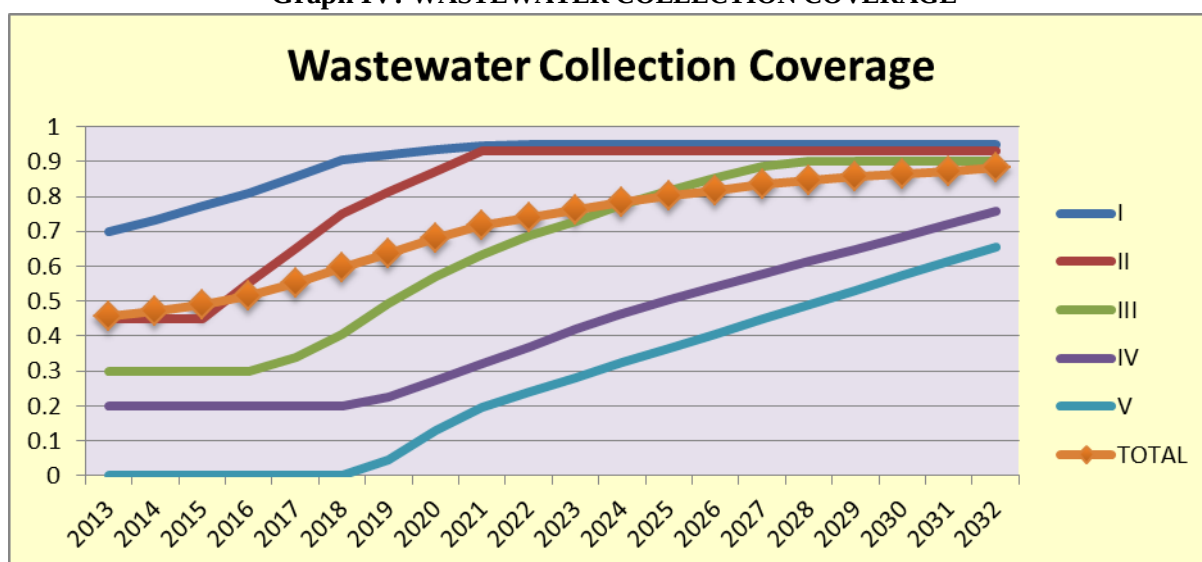
The target initially established is to 2033. The objectives to be attained are coverage of 88% of the population, for all except for agglomerations with the population below 2000 which are not obligated to full compliance standards and supply of drinking water with all standards from this segment.

Table VIII: URBAN WASTEWATER

Concept	Municipality/Agglomeration	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Urban Wastewater As % of Population	I	70%	74%	78%	83%	87%	89%	90%	91%	92%	92%	92%	92%	92%	92%	92%	92%	92%	92%	92%	92%	92%
	II	45%	45%	55%	65%	75%	75%	75%	81%	87%	93%	93%	93%	93%	93%	93%	93%	93%	93%	93%	93%	93%
	III	30%	30%	30%	30%	33%	38%	46%	52%	57%	62%	67%	70%	74%	78%	81%	84%	87%	89%	90%	90%	90%
	IV	20%	20%	20%	20%	20%	20%	24%	30%	35%	39%	44%	49%	54%	58%	61%	65%	70%	74%	77%	80%	80%
	V	0%	0%	0%	0%	0%	0%	5%	14%	21%	26%	31%	35%	40%	45%	50%	54%	59%	64%	68%	73%	73%
	TOTAL	46%	48%	50%	53%	56%	58%	62%	66%	69%	71%	73%	75%	77%	79%	81%	83%	84%	86%	87%	88%	88%
Treatment As % of Population	I	3%	7%	18%	74%	83%	89%	95%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	II	3%	3%	10%	57%	64%	64%	64%	68%	96%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	III	8%	8%	8%	8%	10%	22%	33%	42%	50%	58%	64%	70%	78%	82%	87%	92%	96%	99%	100%	100%	100%
	IV	2%	2%	2%	2%	2%	2%	11%	19%	26%	33%	41%	49%	55%	60%	66%	72%	79%	86%	90%	95%	100%
	V	0%	0%	0%	0%	0%	0%	8%	19%	26%	33%	39%	45%	51%	57%	63%	69%	75%	82%	88%	94%	100%
	TOTAL	4%	6%	12%	43%	48%	54%	61%	68%	73%	77%	79%	82%	85%	87%	90%	92%	95%	97%	98%	99%	100%

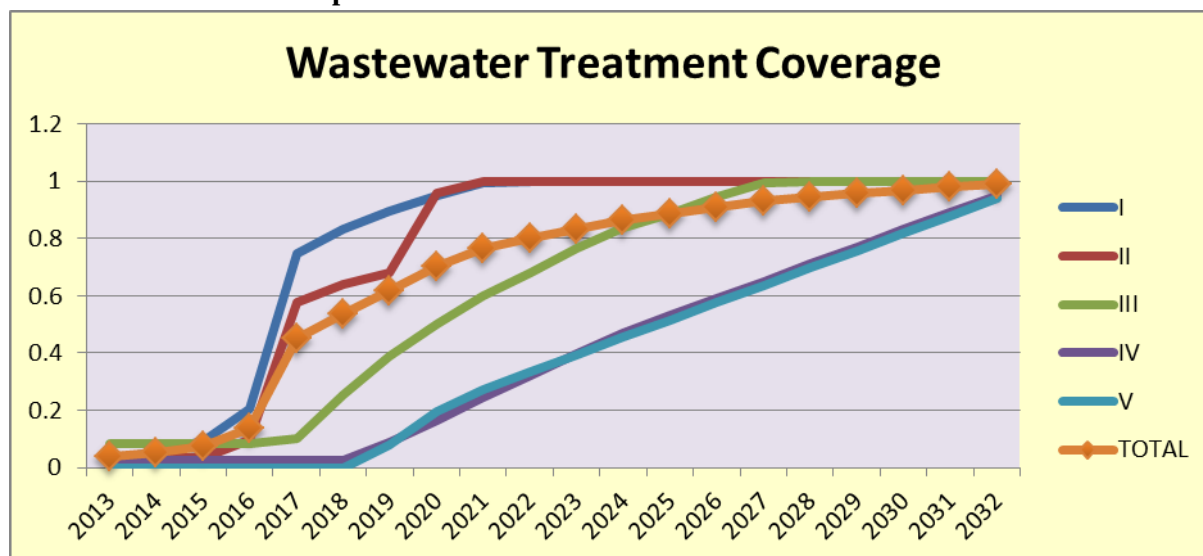
Below the convergence of the different types of agglomerations is illustrated graphically, both for coverage and treatment standards

Graph IV: WASTEWATER COLLECTION COVERAGE



I-Agglomerations with population > 100.000; II-Agglomerations between 50.000 and 99.999; III-Agglomerations between 10.000 and 49.999; IV-Agglomerations between 2.000 and 9.999; V-Agglomerations < 1.999 persons (not included in the UWWD).

Graph V: WASTEWATER TREATMENT COVERAGE



I-Agglomerations with population > 100.000; II-Agglomerations between 50.000 and 99.999; III-Agglomerations between 10.000 and 49.999; IV-Agglomerations between 2.000 and 9.999; V-Agglomerations < 1.999 persons (not included in the UWWD).

2.3.1.5.4. Flood protection

In accordance with the Water Strategy in RS/BiH, approximation in the area of flood protection has been divided into three phases:

- Phase I includes what are considered “urgent” projects, mainly the rehabilitation of existing deteriorated infrastructure which poses a high risk to flooding as the areas it no longer effectively protects have been subject to recurrent flooding in the past;
- Phase II includes high priority actions associated to observed high risk gaps in the existing infrastructure to be rehabilitated.
- Phase III includes those projects that would enable RS to achieve full compliance.

Table IX: FLOOD PROTECTION PHASE TARGETING

COST ITEM	PHASE I. - UPGRADING			PHASE II. – HIGH PRIORITY ACTIONS									
YEAR	2013.	2014.	2015.	2016.	2017.	2018.	2019.	2020.					
PHASE TARGETING	10%	40%	100%	15%	30%	50%	75%	100%					
COST ITEM	PHASE III. – IMPLEMENTATION TO FULL COMPLIANCE STATUS												
YEAR	2021.	2022.	2023.	2024.	2025.	2026.	2027.	2028.	2029.	2030.	2031.	2032.	2033.
PHASE TARGETING	2%	4%	7%	12%	18%	25%	33%	45%	57%	70%	83%	96%	100 %

From the current status and the defined target, a chronological targeting sequence for approximation has been defined. This, obviously, is a for EAS-made best estimate and does not reflect a specific policy for RS which, as previously indicated, does not as yet exist in these terms.

2.3.1.6. COSTS OF APPROXIMATION

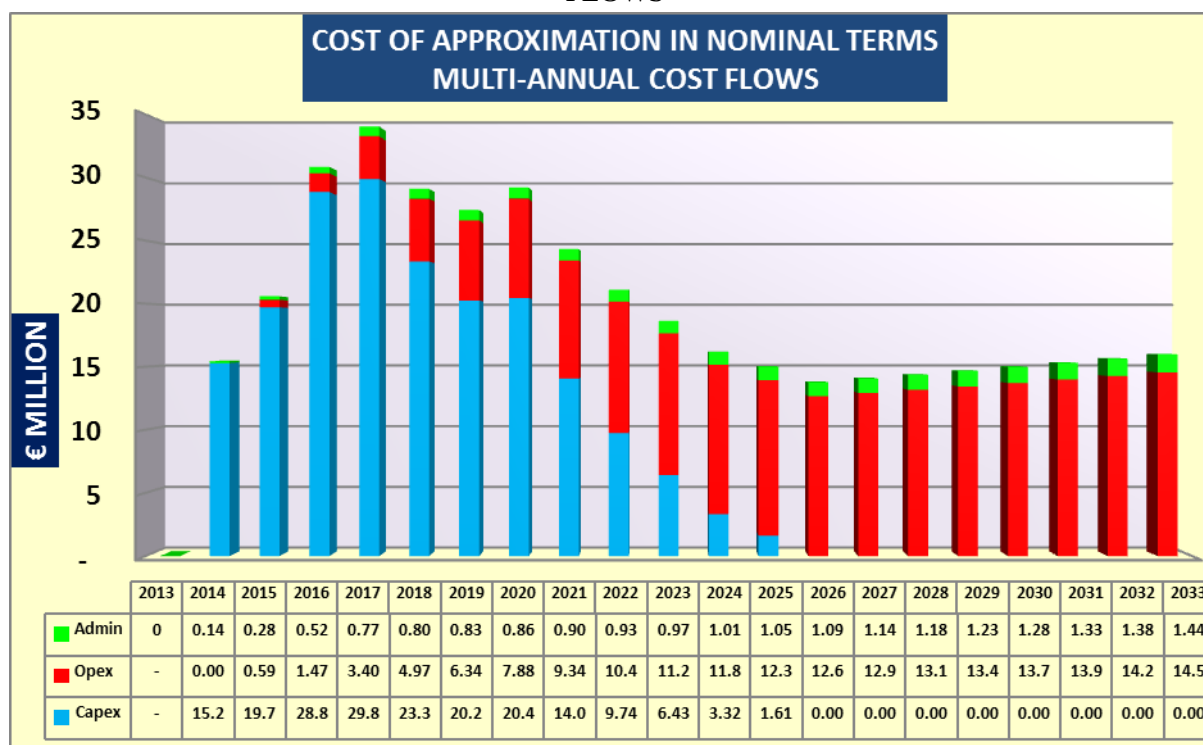
On the basis of the prior targets of approximation, the defined volumes in % of population served by a fully compliant system and the unit costs defined, the cost of approximation can be evaluated on a multi-annual basis. This is illustrated below in nominal terms, distributed as Capex, Opex and Administrative costs.

2.3.1.6.1. Drinking water

Capex peaks at almost over €30 Million per annum in 2017, mainly on account of the short-term Flood Protection urgent actions envisaged. Opex increases to a substantial €14,5 Million per annum in 2033.

Administrative Costs build up as Opex does, but on a much lower scale, and reach €1,4 Million per annum in 2033. The cost of approximation undiscounted, that is, in nominal terms, is indicated below.

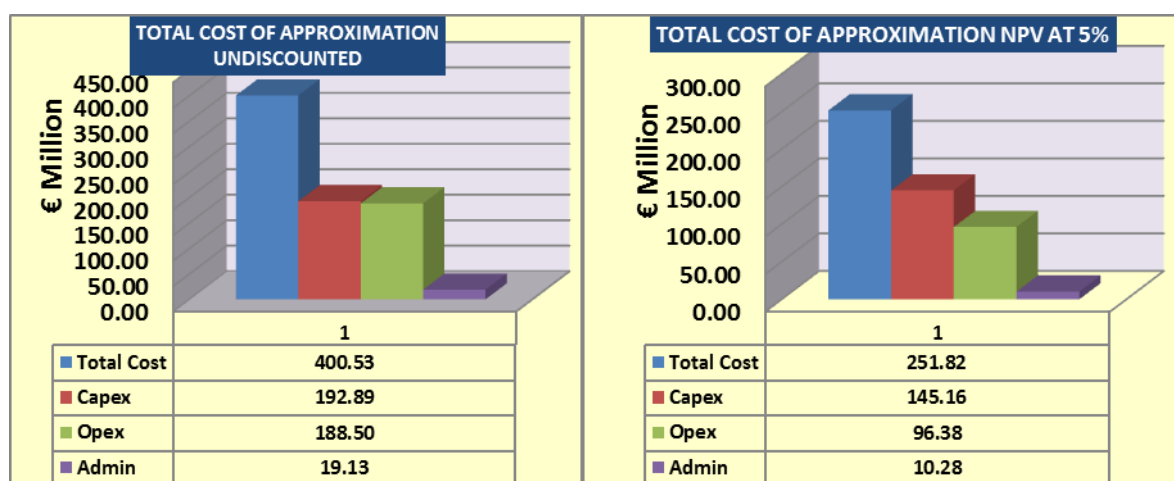
Graph VI: COSTS OF APPROXIMATION IN NOMINAL TERMS – MULTIANNUAL COST FLOWS



The total cost of €401 Million to 2033 is, however, a general figure the true value of which depends on the chronological deployment of the costs. Such a magnitude, payable in 2014 is not the same as if it is due, for example in 2033. Thus to define a comparable figure and eliminate time distortions, the cost flows are discounted back to their value in 2013 terms. This is the Net Present Value (NPV) concept and it is the indicator used in economics to determine present day costs of a policy decision. The discount rate used is 5%, the same as presently recommended for large infrastructure projects. This magnitude is indicated in the chart below:

- Investment expenditures, Capex, are estimated at € 145 Million to be incurred prior to 2025;
- Opex, to 2033, is a considerable (and ongoing) cost amounting to that date to €96 Million in present day terms;
- Administrative costs are estimated at € 10,3 Million, averaging, in NPV terms, approximately € 1,4 Million per annum.

Graph VII: TOTAL COST OF APPROXIMATION UNDISCOUNTED/DISCOUNTED

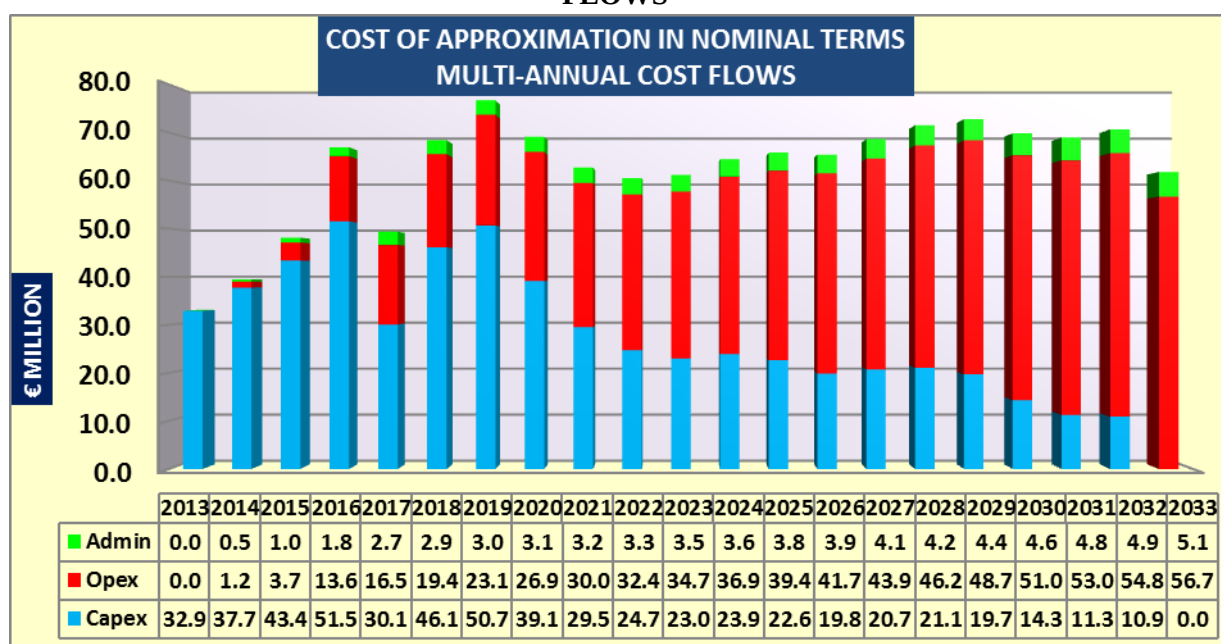


Overall, the approximation cost in Drinking Water is estimated to be € 252 million.

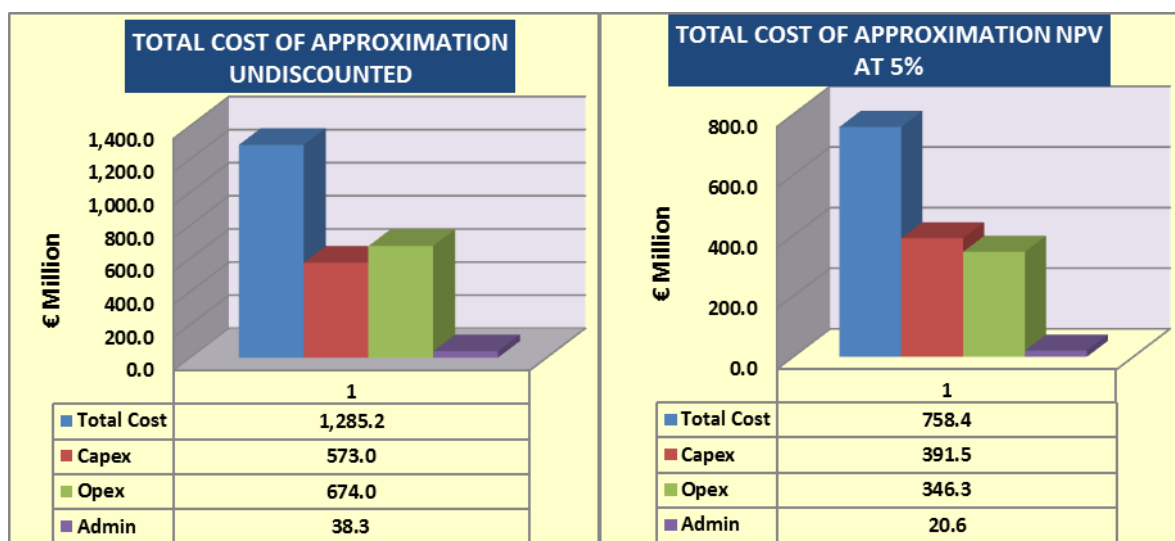
2.3.1.6.2. Urban wastewater

Capex peaks at just over €51 million per annum in 2016, mainly on account of the short term wastewater works to be undertaken in major agglomerations. Opex increases to a substantial €57 Million per annum in 2033. Administrative costs build up as Opex does, but on a much lower scale, and surpass €5 million per annum in 2033. The cost of approximation undiscounted, that is, in nominal terms, is indicated below.

Graph VIII: COST OF APPROXIMATION IN NOMINAL TERMS-MULTIANNUAL COST FLOWS



Graph IX: TOTAL COST OF APPROXIMATION UNDISCOUNTED/DISCOUNTED



The total cost of €1.285 Million to 2033 is, however, a general figure the true value of which depends on the chronological deployment of the costs. Such a magnitude, payable in 2014 is not the same as if it is due, for example in 2033.

Thus to define a comparable figure and eliminate time distortions, the cost flows are discounted back to their value in 2013 terms. This is the Net Present Value (NPV) concept and is the indicator used in economics to determine present day costs of a policy decision.

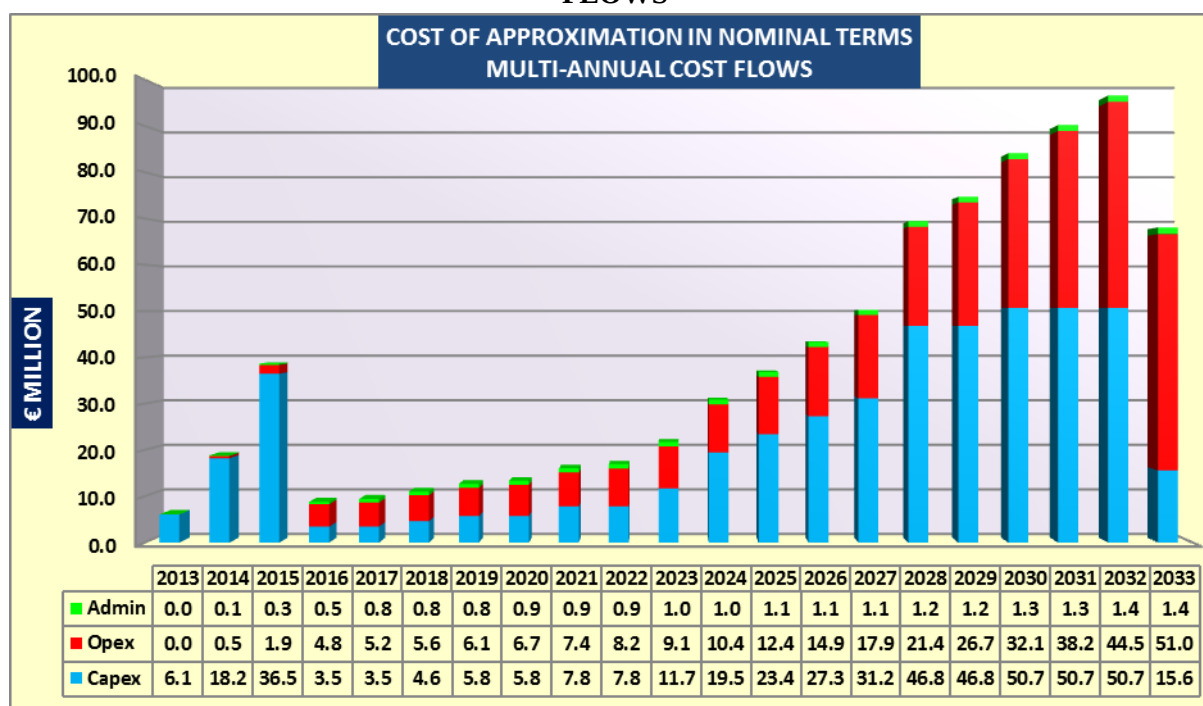
The discount rate used is 5%, the same as presently recommended for large infrastructure projects. This magnitude is indicated in the graph below:

- Investment expenditures, Capex, are estimated at €392 million to be incurred prior to 2033;
- Opex, to 2033, is a considerable (and ongoing) cost amounting to that date to €346 million in present day terms;
- Administrative costs are estimated at €20,6 million, averaging, in NPV terms, approximately €2,6 million per annum.

2.3.1.6.3. Flood protection

Capex peaks at just over €57 Million per annum in 2030/2032, although it reaches €36 Million in 2015, mainly due to short-term urgent works foreseen by the Water Strategy of RS/BiH. Opex increases to a substantial €51 Million per annum in 2033. Administrative Costs build up as Opex does, but on a much lower scale, and amount to €1,44 Million per annum in 2033. The cost of approximation undiscounted, that is, in nominal terms, is indicated below.

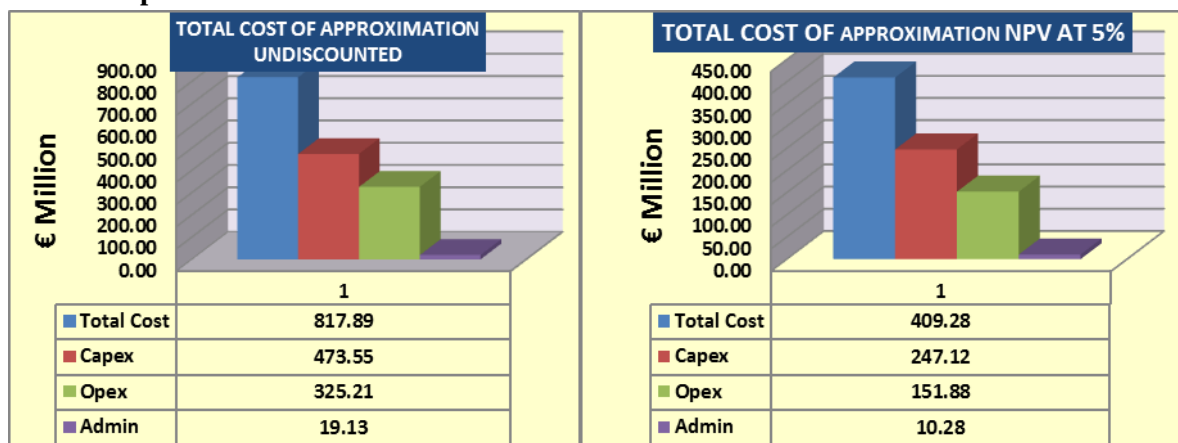
Graph X: COST OF APPROXIMATION IN NOMINAL TERMS – MULTI-ANNUAL COST-FLOWS



The total cost of €818 Million to 2033 is, however, a general figure the true value of which depends on the chronological deployment of the costs. Such a magnitude, payable in 2014 is not the same as if it is due, for example in 2033. Thus to define a comparable figure and eliminate time distortions, the cost flows are discounted back to their value in 2013 terms. This is the Net Present Value (NPV) concept and is the indicator used in economics to determine present day costs of a policy decision. The discount rate used is 5%, the same as presently recommended for large infrastructure projects. This magnitude is indicated in the chart below:

- Investment expenditures, Capex, are estimated at the total of €247 million to be incurred prior to 2033;
- Opex, to 2033, is a considerable (and ongoing) cost amounting to that date to €333 million in present day terms;
- Administrative costs are estimated at €10,3 million, averaging, in NPV terms, approximately €1,4 million per annum.

Graph XI: TOTAL COST OF APPROXIMATION UNDISCOUNTED/DISCOUNTED



Overall, the approximation cost in flood protection sector is estimated to be €409 million, which constitutes a significant obstacle since the factor of costs recovery is very low and indirect, unlike with the drinking water and urban wastewater sector.

2.3.1.7. CONSIDERATION FOR FINANCING

There will be three key financing sources:

- EU funds and international donations;
- Local sources of financing;
- Credits/loans provided by foreign banks and international financial institutions (IFIs).

Local contributions will be obtained from:

Through water fees;

Through special (dedicated/earmarked) fees realized based on other laws;

Through revenues of WS companies realized by increased prices of services (cost recovery);

From specially dedicated funds of entity, cantonal and municipal budgets;

From the assets of public loans;

Based on special (earmarked) taxes;

Based on Law on Concessions.

The amounts required imply that serious limitations will be forthcoming on account of the severe affordability constraints, both at household level, affecting cost recovery and at national level, affecting, especially, flood protection.

This will probably imply that the 20 year period initially considered to 2033 will prove insufficient. Thus, this analysis will be revised in the EAS when the Economic Gap is linked to said affordability constraints.

2.3.2. WASTE MANAGEMENT

2.3.2.1. BASELINE

There are fifteen pieces of EU legislation in the sector. Three of them are considered especially complex and/or expensive to transpose and implement:

- The Waste Framework Directive;
- The Packaging and Packaging Waste Directive; and
- The Landfill Directive

The Waste Framework Directive, (2008/98/EC) establishes the following waste management hierarchy:

- Prevention;
- Preparation for re-use;
- Recycling;
- Recovery operations (i.e. energy recovery from landfill gas);
- Disposal.

Furthermore, it introduces two basic concepts:

- Waste as a by-product;
- The end-of-waste status.

It encourages, although it does not oblige, MSs to pursue extended producer responsibility defined as “responsibility for the environmental impact of a product throughout its life-cycle”.

The implementation of the Waste Framework Directive requires an effective permitting system for waste collectors, transporters, waste-management companies, users of waste as raw materials and all other intervening bodies. A strong monitoring and inspection capacity is also required, especially in the first year of implementation, to reduce the very negative impact of non registered waste producers, which would undermine the system when most vulnerable.

It also requires the establishment of an integrated and sufficient network of waste disposal installations, including the recovery of mixed municipal waste.

The approach to estimating the cost of approximation for BiH in this sector takes into account all these components so as to define an integrated waste management system. Thus unit costs and sector volumes have been established on the basis of such a system.

2.3.2.2. RATIONALE FOR THE COST ESTIMATE

Based on the draft RS Waste Management Strategy and parallel preprojects of technical support, including the feasibility studies planned and performed, a starting point for the waste management situation in RS can be estimated for the purposes of this cost analysis by distributing the different regions into 4 categories

- Regions with established close to sanitary level landfills (REL);
- Regions with works commenced in establishing such facilities (RWC);
- Regions where there is an inter-municipal agreement, an important prior step (RMAS);

- Regions, which are as yet undefined (UNDEFINED).

The next step consists in establishing the population presently included in each category and an estimate of the % of full cost that will be needed to upgrade the service to such populations to compliant status.

The results of this analysis are indicated below.

Table X: POPULATION DISTRIBUTION ACCORDING TO COMPLIANCE GAP STATUS

Waste Management Regions	Population	% Full Cost
Regions with Established Landfills	486.091	35,00%
Regions with Works Commenced	202.212	90,00%
Regions with Inter-municipal Agreement	404.336	100,00%
Undefined	234.352	100,00%
TOTAL FOR RS	1.326.991	

This provides us a basic, but reasonably realistic indication of the infrastructure gap to be addressed in economic terms.

2.3.2.3. UNIT COSTS

2.3.2.3.1. Introductory notes

For the implementation of a municipal solid waste (MSW) management system that is fully compliant a series of Investment (Capex) costs, Operation & Maintenance (Opex costs) and Administrative (Admin) costs will be incurred, the unit costs for establishing such a system should be expressed in terms of unit cost per population.

To establish a RS unit cost reference, combined were the following:

- A case study, reproduced herewith, for a standard population unit of 435.000 inhabitants, considered as at 2013, an optimum number for a regional system;
- Available International references of costs as experienced in other transition economies;
- The observed costs in RS projects and feasibility studies

These references are summarized below.

2.3.2.3.2. Case study

Summarized investment expenditures from the case study:

- The minimal total investment for compliance with EU requirements for a case of 435.000 inhabitants is € 35.717.764 (undiscounted, without any replacement);
- This is equivalent to an Investment of €82.1 per Capita;
- O&M expenditures.

Summarized operational expenditures for collection from the case study comprise

the minimal total O&M cost for compliance with EU requirements for a case of 435.000 inhabitants is €8.372.202 /a and related to the number of inhabitants €19.25 /cap. and year.

2.3.2.3.3. Feasibility study

Available FS figures for Republika Srpska, FBiH and BD have been derived from available projects. The average equivalent cost per capita is indicated below.

Table XI: FEASIBILITY STUDY REFERENCES

U BiH	€/PE
Capex	86
Opex	16

2.3.2.3.4. International references

Average equivalent unit costs in other regionally related countries are summarized below.

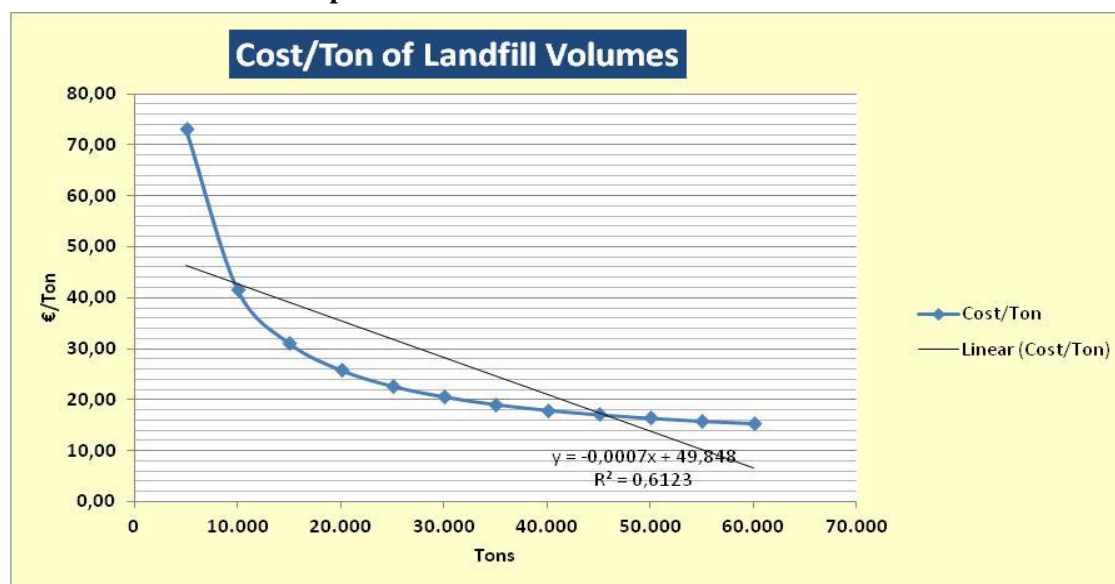
Table XII: RESULTS IN AVERAGE €/PE

RESULTS IN AVERAGE €/PE		
REFERENCE	CAPEX	OPEX
SERBIAN SECTOR	70,37	15
ROMANIA	91,04	15
BULGARIA	85,30	17
CROATIA	80,51	11.
POLAND	92,49	17
BOSNIAN FS	85,66	16
EAS BREF UNIT COST FOR BIH	84,23	15,14

2.3.2.3.5. Adjustments of these references to the conditions in RS

The distribution of costs indicated above are for average sized regions which are probably of a greater size than will be applied in RS, given its territory and institutional organization. The cost per ton of waste is directly related to volume concentrated, as is illustrated below

Graph XII: COST / TON OF LANDFILL VOLUME



Thus, for the EAS purpose, to further adjust these unit costs to idiosyncratic conditions in RS, a cost/ton index was developed, which is applied to the different types of regions detailed above.

Table XIII: COST PER TON INDEX

TONS	CAPEX COSTS		OPEX	COST/TON	INDEX
	Fixed	Variable			
1	315.152	3	7	315.162	2.047.834
5.000	315.152	17.120	33.573	73,17	475,43
10.000	315.152	34.240	67.146	41,65	270,65
15.000	315.152	51.395	100.720	31,15	202,40
20.000	315.152	68.479	134.293	25,90	168,27
25.000	315.152	85.599	167.866	22,74	147,79
30.000	315.152	102.719	201.439	20,64	134,14
35.000	315.152	119.839	235.013	19,14	124,39
40.000	315.152	136.959	268.586	18,02	117,07
45.000	315.152	154.078	302.159	17,14	111,38
50.000	315.152	171.198	335.732	16,44	106,83
55.000	315.152	188.318	369.306	15,87	103,11
60.000	315.152	205.438	402.879	15,39	100,00

This concept has been applied to RS as follows.

Table XIV: SUMMARY OF UNIT COSTS FOR CAPEX CALCULATIONS

UNIT COST FOR CAPEX SUMMARY	Number	Population	Average	Tons p/a	Cost Index	BASE	APPLIED
Regions with Established Landfills	2	486.091	277.767	95.741	100,00	85,66	85,66
Regions with Works Commenced	1	202.212	144.437	49.785	106,30	85,66	91,05
Regions with Inter-municipal Agreement	3	404.336	144.406	49.774	106,30	85,66	91,05
Undefined	3	234.352	74.398	25.644	147,79	85,66	126,59

Thus the Capex unit costs indicated above which range from €85.66 to €126.59 per inhabitant have been applied to different regions defined for this cost of approximation analysis.

Opex costs have been estimated following the formula indicated below.

Table XV: UNIT COSTS FOR OPEX ZA OPEX

OPERATIONS & MAINTENANCE COSTS		TIPIFIED PROJECT INVESTMENTS	
REPLACEMENT CYCLE		CIVIL WORKS	23,98%
		DYKES & CASSETTES	12,16%
		INSTALLATIONS & PLANT	12,08%
		MACHINERY & HEAVY VEHICLES	18,93%
		CLOSURE OF UNSANITARY LANDFILLS	23,83%
		ENGINEERING, SUPERVISION,..	9,00%
UNIT COSTS			
	Replacement		5,67%
	O&M		18,53%

The resulting Opex unit cost per inhabitant is €18.92 (Annual Average NVP €/Cap).

These figures are within the ranges observed in the case study and in the international references and close to those indicated in RS feasibility study. The general upward adjustment in Capex unit costs is justified on the basis of the fact that the compliant systems will be applied to smaller regions.

NOTE: This methodology links Opex costs to compliance targets in terms of % population served by a fully compliant service, which will be, de facto, the basis of BiH's commitment to the EU.

2.3.2.4. TARGETS OF COMPLIANCE

Although it must be recognized as premature to establish targets for compliance and the following Table simply constitutes a best to date estimate, it is important to have a methodology and an order of magnitude so as to determine more accurately future policy as the position of RS becomes clearer.

In this case, the targets for compliance have been established as % population to be served by a fully compliant solid waste management system.

Table XVI: TARGETS FOR BRIDGING THE GAP

CI TARGETS FOR BRIDGING THE GAP (COMPLIANCE)															
Agglomeration	Population	% total/g	Current	Projected targets											
			2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
REL	1.407.961	SERVICED	0,00 %	10,00 %	25,00 %	40,00 %	60,00 %	80,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %
			0	140.036	351.990	563.185	844.777	1.126.369	1.337.563	1.337.563	1.337.563	1.337.563	1.337.563	1.337.563	1.337.563
RWC	585.706	SERVICED	0,00 %	15,00 %	40,00 %	65,00 %	90,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %
			0	210.054	234.282	380.709	527.135	556.420	556.420	556.420	556.420	556.420	556.420	556.420	556.420
RMAS	1.171.156	SERVICED	0,00 %	0,00 %	0,00 %	5,00 %	15,00 %	30,00 %	45,00 %	60,00 %	80,00 %	95,00 %	95,00 %	95,00 %	95,00 %
			0	0	0	58.558	175.673	351.347	527.020	702.694	936.925	1.112.599	1.112.599	1.112.599	1.112.599
UNDEFI	678.80	USLUŽENO	0,00	0,00	0,00	0,00%	0,00%	5,00%	15,00	30,00	45,00	60,00	80,00	90,00	95,00

NED	1		%	%	%				%	%	%	%	%	%	%
			0	0	0	0	0	33.940	101.820	203.640	305.460	407.280	543.041	610.921	644.861
TOTAL	PERS ONS		0	350.090	586.273	1.002.451	1.547.585	2.068.076	2.522.824	2.800.318	3.136.369	3.413.863	3.549.623	3.617.503	3.651.443
	% POP.		0,00%	9,11%	15,25%	26,08%	40,26%	53,81%	65,64%	72,86%	81,60%	88,82%	92,35%	94,12%	95,00%

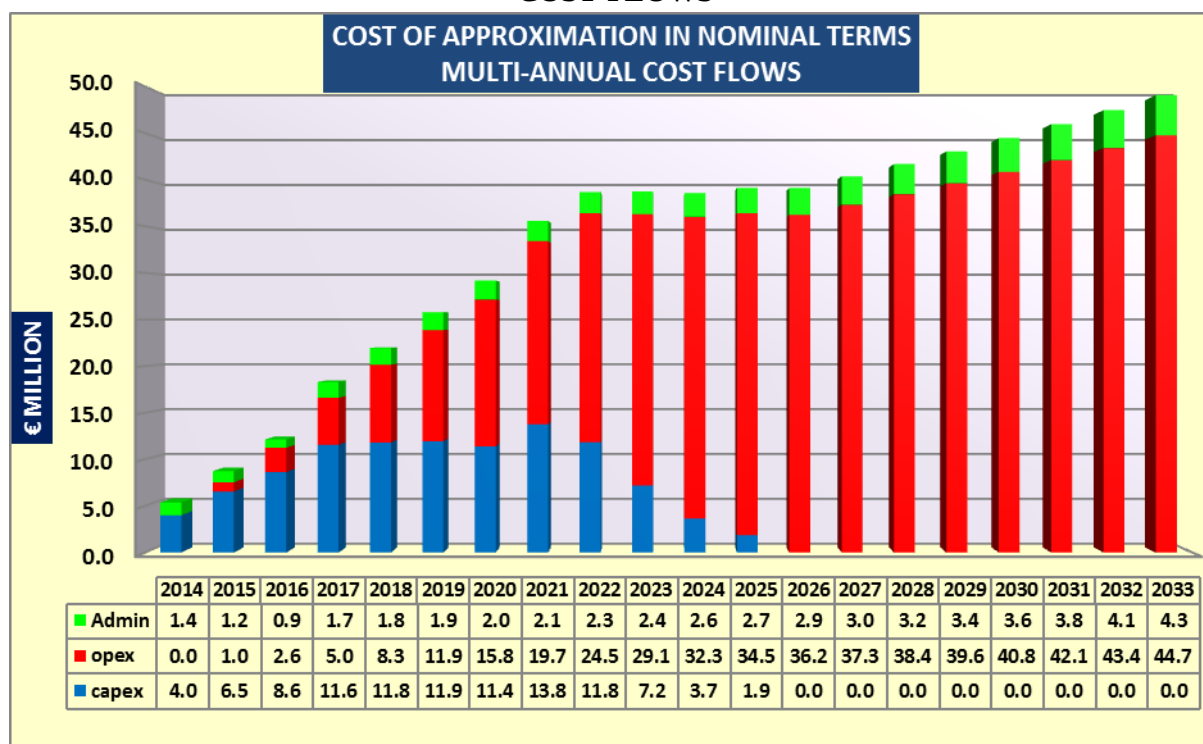
From the current status and the defined target, a chronological targeting sequence for approximation has been defined. This, obviously, is a for the EAS purpose best estimate and does not reflect a specific policy for RS which, as previously indicated, does not as yet exist in these terms.

As can be observed, the target date for approximation to the EU 27 country average objectives is 2025.

2.3.2.5. COSTS OF APPROXIMATION

On the basis of the prior targets for compliance, the defined volumes in % of population served by a fully compliant system and the unit costs per inhabitant, the cost of approximation can be evaluated on a multi-annual basis. This is illustrated below in nominal terms, distributed as Capex, Opex and Administrative costs.

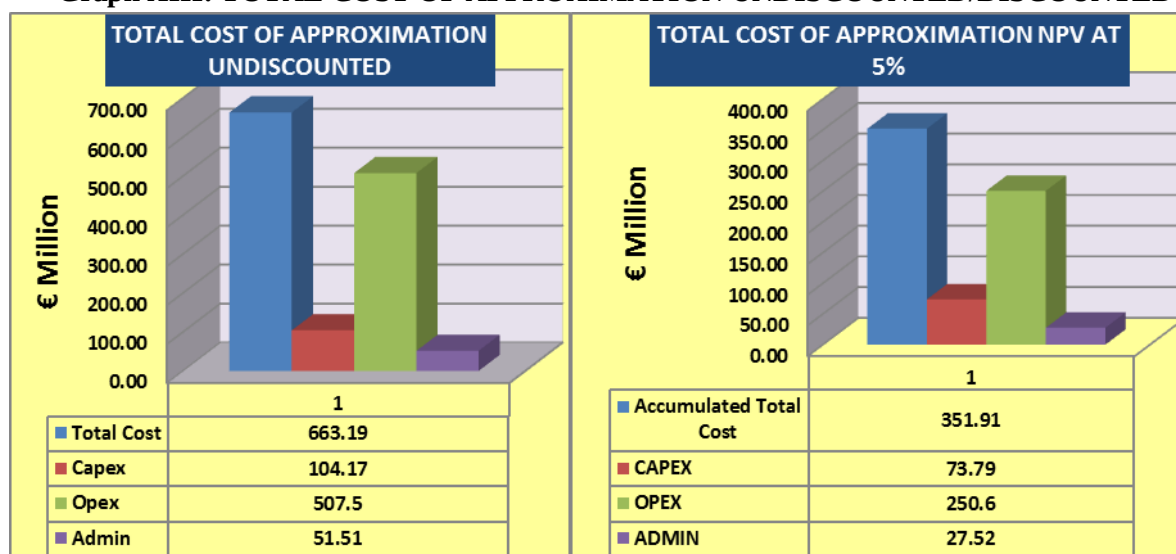
Graph XVII: COST OF APPROXIMATION IN NOMINAL TERMS – MULTI-ANNUAL COST-FLOWS



Capex peaks at almost € 14 million per annum in 2021. Opex increases to a substantial €45 million per annum in 2033. This reflects an important characteristic of the waste sector, that it is Opex heavy, i.e. a unit of investment in the field of waste management implies a large stream of opex costs that impinge directly on the household affordability constraints. Administrative costs build up as Opex does, but on a much lower scale, and reaches €4,3 million per annum in 2033.

The cost of approximation undiscounted, that is, in nominal terms, is indicated below.

Graph XIII: TOTAL COST OF APPROXIMATION UNDISCOUNTED/DISCOUNTED



The total cost of €663 million to 2033 is, however, a general figure the true value of which depends on the chronological deployment of the costs. Such a magnitude, payable in 2014 is not the same as if it is due, for example in 2033. Thus to define a comparable figure and eliminate time distortions, the cost flows are discounted back to their value in 2013 terms. This is the Net Present Value (NPV) concept and is the indicator used in economics to determine present day costs of a policy decision.

The discount rate used is 5%, the same as presently recommended for large infrastructure projects. This magnitude is indicated in the chart above. Investment costs are estimated at €74 million to be incurred to 2025. Opex, to 2033, is a considerably higher (and ongoing) cost amounting to that date to €251 million. Administrative costs Amount to €28 million, averaging, in NPV terms, just over €1,3 million per annum.

Total caosts of approximation in the field of solid waste management are estaimated to € 352 million.

2.3.2.6. CONSIDERATIONS FOR FINANCING

Investment costs will receive considerable support from donors, particularly the EU's IPA programme.

Other donors can be actively sought, as there are numerous programmes to assist in waste management.

However, it must be noted that waste management implies heavy Opex costs and these costs must be financed through cost recovery from tariffs. Thus the sequencing of investments in this sector will be more conditioned by household affordability constraints than by limitations to investment financing.

2.3.3. EMISSIONS IN AIR (DIE)

2.3.3.1. BASELINE

The economic impact of emissions to air are large, complex and affect a number of industries, mostly those that are comprised by the industrial emissions, climate change and air quality directives.

These types of emissions have also a great impact on health and are, to a certain extent, trans - boundary which grants their limitation/reduction a high priority.

Implementation of all requirements under these directives cannot be achieved in short term due to both the technical limitations to establish a reliable inventory and monitoring system and the affordability constraints that will slow down the pace of implementation.

It is likely that the implementation process will take a minimum of seven to ten years once the strategy and realistic implementation plans are finalized. It is a prior necessity to commencement of effective implementation that a phased program of implementation and a reliable plan be prepared for the introduction of control of each industrial sector under IED in order to be able to allow the resources of those organizations involved to cope with the required investments. This, in turn, requires reinforcing the existing databases that must be coordinated closely for the whole territory of RS. Coordination with industry, particularly in the energy sector, will be essential.

2.3.3.2. RATIONALE FOR COST ESTIMATE

Cost is a major consideration in meeting the approximation and implementation requirements of the approximation process. There are a variety of costs to be met, which can be grouped as follows:

- Costs to be borne by the administration:
 - the preliminary costs of setting up, or restructuring, a regulatory body and any agencies that it might require — this will include costs associated with physical and human resources and training;
 - costs of introducing a permitting and enforcement regime and carrying out inspections;
 - costs associated with identifying the installations to be covered by the directives and assessing their current situation;
 - costs associated with the development of BAT guidelines and guidance documents for each industrial sector;
 - costs associated with consultation;
 - costs of data recording and reporting;
 - training costs; and
 - the continued 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, whereby — through levying a charge for the permit and regulatory regime — the government recoups the costs of regulation from the operators and installations. There should be a complete cost recovery for all the expenses associated with permits, whereas the schemes such as EMAS and eco-labelling should be entirely self-financing as far as the regulatory bodies are concerned.

- Cost to industry:

It is clear that the costs of compliance for the industry will be far greater than the direct costs of implementing the legislation. The costs of ensuring that large combustion plants reduce emissions to an acceptable level may include the construction of new plants to replace outdated ones, the addition of new units to less-polluting plants to compensate for the loss of energy from the shut-down of those that cause major pollution, the changing of units within a plant so that less-polluting fuel can be used and so on. The IED Directive imposes far-reaching obligations and substantial costs on industry and government at all levels.

Application of the principles of BAT will be a key determining factor in the costs to each industrial

sector. The biggest price to pay ultimately could be the closure of certain plants. The BREF documents should be able to provide some guidance in this area and the assessment of local circumstances and conditions will also have a large influence.

- The evaluation of costs has been performed in two stages:
 - A preliminary analysis based on the existing budgets of various institutions, which have been made available. The RS databases have been extensively used so as to establish the present situation. This initial estimate provided a baseline figure on Emissions that enabled establishing the framework for a baseline scenario. Subsequently, projections of growth in GHG have been derived from various TA projects and locally derived statistics creating a Business as Usual Scenario (BAU), that is, the likely increase in emissions if no abatement measures are taken. The difference between the BAU and the estimated limits to be applied under the EU legislation, Kopenhagen and other international treaties, will provide a rough estimate of the volumes of gases that need to be reduced through abatement measures;
 - The abatement costs of reducing emissions have been estimated on the basis of international references and applied to the volumes that need to be reduced thus providing an estimate of the cost of approximation in this sector.

2.3.3.3. ABATEMENT COSTS

Abatement costs have been derived from the application of the Regional Air Pollution and Simulation model (RAINS) to the EU 25 States (Romania, Bulgaria and Croatia were not included at the time this exercise was undertaken).

It is the most complete study on the costs of reducing emissions performed to date and has been considered as a reasonable option to apply to RS, where such data has not been generated.

They are summarized in the Table below.

Table XVIII: ABATEMENT COSTS FOR POLLUTANTS

ABATEMENT COSTS					
RAINS MODEL FOR EU EMISSION LIMITS SCENARIO B (INTERMEDIATE) FOR EU 25					
POLLUTANT	TONS REDUCED	COSTS		RANGE EU 25 EPRTR BASED	
	2005-2020	(LEVELIZED €MM)	COST/TON	LOW	HIGH
SO ₂	1.238.000	14.010	11.317	5.600	16.000
NO _X	1.592.000	14.970	9.403	4.400	12.000
NH ₃	1.088.000	38.925	35.777	11.000	31.000
PM	255.000	9.540	37.412	26.000	75.000
VOC	977.000	1.770	1.812	950	2.800
ABATEMENT COSTS ARE FOR REFERENCE. THE COSTS OF EMISSIONS TO AIR ARE BASED ON THE TA PROJECT "IMPROVING EMISSIONS CONTROL" WHICH DEALS WITH EMISSION MANAGEMENT STRATEGIES AND PROPOSED CELINGS FOR TURKEY. IT MUST BE NOTED THAT COMBINED TECHNOLOGIES FOR MORE THAN ONE POLLUTANT REDUCE THE COSTS INDICATED ABOVE WHICH ARE SEPARATE ABATEMENT COSTS FOR EACH POLLUTANT. UNIT COSTS FOR OUR PURPOSES ARE DERIVED AND ADAPTED FROM SCENARIO B (THAT RECOMMENDED). FOR THE CEMENT INDUSTRY A DIRECT REDUCTION TO SCENARIO B WITH ADEQUATE TRANSITION TIME IS CLEARLY A MORE COST EFFECTIVE OPTION AND AS SUCH HAS BEEN INPUT IN THIS ANALYSIS..					

The procedure to apply such costs to RS has been to take the intermediate cost within the range and adapt it through application of the € inflation index from the year the calculation was made to 2013.

In NMVOCs a lower range has been applied, given BiH's geomorphological characteristics and relatively low intensity cement industry.

Table XIX: ABATEMENT COSTS

ABATEMENT COSTS	NO_x	SO₂	NMVOC
In € per Ton removed	9.403	11.317	39.224

2.3.3.4. Targets for compliance

As an initial target for the purposes of the economic gap estimate, 2023 has been established for the cement, VOCs and other non-energy sector industries.

For the energy sector, which produces the largest share of emissions and thereby bears the largest share of abatement costs, 2025 has been established. It must be noted, however, that such a date may not be achievable due to the affordability constraints that will be established in the EAS, as the energy sector costs impact directly upon household affordability through the price of electricity

Table XX: TARGETS CONCERNING EMISSIONS TO AIR

EMISSION TARGETS (Target achievement)													
Sector	2013.	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2021.	2022.	2023.	2024.	2025.
Energy Sector	1%	2%	5%	9%	14%	20%	27%	35%	45%	57%	72%	90%	100%
Cement	3%	10%	20%	35%	50%	60%	70%	80%	90%	95%	100%	100%	100%
VOCs	2%	10%	17%	25%	35%	45%	60%	70%	80%	90%	100%	100%	100%
Other	2%	10%	20%	35%	50%	60%	70%	80%	90%	95%	100%	100%	100%

2.3.3.4.1. Cost of approximation

To estimate the cost of approximation, it will be necessary to apply the abatement costs to the volume of emissions that need to be reduced. The volume of emitted polluting substances to be removed (i.e. the volume of the main pollutants - SO₂, NO_x and NMVOCs to be reduced) has been estimated on the basis of the existing levels and proposed emission limits to 2025.

Table XXI: EXISTING LEVELS OF EMISSIONS (ESTIMATED IN 2013)

EXISTING LEVELS OF EMISSIONS (estimated for BiH in 2013) Emissions in Tons				
	Year	NO _x	SO ₂	NMVOC
BASELINE ESTIMATES PRE-WAR	1990.	28.459	157.112	9.454
BEST ESTIMATES VARIOUS SOURCES	2004.	19.250	146.650	13.231
BEST PROJECT ESTIMATE	2013.	28.000	157.500	14.000

To estimate the volume of pollution to be removed, a BAU Scenario has been established showing the expected growth of emissions in RS over the coming years.

Table XXII: TOTAL GHG EMISSIONS GROWTH

TOTAL GHG EMISSIONS GROWTH		
Year	Volume	Increase
2010.	8.092	BASELINE
2015.	9.013	1,11
2020.	9.405	1,16
2025.	9.912	1,22
2030.	10.945	1,35

The year 2010 is established as a baseline scenario. This means that it is assumed to be the Volume of emissions which RS will need to achieve in accordance with its international (Gothenburg Protocol) and EU commitments by 2025.

This will imply a reduction on the “BAU” scenario equivalent to 22% of present day emissions. In tons this translates to the following volumes to be abated

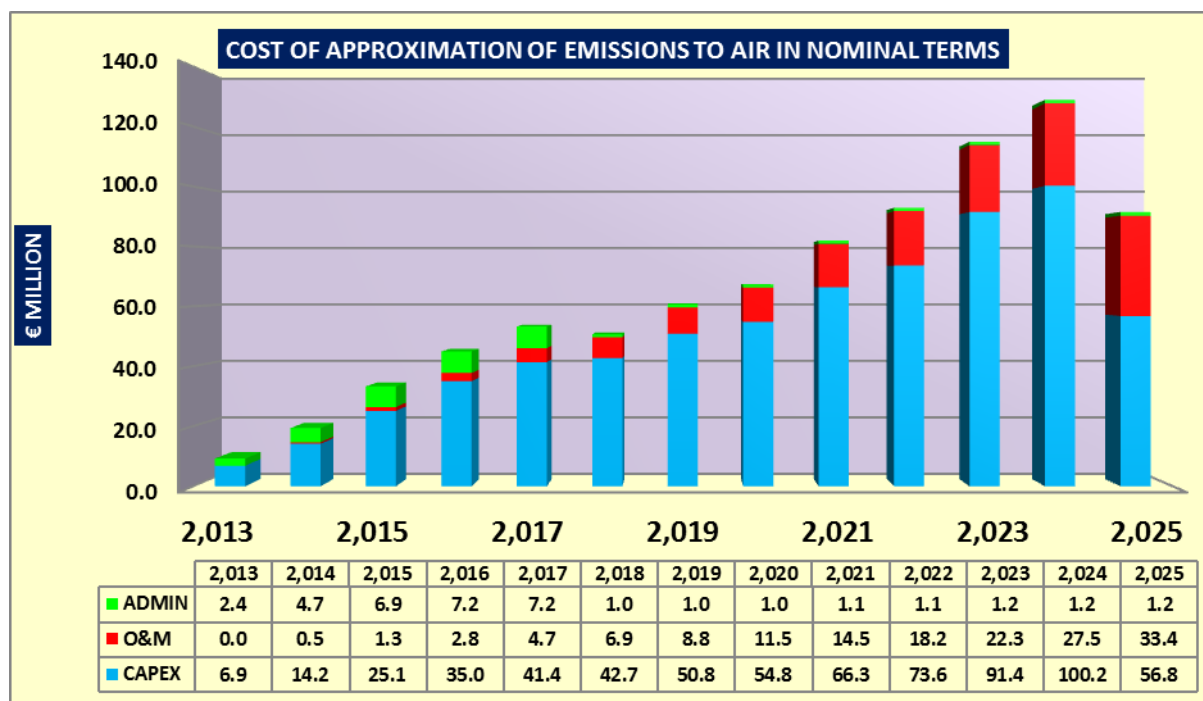
Table XXIII: VOLUMES TO BE ABATED

EQUIVALENT ABATEMENT TO 2025	NO _x	SO ₂	NM VOC
In Tons based on 2013 volumes	6.160	34.650	3.080

These proposed emission limits can by no means be considered a fixed objective of RS policy, but are a proposal that would roughly comply with the acquis (and the Gotheburg Protocols) by that date. It is thus a reasonable reference for the purposes of EAS, although a much more thorough study will need to be made in order to provide a valid basis for joining the EU Emissions Trading Scheme (ETS) and negotiate appropriate transition periods with the EU.

On the basis of the prior targets for compliance, the defined abatement costs and the estimated volumes of pollution to be removed, the cost of approximation can be evaluated, albeit simplistically, on a multi-annual basis. This will establish a reasonable order of magnitude and an initial timetable. This is illustrated below in nominal terms, distributed as Capex, Opex and Administrative costs

Graph XIV: COST OF APPROXIMATION IN THE EMISSIONS TO AIR IN NOMINAL TERMS



Capex peaks at just over € 100 Million per annum in 2024. Opex increases to significant €33 Million per annum in 2025. This is a substantial and recurring cost that will have to be fully absorbed by cost recovery from users. Administrative costs are high in the first five years, when it is assumed that the actions required to set up the different inventories, action plans, etc. will be concentrated. Administration costs after this initial stage remain at approximately €1.2 million p.a.

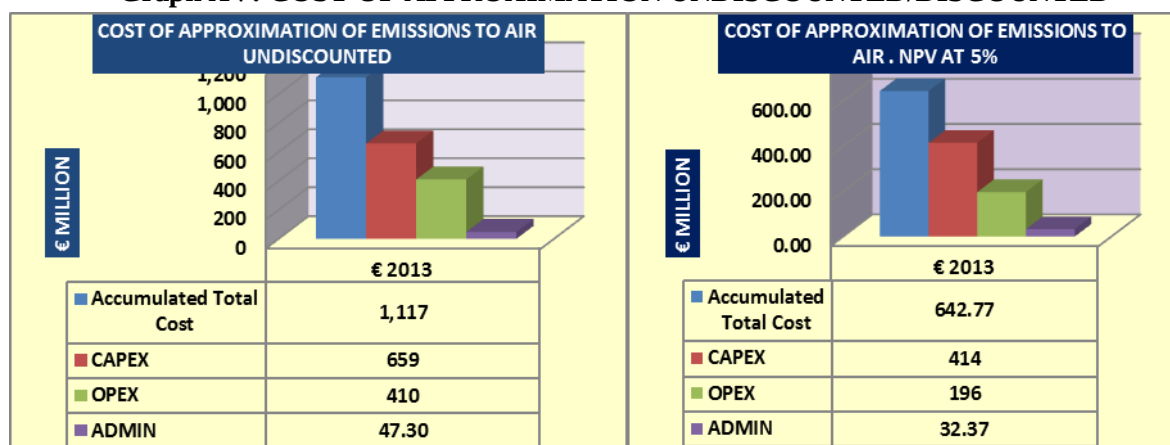
The total cost of €1.117 million to 2033 is, however, a general figure the true value of which depends on the chronological deployment of the costs. Such a magnitude, payable in 2014 is not the same as if it is due, for example in 2033.

Thus to define a comparable figure and eliminate time distortions, the cost flows are discounted back to their value in 2013 terms. This is the Net Present Value (NPV) concept and it is the indicator used in economics to determine present day costs of a policy decision.

The discount rate used is 5%, the same as presently recommended for large infrastructure projects. Investment costs, Capex, are estimated at €4.143 million to be incurred prior to 2025. Opex, to 2033, is a considerable (and ongoing) cost amounting to that date to €196 million in present day terms. Administrative costs are estimated at €32 million, mainly concentrated in the first 4-5 years of the implementation plans.

This magnitude is indicated in the graph below.

Graph XV: COST OF APPROXIMATION UNDISCOUNTED/DISCOUNTED



Overall, the approximation cost of Emissions to Air is estimated to be €643 million.

For further indication of the impact on industry, the costs to be incurred by the main industrial sectors responsible for emissions to air have been detailed below.

Table XXIV: DISCOUNTED INVESTMENT COSTS OF ACHIEVING TARGETS

DISCOUNTED INVESTMENT COSTS OF ACHIEVING TARGET (in € Million)					
DIRECTIVE/BUNDLE	Investment Costs	O&M Costs	ADMIN Costs	Total Costs	AFFORDABLE TARGET DATES
Energy Sector	321	157	0	478	2025.
Cement	5	3	0	8	2023.
VOCs	30	2	0	32	2023.
Other (Estimated at an additional 15%)	58	35	0	93	2023.
Administration	0	0	32	32	2023.
TOTAL AIR	414	196	32	643	2025.

2.3.4. NATURE AND BIOLOGICAL DIVERSITY PROTECTION

2.3.4.1. BASELINE

Nature conservation and the protection of biodiversity are key environmental policy objectives of EU, which are based upon principles of the sustainable use of natural resources. In March 2010, the EU heads of state and government committed themselves to achieve 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. 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

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.

2.3.4.2. RATIONALE FOR COSTS ASSESSMENT

Although the work on designating potential NATURA 2000 sites in RS is in progress, to date it was not possible to forecast all the sites which may be designated under NATURA 2000 or, hence, the proportion of RS territory that might be accounted for by such sites. The existing legislation regulating nature protection at the RS level do not contain the “appropriate assessment” procedures required by the Habitats Directive for projects that may have an impact on NATURA 2000 sites, therefore precise cost estimate is still not possible

Thus the following cost estimate must be evaluated, as a likely order of magnitude, based, primarily on the experience in neighbouring regions, as the likely evolution of protected area planning is still highly uncertain in RS.

2.3.4.3. UNIT COSTS

In general terms, unit costs should be defined in accordance with the type of protected surfaces envisaged. For the purpose of EAS, a simplistic matrix of unit costs was designed, based on specific experience in the region, particularly in Romania, Bulgaria and Croatia.

Typical investment costs associated with nature protection are:

- The preparation of management plans;
- The compensations to farmland in the protected area;
- The compensation to activities not compatible in the designated buffer zones;
- Transaction costs for the acquisition of private property in core areas;
- The purchase of equipment for ongoing monitoring, supervision and protection of the designated area.

Table XXV : UNIT COSTS APPLIED IN €/Ha TO NEW PROTECTED SURFACES

UNIT COSTS	EUR/ha
MANAGEMENT PLANS	11,85
FARMLAND	3,00
BUFFER ZONES	1,00
TRANSACTION COSTS	14,00
EQUIPMENT	3,51

2.3.4.4. TARGETS FOR COMPLIANCE

Although it must be recognized as premature to establish targets for compliance and the following Table simply is a best to date estimate, it is important to have a methodology and an order of magnitude so as to determine more accurately future policy as BiH's position becomes clearer. In this case, the targets for compliance have been established as surface that will need to be protected for reaching an average EU figure as indicated in the most recent EEA's publication on the subject: t: PROTECTED AREAS IN EUROPE, AN OVERVIEW (2012)⁶³.

Table XXVI: SURFACE OF PROTECTED AREAS IN RS

REVIEW OF PROTECTED AREAS BiH COUNTRY SURFACE= 51.210 km ²							
CATEGORY	No	TYPE	TOTAL PROTECTED AREA (ha) CURRENT STATE	ADDITIONAL PROTECTION (ha) FOR CONVERGENCE TO EU 27	TOTAL PROTECTED AREAS (ha)	% SURFACE PROTECTED 2012	2023
Ia i Ib	3	NATIONAL PARKS	20.745	1.900	22.645	0,83%	0,91%
II	2	NATURE PARKS	1.392	48.000	49.392	0,06%	1,99%
V	2	PROTECTED LANDSCAPES	0	186.000	186.000	0,00%	7,48%
IV	3	NATURE RESERVES	0	97.600	97.600	0,00%	3,93%
III	8	MONUMENTS	84	3.500	3.584	0,00%	0,14%
VI		HABITAT MANAGEMENT AND OTHER PROTECTED AREAS OF CULTURAL-HISTORIC SIGNIFICANCE	27	19.000	19.027	0,00%	0,77%
TOTAL	18		22.248	356.000	378.248	0,90%	15,22%

⁶³ "Protected Areas in Europe – an overview", European Environment Agency Report Br. 5/2012, ISSN 1725-9177, published on 22 October 2012 <http://www.eea.europa.eu/publications/protected-areas-in-europe-2012>, available on 1 July 2014

From the current status and the defined target, a chronological targeting sequence for approximation can be defined. This, obviously, is an EAS best estimate and does not reflect a specific policy for RS, which, as previously indicated, does not exist as yet in these terms.

Table XXVII: TARGETS FOR COMPLIANCE (NATURE PROTECTION)

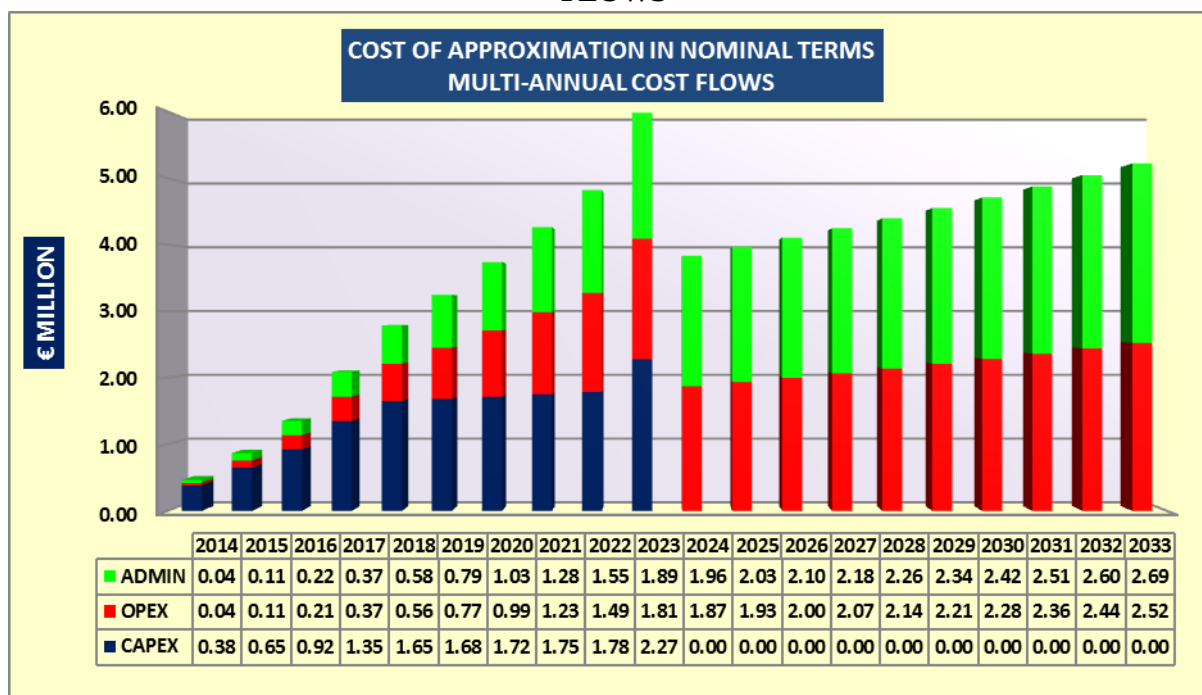
TARGETS FOR COMPLIANCE											
	Current	Projected targets.....									
	2013.	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2021.	2022.	2023.
Protected Area (18.000 unclear deduced)	22.248										
Required Extension	356.000	3%	5%	7%	10%	12%	12%	12%	12%	12%	15%
Extension in ha		11.189	18.648	26.107	37.296	44.755	44.755	44.755	44.755	44.755	55.944
Extension Convergence %		3%	8%	15%	25%	37%	49%	61%	73%	85%	100%

As seen the projected targets for approximation to the average EU27 is 2023. This date is also a realistic assessment of the most recent possible date of EU accession.

2.3.4.5. COSTS OF APPROXIMATION

On the basis of the prior targets for compliance, the defined volumes in surface to be protected and the unit costs per ha, the cost of approximation can be evaluated on a multi-annual basis. This is illustrated below in nominal terms, distributed as Capex, Opex and Administrative costs. Capex peaks at just over €2 million in 2023. Opex grows from a negligible 2014 figure to €2.5 per annum in 2033. This is not a significant figure in the context of RS policy, but it is qualitatively important and must be adequately provisioned in RS different budgets. Administrative costs build up as Opex does and reach €2.7 million per annum in 2033. The same logic as for Opex is applicable here. The cost of approximation undiscounted, that is in nominal terms, and discounted, in NPV terms, is indicated below.

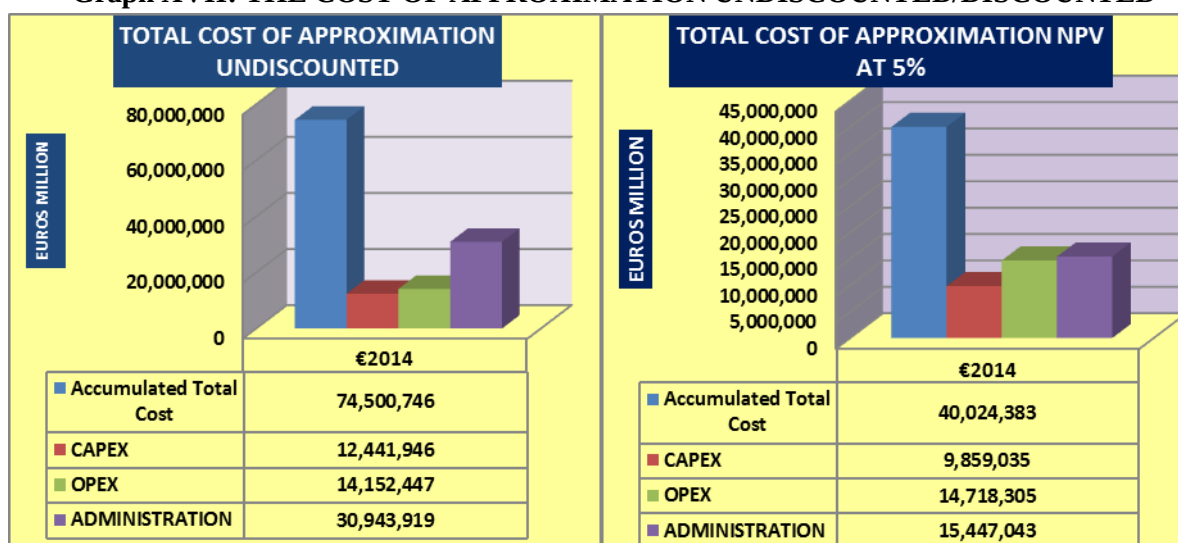
Graph XVI: COST OF APPROXIMATION IN NOMINAL TERMS MULTY-ANNUAL COST FLOWS



The total cost of €75 million to 2033 is, however, a general figure the true value of which depends on the chronological deployment of the costs. Such a magnitude, payable in 2014 is not the same as if it is due, for example in 2033. Thus, to define a comparable figure and eliminate time distortions, the cost flows are discounted back to their value in 2013 terms. This is the NPV concept and is the indicator used in economics to determine present day costs of a policy decision. The discount rate used is 5%, the same as presently recommended for large infrastructure projects.

This magnitude is indicated in the graph below.

Graph XVII: THE COST OF APPROXIMATION UNDISCOUNTED/DISCOUNTED



From the economic point of view, the main costs incurred will be in the management of the NATURA 2000 sites, an administrative burden, which up to 2033 will account for €15.4 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 €9.9 million on the basis of the surfaces planned for the sites and prior experiences in transition economies. Opex costs, the cost of physically maintaining the investments made in the sites, will almost reach €14.7 Million up to 2033.

Overall, the approximation cost in nature protection is estimated to be €40 million.

2.3.4.6. CONSIDERATIONS FOR FINANCING

The necessary investments, for which donor funding should be actively sought, will be made before accession. It is preferable, at least in the short term, that the maintenance of protected areas be directly funded from the RS budget.

In the medium to longer-term however, it will be essential to increase funding for nature conservation and biodiversity protection with user fees. These will internalise external benefits of improved protection of natural resources through the development of rural businesses. In this regard, co-operation between different institutions in RS in relation to programming for the EU - IPA II financial assistance will be important. This will also be the case in relation to the design of pilot agro-environmental measures, which could be used to support the preservation of the NATURA 2000 network in RS. Other funding opportunities should also be pursued including national research programmes and bilateral donors.

2.3.5. OTHER SECTORS

2.3.5.1. NOISE

2.3.5.1.1. Baseline

The main costs imposed upon public administration by the directives in the noise sector will be establishing the authorities responsible for overseeing the agreed noise emission levels and drawing up strategic noise maps.

Setting up laboratories or other institutions carrying out the measurements or verification measures needed concerning type-approval or type-examination costs will be borne primarily by the competent authorities, even if the services are contracted to private laboratories. Costs for the establishment and operations of public and private laboratories will be partially off-set through the fees paid by equipment and vehicle manufacturers and importers.

The main costs imposed upon producers and consumers shall be for compliance with emission limits and technical requirements under the directives. These costs will be borne by the producers of vehicles, aircraft and equipment (industry) or by consumers (households, motorists etc). Laboratory fees related to type-approval may also be transferred on the product producers.

The costs for government to adapt existing institutional arrangements and for the measurement and laboratory facilities for testing, examination and approval will depend on how the present organization evolves, which is currently uncertain.

The costs for producers and consumers will depend on the extent to which producers will need to modify equipment to meet the new environmental noise standards.

2.3.5.1.2. Costs of approximation

Most of the noise directives (those on vehicles and outdoor equipment) concern type-approval/conformity assessment of industrial products with respect to their sound level.

It is not necessary to provide actual EU type-approval services for much of the equipment and motor vehicles, because manufacturers will have applied for the type-approval in a MS. In such cases, national type-approval may be granted to EU type-approved industrial products on the basis of the importer's certificate of conformity (based on EU type-approval issued by another Member State).

Moderate costs may be incurred where verification processes are needed for the monitoring and surveillance of self-certification and full quality assurance systems. Additional costs will be incurred in order to put in place systems for the preparation of noise maps and action plans to reduce the level of environmental noise.

The enforcement of the directives may require increased staffing and training at the type-approval/examination authorities and at the facilities performing tests. More staff are needed for performing periodical checks of industrial products in use, for spot checks, and for inspections to verify the conformity of production (if the industrial products covered are being produced in the MS), and as regards verification where self-certification or full quality assurance systems are applied. These costs depend on local wage levels, as well as on the scale of testing activities. The testing activities depend on the volume and diversity of the industrial products covered by the environmental noise directives that are being introduced and tested.

The costs of personnel should include:

- Gross salaries including social security (domestic equivalent) contributions .The cost per unit of additional staff is estimated at €15.000 per annum growing at 2% p.a. in € terms;
- Overheads are estimated at an additional 70% of the above;
- Training of staff;
- Increased number of employees;

This would generate the expenses of personnel presented in the Table below (data based on the project results)

Table XXVIII: PERSONNEL COST OF APPROXIMATION FOR NOISE

COST OF APPROXIMATION FOR NOISE									
PERSONNEL COSTS	Unit costs	2013.		2014.		2015.		2016.	
		Increase	Total	Increase	Total	Increase	Total	Increase	Totl
Additional staff	Unit	0	0	1	1	0	1	2	3
Gross Salary € Increasing at 3%	15.000	15.000	0	15.450	15.450	15.914	15.914	16.391	49.173
Overheads 70%			0		10.815		11.139		34.421
Training: 150% of Personnel Costs			0		39.398		40.579		125.390

TOTAL			0		65.663		67.632		208.984
-------	--	--	---	--	--------	--	--------	--	---------

2.3.5.1.3. Environmental noise maps for agglomerations and transport

The environmental noise maps for agglomerations are estimated at an average cost of €0.25 per resident (range in previous transition economies is from €0.15 to a maximum of €2). This cost is not obligatory for agglomerations below 250.000 residents.

The noise maps for transport at a cost of for roads & railways of €0.25 per resident have been assumed only for the main agglomerations, including Banja Luka, Istocno Sarajevo and Bijeljina.

Equipment for laboratories is estimated at 25% of that of the Check Republic in 2001-2005 and distributed as follows: 40% in 2014, 40% in 2015 and 20% in 2016;

An additional €150.000 is estimated for the entire BiH, 35% of which for RS, a specific program to increase industrial competitiveness in line with experiences in other transition economies.

Table XXIX: OTHER BUDGET COST OF APPROXIMATION FOR ENVIRONMENTAL NOISE

COST OF APPROXIMATION FOR NOISE									
OTHER BUDGET COSTS	Unit Cost	2013.		2014. 50%		2015. 50%		2016.	
		Ref.	Total	Ref.	Total	Ref.	Total	Ref.	Total
NOISE MAPS AGGLOMS	€0,25/resident	0	0	249.065	31.133	192.434	24.054	0	0
NOISE MAPS TRANSPORT	€0,25/ resident	0	0	0	0	176.064	44.016	176.064	44.016
AIRPORT									
EQUIPMENT FOR LABS	300.000	0,00%	0	40,00%	42.000	40,00%	42.000	20,00%	21.000
ACTION PLANS AGGLOM	€0,25/ resident	0	0	0	0		0	249.065	21.793
ACTION PLANS TRANSPORT	€0,25/ resident	0	0	0	0	176.064	44.016	176.064	44.016
INDUSTRIAL PROGRAM	150.000	0,00%	0	0,00%	0	70,00%	36.750	30,00%	15.750
TOTAL			0		75.133		190.836		146.575

Overall the total impact on the RS budget can be estimated as follows

Table XXX: STATE BUDGET ALLOCATIONS NEEDED FOR COMPLIANCE IN NOISE

COST OF THE NOISE DIRECTIVE IN €	2013.	2014.	2015.	2016.
FROM THE RS BUDGET	0	138.796	258.469	355.559

NOTE: All these figures are reasonable preliminary estimates, which serve as examples of the type of data, which needs to be input with RS generated information as it becomes available.

National producers (private sector) will encounter additional costs when adjusting their production processes to the new noise limits, and establishing in-house noise testing facilities. If the increase in production costs is passed over to the consumer, sales reductions can result. However, if the domestic producers want to export to the EU, they will have to conform to these requirements anyway. Therefore, these costs cannot be viewed entirely as accession-related costs.

On the other hand, consumers in RS will face such price increases before joining the EU (for example, in the case of imported vehicles, when the effect of the environmental noise directive implemented in Western Europe has already been embodied in the price). As noise reduction covered by the environmental noise directives is generally achieved as part of the integrated design and construction of equipment, vehicles and of the rehabilitation & construction of new facilities and networks, it is very difficult and not relevant as a Transition period is not prescribed, to distinguish costs directly associated with the noise directives.

2.3.5.2. CHEMICALS

2.3.5.2.1. Baseline

The principal cost areas associated with the implementation of legislation in the chemical sector consist of costs of establishing the implementation systems, the day-to-day costs of maintaining them and on-going costs for tasks such as the classification of new chemical substances and employing specialist advisors/consultants. Costs will also be incurred by the competent authority to manage notifications and reporting obligations.

Most of the costs will be borne by the private sector. RS companies producing chemical substances, or importing them from outside the EU, will have to register them with ECHA. The cost of drawing up a registration dossier can be high, €250.000 and more. For substances already registered by other companies, parts of the registration may be bought second-hand. Even so, smaller importers/producers are likely either to close shop or to sell their business to companies already holding the necessary registration certificates.

Minor costs should also be taken into account for establishing and maintaining the information technology (IT) infrastructure in order to have a secure connection to the ECHA IT system, which is necessary for the exchange of data between MSs and the ECHA, and for establishing measures to ensure the confidentiality of this data.

The implementation costs to be borne by industry are very much higher than those borne by governments. As this regulation shifts the responsibility for risk assessment for manufactured, imported and used substances to industry, the workload for companies required to register substances

will be very high. Besides the costs of the staff involved, companies will need to pay for studies and tests as well as the registration fee(s). Depending on the manufactured or imported amount, and on the number of companies that have to register the same substance, the costs will differ considerably for different substances. The regulation foresees the establishment of so-called substance information exchange forums (SIEFs) in order to share information on existing data, to avoid additional testing on animals, and to save costs. It is possible for companies registering the same substance to make a joint submission (Article 11). Registrants using this possibility can also benefit from a reduced registration fee.

For other actors in the supply chain of substances there will be a greater need for handling information on the substances, which will result in some additional costs for companies not involved in the registration procedure.

The resulting figure has been multiplied by a staff cost of €15.000 p.a. and an overhead additional cost of 70% (high due to permitting requirements, monitoring and analysis, which require additional overheads). The training costs have been estimated at a total of €5 million over a 6 year period, and studies and other technical support at a total of a further €5 million over a 9 year period.

This is increased annually in €by 2% general € inflation and a further 40% of annual GDP growth projected.

2.3.5.2.2. Targets for compliance

The targets assumed for approximation for various sub-sectors are mentioned below.

Table XXXI: TARGETS FOR COMPLIANCE IN THE CHEMICALS SECTOR

TARGET ACHIEVEMENT							
SUBSTANCE	2013.	2014.	2015.	2016.	2017.	2018.	2019.
Asbestos	0%	20%	40%	70%	100%	100%	100%
GMO	0%	10%	20%	40%	60%	80%	100%
Biocides	0%	10%	20%	40%	60%	80%	100%
Other	0%	20%	40%	60%	80%	100%	100%

These targets constitute a reasonable assumption based on prior experiences in transition economies and the provision that RS can create the required coordination structures to approach this objective in a harmonized framework in the coming period

Table XXXII: COST TO THE ADMINISTRATION OF COMPLIANCE

ADMINISTRATIVE COSTS	2013.	2014.	2015.	2016.	2017.	2018.	2019.	2020.
ADDITIONAL PERSONNEL	0,00	0,01	0,03	0,07	0,12	0,12	0,13	0,14
MATERIALS	0,00	0,01	0,02	0,05	0,08	0,09	0,09	0,09
TRAINING	0,00	0,26	0,35	0,44	0,44	0,37		

STUDIES & OTHER	0,00	0,26	0,35	0,44	0,44	0,37		
FROM THE RS BUDGET	0,00	0,55	0,75	1,00	1,07	0,94	0,22	0,23

Investment needs, based on neighbouring transition economies have been estimated for compliance by RS in the following Table.

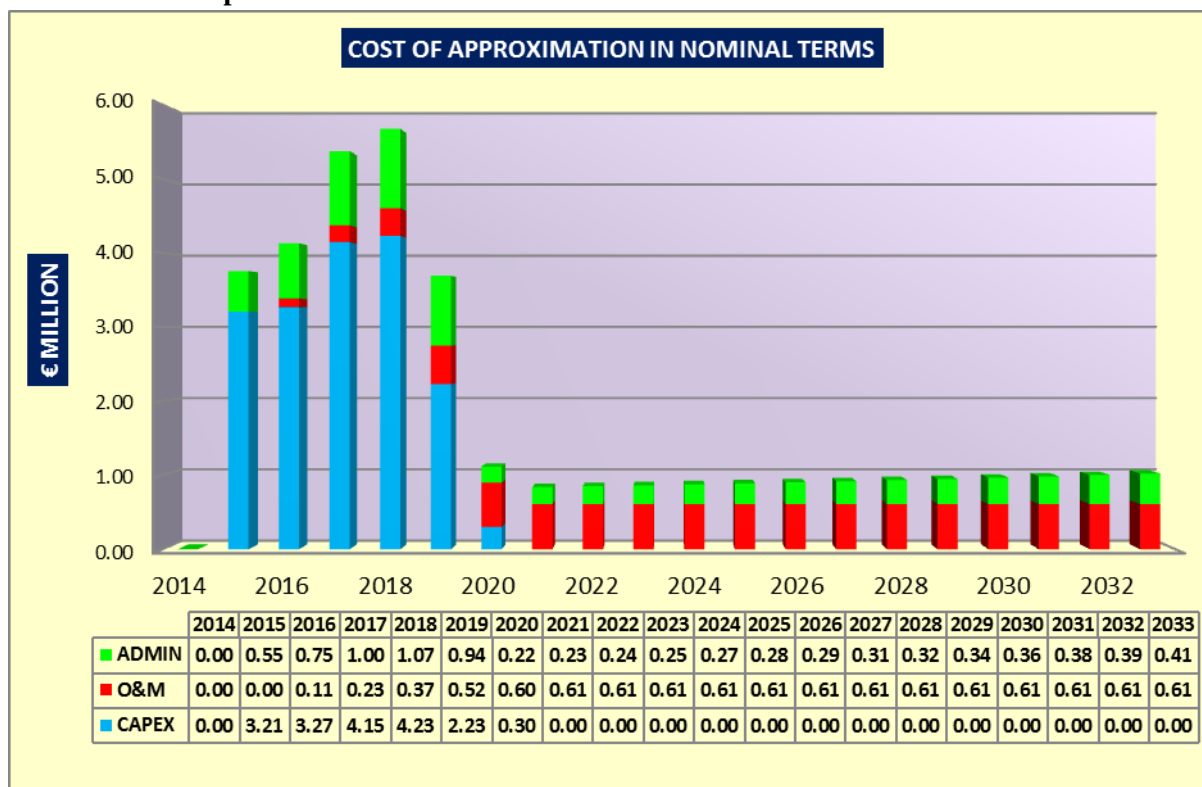
Table XXXIII: CAPEX COSTS TO INDUSTRY

INVESTMENT COSTS OF ACHIEVING TARGETS (in € Million)	
DIRECTIVE	Economically Adjusted Undiscounted Investment Costs
Asbestos	6,3
GMO	7,0
PCB	1,1
Biocides	0,3
Other	1,8
TOTAL	16,4

Opex has been input as 3,5% of investments in accordance with an expected economic life of various investments, mostly installations and equipment, of 28 years.

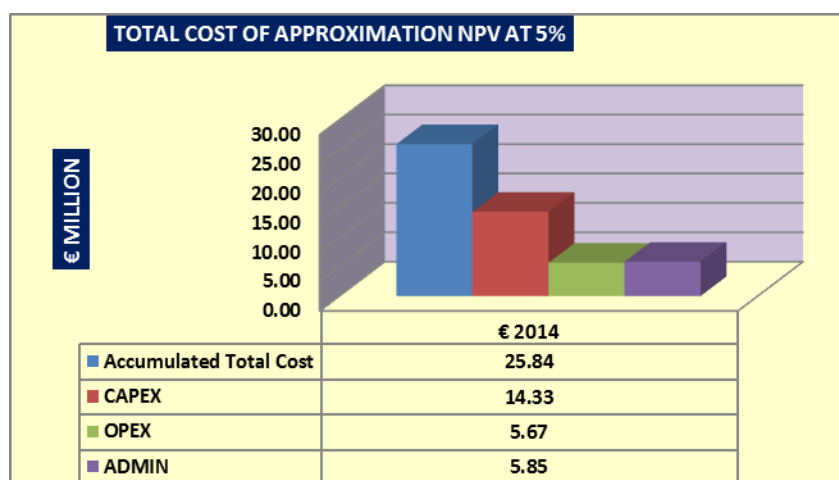
The multi-annual cost flow, including Capex, Opex and additional administrative costs incurred (Admin) is shown below in €million and in nominal terms for the period 2011-2030.

Graph XVIII: COST OF APPROXIMATION IN NOMINAL TERMS



The Total Cost of € 37 Million to 2033 is, however, a general figure the true value of which depends on the chronological deployment of the costs. Such a magnitude, payable in 2014 is not the same as if it is due, for example in 2033. Thus to define a comparable figure and eliminate time distortions, the cost flows are discounted back to their value in 2013 terms. This is the NPV concept and is the indicator used in economics to determine present day costs of a policy decision. Investment costs, Capex, are estimated at €14.3 million to be incurred prior to 2020, mostly by industry and primarily by the chemical sector. Opex, to 2033, is an on-going cost amounting to that date to €5.7 Million in present day terms. Administrative costs are estimated at €5.8 Million to 2033.

Graph XIX: COST OF APPROXIMATION UNDISCOUNTED/DISCOUNED



Overall, the approximation cost of the Chemicals sector is estimated to be € 25.8 million.

2.3.5.2.3. Financing the costs

Basic sources for financing the costs can be:

- Cost recovery from users;
- EU & other donors grants;
- Private sector Investments;
- Local-self-governments, budgets & ecological funds;
- Project finance without recourse to the governmental guarantees from IFIs and commercial banks.

2.4. TOTAL COSTS OF APPROXIMATION AND DISTRIBUTION BY SECTORS

2.4.1. TOTAL COSTS OF APPROXIMATION IN MULTI ANNUAL FLOW FORMAT

The aggregation of all the multiannual flows estimated for the Environmental Sectors provides the estimate of cost on a yearly basis, that RS will have to face to apply the acquis.

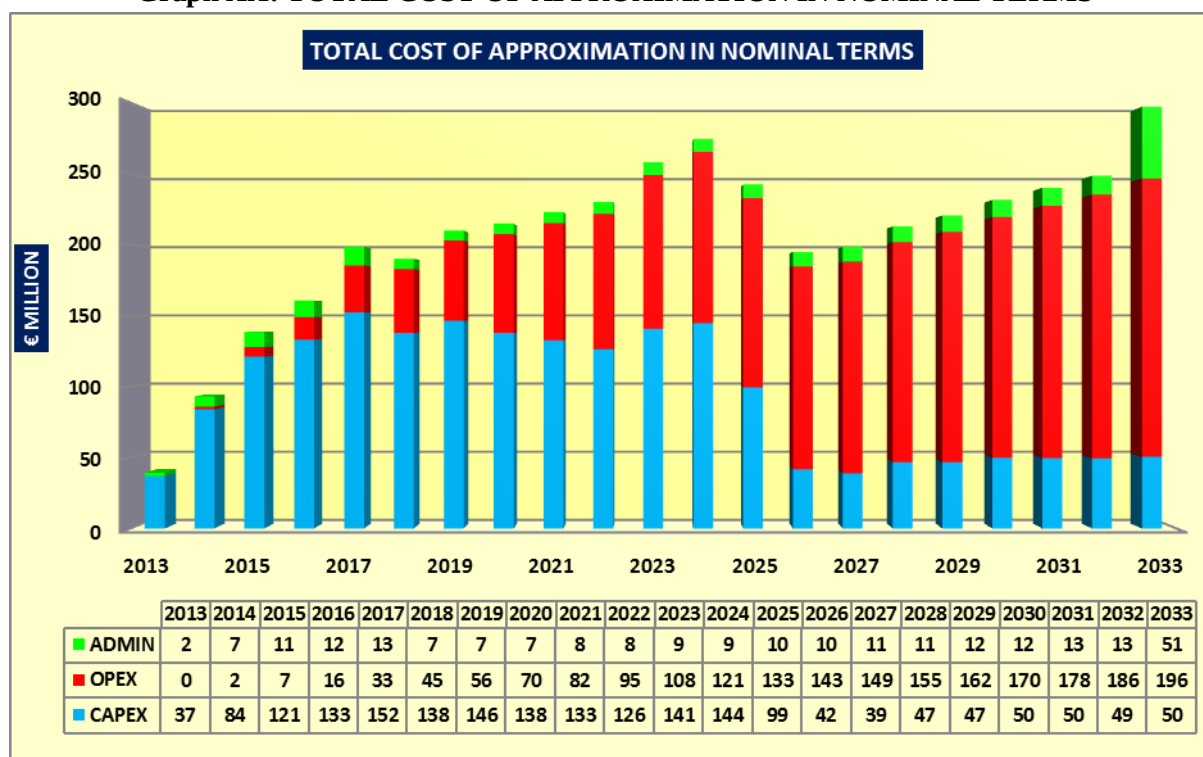
Such figures are summarized below for the periods 2013-2020, 2025, 2030 & 2033.

Table XXXVI: MULTI-ANNUAL COST OF APPROXIMATION

MULTIANNUAL COST OF APROXIMATION (€ Million)											
SECTOR	2013.	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2025.	2030.	2033.
Nature Protection	0,00	0,29	0,56	0,87	1,34	1,79	2,09	2,41	2,60	3,08	3,42
Solid Waste Management	0,00	5,38	8,74	12,15	18,30	21,95	25,78	29,17	39,12	44,46	49,06
Water Management	30,01	64,13	91,03	96,72	119,87	111,97	120,23	115,07	108,37	144,63	128,32
Emissions to Air	9,27	19,42	33,31	44,96	53,29	50,60	60,62	67,25	91,45	38,32	115,31
Noise, Chemicals & GMOs	0,00	3,88	4,81	5,77	5,64	3,65	1,07	0,79	0,85	0,91	0,96
TOTAL COSTS	39,28	93,10	138,43	160,47	198,44	189,96	209,80	214,70	242,37	231,41	297,06

Annual disbursements grow from an estimated €93 Million for 2014 to a peak of almost €300 Million in 2025. In the following chart, the evolution of costs is illustrated graphically.

Graph XX: TOTAL COST OF APPROXIMATION IN NOMINAL TERMS



This flow shows the peak in 2024. This is due to the completion of Capex in the air, waste and other sectors, whilst water sector costs continue rising. Naturally, these flows will vary as we modify the policy assumptions and thus these figures must be interpreted as a best to date estimate, subject ongoing reviews as data becomes available and positions within RS are clarified. It is however, a reasoned and reasonable estimate that constitutes a first draft preliminary order of magnitude

2.4.2. TOTAL COSTS OF APPROXIMATION AND DISTRIBUTION BY SECTORS

The distribution of the estimated total costs into the different environmental sectors has a wide-ranging impact on policy.

- The cost recovery component and most donor funds will finance selectively some of the sectors (waste, water) in preference to others. Environmental funds, budgets and all other sources of finance, should be applied strategically so as to balance the proportion of costs with available resources;
- If this is not done, some sectors will approximate at a faster rate and be, in fact, cross-subsidized from the neglected ones. As the environment is closely interactive, such a policy would neither be fair, nor effective technically, nor economically efficient.

There is no need for an excessively close alignment of said costs and resources, since planned costs will not materialize as expected and are- in any case only indicative.

Maintaining a general proportion to achieve a balanced environmental policy, is, however, an important objective and these results can be used as a guideline.

Table XXXV : DISTRIBUTION OF COSTS BY SECTORS

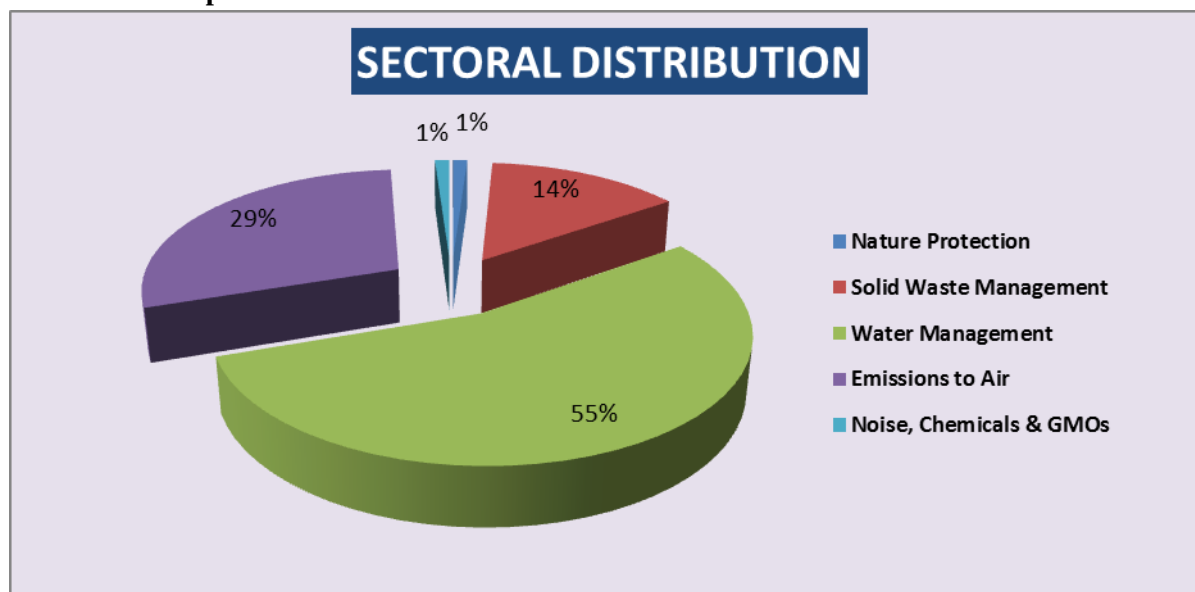
TOTAL COST AND DISTRIBUTION BY SECTORS			
SECTOR	NOMINAL	NPV po stopi od 5%	% ZA SEKTOR
Nature Protection	48,54	26,03	1,06%
Solid Waste Management	663,19	351,91	14,30%
Water Management	2.334.22	1.340.22	54,46%
Emissions to Air	1.231.81	716,30	29,11%
Noise& Chemicals	36,97	26,36	1,07%
TOTAL COST	4.314.73	2.460.81	100,00%

As can be observed, the Total Cost of Approximation amounts to €4,135 million in nominal terms.

As indicated in earlier chapters, this figure is arrived at by adding successive annual amounts and therefore does not correctly reflect the economic cost in true present-day terms. Thus the multiannual cost flows have been discounted back to 2013 at a rate of 5%, thus arriving at what is termed the NPV of said cost flows which reflects (at that discount rate) the Cost of Approximation to RS in 2013 €. The said figure amounts to €2.461 million. This will be the figure quoted as total cost of approximation.

The Graph XXII below illustrates the total cost distribution into sectors.

Graph XXI: SECTORAL PERCENTAGE DISTRIBUTION OF COSTS



As can be observed, the highest costs will be incurred in the water sector, almost €1.340 million and 55% of the total cost. Second in importance will be emissions to air, €716 million, 29% of the total. Third will be Waste, € 352 million and 14% of the Total. These results are in line with empirical observations in previous transition/approximation processes.

2.4.3. COST OF APPROXIMATION AND DISTRIBUTION BY SECTORS

The distribution of costs by type, that is:

- Capex or investment costs;
- Opex or on-going Operation & Maintenance costs of the new assets;
- Administrative costs to establish, monitor and enforce environmental policy

also has significant policy implications:

- The amount of Opex must be recovered from user charges. This is the cost recovery component and implies a tapping of limited affordability at household level. This affordability constraint will determine the speed at which the Investment plan can proceed in a sustainable manner
- A certain proportion of Capex will need to be financed locally. This is the local contribution component. The financing capacity of various RS institutions will also be limited and act as a constraint to the development of the approximation process.
- Administrative costs will need to be met by allocations from the budgets of various RS institutions. Although their overall cost is low, as compared to Capex and Opex, it is nevertheless a significant figure and must be carefully planned. Its impact on the capacity to mobilize donor and other funds is well documented in previous transition processes, both successful ones, Spain & Ireland and not successful ones, Romania & Bulgaria. Lessons to be learnt are that a strong administration will enable a fast absorption of donor funds and other instruments to a value that by far surpasses its direct cost. This is termed in economics as having a multiplier effect.

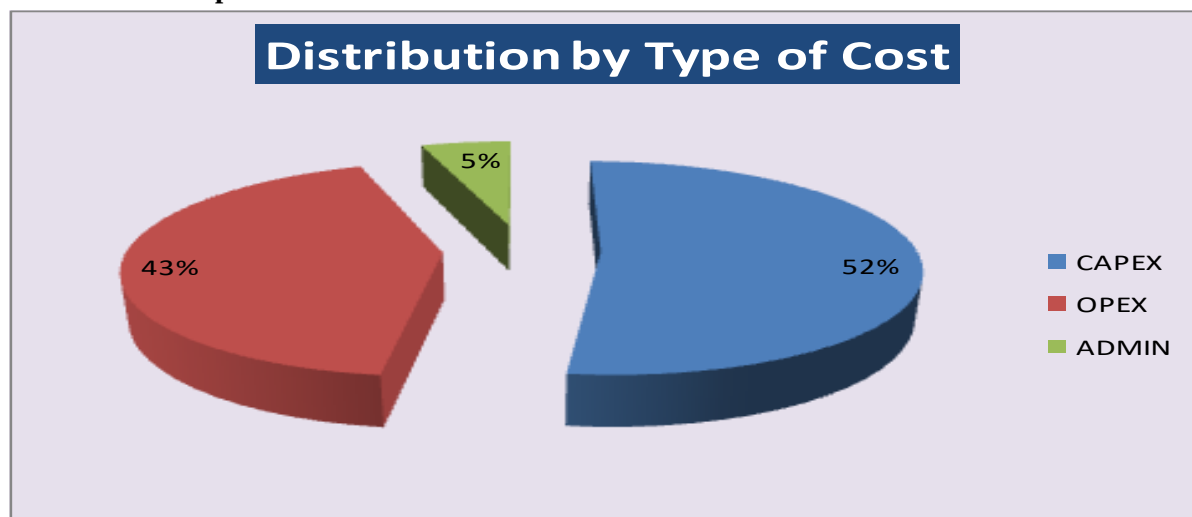
Below in the Table XXXVI and Graph chart XXII the total NPV cost has been distributed into the indicated types of cost.

Table XXXVI : DISTRIBUTION BY TYPE OF COST

TOTAL COST AND DISTRIBUTION BY TYPE OF COST			
SECTOR	CAPEX	OPEX	ADMIN
Nature Protection	6,27	9,64	10,12
Solid Waste Management	73,79	250,59	27,52
Water Management	738,39	560,72	41,11
Emissions to Air	448,48	220,04	47,79
Noise, Chemicals	14,33	5,67	6,36
TOTAL	1.281.26	1.046.66	132,90

PERCENTAGE OF COST TYPE	52,07%	42,53%	5,40%
-------------------------	--------	--------	-------

Graph XXII : PERCENTAGE DISTRIBUTION BY TYPE OF COSTS



As can be observed, Capex will amount to € 1.281 million, 52% of the total costs.

Opex, the greatest limiting component due to its impact on scarce affordability, amounts to almost €1.047 million, 43% of the total costs.

Administrative costs amount, in turn, to €133 million, a sizeable figure if compared to the budgets in RS, which will need to be used efficiently to ensure that the multiplier effect mentioned on mobilization of donor funds takes place.

3. ECONOMIC AND FINANCIAL APPROXIMATION STRATEGY

3.1. BASELINE

In the previous part of this Chapter, the cornerstone of the strategy, the cost, is defined. The Cost of Approximation Model produces a multiannual stream of costs which must be financed. To produce a strategy and the resulting financial plan, it is necessary to:

- Calculate the cost recovery component, i.e. the amount of the costs that can be recovered from the end users. This requires prior calculation of the affordability constraints;
- Estimate reasonable transition periods for full compliance of the acquis;
- Define the financing sources;
- Calculate the funding gap;
- Formulate a plan to finance the gap

3.2. AFFORDABILITY CONSTRAINTS

Affordability constraints limit the amount of the costs that can be recovered from end users through tariffs and other charges, which is termed the Cost Recovery Principle.

After full compliance, in application of the “Polluter Pays Principle”, cost recovery should be 100%. Until then, cost recovery should at least cover Opex costs so as not to compromise the capacity to attract grants (only investment costs are eligible and projects must be financially sustainable) and support from IFIs.

The calculation of cost recovery includes:

- Collecting data on household Income (HHI) distributed in income (10% segments from the 10% richest to the 10% poorest);
- Projecting such data in accordance with GDP expected growth and adjustment indexes to account the growth from typically faster in HHI than in GDP
- Estimating the industrial/commercial component;
- Calculating the present level of affordability used for utility payments. This part is supporting the existing system and is not available for support of the incremental approximation effort;
- Calculating the component of untapped affordability that can sequentially be mobilised to support the approximation effort (i.e. the rate of mobilisation of the cost recovery component).

The results of this analysis are summed in a simplified format below.

Table XXXVII: HOUSEHOLD INCOME AVAILABLE FOR COST RECOVERY

EVOLUTION OF HHI (€/HH)											
	2013.	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2025.	2030.	2033.
HHI AVERAGE €/HH 2012= €2.1555	2.155	2.268	2.404	2.549	2.702	2.864	3.035	3.218	4.638	6.483	7.732
COMPOSITE INDEX AVERAGE	101	105	112	118	125	133	141	149	215	301	359
GDP GROWTH	1,00%	3,50%	5,00%	5,00%	5,00%	5,00%	5,00%	5,00%	5,50%	5,50%	5,50%
REDISTRIBUTION FACTOR AVERAGE	1	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,5	1,2	1
EVOLUTION OF AFFORDABILITY (€MILLION/HH)											
AVERAGE HHI AFFORDABILITY:											
25% % OF HHI AVERAGE (Target is Worl Bank Maximum Recommended Threshold)	539	567	601	637	675	716	759	804	1.159	1.621	1.933
HH EQ AT HH SIZE FOR LOWER INCOME OF 3,27 -0,05%	411.397	411.397	411.397	409.340	407.293	405.257	403.231	401.214	391.284	381.599	375.904
ANNUAL DOMESTIC AFFORDABILITY (€ Million)	222	233	247	261	275	290	306	323	454	618	727
PRESENT EXPENDITURE ON UTILITIES PER HH (Best Estimate: 8,9% of Average HH)	79	83	88	93	98	103	109	115	162	220	259
GROSS HHI AVAILABLE FOR COMPLIANCE	143	150	159	168	177	187	197	208	292	398	468

The maximum available for new investments and their Opex is based on the expected evolution of average HHI from 3-5 minus the present level of resources being used at present to sustain the existing services.

The gross amounts appear substantial, but although this evidences that there is untapped affordability at the average HHI level, it must be taken into account that the capacity to mobilize this untapped affordability is obviously limited. Increases in tariffs must be gradual and matched by observable improvements/extension of the service levels.

Below this figure is modulated by a sequential increase in real terms of HHI dedicated to the approximation effort, which is estimated, at maximum, to be 5% p.a. until 2018 and 7% from then onwards. This will modulate the Net HHI figure available for compliance to a relatively aggressive, but plausible level, as shown below.

This figure will determine the maximum Opex payable and, in turn, the maximum investment plan that the affordability constraints of RS can sustain.

Table XXXVIII: FINANCE NEEDED FOR COMPLIANCE

GROSS HHI AVAILABLE FOR COMPLIANCE	143	150	159	168	177	187	197	208	292	398	468
Mobilization Rate in real terms (Tariff Increases in real terms)	5%	5%	5%	5%	5%	5%	7%	7%	7%	2%	
Index of HHI tapped for Compliance Effort until MAT is reached	5%	10%	15%	20%	25%	30%	37%	44%	79%	100%	100%
NET HHI AVAILABLE FOR COMPLIANCE	7	15	24	34	44	56	73	91	231	398	468
ADDITIONAL OPEX COSTS FOR COMPLIANCE (Includes Admin Costs as part of Opex to sustain System)	2,36	9,20	17,48	27,47	46,25	52,14	63,41	77,06	142,97	181,64	246,62
ADDITIONAL CAPEX COSTS FOR COMPLIANCE	36,92	83,90	120,95	133,00	152,18	137,82	146,39	137,65	99,40	49,77	50,45
NET FINANCE NEEDED FOR COMPLIANCE TARGETS	-32,14	-78,08	-114,55	-126,88	-154,15	-133,91	-136,89	-123,25	-11,55	166,88	170,89

As can be observed in the Table above, net cost recovery is, as required, higher than additional Opex costs, but relatively strained in 2017, when resources reach €44 million and Opex €46 million.

To cover all costs under the investment plan, net finance to a maximum of €155 million will be required.

3.3. TRANSITION PERIODS FOR FULL COMPLIANCE

The following parameters have been integrated into the Approximation Cost Model Tool:

- The multiannual cost flows on a directive/sector basis;
- The multiannual potential cost recovery on a directive/sector basis;
- Assumptions on macroeconomic and socio-economic parameters;

- Mobilisation rates for cost recovery;
- Assumptions on EU grant mobilisation rates and donor funding;
- Projection of domestic finance resources;
- Projections of finance from IFIs, other project finance and private investment;
- Other technical parameters necessary for making the model operative.

The Model Tool is designed to adjust all flows to variations in any of the inputs, notably to target dates for full compliance.

A theoretical accession date target has been established. This date is economically very significant as from such date, RS will have access to a much higher level of EU donor funds. There is no established target at present, as the process of approximation is still in the early phases, but for the purposes of EAs, 2023 has been assumed as a plausible date.

Wherever possible the action plans of existing strategies (waste, energy) have been taken into account. When such action plans imply periods that do not comply with the affordability constraint for Opex (waste), or are more stringent than required given the expected accession date, the target dates have been lengthened to provide plausible and reasonable transition periods from the economic point of view.

This sensitivity analysis has been performed to determine reasonable transition periods for full compliance of the different directives/sectors. Results are shown in the Table below.

Table XXXIX : TRANSITION PERIODS REQUIRED FOR COMPLIANCE

SECTOR/HEAVY INVESTMENT DIRECTIVES	ACCESSION	TRANSITION PERIOD.....										
	2023.	2024.	2025.	2026.	2027.	2028.	2029.	2030.	3031.	3032.	2033.	
WATER												
Urban Wastewater												
Drinking Water												
Flood Protection												
WASTE - MSW												
Landfill+Packaging+Batteries+WEEE												
INDUSTRIAL EMISSIONS												
AirQuality & Climate Change												

3.4. IMPACT ON REPUBLIKA SRPSKA

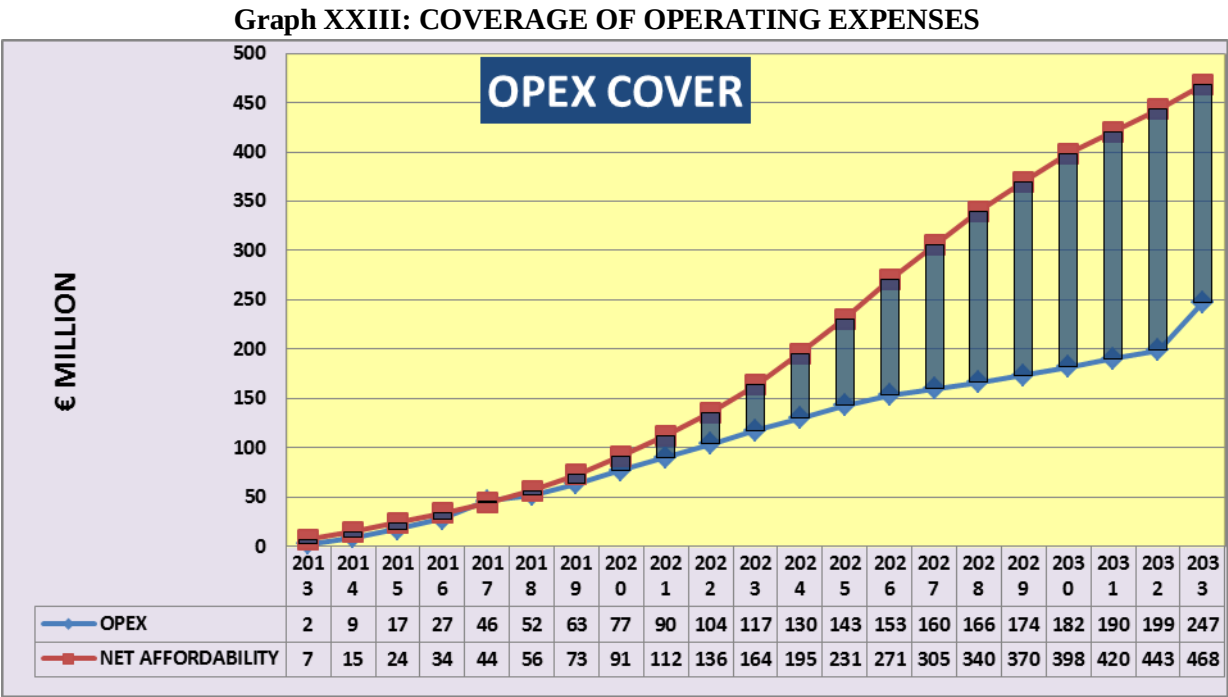
The Impact on RS of the burden of approximation is evaluated from the perspective of:

- Consumers, both households and industrial/commercial;
- RS as a whole, by measuring the additional GDP that must be dedicated to the approximation effort in the field of environment.

It must be noted that the positive indirect economic impacts, i.e. greater GDP growth on account of accession to the EU, estimated in other studies at approximately 2% additional GDP growth per annum, are outside the scope of this study. The benefits of compliance have been calculated and results are provided in the following chapter and should not be disregarded as “intangible” as they are real positive impacts that have been tested in the US and Western Europe for an extended period. They constitute an important part of the economic evaluation process in all large infrastructure projects.

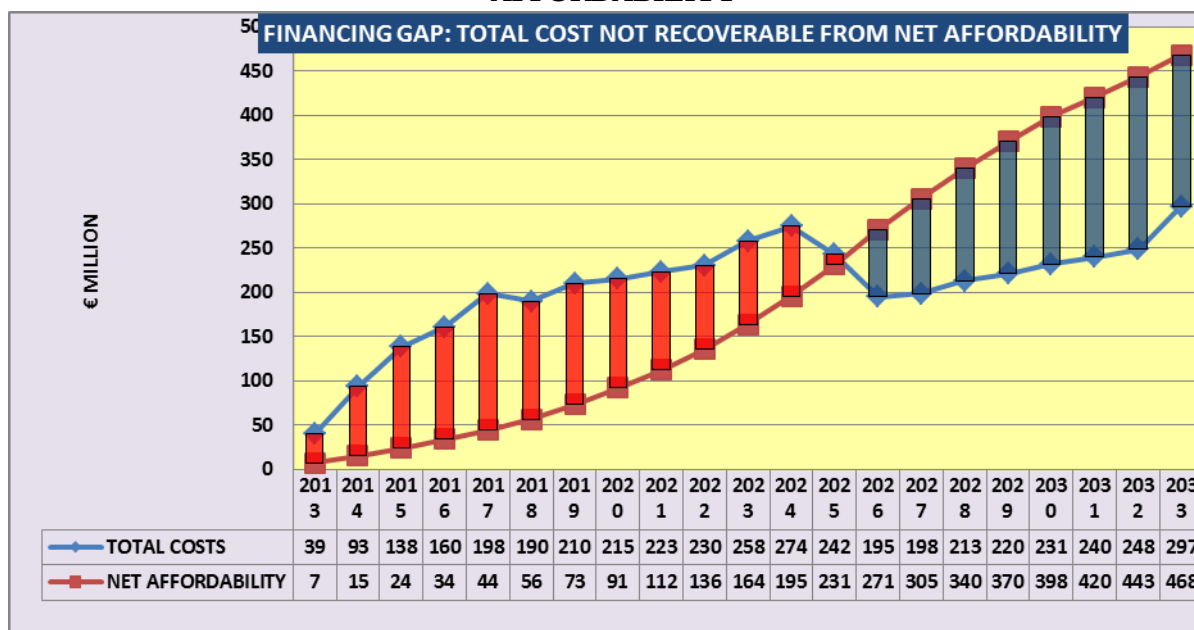
3.4.1. BURDEN ON CONSUMERS

The capacity to pay for Opex is shown in the graph below.



Affordability just covers Opex until 2017. This means that the approximation plan prepared in this scenario is viable but strains capacity to the maximum in the period to 2017. In turn the capacity of consumers to pay for total costs is shown in the graph below.

Graph XXIV : THE FINANCING GAP – TOTAL COST NOT RECOVERABLE FROM NET AFFORDABILITY

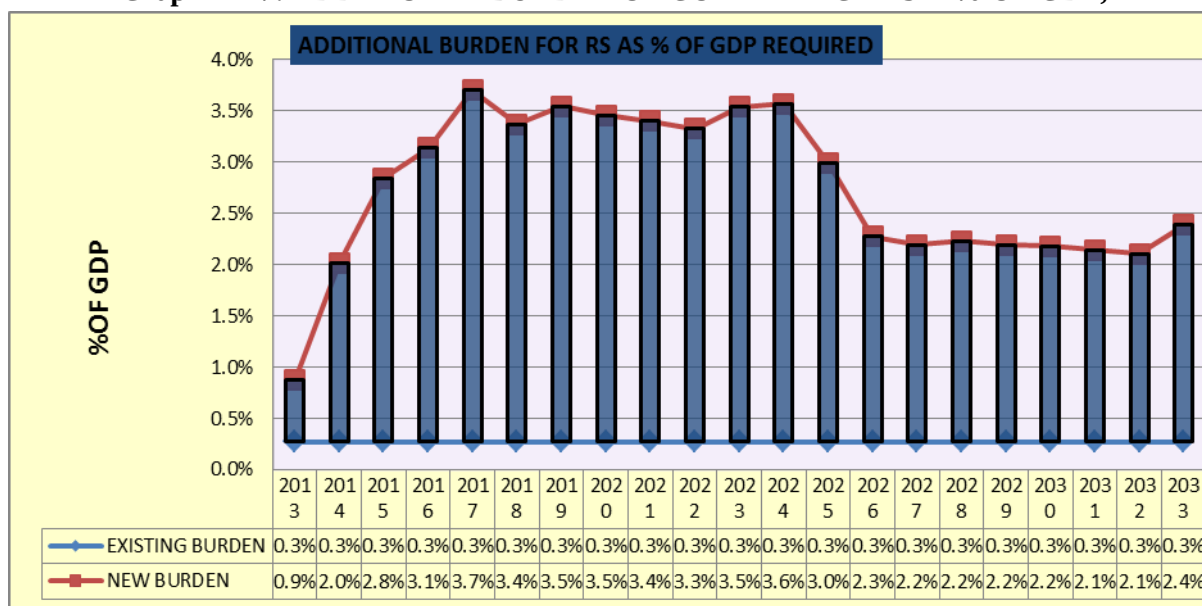


3.4.2. BURDEN ON REPUBLIKA SRPSKA AS A WHOLE

- At present 0.27% of GDP is estimated to be destined to the Environment sector. The most probable, this figure is higher, but there is no specific study on this subject available and performing it was outside the scope of EAS.

The impact of the approximation effort on GDP in RS is shown in the Graph below.

Graph XXV: ADDITIONAL BURDEN OF COMPLIANCE AS A % OF GDP,



Additional GDP to the Environment sector should be at 3.7% level until 2017 and must remain at the level above 3% by 2025. This implies a very challenging effort for RS as a whole. When the results of recent efforts to improve data at the entity level become available, the whole EAS plan should be carefully evaluated to avoid that mobilization of GDP to environment be as rapid as required under this plan, and that the 3% threshold be exceeded.

3.5. FINANCING PLAN OF APPROXIMATION

For the EAS purpose a macro-economic simplified financial plan was developed so as to provide basic indications regarding magnitudes and core methodology for a more detailed model that can be developed at a later stage with improved statistical data and greater resources.

For the objectives of EAS, it constitutes a reasonable, simplified but coherent financial plan, taking into account the major elements that affect multi-annual programming for the approximation effort.

3.5.1. FINANCING PLAN FOR APPROXIMATION

The first calculation that must be made in order to prepare a financing plan is the funding gap, defined as the amount of cost that cannot be recovered from user charges. This will be the difference between the total cost and affordability. It is defined, on an annual basis, in the Graph chart XXV.

3.5.2. FINANCING THE GAP

The funding gap after cost recovery must be covered by a mix of instruments, including:

- EU Grants. The IPA II program during the approximation phase, which is estimated to commence in 2014 and finalise in 2020, when the theoretical target date for membership has been set and cohesion and structural funds after 2020. This assumption is needed for the financial plan as the amounts of grants will increase substantially upon achieving the membership status;
- Financing institutions. This includes a mix of IFIs, domestic and other commercial banks, project finance from KfW and other specialised sources, direct loans to projects (EBRD, EIB, etc...) without government recourse. From prior experience in other approximation efforts (most notably and recently in Romania) this is estimated at 22% of investments, with repayment schedules of 15 years, a grace period of three years and average interest rates of 6% in €;
- Other donors. Direct support from project donors including TA and specific project components. Amounts to approximately 4% of the effort;
- Industry/commercial direct investments and private investors. On the basis of prior experiences, the project team estimates that industry is expected to contribute 6.87% of cost on the basis of the overall industrial/commercial p.e. (persons equivalent) of 27% of HHI. Private investment is a variable factor, but is estimated to account for 6% of Investment needs;
- The remaining gap will have to be financed by the public sector through a variety of instruments which include:
 - entity budgets;
 - local self-government budgets;
 - Other public sector institutions ;

- Economic instruments, most prominently the eco-funds and the various fees collected by the different institutions involved in water and other indirect revenue generating sectors.

The portion remaining after these contributions will have to be financed by the public sector through financial instruments (for example, an EBRD line for environmental projects co-financing).

The financing plan is summarised below to provide an indication of the magnitudes involved.

Table XL: COVERAGE OF THE FINANCING GAP

FINANCING GAP COVERAGE	2013.	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2025.	2030.	2033.
TOTAL COST	39	93	138	160	198	190	210	215	242	231	297
COST RECOVERY	7	15	24	34	44	56	73	91	231	398	468
FUNDING GAP AFTER COST RECOVERY	-32	-78	-115	-127	-154	-134	-137	-123	-12	167	171
ESTIMATED GRANTS AVAILABLE FROM EU FOR ENVIRONMENT	0,0	0,0	0,0	0,0	0,0	0,5	0,5	0,5	4,4	4,9	4,9
NET FINANCING FROM NON GOVERNMENT SOURCES (22%) **	8,1	18,5	26,6	29,3	33,5	30,3	32,2	30,3	21,9	10,9	11,1
OTHER DONORS (4% Inv. Direct+Intl TA 4%)	1,6	3,7	5,5	6,4	7,9	7,6	8,4	8,6	9,7	9,3	11,9
COMERCIAL & PRIVATE SECTOR INVESTMENTS*** (6,87%Comm.+6% Other)	4,8	10,8	15,6	17,1	19,6	17,7	18,8	17,7	12,8	6,4	6,5
REQUIRED FROM PUBLIC SECTOR	-18	-63	-130	-204	-297	-375	-452	-518	-620	151	795

* Based on an assumed 2014-2020 IPA II programme of €700 Million with 20% being earmarked for Environment. Upon accession, assumed for 2023, EU funds will increase substantially. Here an increase to €180 Million p.a. is assumed. These are purely project estimates based on past experience in other accession processes

** Direct Project Financing from domestic banks, IFIs and other sources Net of Repayment with 3 year Grace period & 12 years repayment schedule. Best Project Estimate (BPE) of 22% of CAPEX based on past experience in the Region.

*** Private Sector Investments considered to be neutral, or “zero opportunity cost” to Public Sector, i.e. profits to be derived from efficiency gains not higher than full cost recovery tariffs. BPE 12,87% of CAPEX.

TABLE XLI: PUBLIC SECTOR SUPPORT REQUIRED

PUBLIC SECTOR SUPPORT	2013.	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2025.	2030.	2033.
PUBLIC SECTOR SUPPORT REQUIRED	-18	-63	-130	-204	-297	-375	-452	-518	-620	151	795
DOMESTIC FUNDING SOURCES											
Environmental Institutions											
Environmental Protection Agency											
Ekofunds											
Local Self Government											
Economic Instruments											
Other from Public Sector Budgets (0,27% OF GDP)	14	15	16	17	17	18	19	20	26	34	40
PUBLIC SECTOR RESOURCES FOR APPROXIMATION	14	15	16	17	17	18	19	20	26	34	40
ACUMULATED RESOURCES	14	29	45	62	79	97	116	136	255	409	524
ACUMULATED SUPPORT REQUIREMENTS	-19	-64	-131	-205	-298	-376	-453	-519	-621	150	794
PUBLIC SECTOR EXTERNAL FINANCING NEEDS	-4	-34	-85	-143	-219	-278	-336	-382	-366	559	1318.

The results indicate a need for a relatively strong public sector support.

When more detailed data on the RS level action plans becomes available, the aforementioned Table can be further developed so as to make a more complete distribution of expected public sector funds and an order of magnitude estimate of required net loans for co-financing of the approximation effort.

4. BENEFITS OF IMPLEMENTING THE ACQUIS

4.1. DEFINITION OF BENEFITS

The political implications of joining the EU and its general economic impacts are not the subject of EAS. What is calculated in this section are the direct economic benefits to RS of applying the environmental acquis, irrespective of whether RS finally decides to join the EU or not.

A cleaner environment is not an expensive luxury that a candidate country must incur. Lower environmental standards and an excessive delay in the introduction of the requirements of the acquis imply hidden economic costs to society, which must be calculated. Not to avoid such “hidden costs” is akin to ignoring asset maintenance and replacement and is incompatible with the basic tenet of sustainability.

The main categories of benefits, or damage avoided, include:

- Health benefits. They stem from the direct savings of treating the cost of illnesses aggravated by pollution and of the avoidance of early mortality.
- Resource benefits. They are the benefits directly accruing from commercial enterprises dependant directly from the environment, i.e. forestry, agriculture, fisheries.
- Resource cost savings. They are the savings to the operators and to the consumers of Implementing a directive, for example, provision of water supply will imply the savings of drilling a well, the avoided cost of consuming bottled water. Connection to sewerage will imply the saving of building a septic tank, etc.
- Benefits to the ecosystem. The benefits to the general environment that are not commercially quantifiable but for which society expresses a willingness to pay (WTP concept) that can be monetised.
- Social benefits. Those stemming from the conservation of natural and cultural heritage, recreational opportunities, social cohesion;
- Wider economic benefits. Increased employment through environmental investment, eco-efficiency gains, and increased attraction to investment, tourism and eco-tourism.

4.2. METHODOLOGY

4.2.1. TECHNIQUES

The estimation of these benefits from strengthened environmental protection has been performed using a combination of techniques.

- A technique termed WTP principle was used to evaluate the benefits accruing from improvements in surface water, river eco-systems, methane capture, leachate & disamenity from landfills. As the name implies, this technique is based upon evaluating the willingness of a population to pay for environmental benefits.
- The benefits to agriculture of an improved environment were estimated by estimating the damage to agricultural production, which could be avoided. This damage avoided technique was also applied to property (buildings and other constructions).

- The benefits transfer through direct value technique was used to estimate the benefits in the energy sector from Methane capture as well to estimate the benefits from products derived from recycling and composting
- Estimates of the benefits from improvements in drinking water, wastewater treatment, CO2 capture and reduction in other emissions were obtained by analysing potential reduction in mortality (value of life) and in morbidity (value of health).
- The response functions utilised were derived from the Environmental Cost Assessment and Investment Plan (ECAIP studija) developed for Romania in 2005 and adapted to 2010 Serbian conditions.

4.2.2. MONETISATION

This evaluation has been performed on the basis of the existing methodology developed by the EU Commission for the cost-benefit analyses of large infrastructure projects. This methodology can be readily applied to the benefits calculation for the EAS as it is mostly population driven. The methodology is not so readily applicable to the cost analysis because the information in that case is project specific.

This will have the following advantages:

- The analytical tool will be fully consistent with that used for the evaluation of all projects to be presented to the EU and to the IFIs. This will facilitate the economic analysis of RS analysts for large infrastructure projects and the integration of specific project information into the overall strategy;
- The same economic benefits model can be applied to any sector, thus facilitating the task of establishing priorities on the basis of the benefits to society with a fully coherent evaluation methodology.

This simple model to monetise with an accepted methodology the benefits accruing from each sector is in a standardised format, easy to operate and with the capacity to directly provide the data on the benefits per population unit, so that comparison between different actions/policies is meaningful and serves as an input for project prioritisation. In this way a model tool specific to RS is provided that can be used for prioritization and for application to large infrastructure projects in the implementation phase as new data and more localized needs evolve.

4.3. RESULTS OF THE BENEFITS CALCULATIONS

4.3.1. BASELINE

In the model tool Benefits Tables the development of the estimates of positive impacts on society are developed for the three sectors considered:

- Water directives, WATER;
- Solid waste management WASTE; and
- Emissions to air AIR & INDUSTRIAL POLLUTION.

Those tables contain in the comments attached to the unit costs, and the specific references included in the text, the information pertaining to the sources of the impact valuation methodology. The benefit transfer equation has been calculated on the basis of the 2012 GDP Purchase Price Parity (PPP) in RS

and in the reference countries, which are the EU 27 as established, mainly, in the ECOTEC study of 2000/2001⁶⁴ commissioned by the EU and the US/UK references applied.

The relationship of BiH to these references is weighed 80/20 in favour of the EU 27 data because of its relative homogeneity of BiH with the EU countries. The results of applying the said equation are that Benefits are transferred to RS in a proportion of 29%. This constitutes a conservative Benefit Transfer equation and thus the Benefits monetized can be considered to be the lower threshold.

The technique consists in defining volumes for RS and applying that proportion of the external benefits documented in the reference countries. The actual calculations are, naturally, more complex, but the basic concept is simply an adjustment to local conditions of the information available in more advanced economies

4.3.2. RESULTS

Below are the summarized results of this analysis. Firstly, the results are expressed in a low-medium-high range in per annum terms in the following Table.

Table XLII: SUMMARY OF MONETISED BENEFITS

SUMMARY OF MONETISED BENEFITS				
		RANGE OF BENEFITS (€ MILLION PER ANNUM)		
		LO W	MEDI UM	HI GH
WATER	Drinking Water	2,23	6,76	13,52
	Surface Water	0,24	0,73	1,47
	River Ecosystems	0,72	2,18	4,36
	Wastewater Treatment	5,31	10,31	15,31
WASTE	Methane Capture	0,46	0,65	0,87
	Energy from Methane	0,04	0,14	0,34
	Carbon Dioxide Capture	8,40	13,13	18,90
	Leachate & Disamenity from Landfills	0,23	0,69	1,38
	Recycling & Composting	5,62	42,00	98,77
AIR & INDUSTRIAL	Reduction in Mortality	11,08	16,10	21,12

⁶⁴ "The Benefits of Compliance with the Environmental Acquis for the Candidate Countries", Final Report, C/1849/PtB, ECOTEC Research & Consulting Limited, 20 July

POLLUTION	Reduction in Morbidity	31,90	95,71	159,52
	Agriculture	0,00	0,00	0,00
	Construction & Materials	0,00	0,00	0,00
TOTAL ANNUAL MONETISED BENEFITS:		66,23	188,40	335,55

These per annum values can be evaluated for the purposes of this document by calculating the NPV at 5% discount rate of the multiannual benefit flows for the 20 years period considered (2013-2033). The results are shown in the Table XLVIII below.

Table XLIII: TOTAL BENEFITS OF COMPLIANCE

BENEFITS OF COMPLIANCE *	
	KORISTI
WATER	489
WASTE	1.388
AIR & INDUSTRIAL POLLUTION	2.741
ALL OTHER	NOT MONETISED
TOTAL BENEFITS:	4.618

* Based on Medium Range Benefits. NPV at 5% in € Million

It must be noted that benefit accrual after 2033 will show an increasing trend in real terms, as BiH becomes wealthier, whereas Opex on-going costs should grow at a slower pace in real terms. Thus, the longer the analysis period, the greater the benefits vis a vis the costs.

4.3.3. COST BENEFIT ANALYSIS

In order to provide a useful indicator of the cost to benefits relationship, the cost stream in each sector has been discounted at 5% over the period 2013-2033 and compared to the benefit stream, performing the same calculation (NPV, 5%, 2013-2033). The results of these two thereby comparable magnitudes are indicated in the following Table.

Table XLIV: COST-BENEFIT EVALUATION OF COMPLIANCE

SUMMARY OF PV DISCOUNTED AT 5% OF COSTS AND MONETISED BENEFITS OVER PROJECT TIME FRAME (2013-2033)		
COST-BENEFIT RESULTS OF COMPLIANCE*		
	BENEFITS	COSTS
WATER	489	1.340
WASTE	1.388	352
AIR & INDUSTRIAL POLLUTION	2.741	716
OTHER	NOT MONETISED	53
TOTAL BENEFITS:	4.618	2.641

** Based on Medium Range Benefits. In € Million

The relationship is a benefit to cost ratio of 1,88. This ratio is somewhat lower than observed in other cases, normally closer to 2,5, due, mainly to the relatively low economic starting point of RS.

4.4. CONCLUSIONS AND RECOMMENDATIONS ON THE USE OF THESE BENEFIT ESTIMATES

Considered must be that the environment is a complex group of interrelated variables and thus the evaluation of any set of effects derived from it are equally complex and interrelated. The optimization of investment capacity by concentrating funds on sectors with a higher benefit value may not be either realistic or desirable. Monetising is useful for policy determination, but prudence must be exercised in the interpretation of segregated sector monetary calculations. Nevertheless, within the prudence advised in the preceding paragraph, it must be noted:

- That benefit calculations are backed by a scientific body of knowledge accumulated through numerous studies, commencing with the impact of clean water in the US in the 1950s and subsequently gathering momentum in all developed countries since the 1980s.
- The level of accuracy of said calculations can be considered as high, at least, as the estimate of costs.
- The analysis made for this Strategy, again, simplified and limited due to resource and domestic data limitations, but indicates a reasonably reliable order of magnitude

In view of these results, the following becomes evident:

- That approximation policy must take into account not only the costs to industry, but also the external benefits to society, which are, basically, the damage avoided through reduced pollution.
- That compliance schedules should be compressed in those subsectors that do most environmentally costly damage, mainly emissions to air, particularly of NO_x, VOCs and SO₂, in the case of RS;
- That in view of the benefit to cost ratio, the implementation of the environmental acquis in RS, should be a priority for the administrations at all levels, whether RS decides to join the EU or not.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. GENERAL RECOMMENDATIONS

The economic analyses presented above provide justification for the following general economic conclusions and recommendations regarding environmental approximation:

- An environmental infrastructure audit should be carried out at short notice to establish clearly the situation in RS regarding the state of environmental Infrastructure and of utility service providers. This will clarify the starting position vis a vis the preparation of more detailed implementation action plans at the RS level;
- An affordability study at RS level should be carried out at short notice so as to provide much needed affordability references and benchmarks;
- A grant programming tool, with flexibility between sectors should be developed so as to enable more precise planning of the application of IPA and other donor funds;
- The environmental protection funds, both the existing ones and those to be established, should be closely monitored and developed in view of their high potential for revenue generation;
- The public sector should consider contracting a flexible drawdown financing line for ready co-financing for environmental projects. The amount and timing of this financing instrument will depend, largely, on the situation and action plans at the RS level;
- Public Utilities Companies (PUCs) are an extremely important part of the approximation effort and steps must be taken to regulate them in such a way as to promote scale of operations and extension and modernization of services. They will be the recipients of the largest portion of grants.
- Steps must be taken to eliminate present heavy cross-subsidization of tariffs and to provide reference parameters for harmonized service charges relating service levels to costs;
- The concepts of maximum affordable tariffs and full cost recovery tariffs must be established clearly as reference parameters for project evaluation and the setting of tariffs(price of services)

5.2. RESPONSIBLE INSTITUTIONS IN REPUBLIKA SRPSKA

5.2.1. STRATEGIC IMPACT IN THE SHORT TERM

RS will need to fully set-up an indirect management system of EU funds before the opting to become a candidate country, as this is a prior to candidate status condition, in accordance with Article 7 of the Commission Implementing Regulation (EU) No 447/2014 of 2 May 2014 on the specific rules for implementing Regulation (EU) No 231/2014 of the European Parliament and of the Council establishing an Instrument for pre-accession assistance (IPA II).

In parallel, the detailed implementation plans will have to be prepared for, at least, the heavy investment directives.

Finally, and perhaps most significant, an environmental project pipeline will need to be developed well beyond present levels so as to ensure the capacity to attract donors and IFI funds for viable, well-structured projects

5.2.2. MAIN REQUIREMENTS IN THE ECONOMIC AND FINANCIAL FIELDS IN RELATION TO THE OPERATIVE STRUCTURE TO THE INDIRECT MANAGEMENT SYSTEM

Institutions of RS will have to further develop substantially their capacities in accordance with their competences, both from the qualitative and quantitative point of view, so as to:

- Contribute to the preparation of the operating programme, by providing multiannual plans on measures under their responsibility (environment is normally the largest, together with transport);
- Ensure projects are prepared for the measure in accordance with EU requirements;
- Contribute to the preparation of the general selection criteria;
- Ensure that the national financing contribution is secured each year on a multi-annual strategic basis. This implies securing, delivering and monitoring all co-financing, including contributions from the State Budget, donors, domestic sources and IFIs;
- Monitoring performance, including financial targets, outputs and results. This is essential so as to avoid budgetary de-commitments from the EU, which would imply irrevocable loss of the de-committed amount of EU grants.

The detection of projects in the Environmental field needs to be addressed more proactively and aggressively, rapidly screening projects for conversion into feasibility studies of EU/IFI standards and then, again rapidly, composing the “least cost to RS financing mix” which includes accessing, with quality documentation, IPA or subsequent EU grant instruments, donors, IFIs & other financing sources, LSGUs, and last, but certainly not least, to access all domestic environmental sources, the Eco-funds, the water funds, other economic instruments that may be developed and to ensure available funds on call for co-financing.

5.2.3. CONCLUSIONS

- All these functions require deep expertise in the field of economic planning and modelling tools to implement multi-annual plans that must be prepared and adjusted on an ongoing basis, both for the estimation of costs and their financing.
- The capacity to liaise must be substantially strengthened on the technical, legal and economic fields with the PUCs, comprehending the socio-economic impact of tariffs and providing clear calculations of affordability, one of the essential parameters for grant calculation, and of the debt capacity of the direct beneficiaries, which are most frequently LSGUs or PUCs.

5.2.4. DIRECTIVE SPECIFIC IMPLEMENTATION PLAN

The preparation of the DSIPs will require an intense effort both in technical and economic & financial fields, by inter alia:

- Defining clearly the existing infrastructure;
- Setting service targets for approximation on the basis of a well-documented starting point;
- Detailed definitions of the BATs to be employed;
- The estimation and definition of investment requirements on a multi-annual basis with a flexible multi-criteria modelling tool;
- Determine the macro-affordability constraints on all levels;
- Estimate the impact of investments upon affordability on account of the Opex requirements that will build up;
- A clear justification, from the financial and economic point of view, of the transition periods required for full compliance;

The EAS provides the outline for the realisation of the implementation plans, but it is obvious that given the present situation of data availability in RS, the scope and resources of the EAS are in no way sufficient to develop these to the level required. BiH must ensure coordination of all aspects of the sector of environment, which by definition must be horizontally integrated into all economic areas.

The EU has developed a golden rule regarding efficiency in absorption of funds. “The fewer Institutions involved, the higher the absorption of grants”.

There is a tendency in transition economies to parcel out between different Institutions the budgets and responsibilities for new tasks. This may impair efficiency if the competencies for the investment heavy directives, with huge economic impacts, are to be parcelled out between different institutions in a not fully coordinated manner.

5.3. RECOMMENDED MEASURES

5.3.1. SHORT TERM MEASURES RECOMMENDED

- To create a clear form of coordination responsible for Chapter 27 Environment in accordance with the decision on coordination of the process of European integration.
- To urgently request TA to update certain indicators of Chapter V Economic aspects of Approximation of the Acquis since it has been taken over from the document which resulted from EnvIS project in November 2014.

5.3.2. MEDIUM TERM MEASURES RECOMMENDED

On a Medium term basis, the challenge will be in two key areas:

- Create the capacity to mobilize the latent affordability at domestic level

Optimizing cost recovery from end polluters through user charges and the various economic instruments is not just financially desirable; it is an absolute requirement of the EU grant scheme.

The EU subsidizes the part of an eligible investment that cannot be afforded at domestic level. The grant is the part of the investment that cannot be recovered from user charges. User charges need to be raised to the MAT (the Maximum Affordable Tariff) in the shortest time possible.

The main institutions that are involved in this process are the PUCs at LSG level. Thus, in this context, all efforts to accelerate the formation of economically and financially viable PUCs must be a RS governing institution priority as it will serve the best interests of RS by aiding the mobilization of EU grants, key to improve the living standards of all people in BiH.

Capacity must be built up at EPU (Economic Policy Unit) level to provide guidance as required regarding the setting of MATs and FCTs (Full Cost Recovery Tariffs). This will require expertise within the EPU in the field of affordability calculation and in the development of tariff policy.

- Create the capacity for ensuring rapid and full mobilization of available EU funds.

Under IPA a significant testing of the local Institutional capacity will take place. However, it must be noted that the expected volumes will remain approximately the same (€100 million per annum, overall, with some €35 million to RS, with about €25 million to environment of 8 million of which for RS). Projects must continue to be large, clearly prioritized and few in number. The stress will come later, from the procedural innovation that indirect management system implies, from the requirements to contribute to the definition of the Operational Programme (OP) Environment, and, especially, from the need to provide adequate implementation plans for negotiation of the SAA Chapter 27.

As from membership onwards, however, the stress will emanate from the increase of available funds. Funding can be expected to increase from €700 Million over a seven year period to possibly over €700 per annum for the entire BiH, 240 million euros for RS on an annual basis.

To date, noted must be that this phase has caught all new 2004 EU members by surprise with, in many cases, not even embryonic capacities in programming, planning and the economic policy functions described. Romania and Bulgaria in spite of the enormous gap with the EU average, in particular, are as yet contributors to the EU budget. This illustrates that the opportunity cost of this lack of even minimal anticipation, can be very high, costing the accession state hundreds of millions of Euros in lost donor funding.

VI SUPPORT ACTIONS FOR APPROXIMATION

EAS BiH has not international environmental treaties as a source of international obligations of BiH. However, international environmental treaties must be transposed into RS legal system by way of transposing EU legislation that integrated those obligations into the EU acquis.

Therefore, with regard to all environmental treaties concluded between the EU and BiH, RS has a dual constitutional obligation to extend support to BiH in meeting the international obligations, that is

- Obligation to directly abide by the treaties, implement them in its territory and participate in activities and institutional arrangements defined in the treaties, including regular reporting to CoP;
- Obligation to indirectly abide by the treaties, by way of transposing parts of the EU acquis pertaining to the said international treaties into its legal system, and to enforce and implement the legislation, including a regular reporting to the EU institutions.

A detailed list of relevant environmental treaties is given in Annex II.

VII CLOSING REMARKS

Transposition of EU legislation from eight environmental sectors into the RS legal systems, elaborated in this document, commenced (with the exception of the environmental noise management) in 2002. transposition has slowed down in the last several years. A certain number of bylaws (decrees, rulebook) the legal ground for which exists in the aforementioned laws, has been enacted to a large degree.

With regard to the entire period anticipated for environmental approximation, the RS Ministry of Economic Relations and Regional Cooperation plays a strong and proactive role in coordinating and harmonising the actions carried out by the RS environmental institutions, which includes among other things

- Cooperation between Ministry of Economic Relations and Regional Cooperation and environmental institutions in RS in relation to:
- Annual planning of the order and duration of transposition activities;
- Preparation of necessary legal analyses of gaps in the field of environment (Chapter 27 of SAA);
- Tasks related to the preparation of environmental legislation;
- Drafting of enactments that need to be adopted;
- Drafting of implementation plans (DSIP, APID, IP and related AP) for the transposition of EU legislation (directives and regulations) and execution of international obligations entailing from accepted international environmental treaties;

- Active participation in clarification, explanation and promotion of various environmental institutions at all levels in transposition and enforcement of the EU acquis;
- Sharing of responsibilities with other competent institutions about a regular reporting on environment within planning and enforcing of foreign policy

For the entire period of approximation of environmental legislation, the RS authorities competent for environmental issues should participate in developing of strategic, policy and planning instruments at all levels and undertake all available measures and activities aimed at full transposition of the EU environmental acquis into RS legal systems, in accordance with their constitutional and legal responsibilities and existing procedure.

Analyses conducted have shown that the general competent institutions for environmental protection in RS have been designated. Certainly, the fact that transposition of certain aspects of analysed EU environmental acquis is lagging behind has consequences on the institutional aspects. This means that the competent authorities have not been specifically designated for all analysed EU legal instruments. However, considering the analysed competences and work of the RS administrative bodies and existing environmental legislation, a conclusion may be drawn that the competent environmental authorities in RS will take over most of the institutional responsibilities in regards to the currently not transposed legal instruments.

In certain areas, where two or more authorities share competences, better division of competence, avoiding overlapping and better utilization of human and technical resources is needed.

In general, the findings of performed analyses and the size and complexity of the EU environmental acquis that should be transposed into the RS legal system, the following recommendations are needed:

- Each piece of EU environmental acquis that should be transposed into the legal systems in RS, should be assigned to a specific public authority from the standpoint of its transposition, implementation of newly adopted (new or amended existing) environmental legislation containing transposed respective EU requirements; enforcement of such new environmental legislation;
- Each piece of EU environmental acquis that should be transposed into the RS legal system, should be assigned to a specific public authority from the standpoint of coordination (of the process of transposition, and broadly speaking of approximation of environmental legislation, and subsequent implementation and enforcement of such legislation) and reporting to the EU authorities.

VIII ANNEXES

ANNEX I: LIST OF EU ENVIRONMENTAL ACQUIS LEGISLATIVE INSTRUMENTS

HORIZONTAL LEGISLATION

1.	Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment
2.	Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment
3.	Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (which codified the Council Directive of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment that was amended by Council Directive 97/11/EC, Directive 2003/35/EC, Directive 2009/31/EC) as amended by Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment
4.	Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC
5.	Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC
6.	Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, as amended by Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries and Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide, and Directive 2013/30/EU of the European Parliament and of the Council of 12 June 2013 on safety of offshore oil and gas operations on safety of offshore oil and gas operations.
7.	Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)

8.	Directive 2008/99/EC of the European Parliament and of the Council of 19 November 2008 on the protection of the environment through criminal law (Text with EEA relevance)
9.	Regulation (EU) No 1293/2013 of the European Parliament and of the Council of 11 December 2013 on the establishment of a Programme for the Environment and Climate Action (LIFE) and repealing Regulation (EC) No 614/2007 - LIFE Regulation

WATER MANAGEMENT

1	Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, as last amended by Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 - Water Framework Directive
2	Council Directive 91/271/EEC of 21 May 1991 concerning urban wastewater treatment, as last amended by Regulation (EC) No 1882/2002, Regulation (EC) 596/2009 and Directive of Commission 2015/1787;
3.	Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption, as last amended by Regulation (EC) No 1882/2002 and Regulation (EC) 596/2009 of the European Parliament and of the Council of 18 June 2009 and Directive of Commission 2015/1787;
4.	Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources, as last amended by Regulation (EC) No 1882/2003 of the European Parliament and of the Council of 29 September 2003 and Regulation (EC) 1137/2008 of the European Parliament and of the Council of 22 October 2008 – Nitrates Directive
5.	Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration ⁶⁵ - Groundwater Protection Directive
6.	Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC, as last amended by Regulation (EC) No 596/2009 of the European Parliament and of the Council of 18 June 2009 – Bathing Water Directive

⁶⁵In addition to that, the Commission decided and agreed with the member States a proposal of the [Directive of the Commission amending Annex II to the Ground Water Directive](#). The proposal is in the review procedure of the Council and the European Parliament at the moment of writing this document.

7.	Directive 2006/44/EC of the European Parliament and of the Council of 6 September 2006 on the quality of freshwaters needing protection or improvement in order to support fish life (codified version replacing and repealing Council Directive 78/659/EEC on the quality of freshwaters needing protection or improvement in order to support fish life), as amended by Regulation (EC) No 1137/2008 of the European Parliament and of the Council of 22 October 2008) - Freshwater Fish Water Directive
8.	Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks – Flood Risks Directive
9.	Commission Directive 2009/90/EC of 31 July 2009 laying down, pursuant to Directive 2000/60/EC of the European Parliament and of the Council, technical specifications for chemical analysis and monitoring of water status – Monitoring of Waters Status
10.	Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC of the European Parliament and of the Council – Environmental Quality Standards
11.	Directive 2006/11/EC of the European Parliament and of the Council of 15 February 2006 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community – Discharge of Dangerous Substances
12.	Commission Directive 2003/40/EC of 16 May 2003 establishing the list, concentration limits and labelling requirements for the constituents of natural mineral waters and the conditions for using ozone-enriched air for the treatment of natural mineral waters and spring waters
13.	Directive 2009/54/EC of the European Parliament and of the Council of 18 June 2009 on the exploitation and marketing of natural mineral waters

WASTE MANAGEMENT

1	Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives – Waste Framework Directive
2	Commission Decision 2000/532/EC of 3 May 2000 establishing a List of Wastes as amended by Commission Decision 2001/118/EC of 16 January 2001, Commission Decision 2001/119/EC of 22 January 2001, and Council Decision 2001/573/EC of 23 July 2001 – Lists of Waste

3.	Regulation (EC) No 2150/2002 of the European Parliament and of the Council of 25 November 2002 on waste statistics, later amended Commission Regulation (EC) No 574/2004 of 23 February 2004 amending Annexes I and III, Commission Regulation (EC) No 783/2005 of 24 May 2005 amending Annex II, Regulation (EC) No 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE, Regulation (EC) No 221/2009 of the European Parliament and of the Council of 11 March 2009, as regards the implementing powers conferred on the Commission, and Commission Regulation (EU) No 849/2010 of 27 September 2010.– Waste Statistics
4.	Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste, as amended by Regulation (EC) 1882/2003 and Regulation (EC) 1137/2008, and Directive 2011/97/EU regards to specific criteria for the storage of metallic mercury considered as waste, Council Decision 2003/33/EC of 19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of Annex II to the Directive 1999/31/EC – Landfill Directive
5.	European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging of waste, amended by Regulation (EC) No 1882/2003 of the European Parliament and of the Council of 29 September 2003, Directive 2004/12/EC of the European Parliament and of the Council of 11 February 2004, Directive 2005/20/EC of the European Parliament and of the Council of 9 March 2005, Regulation (EC) No 219/2009 of the European Parliament and of the Council of 11 March 2009 – Packaging Waste Directive
6.	Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-of life vehicles, as amended by Commission Decision 2002/525/EC of 27 June 2002, Commission Decision 2005/63/EC of 24 January 2005, Commission Decision 2005/438/EC of 10 June 2005, Council Decision 2005/673/EC of 20 September 2005, Directive 2008/33/EC of the European Parliament and of the Council of 11 March 2008, Commission Decision 2008/689/EC of 1 August 2008, Directive 2008/112/EC of the European Parliament and of the Council of 16 December 2008, Commission Decision 2010/115/EU of 23 February 2010, Commission Directive 2011/37/EU of 30 March 2011 – Directive on End-of-Life Vehicles
7.	Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators and waste batteries and accumulators and repealing Directive 91/157/EEC, as amended by Directive 2008/12/EC of the European Parliament and of the Council of 11 March 2008, and Directive 2008/103/EC of the European Parliament and of the Council of 19 November 2008 – Batteries and Accumulators Directive
8.	Commission Decision 2008/763/EC of 29 September 2008 establishing, pursuant to Directive 2006/66/EC of the European Parliament and of the Council, a common methodology for the calculation of annual sales of portable batteries and accumulators to end-users, Commission Decision 2009/603/EC of 5 August 2009 establishing requirements for registration of producers of batteries and accumulators in accordance with Directive 2006/66/EC of the European Parliament and of the Council, Commission Decision 2009/851/EC of 25 November 2009 establishing a questionnaire for Member States reports on the implementation of Directive 2006/66/EC of the European Parliament and of the Council on batteries and accumulators and waste batteries and accumulators

9.	Council Directive 96/59/EC of 16 September 1996 on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCB/PCT), as amended by Regulation (EC) 596/2009 of the European Parliament and of the Council of 18 June 2009 – PCB/PCT Directive
10.	Commission Regulation (EC) No 850/2004 on persistent organic pollutants, amended with Regulation No 757/2010 of 24 August 2010 as regards Annexes I and III, and Regulation No 756/2010 of 24 August 2010 as regards Annexes IV and V
11.	Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries and amending Directive 2004/35/EC, and Regulation (EC) No 596/2009, as amended by Commission Decisions 2009/335/EC, 2009/337/EC, 2009/358/EC, 2009/359/EC, and 2009/360/EC – Mining Waste Directive
12.	Council Directive 86/278/EEC of 12 June 1986 on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture, as amended by Council Directive 91/692/EEC of 23 December 1991, Council Regulation EC/807/2003 of 14 April 2003 and Regulation EC/219/2009 of the European Parliament and of the Council of 11 March 2009 – Sewage Sludge Directive
13.	Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste, as amended by the following: Commission Regulation EC/1379/2007 of 26 November 2007, Commission Regulation (EC) No EC/669/2008 of 15 July 2008, Regulation EC/219/2009 of the European Parliament and of the Council of 11 March 2009, Commission Regulation (EC) No EC/308/2009 of 15 April 2009, Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009, Commission Regulation (EU) No 413/2010 of 12 May 2010, Commission Regulation (EC) No 664/2011 of 11 July 2011 and Regulation (EU) 135/2012 of 16 February 2012 – Shipment of Waste
14.	Commission Regulation (EC) No 1418/2007 of 29 November 2007 concerning the export for recovery of certain waste listed in Annex III or IIIA to Regulation (EC) No 1013/2006 of the European Parliament and of the Council to certain countries to which the OECD Decision on the control of transboundary movements of wastes does not apply, as amended by Regulation (EC) 740/2008, Regulation (EC) 967/2008 and Regulation (EU) 674/2012
15.	Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE) – WEEE Directive
16.	Regulation (EC) 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC, amended by the Regulation (EC) 293/2016 of the European Parliament and of the Council of 1 March 2016 and regulation (EC) 460/2016 of 30 March 2016, amending Annexs IV and V of the Regulation (EC) 850/2004.

AIR QUALITY AND CLIMATE CHANGE

1	Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe – AAQ Directive
2	Directive 2004/107/EC of the European Parliament and of the Council of 15 December 2004 relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air, as amended by Regulation (EC) 219/2009 - Directive relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air
3.	Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants, as amended by Directive 2006/105/EC of 20 November 2006 and Regulation EC/219/2009 of the European Parliament and of the Council of 11 March 2009 - NEC Directive
4.	Directive 94/63/EC of 20 December 1994 on the control of volatile organic compound (VOC) emissions resulting from the storage of petrol and its distribution from terminals to service stations, as amended by Regulations EC/1882/2003 and EC/1137/2008 - VOC Petrol Directive
5.	Directive 2009/126/EC of the European Parliament and of the Council of 21 October 2009 on Stage II petrol vapour recovery during refuelling of motor vehicles at service stations - VOC Petrol Stage II Directive
6.	Directive 2004/42/EC of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC, as amended by Directive 2008/112/EC and Regulation EC/1137/2008 - Paints Directive
7.	Directive 97/68/EC of the European Parliament and of the Council of 16 December 1997 on the approximation of the laws of the Member States relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery, as amended by Directives 2001/63/EC, 2002/88/EC, 2004/26/EC and 2006/105/EC , Regulation (EC) 596/2009 Directive 2010/26/EU, Directive 2011/88/EU and Directive 2012/46/EU - Non-road machinery Directive
8.	Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC and Regulations EC/1195/2006, EC/172/2007, EC/323/2007, EC/219/2009, EC/304/2009, and 519/2012 - POPs Regulation

9.	Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC, as amended by Council Directives 2000/71/EC of 7 November 2000, 2003/17/EC of the European Parliament and of the Council of 3 March 2003, Regulation (EC) No 1882/2003 of the European Parliament and of the Council of 29 September 2003, Directive 2009/30/EC of the European Parliament and of the Council of 23 April 2009. Council Decision 2002/159/EC of 18 February 2002 on a common format for the submission of summaries of national fuel quality data - Fuel Quality Directive
10.	Directive 1999/32/EC of 26 April 1999 relating to a reduction in the sulphur content of certain liquid fuels and amending Directive 93/12/EEC, as amended by Regulation (EC)1882/2003, Regulation (EC) 219/2009, Directive 2005/33/EC and Directive 2009/30/EC - Sulphur content in liquid fuels Directive
11.	Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community - Emission Trading Directive
12.	Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council, as amended by Commission Regulation (EU) 206/2014 as regards global warming potentials for non-CO ₂ greenhouse gases - Regulation on reporting of GHG emissions
13.	Since this report must be verified, the Commission adopted the Regulation (EU) No 600/2012 of 21 June 2012 on the verification of greenhouse gas emission reports and tonne-kilometre reports and the accreditation of verifiers pursuant to Directive 2003/87/EC of the European Parliament and of the Council - Regulation on verification of GHG emission reports
14.	Commission Regulation (EC) No 994/2008 of 8 October 2008 for a standardised and secured system of registries pursuant to Directive 2003/87/EC of the European Parliament and of the Council and Decision No 280/2004/EC of the European Parliament and of the Council - Regulation on Registries
15.	Commission Regulation (EU) No 82/2010 of 28 January 2010 amending Regulation (EC) No 748/2009 on the list of aircraft operators which performed an aviation activity listed in Annex I to Directive 2003/87/EC on or after 1 January 2006 specifying the administering Member State for each aircraft operator - Aviation Regulation
16.	Commission Decision 2009/450/EC of 8 June 2009 on the detailed interpretation of the aviation activities listed in Annex I to Directive 2003/87/EC of the European Parliament and of the Council - Aviation Decision
17.	Commission Decision 2006/780/EC of 13 November 2006 on avoiding double counting of greenhouse gas emission reductions under the Community emissions trading scheme for project activities under the Kyoto Protocol pursuant to Directive 2003/87/EC of the European Parliament and of the Council - Decision on double counting

18.	Commission Decision 2007/589/EC of 18 July 2007 establishing guidelines for the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council - Decision monitoring and reporting
19.	Commission Decision 2010/2/EU of 24 December 2009 determining, pursuant to Directive 2003/87/EC of the European Parliament and of the Council, a list of sectors and subsectors which are deemed to be exposed to a significant risk of carbon leakage as amended by Decisions 2011/745/EU and 2012/498/EU - Decision on risk of carbon leakage
20.	Directive 1999/94/EC of the European Parliament and of the Council of 13 December 1999 relating to the availability of consumer information on fuel economy and CO2 emissions in respect of the marketing of new passenger cars, as amended by Directive 2003/73/EC, Regulation (EC) No 1882/2003 and Regulation (EC) No 1137/2008,- Consumer Information Directive
21.	Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006 - Storage of carbon dioxide Directive
22.	Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO2 emissions from light-duty vehicles- Passenger cars emissions Regulation
23.	Decision No 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol and its implementing provisions Commission Decision 2005/166/EC - Monitoring Mechanism Decision
24.	Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020 - Effort Sharing Decision
25.	Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer (recast), as amended by Commission Regulation (EU) No 744/2010 of 18n August 2010 - Regulation on ozone depleting substances
26.	Commission Directive 2010/79/EU of 19 November 2010 on the adaptation to technical progress of Annex III to Directive 2004/42/EC of the European Parliament and of the Council on the limitation of emissions of volatile organic compounds

INDUSTRIAL POLLUTION

1	Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)– IED
2	Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC – Seveso III Directive
3.	Regulation (EC) No 166/2006 of the European Parliament and of the Council of 18 January 2006 concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC, as amended by Regulation (EC) No 596/2009 of the European Parliament and of the Council of 18 June 2009 E-PRTR
4.	Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme – EMAS
5.	Regulation (EC) No 66/2010 of the European Parliament and of the Council of 25 November 2009 on the EU Ecolabel – 2012/481/EU: Commission Decision of 16 August 2012 establishing the ecological criteria for the award of the EU Ecolabel for printed paper – 2012/448/EU: Commission Decision of 12 July 2012 establishing the ecological criteria for the award of the EU Ecolabel for newsprint paper – Eco-Label

CHEMICALS

1.	Regulation EC/1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency (Amending Directive 1999/45/EC and repealing Council Regulation (EEC) 793/93 and Commission Regulation EC/1488/94, 1354/2007, 987/2008, 1272/2008, 1341/2009 and 552/2009 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC) – REACH , as amended by: Council Regulation (EC) No 1354/2007 of 15 November 2007; Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008; Commission Regulation (EC) No 134/2009 of 16 February 2009; Commission Regulation (EC) No 552/2009 of 22 June 2009; Commission Regulation (EU) No 276/2010 of 31 March 2010; Commission Regulation (EU) No 453/2010 of 20 May 2010; Commission Regulation (EU) No 143/2011 of 17 February 2011; Commission Regulation (EU) No 207/2011 of 2 March 2011; Commission Regulation (EU) No 252/2011 of 15 March 2011; Commission Regulation (EU) No 253/2011 of 15 March 2011; Commission Regulation (EU) No 366/2011 of 14 April 2011; Commission Regulation (EU) No 494/2011 of 20 May 2011; Commission Regulation (EU) No 109/2012 of 9 February 2012; Commission Regulation (EU) No 125/2012 of 14 February 2012; Commission Regulation (EU) No 412/2012 of 15 May 2012; Commission Regulation (EU) No 835/2012 of 18 September 2012; Commission Regulation (EU) No 836/2012 of 18 September 2012; Commission Regulation (EU) No 126/2013 of 13 February 2013; Commission Regulation (EU) No 348/2013 of 17 April 2013; Council Regulation (EU) No 517/2013 of 13 May 2013 Regulation EC/1272/2013 of 6 December 2013.; Regulation EC/301/2014 of 25 March 2014; Regulation EC/317/2014 of 27 March 2014; Regulation EC/474/2014 of 8 May 2014.; Regulation EC/ 895/2014 of 14 August 2014; Regulation EC/2015/282 of 2 February 2015; Regulation EC/2015/326 of 2 March 2015; Regulation EC/2015/628 of 22 April 2015; Regulation EC/2015/830 of 28 May 2015; Regulation EC/2015/1494 of 4 September 2015; Regulation EC/ 2016/26 of 13 January 2016; Regulation EC/2016/217 of 16 February 2016; Regulation EC/2016/863 of 31 May 2016; Regulation EC/ 2016/1005 of 22 June 2016; Regulation EC/ 2016/1017 of 23 June 2016; Regulation EC/ 2016/1688 of 20 September 2016;
2.	Regulation (EU) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, with amendments from Regulation (EU) 790/2009 of 10 August 2009; Regulation (EU) No 286/2011 of 10 March 2011; Regulation (EU) No 618/2012 of 10 July 2012; Regulation (EU) No 487/2013 of 8 May 2013; Regulation (EU) No 517/2013 of 13 May 2013; Regulation (EU) No. 758/2013 of 7 August 2013; Regulation (EU) No 944/2013 of 2 October 2013; Regulation (EU) No 605/2014 of 5 June 2014; Regulation (EU) No. 1297/2014 of 5 December 2014; Regulation (EU) No 2015/1221 of 24 July 2015; Regulation (EU) No 2016/918 of 19 May 2016; Regulation (EU) No 2016/1179 of 19 July 2016)
3.	Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals (repealed Regulation EC/689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of hazardous chemicals
4.	Council Regulation (EC) No 440/2008 of 30 May 2008 laying down test methods pursuant to Regulation REACH

5.	Regulation (EC) No. 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents, amended by Regulation (EC) No.. 907/2006 of 20 June 2006, Regulation (EC) No.1336/2008 of the European Parliament and of the Council of 16 December 2008, Regulation (EC) No 219/2009 of the European Parliament and of the Council of 11 March 2009, Regulation (EC) No 551/2009 of 25 June 2009, Regulation (EC) No 259/2012 of the European Parliament and of the Council of 14 March 2012.
6.	Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants by which the Stockholm convention is implemented in the European Union.
7.	Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products
8.	Directive 2004/10/EC on principles of good laboratory practice and the verification of their applications for tests on chemical substances (Amended by Regulation (EC) No 219/2009)
9.	Directive 2004/9/EC of the European Parliament and of the Council of 11 February 2004 on the inspection and verification of good laboratory practice (GLP)
10.	Council Directive 87/217/EEC of 19 March 1987 on the prevention and reduction of environmental pollution by asbestos, as amended by Directive 91/692/EEC and Regulation EC/807/2003
11.	Regulation (EC) No 1102/2008 of the European Parliament and of the Council of 22 October 2008 on the banning of exports of metallic mercury and certain mercury compounds and mixtures and the safe storage of metallic mercury
12.	Directive 2010/63/EU of the European Parliament and of the Council on the protection of animals used for scientific purposes
13.	Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products repealing the Directive 98/8/EC concerning the placing of biocidal products on the market
14.	Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides

NATURE PROTECTION

1	Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, as amended by Directives 97/62/EC and 2006/105/EC and Regulation (EC) 1882/2003
2	Directive 2009/147/EC of the European Parliament and of The Council of 30 November 2009 on the conservation of wild birds (codified version of Directive 79/406/EEC and its amendments)
3.	Council Regulation (EC) No 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade therein, as amended by Regulations (EC) 938/97, 2307/97, 2214/98, 1476/99, 2724/2000, 1579/2001, 2476/2001, 1497/2003, 1882/2003, 834/2004, 252/2005 and 1332/2005 318/2008, 398/2009, 407/2009, and (EU) 101/2012 Commission Regulation (EC) 865/2006 laying down detailed rules concerning the implementation of Council Regulation (EC) 338/97 - Commission Implementing Regulation 792/2012 of 23 August 2012 laying down rules for the design of permits, certificates and other documents provided for in Council Regulation 338/97 on the protection of species of wild fauna and flora by regulating trade therein and amending Commission Regulation 865/2006 - Commission Regulation (EU) No. 791/2012 of 23 August 2012 amending, as regards certain provisions relating to the trade in species of wild fauna and flora, Regulation (EC) No. 865/2006 laying down detailed rules for the implementation of Council Regulation (EC) No 338/97
4.	Council Directive 1999/22/EC of 29 March 1999 relating to the keeping of wild animals in zoos
5.	Council Regulation (EEC) No 3254/91 of 4 November 1991 prohibiting the use of leghold traps in the Community and the introduction into the Community of pelts and manufactured goods of certain wild animal species originating in countries which catch them by means of leghold traps or trapping methods which do not meet international humane trapping standards

ENVIRONMENTAL NOISE

1.	Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise, as amended by Regulation (EC) 1137/2008 – Environmental Noise Directive
----	---

2	Directive 2000/14/EC of the European Parliament and of the Council of 8 May 2000 on the approximation of the laws of the Member States relating to the noise emission in the environment by equipment for use outdoors, as amended by Directive 2005/88/EC and Regulation (EC) 219/2009 – Outdoor Equipment Directive
3.	Council Directive 92/23/EEC of 31 March 1992 relating to tires for motor vehicles and their trailers and to their fitting, as amended by Directive 2001/43/EC of the European Parliament and of the Council of 27 June 2001 relating to tyres for motor vehicles and their trailers and to their fitting, and by Commission Directive 2005/11/EC of 16 February 2005 for the purposes of its adaptation to technical progress – Motor Vehicles Tires Directive
4.	Council Directive 70/157/EEC of 6 February 1970 on the approximation of the laws of the Member States relating to the permissible sound level and the exhaust system of motor vehicles as amended by: Commission Directive 73/350/EEC of 7 November 1973, Council Directive 77/212/EEC of 8 March 1977, Commission Directive 81/334/EEC of 13 April 1981, Commission Directive 84/372/EEC of 3 July 1984, Council Directive 84/424/EEC of 3 September 1984, Council Directive 87/354/EEC of 25 June 1987, Commission Directive 89/491/EEC of 17 July 1989; Council Directive 92/97/EEC of 10 November 1992, Commission Directive 96/20/EC of 27 March 1996, Commission Directive 99/101/EC of 15 December 1999, Commission Directive 2007/734/EC of 14 June 2007.– Motor Vehicle Directive
5.	Directive 97/24/EC of the European Parliament and of the Council of 17 June 1997 on certain components and characteristics of two or three-wheel motor vehicles, as amended Directive 2002/51/EC of the European Parliament and of the Council of 19 July 2002, Commission Directive 2003/77/EC of 11 August 2003, Commission Directive 2005/30/EC of 22 April 2005, Commission Directive 2006/120/EC of 27 November 2006, Commission Directive 2006/27/EC of 3 March 2006, Commission Directive 2006/72/EC of 18 August 2006, Commission Directive 2009/108/EC of 17 August 2009, Commission Directive 2013/60/EU of 27 November 2013 amending for the purposes of adapting to technical progress – Motorcycle Noise Directive
6.	Regulation (EC) No 1222/2009 of the European Parliament and of the Council of 25 November 2009 on the labelling of tyres with respect to fuel efficiency and other essential parameters, amended by Regulation (EU) No 228/2011 of 7 March 2011 with regard to the wet grip testing method for C1 tyres, and Regulation (EU) No 1235/2011 of 29 November 2011 with regard to the wet grip grading of tyres, the measurement of rolling resistance and the verification procedure – Regulation on Labelling of Tyres
7.	Directive 80/51/EEC on the limitation of noise emissions from subsonic aircraft, as amended by Directive 83/206/EEC of 4 December 1989 on the limitation of noise emission from civil subsonic jet aeroplanes – Subsonic Aircraft Noise Directive
8.	Council Directive 89/629/EEC of 4 December 1989 on the limitation of noise from civil subsonic jet aeroplanes, as amended by Council Directive 92/14/EC on the limitation of the operation of aeroplanes covered by Part II, Chapter 2, Volume 1 of Annex 16 to the Convention on International Civil Aviation, as amended by Directive 98/20/EC of 30 March 1998 and Directive 1999/28/EC of 21 April 1999 amending the Annex of Council Directive 92/14/EEC – Civil Subsonic Jet Aeroplanes Directive

9.	Directive 2002/30/EC of the European Parliament and of the Council of 26 March 2002 on the establishment of rules and procedures with regard to the introduction of noise-related operating restrictions at Community airports, as amended by Regulation (EC) No 1137/2008 of the European Parliament and of the Council of 22 October adapting a number of instruments subject to the procedure laid down in Article 251 of the Treaty to Council Decision 1999/468/EC, with regard to the regulatory procedure with scrutiny — Adaptation to the regulatory procedure with scrutiny — Part One— Airport Noise Directive
10.	Directive (2008/57/EC) on interoperability of the European Rail system, as amended by Directive 2009/131/EC of 16 October 2009 amending Annex VII to Directive 2008/57/EC, Directive 2011/18/EU of 1 March 2011 amending Annexes II, V and VI to Directive 2008/57/EC, Directive 2013/9/EU of 11 March 2013 amending Annex III to Directive 2008/57/EC; See also Commission Recommendation 2011/217/EU on the authorisation for the placing in service of structural subsystems and vehicles under Directive 2008/57/EC – Directive on interoperability of the European Rail system
11.	Commission Decision 2011/229/EU of 4 April 2011 concerning the technical specifications of interoperability relating to the subsystem ‘rolling stock – noise’ of the trans-European conventional rail system, as amended by Commission Decision of 23 July 2012 concerning technical specifications for interoperability - Decision on rolling stock noise

ANNEX II: THE LIST OF SOURCES OF BIH INTERNATIONAL ENVIRONMENTAL OBLIGATIONS [EXISTING & POTENTIAL]

GLOBAL RELEVANCE TREATIES

N o.	Title		Signing		BiH		EU Party from
			Date	Place	Status		
1	CONVENTION ON WETLANDS OF INTERNATIONAL IMPORTANCE ESPECIALLY AS WATERFOWL HABITAT (RAMSAR)		02.02.1971.	Ramsar, Iran	SUC; 2001	01.03.92.	---
2	THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS (MARPOL)		02.11.1973.	London, UK			
	3.	Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973	17.02.1978.	London, UK			
	4.	Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (Annex VI) (MARPOL 73/78)	26.09.1997.	London, UK			

5.	CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FLORA AND FAUNA (CITES)		03.03.1973.	Washington, DC, USA	R; 05.12.2008.	BiH-MU 11/08	
	6.	Bonn Amendment	22.06.1979. [KSS]	Bonn, Germany			
	7.	Gaborone amendment	30.04.1983. [Druga KSS]	Gaborone, Botswana			
8.	VIENNA CONVENTION FOR THE PROTECTION OF THE OZONE LAYER (UNEP)		22.03.1985.	Vienna, Austria	SUC	SFRJ-MU 1/90 i R BiH 13/94	EU[P], 1988 APP
	9.	Montreal Protocol on Substances that Deplete Ozone Layer	16.09.1987.	Montreal, Canada	SUC	SFRJ-MU 16/90	EU[P], 1988 APP
		10 · The London Amendment (1990) to the Montreal Protocol agreed by the Second Meeting of the parties to the Vienna Convention on the Ozone Layer	27. - 29. June 1990. [2 nd CoP]	London, UK	R; 08.2003	BiH-MU 8/03	EU[P], 1991 APP
		11 · Copenhagen Amendment (1992) The amendment to the Montreal Protocol agreed by the Fourth Meeting of the Parties (Copenhagen, 23–25 November 1992)	25.11.1992. [4 th CoP]	Copenhagen, Denmark	R; 08/2003	BiH-MU 8/03	EU[P], 1995 APP
		12 · The Montreal Amendment (1997) The amendment to the Montreal Protocol agreed by the Ninth Meeting of the Parties (Montreal, 15–17 September 1997)	15. - 17.09.1997 [9 th CoP]	Montreal, Canada	R; 08/2003	BiH-MU 8/03	EU[P], 2000 APP
		13 · Beijing amendments to the Montreal Protocol on Substances that damage the ozone layer	29.11. - 3.12.1999. [11 th CoP]	Beijing, China	R; 10.2011	BiH-MU 8/03	EU[P], 2002 APP

14.	BASEL CONVENTION ON THE CONTROL OF TRANS- BOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR DISPOSAL (UNEP)		22.03.1989.	Basel, Switzerland	R; 12. 2000	BiH 31/00	EU[P], 1994
	15.	Amendment to the Convention (“Ban Amendment”)	8. - 22.09.1995. [3 rd CoP]	Geneva, Switzerland			EU[P], 1997 APP
	16.	Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal	10.12.1999. [5 th CoP]]	Basel, Switzerland			
17.	UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)		13.06.1992.	Rio de Janeiro, Brazil	R; 20.07.2000.	BiH 19/00	EU[P], 1994
	18.	Kyoto Protocol	01.12.1997.	Kyoto, Japan	R; 22.04.2008.	BiH-MU 3/08	EU[P], 2002 APP
	19.	Doha Amendment to the Kyoto Protocol	26.11. - 07.12.2012. [18. KSS]	Doha, Qatar			
20.	CONVENTION ON BIOLOGICAL DIVERSITY (CBD)		13.06.1992.	Rio de Janeiro, Brazil	R; 31.12.2002.	BiH-MU 12/02	EU[P], 1993 APP
	21.	Cartagena Protocol on Biosafety to the Convention on biological diversity	29.01.2000.	Montreal, Canada	R; 24.12.2008.	BiH-MU 12/08	EU[P], 2002 APP
	22.	Protocol on Liability and Redress to the Cartagena Protocol on Biosafety (The Nagoya– Kuala Lumpur Supplementary Protocol),	15.10.2010.	Nagoya, Japan			
	23.	Nagoya Protocol on Access to Genetic Resources and the fair and equitable Sharing of Benefits arising from their Utilization to the Convention on Biological Diversity	29.10.2010.	Nagoya, Japan			

24.	UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION IN COUNTRIES EXPERIENCING SERIOUS DROUGHT AND/OR DESERTIFICATION, PARTICULARLY IN AFRICA (UNCCD)		17.06.1994.	Paris, France	R; 26.08.2002.	BiH-MU 12/02	EU [P] 1998
25.	THE CONVENTION FOR THE PROTECTION OF THE MARINE ENVIRONMENT AND THE COASTAL REGION OF THE MEDITERRANEAN (BARCELONA CONVENTION)		10.06.1995.	Barcelona, Spain	SUC; 22.10.1994.		
	26.	Protocol for the Prevention of Pollution in the Mediterranean Sea by Dumping from Ships and Aircraft (Dumping Protocol)	16.02.1976.	Barcelona, Spain			
	27.	Protocol for the Prevention and Elimination of Pollution in the Mediterranean Sea by Dumping from Ships and Aircraft or Incineration at Sea	10.06.1995.	Barcelona, Spain			
	28.	Protocol on the Protection of the Mediterranean Sea against Pollution from Land-Based Sources (LBS Protocol)	17.05.1980.	Athens, Greece			
	29.	Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (amended LBS Protocol)	07.03.1996.	Siracusa, Italy			
	30.	Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA and Biodiversity Protocol)	10.06.1995.	Barcelona, Spain			

	31.	Protocol Concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea (Prevention and Emergency Protocol)	25.01.2002.	Valetta, Malta			
	32.	Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (Offshore Protocol)	14.10.1994.	Madrid, Spain			
	33.	Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal (Hazardous Wastes Protocol)	01.10.1996.	Izmir, Turkey			
34.	UN CONVENTION ON THE LAW ON NON-NAVIGATIONAL USES OF INTERNATIONAL WATERCOURSES		21.05.1997.	New York, USA			
35.	THE ROTTERDAM CONVENTION ON THE PRIOR INFORMED CONSENT PROCEDURE FOR CERTAIN HAZARDOUS CHEMICALS AND PESTICIDES IN INTERNATIONAL TRADE (UNEP and FAO) [Revised 2011]		10.09.1998.	Rotterdam, Netherlands	R; 20.11.2006.	BiH-MU 14/06	EU[P], 2004
	36.	Amendment to the Convention Annex III and adoption of Annex VI	20. 24.09.2004. [1 st CoP]	- Geneva, Switzerland			
	37.	Amendment to the Convention Annex III	27. 31.10.2008. [4 th CoP]	- Rome, Italy			
	38.	Amendment to the Convention Annex III	20. 24.11.2011. [5 th CoP]	- Geneva, Switzerland			

39.	STOCKHOLM CONVENTION ON PERSISTENT ORGANIC POLLUTANTS (POPs) (UNEP)	22.05.2001.	Stockholm, Sweden	R; 02.03.2010.	BiH-MU 1/10	EU [P] 2005
40.	Amendments to Annexes A, B and C	04. - 08.05.2009. [Četvrta KSS]	Geneva, Switzerland			
41.	Amendment to Annex A	25. - 29.04. 2011.	Geneva, Switzerland			

COUNCIL OF EUROPE TREATIES

Br.	Naslov	Potpisan		BiH		EU
		Datum	Mjesto	Status	Sl. glasnik	
42	CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE AND NATURAL HABITATS	19.09.1979.	Bern, Switzerland	R;15.09.2008.	BiH-MU 8/08	EU[P], 1982
43.	CONVENTION FOR THE PROTECTION OF VERTEBRATE ANIMALS USED FOR EXPERIMENTAL AND OTHER SCIENTIFIC PURPOSES	18.3.1986.	Strasbourg, France			EU[P], 1998

UN-ECE TREATIES

Br.	Naslov		Potpisan		BiH		EU
			Datum	Mjesto	Status	Sl. glasnik	
44.	(CONVENTION ON LONG-RANGE TRANS-BOUNDARY AIR POLLUTION (CLRTAP))		13.11.1979.	Geneva, Switzerland	SUC; 06/03/1992	SFRJ-MU 11/86 i R BiH 13/94	EU[P], 1983
	45.	Protocol to the 1979 Convention on Long-Range Trans-boundary Air Pollution to Abate Acidification, Eutrophication and Ground-Level Ozone (The 1999 Gothenburg Protocol)	30.11.1999.	Gothenburg, Sweden			
	46.	Amendment to Annex I to the 1999 Protocol to Abate Acidification, Eutrophication and Ground-Level Ozone	EB Decision 2012/1 Amendment				
	47.	Amendment of the texts of and Annexes II and IX to the 1999 Protocol to Abate Acidification, Eutrophication and Ground-Level Ozone and addition of new Annexes X and XI	EB Decision 2012/2				
	48.	Adjustment under the Gothenburg Protocol to emission reduction commitments or to inventories for the purposes of comparing total national emissions with them	EB Decision 2012/3				

		49.	Provisional Application of Amendment to the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone	EB Decision 2012/4				
	50.	Protocol to the Convention on long range Transboundary air pollution concerning long-term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP)		28.9.1984.	Geneva, Switzerland			EU[P], 1988
	51.	Protocol to the 1979 Convention On Long-Range Transboundary Air Pollution On Persistent Organic Pollutants (tent Organic Pollutants - POPs)		24.06.1998.	Aarhus, Denmark			
		52.	Protocol to the 1979 Convention On Long-Range Transboundary Air Pollution on Persistent Organic Pollutants Amendments to Annexes I and II (POPs)	18.12.2009.	Geneva, Switzerland			
		53.	Protocol to the 1979 Convention On Long-Range Transboundary Air Pollution on Persistent Organic Pollutants Amendments to the Text and to Annexes I, II, III, IV, VI and VIII	18 12. 2009	Geneva, Switzerland			
		54.	Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Persistent Organic Pollutants Amendments to Annexes V and VII	18.12.2009.	Geneva, Switzerland			
	55.	Protocol to the 1979 Convention On Long-Range Transboundary Air Pollution On Heavy Metals		24.06.1998.	Aarhus, Denmark			

		56.	Amendment of the text of and Annexes other than III and VII to the 1998 Protocol on Heavy Metals	EB Decision 2012/5				
		57.	Amendment of annex III to the 1998 Protocol on Heavy Metals	EB Decision 2012/6				
	58.		Protocol to the 1979 Convention On Long-Range Transboundary Air Pollution On Further Reduction Of Sulphur Emissions	14.06.1994.	Oslo, Norway			EU[P], 1998
		59.	Adjustment to Annex II to the 1994 Oslo Protocol on Further Reduction of Sulphur Emissions	2007				
	60.		Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution Concerning the Control of Emissions of Volatile Organic Compounds or Their Transboundary Fluxes (VOC Protocol)	18.11.1991.	Geneva, Switzerland			
	61.		Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at least 30 per cent	08.07.1985.	Helsinki, Finland			
	62.		Protocol to the 1979 Convention on Long- Range Transboundary Air Pollution Concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes (Sofia Protocol)	31.10.1988.	Sofia, Bulgaria			EU[P], 1994
63.			THE CONVENTION ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) IN TRANS-BOUNDARY CONTEXT (ESPOO)	25.02.1991.	Espoo, Finland	R;14.03.2010.	BiH-MU 8/09	EU[P], 1997
	64.		First Amendment to the Espoo Convention	26. - 27.02. 2001. [2 nd CoP Decision II/14]	Sofia, Bulgaria			

	65.	Second Amendment to the Espoo Convention	04.06.2004. [3 rd CoP Decision III/7]	Cavtat, Croatia			
	66.	Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (SEA Protocol)	21.05.2003.	Kiev, Ukraine			
67.		CONVENTION ON THE TRANS-BOUNDARY EFFECTS OF INDUSTRIAL ACCIDENTS	17.03.1992.	Helsinki, Finland	PR; 20.02.2013.		EU[P], 2000
68.		CONVENTION ON THE PROTECTION AND USE OF TRANS-BOUNDARY WATERCOURSES AND INTERNATIONAL LAKES	17.03.1992.	Helsinki, Finland	R; 03/09/2009	BiH-MU 8/09	EU[P], 1996
	69.	Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes	17.06.1999.	London, UK		BiH-MU 8/2010	
70.		AGREEMENT ON THE CONSERVATION OF AFRICAN-EURASIAN MIGRATORY WATER BIRDS (AEWA-CMS) (UNEP)	15.06.1995.	The Hague			EU[P] 1999
	71.	Amendment to the Agreement	14. - 18. maj 2012. [Peta KSS]	La Rochelle, France			
72.		INTERNATIONAL TROPICAL TIMBER AGREEMENT(ITTA) (UNCTAD)	26.1.1994.	Geneva			EU[P] 1997
73.		CONVENTION ON PUBLIC PARTICIPATION, ACCESS TO INFORMATION AND ACCESS TO JUSTICE IN ENVIRONMENTAL MATTERS (AARHUS)	25.04.1998.	Aarhus, Denmark	R; 15/09/2008	BiH-MU 8/08	EU[P] 2001

	74 .	Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes and to the 1992 Convention On the Transboundary Effects of Industrial Accidents	21.05.2003.	Kiev, Ukraine			
	75 .	Protocol on Pollutant Release and Transfer Registers	21.05.2003.	Kiev, Ukraine			

OTHER TREATIES

No.	Title		Signing		BiH		EU
			Date	Place	Status	O.G.	
76	CONVENTION ON PROTECTION AND SUSTAINABLE USE OF DANUBE RIVER (DRPC)		29.06.1994	Sofia, Bulgaria	R; 11/07/2005	BiH-MU 01/2005	EU[P] 1998
77	FRAMEWORK AGREEMENT ON THE SAVA RIVER BASIN (FASRB)		03.12.2002	Kranjska Gora, Slovenia		BiH-MU 8/2003	
	78	Protocol on the Navigation Regime to the Framework Agreement on the Sava River Basin	03.12.2002	Kranjska Gora, Slovenia		BiH-MU 10/2009	
	79	Protocol on Flood Protection to the Framework Agreement on the Sava River Basin	01.06.2010	Gradiška, B&H		BiH-MU 7/2011	

	80	Protocol on Prevention of the Water Pollution Caused by Navigation to the Framework Agreement on the Sava River Basin					
81		INTERNATIONAL PLANT PROTECTION CONVENTION (IPPC) (FAO)	12.06.1951 [Rev. 1979; new rev. text	Rome, Italy	R; 30/06/2003	BiH-MU 8/03	

ACC = Accession

R = Ratification

S = Signatory

SUC = Succession

--- = not applicable

ANNEX III – REGULATIONS RELEVANT TO THE REPUBLIKA SRPSKA INSTITUTIONS COMPETENT FOR ENVIRONEMNTAL PROTECTION

No	Title	Publishe
	CONSTITUTION OF REPUBLIKA SRPSKA	(Official Gazette of Republika Srpska, Vol. 21/92 –revised, 28/94, 8/96, 13/96, 15/96,16/96, 21/96, 21/02, 26/02, 30/02, 31/02, 69/02, 31/03, 98/03, 115/05, 117/05)
1.	LAW ON GOVERNMENT	(Official Gazette of Republika Srpska, Vol. 118/08)
2.	LAW ON THE REPUBLIC ADMINISTRATION	(Official Gazette of Republika Srpska, Vol. 118/08, 11/09, 74/10, 86/10, 24/12, 121/12, 15/16 and 57/16)
3.	LAW ON CIVIL SERVANTS	(Official Gazette of Republika Srpska, Vol. 118/08, 117/11, 37/12 i 57/16)
4.	LAW ON GENERAL ADMINISTRATIVE PROCEDURE	(Official Gazette of Republika Srpska, Vol. 13/02, 87/07 i 50/10)
5.	LAW ON ADMINISTRATIVE DISPUTES	(Official Gazette of Republika Srpska, Vol. 109/05 I 63/11)
6.	LAW ON INSPECTIONS IN RS	(Official Gazette of Republika Srpska, Vol. 74/10, 109/12, 117/12 I 44/16)
7.	LAW ON ENVIRONMENTAL PROTECTION FUND AND FINANCING	(Official Gazette of Republika Srpska, Vol. 117/11, 63/14 i 93/16)
8.	LAW ON FREE ACCESS TO INFORMATION	(Official Gazette of Republika Srpska, Vol. 20/01)

ANNEX IV – REPUBLIKA SRPSKA POLICY AND REGULATIONS INSTRUMENTS IN THE FIELD OF ENVIRONMENTAL PROTECTION

S T R A T E G I E S					
No	Title	Adopted by		Data concerning the adoption	
1	ENVIRONMENTAL PROTECTION STRATEGY	National	Assembly	Official Republika Srpska, Vol. 65/11	
2	Chemical Safetz Startegy 2012-2016	National	Assembly	Official Republika Srpska, Vol.49/12	
3.	REPUBLIKA SRPSKA AIR PROTECTION STRATEGY	National	Assembly	Official Republika Srpska, Vol. 37/11.	
4.	INTEGRAL WATER MANAGEMENT STRATEGY	National	Assembly	Official Republika Srpska, Vol. 17/16	

ENVIRONMENTAL PROTECTION REGULATIONS

HORIZONTAL ISSUES					
br.	Naslov			Objavljeno u	
1.	LAW ON ENVIRONMENTAL PROTECTION			(Official Republika Srpska, Vol. 71/12 and 79/15)	
	2.	Rulebook on projects requiring environmental impact assessment and criteria for requirement and scope of environmental impact assesment		(Official Republika Srpska, Vol. 124/12)	
	3.	Rulebook on executing of activities in the field of environmental protection		(Official Republika Srpska, Vol. 28/13)	

	4.	Rulebook on methodology and keeping of register of plants and polluters	(Official Gazette of Republika Srpska, Vol. 92/07)
	5.	Rulebook on contents of reports strategic environmental impact assessment	(Official Gazette of Republika Srpska, Vol. 28/13)
	6.	Rulebook on criteria for requirement of strategic environmental impact assessment	(Official Gazette of Republika Srpska, Vol. 28/13)
	7.	Instruction on contents of the Study on environmental impact study	(Official Gazette of Republika Srpska, Vol. 108/13)
2.	CRIMINAL CODE		(Official Gazette of Republika Srpska, Vol. 49/03, 108/04, 37/06, 70/06, 73/10, 01/12, 67/13)
3.	LAW ON MINOR OFFENSES		(Official Gazette of Republika Srpska, Vol. 63/14)
4.	LAW ON FREE ACCESS TO INFORMATION		(Official Gazette of Republika Srpska, Vol. 20/01)
5.	LAW ON ENVIRONMENTAL PROTECTION FUND AND FINANCING		(Official Gazette of Republika Srpska, Vol. 117/11, 63/14 and 93/16)

WATER MANAGEMENT AND PROTECTION			
No.	Title		Published
1.	LAW ON WATERS		(Official Gazette of Republika Srpska, Vol.50/06, 92/09 i 121/12)
	2.	Directive on manner, procedure and deadlines for calcualtion and payment and delayed payment for water fees	(Official Gazette of Republika Srpska, Vol.7/14)
	3.	Directive on wate classification and watercourse categorisation	(Official Gazette of Republika Srpska, Vol.42/01)
	4.	Directive on participation of public in water management	(Official Gazette of Republika Srpska, Vol.35/07)
	5.	Decision on determination of district river basisns boundaries and watercourses in the territory of Republika Srpska	(Official Gazette of Republika Srpska, Vol.98/06)
	6.	Decision of special water fee rates	(Official Gazette of Republika Srpska, Vol.53/11 i 119/11)
	7.	Rulebook on requirements for wastewater release into public sewerage	(Official Gazette of Republika Srpska, Vol.44/01)
	8.	Rulebook on requirements for wastewater release in surface waters	(Official Gazette of Republika Srpska, Vol.44/01)
	9.	Rulebook on methods of determining level of wastewater levels as grounds for determination of water fees	(Official Gazette of Republika Srpska, Vol. 79/11, 25/12, 36/12)
	10.	Rulebook on requirements to be met by water management laboratories as legal entities or within legal entities which carry out certain research of surface, ground and wastewaters	(Official Gazette of Republika Srpska, Vol.44/01)
	11.	Rulebook on wastewater treatment and drainage for cities and inhabited areas which do not have public sewerage	(Official Gazette of Republika Srpska, Vol.68/01)
	12.	Rulebook on measrues of protection, determination, maintenance and marking of sanitary protection zone	(Official Gazette of Republika Srpska, Vol.76/16)
	13.	Rulebook on maintenance of riverbeds and water land	(Official Gazette of Republika Srpska, Vol.34/03, 22/06)
	14.	Rulebook on health regularity of drinking water	(Official Gazette of Republika Srpska, Vol.75/15)

	15.	Rulebook on allowed quantities of hazardous and detrimental substances in agricultural land and irrigation water and methods of research thereof	(Official Gazette of Republika Srpska, Vol.56/16)
--	-----	--	---

WASTE MANAGEMENT			
No	Title		Published
1.	LAW ON WASTE MANAGEMENT		(Official Gazette of Republika Srpska, Vol.. 111/13 i 106/15)
	2.	Directive on landfill waste disposal	(Official Gazette of Republika Srpska, Vol.36/15)
	3.	Directives on packaging and packaging waste management	(Official Gazette of Republika Srpska, Vol.36/15)
	4.	Directive on lists of waste and documents relative to transboundary movement of waste	(Official Gazette of Republika Srpska, Vol.86/15)
	5.	Decision on coefficients for calculation of fees for burdening of environment with packaging waste and goals of packaging and packaging waste managementfor 2015 and 2016	(Official Gazette of Republika Srpska, Vol.6/16 i 67/16)
	6.	Rulebook on types of waste and activities in the field of waste management requiring permits	(Official Gazette of Republika Srpska, Vol.39/05 i 3/07)
	7.	Rulebook requirements for operation of waste incineration plants	(Official Gazette of Republika Srpska, Vol.39/05)
	8.	Rulebook on financial guaranties that can provide for transboundary movement of waste	(Official Gazette of Republika Srpska, Vol.86/05)
	9.	Rulebook on hazardous waste transportation	(Official Gazette of Republika Srpska, Vol.86/05)
	10.	Rulebook on requirements for transfer of waste management duty from producers and sellers to responsible persons in waste collection system 2323	(Official Gazette of Republika Srpska, Vol.118/05)
	11.	Rulebook on medical waste management	(Official Gazette of Republika Srpska, Vol. 90/06)
	12.	Rulebook on manner of waste tyres management	(Official Gazette of Republika Srpska, Vol. 20/12)

13.	Rulebook on request form for issuance of permit for waste storing, treatment and disposal	(Official Gazette of Republika Srpska, Vol.18/15)
14.	Rulebook on waste categories, research and classification	(Official Gazette of Republika Srpska, Vol.19/15)
15.	Rulebook on document form concerning hazardous waste movement and instructions on how the fill out forms	(Official Gazette of Republika Srpska, Vol.21/15)
16.	Rulebook on end of validity of Rulebook on hazardous waste transportation	(Official Gazette of Republika Srpska, Vol.21/15)
17.	Rulebook on contents of measures program with timeline of adaptation of existing landfills	(Official Gazette of Republika Srpska, Vol.41/15)
18.	Rulebook on contents, keeping and layout of register of issued waste management permits	(Official Gazette of Republika Srpska, Vol.43/15)
19.	Rulebook on contents and layout of waste management permit	(Official Gazette of Republika Srpska, Vol.43/15)
20.	Rulebook on storing, packaging and marking of hazardous waste	(Official Gazette of Republika Srpska, Vol.49/15)
21.	Rulebook on requirements and collection, transportation, storing and treatment of waste used as secondary raw material or for energy generation (Official Gazette of Republika Srpska Vol 61/15)	(Official Gazette of Republika Srpska, Vol.61/15)
22.	Rulebook on methodology of data collection on waste and records thereofi (Official Gazette of Republika Srpska Vol 61/15)	(Official Gazette of Republika Srpska, Vol.61/15)
23.	Rulebook on general and special documentation submitted along with requests for issuance of waste import, export and transit permit (Official Gazette of Republika Srpska Vol 5/16)	(Official Gazette of Republika Srpska, Vol.5/16)
24.	LAW ON UTILITIES ACTIVITIES	(Official Gazette of Republika Srpska, Vol.124/11)

AIR QUALITY AND CLIMATE CHANGE		
No	Title	Published
1.	LAW ON AIR PROTECTION	(Official Gazette of Republika Srpska, Vol. 124/11)

	2.	Directive on gradual exclusion of substances that damage ozone layer	(Official Gazette of Republika Srpska, Vol.94/05)
	3.	Directive concerning determination of zones and agglomerations	(Official Gazette of Republika Srpska, Vol.100/12)
	4.	Directive on requirements for air quality monitoring	(Official Gazette of Republika Srpska, Vol.124/12)
	5.	Directive on air quality values	(Official Gazette of Republika Srpska, Vol.124/12)
	6.	Directive concerning establishment of Republic network of measuring stations and measuring spots	(Official Gazette of Republika Srpska, Vol.124/12)
	7.	Rulebook on methodology and keeping of registers of plants and polluters	(Official Gazette of Republika Srpska, Vol. 92/07)
	8.	Rulebook on measures of prevention and reduction of air pollution and air quality improvement	(Official Gazette of Republika Srpska, Vol.03/15, 51/158 and 47/16)

INDUSTRIAL POLLUTION			
Np	Title		Published
1		LAW ON ENVIRONMENTAL PROTECTION	(Official Gazette of Republika Srpska, Vol 71/12 and 79/15)
	2.	Rulebook on plants that may be constructed and operate only with ecological permit	(Official Gazette of Republika Srpska Vol 124/12)
	3.	Rulebook on revision and renewal of ecological permits	(Official Gazette of Republika Srpska Vol 28/13)
	4.	Rulebook on eco-labels and eco-labels	(Official Gazette of Republika Srpska Vol 108/13)
	5.	Rulebook on contents and keeping of register of issue ecological permits	(Official Gazette of Republika Srpska Vol 108/13)
	6.	Rulebook on activities and development of best available techniques	(Official Gazette of Republika Srpska Vol 108/13)

CHEMICALS			
No		Title	Published
1.		LAW ON ENVIRONMENTAL PROTECTION	(Official Gazette of Republika Srpska Vol 71/12 i 79/15)
2.		LAW ON CHEMICALS	(Official Gazette of Republika Srpska Vol 25/09)
	3.	Rulebook on methods of chemicals safety evaluation, contents of chemicals safety report and proposal of measures for reduction and control of risk from chemicals	(Official Gazette of Republika Srpska Vol 99/09 i 79/14)
	4.	Rulebook on requirements to be met by institutions that evaluate chemicals safety	(Official Gazette of Republika Srpska Vol 33/13)
	5.	Rulebook concerning determination of requirements for renewal of activities of production, trade and use of chemicals	(Official Gazette of Republika Srpska Vol 27/14, 28/14 i 42/16)
	6.	Rulebook on keeping of integral inventory of chemicals	(Official Gazette of Republika Srpska Vol 15/11)
	7.	Rulebook on contents of records and keeping of chemicals records	(Official Gazette of Republika Srpska Vol 113/09 i 45/14)
	8.	Rulebook on criteria for marketing of detergents	(Official Gazette of Republika Srpska Vol 104/14)
	9.	Rulebook on contents of technical records on surfactant in detergents	(Official Gazette of Republika Srpska Vol 8/10)
	10.	Rulebook on labelling of detergents	(Official Gazette of Republika Srpska Vol 8/10 i 104/14)
	11.	Rulebook on requirements and on acquiring and testing of knowledge on protection from hazardous chemicals	(Official Gazette of Republika Srpska Vol 71/13 i 42/16)
	12.	Rulebook on the level of fees pertaining to hazardous chemicals and products	(Official Gazette of Republika Srpska Vol 125/11 i 27/13)

	13.	Rulebook on classification, packaging and labelling of chemicals and certain products	(Official Gazette of Republika Srpska Vol 9/16 i 89/16)
	14.	Rulebook on criteria for identification of substances such as PBT or vPvB	(Official Gazette of Republika Srpska Vol 104/15)
	15.	Rulebook on contents of safety technical sheet	(Official Gazette of Republika Srpska Vol 104/13)
	16.	Rulebook on prior notice procedure and procedure of issuing approvals based on prior notice in cases of import and export of certain hazardous chemicals and products	(Official Gazette of Republika Srpska Vol 33/13)
	17.	Rulebook on keeping of chemicals inventory	(Official Gazette of Republika Srpska Vol 46/14)
	18.	Rulebook on keeping of chemicals records	(Official Gazette of Republika Srpska Vol 86/13)
	19.	Rulebook on contents of report in procedure of supervision and import of chemicals	(Official Gazette of Republika Srpska Vol 126/11 i 42/16)
	20.	Rulebook on principles of good laboratory practice	(Official Gazette of Republika Srpska Vol 23/12)
	21.	Rulebook on determining how harmonised work of laboratories is with principles of good laboratory practice	(Official Gazette of Republika Srpska Vol 23/12)
	22.	Rulebook on methods of examining of chemicals features	(Official Gazette of Republika Srpska Vol 5/13)
	23.	List of substances that cause concerns	(Official Gazette of Republika Srpska Vol 106/12 i 54/15)
	24.	Rulebook on requirements for limitation and ban of production, trade and use of chemicals	(Official Gazette of Republika Srpska Vol 100/10 i 63/13)
25.	LAW ON BIOCIDES		(Official Gazette of Republika Srpska Vol 37/09)
	26.	Rulebook on keeping of biocides records	(Official Gazette of Republika Srpska Vol 86/13)

27.	Rulebook on contents of reports in procedure of supervision of biocides that are imported	(Official Gazette of Republika Srpska Vol 126/11 i 42/16)
28.	Rulebook on specific requests concerning classification, packaging, labelling and advertising of biocides	(Official Gazette of Republika Srpska Vol 10/11)
29.	Rulebook on requirements to be met by legal entities that use biocides for professional purposes	(Official Gazette of Republika Srpska Vol 79/14 i 83/14)
30.	Rulebook on requirements for activities of production, trade, use and storing of biocides	(Official Gazette of Republika Srpska Vol 79/14)
31.	Rulebook on keeping of biocides inventory	(Official Gazette of Republika Srpska Vol 57/10)
32.	Rulebook on requirements and procedure of acknowledging foreign permits for marketing of biocides	(Official Gazette of Republika Srpska Vol 49/10)
33.	Rulebook on contents of basic data on biocidal products	(Official Gazette of Republika Srpska Vol 32/10 i 86/13)
34.	Rulebook on list of active substances that are not allowed in biocidal products	(Official Gazette of Republika Srpska Vol 32/10, 74/11, 85/12 and 13/15)
35.	Rulebook on list of active substances allowed in biocidal products	(Official Gazette of Republika Srpska Vol 32/10, 72/11, 85/12, 14/15 i 24/16)
36.	Rulebook on conditions and work of Commission for biocides	(Official Gazette of Republika Srpska Vol 23/10)
37.	Rulebook on types of biocide	(Official Gazette of Republika Srpska Vol 3/10)
38.	Rulebook on principles and procedures of biocidal product risk assessment	(Official Gazette of Republika Srpska Vol 3/10)
39.	Rulebook on contents of documentation for evaluation of active substances of biocide, biocide evaluation, scope and contents of records and summary records	(Official Gazette of Republika Srpska Vol 3/10)

NATURE PROTECTION		
No	Title	Published
1.	LAW ON NATURE PROTECTION	(Official Gazette of Republika Srpska Vol 20/14)
2.	LAW ON NATIONAL PARKS	(Official Gazette of Republika Srpska Vol 75/10)
3.	Rulebook on system of monitoring of intentional keeping and killing of protected animals	(Official Gazette of Republika Srpska Vol 85/05)
4.	Rulebook on establishment and management of information systems for nature protection and monitoring system	(Official Gazette of Republika Srpska Vol . 85/05)
5.	Rulebook on contents, determination and enforcement of measures of protected areas management	(Official Gazette of Republika Srpska Vol 83/15)
6.	Rulebook on official uniform, identification card and use of issued weapons to supervision service in national parks	(Official Gazette of Republika Srpska Vol 83/11)
7.	Rulebook on order in national parks	(Official Gazette of Republika Srpska Vol . 83/11)
8.	Rulebook on protected natural estates register	(Official Gazette of Republika Srpska Vol 55/15)
9.	Rulebook on layout of label of environmental protection, procedure and requirements for its use	(Official Gazette of Republika Srpska Vol 50/16)
10.	Directive on red list of protected species of flora and fauna in Republika Srpska	(Official Gazette of Republika Srpska Vol 124/12)
11.	LAW ON “SUTJESKA” NATIONAL PARK	(Official Gazette of Republika Srpska Vol 121/12)
12.	LAW ON “KOZARA” NATIONAL PARK	(Official Gazette of Republika Srpska Vol 121/12)

ENVIRONMENTAL NOISE		
No	Title	Published
1	LAW ON ENVIRONMENTAL PROTECTION	(Official Gazette of Republika Srpska Vol 71/12 i 79/15)
	2 Rulebook on allowed limits of sound and murmur intensity	(Official Gazette of Republika Srpska Vol 46/89)