
ENVIRONMENTAL APPROXIMATION STRATEGY OF BOSNIA AND HERZEGOVINA

EAS - BIH

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ACRONYMS AND 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
BD of BiH	Brčko District of Bosnia and Herzegovina
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)
DUPPA	Department for Urban Planning and Property Affairs, Brčko District of BiH



DW

Drinking water

EAS

Environmental Approximation Strategy



EBRD	European Bank for Reconstruction and Development
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 (EuropeAid/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
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
IQs	Implementation Questionnaire [RENA context]
IT	Information Technology
ITL	Independent transaction log [GHG context]
JI	Joint Implementation (mechanism) [Kyoto context]
KfW	<i>Kreditanstalt für Wiederaufbau</i> [bank group]
LCP	Large Combustion Plant
LE	Local Expert
LGA	Legal Gap Analysis
LSG	Local Self-Government
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



NOx	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
O.G.	Official Gazette
OP	Operational Programme
O&M	Operation and Maintenance
Opex	Operational Expenditure (O & M costs)
PCB	Polychlorinated biphenyls
PCT	Polychlorinated terphenyls
PM_[10; 2,5]	Particulate Maters
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
RMAS	Regions where there is an inter-municipal agreement
ROD	Reporting Obligations Data Base [EU]
REACH	EU Regulation on Registration, Evaluation, Authorisation and Restriction of chemicals
RS	Republika Srpska
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 Waste Water [Directive]
VOCs	Volatile Organic Compounds
WEEE	Waste Electrical and Electronic Equipment
WFD	Water Framework Directive
WI	Waste Incineration
WQOs	Water Quality Objectives
WS	Water Service
WVTA	Whole Vehicle Type-Approval



EXECUTIVE SUMMARY

Association of BiH with EU is a goal which BiH is formally committed to achieve by signing the Stabilisation and Association Agreement (SAA) in 2008. In accordance with EU Copenhagen and Madrid criteria, approximation of legislation of a country intending to join EU is a unique obligation accepted by signing of SAA. The approximation process assumes bringing in line all legislation, rules and procedures of accessing country with EU acquis (i.e. regulations, directives, decisions etc.). According to the EU Agenda 2000, countries candidate for the EU membership should adopt realistic national long- term strategies for gradual effective alignment of their legislation with acquis, which would start being implemented before accession, in particular for tackling water and air pollution. These strategies should identify key priority areas and objectives to be fulfilled by the dates of accession as well as timetables for further full compliance; ensuring fulfilling obligations is therefore included in the SAA. This also pertains to approximation of environmental legislation in BiH; environment shall be subject of negotiation between BiH and EU in accordance with SAA Chapter 27.

In case of BiH, EU Commission assessed in its 2013 Progress Report that the lack of genuine political support for the EU agenda is reflected in very limited progress as regards approximation to EU laws and standards. Therefore, there is a clear requirement from EU that BiH must adopt a country-wide environmental approximation strategy (EAS). EU provided financial support for drafting of the text of EAS through implementation of the IPA Project EnvIS (2011-2014) which was delivered in December 2014. Adoption of EAS is also a requirement for participation of BiH in the EU IPA II Programme.

However, differently from other countries in the South East Europe (SEE), due to its composite constitutional features, the BiH environmental approximation approach comprises a set composed of four strategic planning documents - one applicable in the entire territory of the country and three covering the territories of the BiH constitutional units. Only taken together (all adopted and implemented by the competent authorities) shall they make a harmonized body of strategic approximation, instead of one country strategy document (EAS), as in the case of other EU (potential) candidate countries.

Adoption of EAS-BiH and entity and BD of BiH strategies for implementation of EAS-BiH by the competent authorities of BiH, entities and BD of BiH respectively, in accordance with the existing legislation and under the respective procedures is the step that should follow delivery of the EnvIS Project outputs. According to agreed concept, the EAS-BiH and entities and BD of BiH documents for implementation of EAS-BiH are designed to make a unitary whole of strategy / planning documents, aimed at providing conditions for both:

- BiH to fulfil its accepted international obligations in accordance with SAA (2008); With adoption and publishing of EAS-BiH, BiH shall have a vitally important strategy applicable in the entire territory of the country; and
- FBiH, RS and BD of BiH to provide necessary support to BiH in fulfilling its accepted international obligations, in accordance with the BiH Constitution; The respective FBiH, RS and BD of BiH strategic documents shall enable at the same time:
 - implementation of EAS in their respective parts of the territory; and



- fully discharge of their constitutional competences with regards to transposition, implementation and enforcement of the EU acquis.

The EU environmental acquis, which these strategic documents comprise, consists of eight group of legislative instruments – horizontal, water, waste, air quality and climate change, industrial pollution, chemicals, nature protection, and environmental noise. EU legislation is presented in EAS in detail necessary for approximation purpose. Annex I contains an exhaustive list of the legislation subject to transposition. International sources of obligations of BiH regarding environmental issues are not specifically dealt with in EAS. However, due to the fact that EU is a party to a large number of international environmental treaties, and that often EU legislation, incorporates requirements of such international environmental treaties/ which are the basis of transposition/, it was inevitable to deal in EAS to the certain extent with such environmental treaties. The list of sources of international environmental obligations of BiH is contained in Annex II to this Strategy.

The process of association and following accession to the EU, from the perspective of the legal systems in BiH, is a complex and iterative process, which consists of three inter-linked segments:

- Transposition of EU environmental acquis into the (local) law systems of BiH, FBiH, RS and BD of BiH;
- Implementation of local legislation that transposed environmental acquis; this includes establishing of an institutional framework (at the level of State and entity and BD of BiH levels) capable to implement new legislation harmonized with the legislation of EU);
- Providing enforcement mechanisms (at all administrative levels) that will ensure that certain behaviour of all subjects is in accordance with new regulations (with the environmental acquis harmonized) by using of surveillance system, penalties, incentives.

Relevant BiH constitutional, legal and institutional issues are presented and elaborated in the respective chapters of EAS-BiH, providing in comparison with presented EU requirements, the basis for identification of existing gaps and recommendations.

The present text of EAS-BiH and the entity and BD of BiH documents for implementing of EAS-BiH are drafted jointly in parallel, with the aim of providing maximum harmonization between them. They are developed on the basis of previously completed comprehensive in-depth gap analyses of the legal, institutional and economic aspects relevant to the environmental approximation process in BiH, performed under the agreed Project implementation methodology. All four texts of the strategic documents should be in accordance with the constitutional competences of BiH, FBiH, RS and BD of BiH and their legal systems, and reflect their development needs. According to the beneficiary requirements, the agreed approach has been limited with exclusion of considerations for drafting new or amending existing environmental legislation and designing and proposing establishment of new institutions.

This analysis provided answers to the question of whether and to what extent there are gaps in the current environmental legislation of BiH, entities and BD of BiH in comparison with relevant EU legislation. In other words, it showed the level of achieved progress in transposition of EU environmental legislation into the legal system of BiH and legal systems of its constitutional units. Regarding institutions competent for environmental issues, a review of EU requirements was provided



which, in comparison with existing institutional review in BiH (also provided) might offer the answer to the question on what has been and what still needs to be done in order to create an appropriate institutional framework that would be capable of implementing environmental legislation harmonized with EU legislation on the high level of protection, conservation and improvement of the environment.

In accordance with analyses made, the legal and institutional gaps were identified and recommendations for undertaking of priority measures are suggested for each of analysed environmental sub-sectors (in short-term – 2-4 years and mid-term – 4-6 years periods) with aim of the identified gaps to be bridged over.

Economic aspects of this Strategy were developed in situation with limited data available, what conditioned extended development of models, particularly having in view that the national (BiH) approach had to be segmented and adjusted separately for FBiH, RS and BD of BiH, what is a unique case in EU. However, despite this kind of issues, it was possible to establish the total cost of approximation, which is estimated at some 7.1 billion EUR in a 30-40 year period. In the same period, benefits from approximation are assessed at 13.2 billion EUR. All total BiH estimates are based on the sector costs assessments (water, waste, air quality and climate change and others), and reflect costs of approximation estimates in FBiH, RS and BD of BiH.

At the same time, it was possible to identify possible sources of financing the cost of approximation, with specific focus on the so-called heavy investment directives, and suggest adequate recommendations.

When adopted formally by decisions of competent authorities of BiH, FBiH, RS and BD of BiH, these four strategic instruments, making together a comprehensive BiH environmental strategic platform, shall serve as a reliable basis for continuing in a structured way the process of environmental approximation, with a strong support provided by EU through the IPA II Programme.



I. INTRODUCTION



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Ministry of Foreign Trade
and Economic Relations

1. OBJECTIVE, PURPOSE AND SCOPE OF EAS

Bosnia and Herzegovina (BiH) today is still suffering from a legacy of environmental neglect and deterioration resulting from a governance system that failed to take into account the sustainability of economic and infrastructure developments, the impact of economic deterioration and conflict in the region. Initially in the immediate aftermath of the regional conflict, environmental protection was not generally perceived to be of high importance. Rather the perception appeared to be that environmental protection was an expensive luxury that BiH could ill afford, and the priorities were political stability, economic growth, increased employment and post-conflict reconstruction and clean-up. Recently perceived deficiencies in the application of various strategies, including those related to environmental sectors, have highlighted the need to develop a BiH Environmental Approximation Strategy (EAS) and strategies in Federation BiH (FBiH), Republic of Srpska (RS) and Brcko District of BiH (BD of BiH), and particularly plans for implementation of Directive Specific Implementation Plans (DSIPs) for BiH and Action Plans for Implementation of the Directives (APIDs) for FBiH, RS and BD of BiH.

The main objective of the BiH EAS is to ensure strategic planning of the approximation process implementation of which would provide conditions for improving of environmental protection with the aim of sustainable development. The environmental approximation process in fact consists of the transposition of environmental legislation of European Union (EU) into the legislation in BiH and implementation of such environmental legislation in BiH. Implementation will require the development of sub-strategies and plans that identify what resources are needed and how they can be mobilised to complete the implementation of the *acquis*.

Coordination of activities of different administrative authorities in BiH competent for the alignment of environmental legislation in BiH with the EU environmental *acquis* and its gradual implementation in accordance the Stabilisation and Association Agreement (SAA) is a vital dimension of such commitment. EAS can be seen as a strategic framework planning document, which should provide necessary conditions for fulfilling of international obligations accepted by BiH country-wide, in all constitutional parts of BiH, where competence for environmental issues is shared between its political units, i.e. FBiH, RS and BD of BiH.

At a more technical level, this mean that EAS shall also provide a reliable basic framework for development and adoption of the strategic documents of two entities (FBiH, RS) and Brcko District of BiH aimed at full transposition of the EU environmental *acquis* into their respective political systems. Implementation and enforcement of the FBiH, RS and BD of BiH legislation fully harmonized with the EU environmental legislation (*acquis*) are permanent activities of environmental authorities.

Through such activities, two BiH entities and BD of BiH shall fulfil its constitutional duty of providing necessary support to the State of BiH in fulfilling its international obligations in the field of environment, originating primarily from SAA.



2. GENERAL NOTES ON THE EU REQUIREMENTS

Joining European Union is the highest political priority of BiH. Political commitments and decisions have been transformed into the legally binding form by signing of the SAA between the European Community and Member States, of the one part, and Bosnia and Herzegovina, of the other part on 26 June 2008 in Luxembourg. The SAA has been ratified by all signatories entered into force on 1 June 2015. BiH ratified SAA in November 2008 and achieved the status of an EU Potential Candidate Country. With signing and ratification of SAA BiH has undoubtedly made a commitment to:

- Harmonize its legislation with EU *acquis*; and
- Create an institutional framework to implement legislation that is harmonized with EU requirements.

Foreclosed international legal obligations have their stronghold in the national legislation of BiH. Namely, the Law on the Procedures for Concluding and Executing of Treaties¹ provides for procedure regarding conclusion of international treaties and obligations of the authorities in BiH in the performance of obligations accepted by signing an international treaty. The Presidency of BiH, with the consent of the Parliamentary Assembly of BiH is competent for the ratification of international treaties on behalf of BiH. Regarding the execution of international treaties, the Law provides for obligations of the Council of Ministers of BiH to fulfil obligations accepted by international agreements. The Law also stipulates that the Council of Ministers shall fulfil these obligations through the public authorities, regardless of whether those authorities were established by legislation of BiH or the entities and BD of BiH. This means that the legal obligations of all authorities in BiH are to carry out the international legally binding obligations of BiH as accepted by signing of international treaties, including SAA.

It should be pointed out that there exists a legal obligation for the competent authorities at all levels in BiH to participate actively in the process of BiH association with EU and accession to the EU through the process of transposing EU legislation into the BiH legal systems and adjusting institutions at all levels for implementation and enforcement of transposed legislation.

Accession and Pre-accession Countries must prepare a National Programme for the Adoption of the Acquis (NPAA) aimed at planning and implementing the EU approximation process. In the case of environment, which is one of the 35 Chapters, which will be negotiated between the parties of SAA, and which covers almost one third of the overall EU *acquis*, a more detailed strategic document, EAS, is required to be adopted. EAS comprises different aspects of eight environmental sub-sectors of the EU environmental *acquis*. For each of the analysed sub-sectors all relevant legal, institutional, economic and financial issues in BiH (i.e. on the BiH, FBiH, RS and BD of BiH levels) were analysed, gaps identified and recommendations made for short-term and mid-term measures (priorities).

Those sub-sectors are:

- Horizontal (cross-cutting) issues;

¹ "Official Gazette of BiH", Vol. 29/00.



- Water Management;
- Waste Management;
- Air Quality and Climate Change;
- Industrial Pollution;
- Chemicals;
- Nature Protection; and
- Environmental Noise.

The EU Marine Strategy, as well as the issues regarding ionizing and non-ionizing radiation are left out of the scope of this Strategy and will not be elaborated here. This implies a need for the BiH institutions to deal with these issues in separate strategic documents, or to include them into the first revision of EAS.

With regards to institutional aspects of environmental approximation, the attention in this document is focused on the respective sectoral requirements of the EU and the current competences of BiH institutions for implementing the process of legislative convergence in BiH with the EU environmental legislation on protection, conservation and improvement of the environment.

The list of EU legal instruments that make up the eight environmental sub-sectors is contained in ANNEX I to this Strategy. The lists of relevant legal instruments of BiH are listed in the tables inserted in the text of the Strategy. In summary, the aim is to present the status, activities, and the method of the performing of functions of BiH institutions competent for environmental approximation.



3. METHODOLOGY APPLIED

The analytical work that preceded drafting of EAS has comprised performing legal, institutional and economic gap analyses, in the framework of the EU IPA funded Project EnvIS (2011-2014).² The purpose of providing these analytical background documents was forming a comprehensive supporting basis for development of the texts of EAS and the implementing documents for the entities and BD of BiH. These analyses were aimed at providing a feasible justification for EAS and entity and BD of BiH implementing instruments that should be developed and adopted as a set of the BiH strategic / policy / planning documents in accordance with existing BiH constitutional and legal competences and procedures, with the view of fostering approximation of environmental sector towards EU environmental *acquis*.

The legal aspects investigated have comprised:

- An in-depth analysis of international and national (State, entities and BD of BiH) binding duties of the BiH, FBiH, RS and BD of BiH public authorities connected to the process of approximation of environmental legislation in BiH towards EU environmental *acquis*;
- Identification and reviewing of the environmental *acquis* that should be transposed into the legal system in BiH;
- Reviewing of BiH, FBiH, RS and BD of BiH environmental legislation in eight sub-sectors identified in the EU environmental *acquis*;
- Identification of potential and existing gaps in environmental legislation in BiH; and
- Proposing / recommending short-term and mid-term priorities for activities.

The institutional aspects researched comprise the existing institutional framework of BiH, FBiH, RS BD of BiH regarding the reviewed environmental sectors of the EU environmental *acquis*, and identified gaps and recommendations for the undertaking of priority measures each of analysed sectors with the purpose of filling the gaps. Thus, the focus was on investigation of institutional issues regarding responsibilities for transposition and implementation of the EU environmental *acquis*.

The process of accession to the EU, from the perspective of a legal system, is a complex and iterative process, which consists of three inter-linked segments:

- Transposition of the EU *acquis* into the legal systems of BiH, FBiH, RS and BD of BiH;
- Implementation of local legislation that transposed EU *acquis*; this includes establishing of an institutional framework (at the level of State and entity and BD of BiH levels) capable of implementing new environmental legislation harmonized with environmental legislation of EU);
- Providing enforcement mechanisms (at all administrative levels) that will ensure that certain behaviour of all subjects is in accordance with new legislation, harmonized with the EU *acquis*, including monitoring, surveillance system, penalties, incentives.

In this framework, the analysis of legal aspects provides answers to the question of whether and to what extent there are gaps in current environmental legislation of BiH, entities and BD of BiH in comparison with desirable full transposition of EU environmental legislation. In other words, the

² Strengthening Bosnia and Herzegovina environmental institutions and preparation for pre-accession funds - EnvIS; EuropeAid/128786/C/SER/BA



results of the investigation of relevant legal issues show the level of progress achieved in transposition of EU environmental legislation into the legal systems of BiH and its constitutional units.

Analysis of the institutional framework in BiH was intended to provide an answer to the question on what has been done thus far and what still needs to be done in order to create an appropriate institutional framework that would be capable of implementing environmental legislation harmonized with EU environmental legislation. The analysis of public institutions responsible to ensure the imposition of certain behaviour in the event of breach or non-implementation of the transposed EU legislation (enforcement) is a separate issue, which was not in the scope of the research and was not dealt with comprehensively in this document.

The research into current situation was the first step in designing an overall strategy. The research is limited on the status quo, with no ambition to search for causes and possible consequences of current situation. The main source of information were legal instruments (constitutions, laws, decisions and regulations) currently in force in EU and BiH, 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 texts of the EAS and strategic documents for FBiH, RS and BD of BiH was supplemented also with scrutiny of the economic and financial aspects of approximation.

The economic component of the EAS has, as its corner stone, the estimation of the overall cost of approximation. In addition, this cost must be linked to reasonable assumptions regarding cost recovery and financing potential, so as to establish a plausible timeframe for full compliance. There are two broad methods employed to estimate the cost of approximation and general impact on regulations:

- 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 /substances/ to be removed or populations to be served by new or improved standards and 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 estimate deriving from industry sources and real data taken over 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 taken over from a reference base that differs widely from the idiosyncratic conditions prevailing in the beneficiary country / region.

The top to bottom, macro-econometric approach is employed when the directives evaluated are complex, have a wide reaching impact, especially significant impact the population and thus 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 into the air and water or 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 related 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 fill the gaps and better define the macro national level approach.

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

- Emissions into air;
- Emissions into water;
- Solid Waste Management.

In addition, the fourth model has been developed for nature and biodiversity protection due to the fact that it is one of key elements of the EU environmental protection policy, although from the cost of approximation point of view, the direct approximation costs are not significant. The approximation of horizontal legislation and legislation in environmental noise and chemical sectors have been estimated on the basis of proportionality to similar transition economies, as there is insufficient data for a domestically based extrapolation. This 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 heavily compromise a balanced implementation, given the interactive nature of environment.

These factors must be taken into account seriously in order to create a feasible and credible national policy.

The evaluation of costs is performed in two stages:

- A preliminary analysis based on existing studies, statistics and the budgets of the different institutions, especially in the case of the heavy investment directives. This initial estimate provides a baseline figure that will permit us to establish the framework for the more elaborate directive by directive or sector by sector cost analysis. This “baseline scenario” derived from the existing information will also permit us to perform 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 BiH’ financial and economic capacities.
- A best to date EAS cost of approximation evaluation for the aforementioned sectors.

The starting point of these analyses, basically, involves:

- 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 is derived from the baseline scenario, the existing feasibility studies for ongoing projects and obligatorily in those cases where specific to BiH unit costs cannot be obtained, “project best estimates” should be made based on the situation in BiH and the experience of the key and senior experts in other transition economies where these analyses were made;
- This information is collected and introduced, together with a vast array of necessary assumptions and sector specific parameters into a calculation model;
- The model is then customized to BiH’s needs and priorities and includes a clear module of “input” parameters for policy manipulation on a sector by sector basis. This will be the interface used by the analysts. 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.



II SOURCES OF OBLIGATIONS AND SCOPE OF APPROXIMATION



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Ministry of Foreign Trade
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1. EU SOURCES OF OBLIGATIONS

International sources of obligations and rights, making a part of the EU *acquis*, relevant for environmental approximation in BiH, are the following:

- Stabilization and Association Agreement (SAA) (2008);
- Council Directive of 23 December 1991 standardizing and rationalizing reports on the implementation of certain Directives relating to the environment (91/692/EEC) (Standardized Reporting Directive – SRD) (consolidated);
- Regulation (EC) No 401/2009 of the European Parliament and of the Council of 23 April 2009 on the European Environment Agency and the European Environment Information and Observation Network.

Regarding institutional issues, there is a specific, unofficial and non-binding document of the EU Commission, which should be taken into account. It is GUIDE TO THE MAIN ADMINISTRATIVE STRUCTURES REQUIRED FOR IMPLEMENTING THE ACQUIS³ The Guide is designed as a working tool for the Commission experts in Headquarters and Delegations involved in the EU enlargement process and for experts working for the Commission. It is also intended to provide informal guidance to the experts in partner countries who are engaged in the process of approximation of their legislation and administration with those of the EU.

1.1 STABILIZATION AND ASSOCIATION AGREEMENT (SAA)

1.1.1 Environmental related core elements

The SAA has been concluded between the European Union, its 28 Member States, and Atomic Energy Community on the one part, and Bosnia and Herzegovina, on the other part. BiH signed and ratified the SAA which came into force on 1 June 2015. Certain provisions of the SAA are binding for BiH in the way that BiH is obliged to implement them from the date of the SAA signing. Namely, the Parties to the Agreement recognized the importance of the approximation of existing legislation of BiH⁴ to the legislation of EU, and its effective implementation. BiH has the obligation to endeavour to ensure that its existing laws and future legislation will be gradually made compatible with the EU *acquis*. Bosnia and Herzegovina accepted the obligation to ensure that its existing and future legislation will be properly implemented and enforced.⁵

³ Updated February 2013. The previous version of the document, dated May 2005 is available at http://ec.europa.eu/enlargement/pdf/enlargement_process/accesion_process/how_does_a_country_join_the_eu/negotiations_croatia_turkey/adminstructures_version_may05_35_ch_public_en.pdf. Accessible 13.10.2013

⁴ The expression “BiH legislation” comprise in this context not only specifically the State of BiH legislation, but also the entire body of (domestic) legislation in BiH (which is a Party to the SAA as a sovereign country recognized in international law), which includes legislation adopted at all levels – State of BiH, entities, BD of BiH, cantons, and units of local self government (cities and municipalities). All the legislation adopted at these levels must be harmonized with the EU legislation. Responsibility for transposition of the EU *acquis* into domestic legislation (and also for implementation and enforcement of such domestic legislation harmonized with *acquis*), from the standpoint of the EU, lies only with the State of BiH, as the Party to the SAA. None of the BiH constitutional units is in a direct relation with the EU and its organs responsible for implementation of SAA-a. 5SAA, Article 70.1.



Bosnia and Herzegovina also accepted the obligation to bring into conformity its policies and other measures with a sustainable economic and social development of the country. These policies should ensure that environmental considerations are fully incorporated from the outset and that they are linked to the requirements of harmonious social development.⁶

The gradual approximation (which shall extend to the entire EU *acquis*) of domestic legislation to the legislation of EU is a binding duty of BiH, from the day of signing of the SAA, i.e. from 16 June 2008, and will last until the end of the transitional period, established as a six-year period.⁷ Approximation shall be carried out on the basis of a programme to be agreed between the European Commission and BiH.⁸ BiH agreed to define, in agreement with the European Commission, the detailed arrangements for the monitoring of the implementation of approximation of legislation and activities necessary for the enforcement of law.⁹

The SAA relies *inter alia* on EU Partnership with BiH, which identified priorities for action aimed at supporting BiH's efforts to move closer to the EU¹⁰ on the commitment of BiH to approximate its legislation in the relevant sectors, among others in the sector of environment, to respective sectors of the EU and to effectively implement it¹¹ and on the EU willingness to provide decisive support for the implementation of reforms and to use all available instruments of cooperation and technical, financial and economic support on a comprehensive indicative multi-annual basis.¹²

The Stabilization and Association Council has been established in accordance with Article 115 of SAA with the task to review regularly, on an annual basis, the implementation of the SAA and adoption and implementation by BiH of legal, administrative, institutional and economic reforms, in the light of the Preamble of SAA and in accordance with the general principles of the SAA. The Council must take duly into account priorities set in the European Partnership relevant to the SAA.¹³

The parties to SAA committed to 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.¹⁴ In particular, they agreed to establish cooperation with the aim of strengthening administrative structures and procedures to ensure strategic planning of environmental issues and coordination between relevant actors. They agreed to put focus on alignment of BiH legislation to the EU *acquis*, and to development of relevant strategies.¹⁵

6SAA, Article 86.2.

7SAA, Article 70.2. According to Article 8 of the SAA, that transitional six-year period shall begin on the day of the entry into force of the SAA. Obligation of BiH gradually to approximate its legislation with the Community *acquis*, based on the SAA Article 70.2 is a binding duty for BiH in accordance with Article 12.1.(a) of the Vienna Convention on the Law of Treaties (1969), which BiH is a Party to due to the succession of SFRY.

8SAA, Article 70.3. Paragraph 2

9SAA, Article 7.4.

10 SAA, Recital, Paragraph 4

11 SAA, Recital, Paragraph 4

12 SAA, Recital, Paragraph 14

13SAA, Article 8. Paragraph 2

14SAA, Article 108 Paragraph 1

15SAA, Article 108 Paragraph 2



In fulfilling its international obligations based in the SAA, BiH (as well as other Western Balkans countries) is recommended to make use of the Commission's Communication to the Council, European Parliament, the Economic and Social Committee, the Committee of the Regions and the Candidate Countries in central and Eastern Europe on Accession Strategies for Environment – Meeting the Challenge of Enlargement with Candidate Countries in Central and Eastern Europe¹⁶ and Communication from the Commission – The Challenge of Environmental Financing in the Candidate Countries,¹⁷ which extensively elaborate the reasons, explanations and justification related to the necessity for development and adoption of an environmental approximation strategy (EAS) and directive specific implementation plans (DSIPs), are given as a successful example of their transition before beginning negotiations on association with EU and it is recommended that they are to be replicated in South Eastern Europe countries.¹⁸

1.1.2 European Union Pre-Accession Assistance

By adopting the Council Regulation (EC) No. 1085/2006 of 17 July 2006 the European Union established an Instrument for Pre-Accession Assistance (IPA). It was financial instrument designed for the period 2007-2013 to support the stabilization and association process of the Candidate and Potential Candidate Countries while respecting their specific features and the processes in which they were engaged. The assistance was provided on the basis of the European Partnerships of the Potential Candidates and the Accession Partnerships of the Candidate Countries, which means the Western Balkan Countries, Turkey and Iceland.

The aim of the IPA was therefore to enhance the efficiency and coherence of aid by means of a single framework in order to strengthen institutional capacity, cross-border cooperation, economic and social development and rural development. This assistance depended on the progress made by the beneficiary countries and their needs as shown in the Commission's evaluations and strategy documents.¹⁹ It is made of five components, but BiH as a Potential Candidate Country can benefit only from the first two components:

- Support for transition and institution-building component, aimed at financing

16 COM(1998) 294 final, Brussels, 20.05.1998. This document contains the following basic direction: "In partnership with the Union, realistic, national, long-term strategies for gradual effective alignment should be drawn up and start being implemented in all applicant countries before accession [...]. These strategies should identify key priorities areas and objectives to be fulfilled by the dates of accession as well as timetables for further full compliance; ensuring obligations should be incorporated in the accession treaties. All new investments should comply with the *acquis*. / page 1b.

17 COM (2001) 304 final, Brussels, 08.06.2001. This document contains details regarding directive specific implementation and financing plans

18 See at

http://europa.eu/legislation_summaries/enlargement/2004_and_2007_enlargement/l28057_en.htm, available 19.02.2013.

http://europa.eu/legislation_summaries/enlargement/2004_and_2007_enlargement/l28057_en.htm, available 19.02.2013.

19 Progress is measured on the basis of decisions taken, legislation adopted and measures implemented.



capacity-building and institution-building;

- Cross-border cooperation component, aimed at supporting the beneficiary countries in the area of cross-border cooperation between themselves, with the EU Member States or within the framework of cross-border or inter-regional actions.

The IPA is also subject to a suspension clause, which may be applied to all beneficiary countries that fail to comply with the principles of democracy, the rule of law, human rights and minority rights, and the commitments contained in the partnerships (Accession Partnership or European Partnership). It may also be applied to countries that fail to make sufficient progress towards fulfilment of accession criteria or, for the Western Balkan Countries including BiH, towards the reform process. The Council may take appropriate measures, acting by qualified majority on a proposal from the Commission, after informing the European Parliament.

In the past nine years the sector Environment in BiH benefited from IPA assistance, although the absorption capacity of the beneficiaries was not sufficient due to the several reasons, including lack of institutional capacities at all administrative levels in BiH, poor programme and project coordination and management, lack of domestic financial resources for co-financing, etc.

Regulation (EU) No 231/2014 of the European Parliament and of the Council of 11 March 2014 establishing an Instrument for Pre-accession Assistance (IPA II instrument) established the basis for pre-accession financial assistance for the period 2014-2020. IPA II regulation came into force on 16 March 2014 and is applicable retroactively from 1st January 2014. The IPA II regulation is complemented by the Regulation (EU) No 236/2014 of the European Parliament and of the Council of 11 March 2014 laying down common rules and procedures for the implementation of the Union's instruments for financing external action (Common Implementing Regulation), which is a set of simplified and harmonized implementing rules and procedures for external action instruments.

This pre-accession instrument will continue to *focus on delivering on the Enlargement Policy*, which is one of the core priorities of EU External Action, and help to promote stability, security and prosperity in Europe. It will continue to pursue the general policy objective of supporting Candidate and Potential Candidate Countries in their preparations for EU membership and the progressive alignment of their institutions and economies with the standards and policies of the European Union, according to their specific needs and adapted to their individual enlargement agendas. The coherence between the financial assistance and the overall progress made in the implementation of the pre-accession strategy will be strengthened. In addition, future pre-accession assistance will be even more strategically focused, efficient and better targeted than it has been so far, aiming for more sustainable results in improving the readiness of these countries for membership. Country Strategy Papers are the specific strategic planning documents made for each beneficiary for the 7- year period. The new instrument will operate more flexibly to leverage more funds from other donors or the private sector by using innovative financing instruments.

In comparison to the past IPA instrument some important new objectives were introduced in the IPA II instrument like support for economic, social and territorial development, with *inter alia* a view to a smart, sustainable and inclusive growth, through environmental goals. Five components from the past IPA Regulation for 2007-2013 cycles were changed in the new IPA II Regulation into policy areas.



In the next seven years BiH as a Potential Candidate Country may benefit from this new IPA II instrument, but there are two important conditions for the EU assistance:

- Fully operational efficient coordination mechanism in place by the time of programming of IPA II
- Any support to investments in the areas of socio economic development (in particular transport and environment) is conditional on transport strategy and Environmental Approximation Strategy of Bosnia and Hercegovina EAS / BiH.

Adopted country-wide EAS with its implementing arrangements for two Entities and Brcko District of BiH and a country-wide environmental project implementation will allow BiH to fulfil one of these two important conditions for the sector of Environment.

1.2 REPORTING DUTY LEGISLATION

The binding reporting duty of the Member States (MSs) has been set out in numerous environmental legislative instruments of the EU. It is not possible to make a comprehensive review of all reporting obligations here; it would be well outside of the scope and purpose of this analysis. However, certain insight can be provided through presentation of examples illustrating how the system of reporting works in principle. Accordingly, the Council Directive of 23 December 1991 standardizing and rationalizing reports on the implementation of certain Directives relating to the environment (91/692/EEC) (Standardized Reporting Directive – SRD (consolidated) should be mentioned first.

The purpose of the SRD Directive is to rationalize and improve on a sectoral basis the provisions on the transmission of information and the publication of reports concerning certain Community Directives on the environment protection.²⁰ The Member States have a binding duty to send information to the EU Commission on the implementation of this Directive and other pertinent directives, in the form of a sectoral report, which shall be prepared on the basis of a questionnaire or outline drafted by the Commission in accordance with the procedure set out in the Directive.²¹ The questionnaire or outline shall be sent to the Member States six month before the start of the period covered by the report. The report must be submitted within nine months of the end of the three- year period covered.

The SRD amended 31 directives comprising duty to submit reports regarding air pollution, biodiversity change, nature, chemicals, natural resources, waste and water. A brief insight into the Reporting Obligation Database (ROD) of (EEA) EIONET provides for the identification of some 150 reporting obligations of the Member States, regarding various aspects of environment. Those reporting duties can be in the form of submitting reports (annual, biennial, triennial, compliance, assessment, summary, monitoring, implementation – directive, programmes and measures -, situation), information plans (including summary and action), programmes, inventories, lists, questionnaires filled in, notifications, projections and near-real time data.²²

Additionally to these reporting duties based on national legislation harmonized with EU environmental *acquis* and on the EU legislation, which is implementable without transposition (i.e. decisions) there are some 80 reporting duties connected to the implementation of international environmental treaties.

²⁰ Article 1

²¹ In accordance with Article 6 which requires the committee assistance procedure.

²² <http://rod.eionet.europa.eu/index.html>. available 29.04.2014.



Reporting duties of national statistical agencies to EUROSTAT are not taken into account here because those duties are regulated by statistical legislation and should be fulfilled through a separate, statistical system.

1.3 EEA AND EIONET REGULATION

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).²³ The objective of the EEA and EIONET-a is to provide the EU and member states:

- Objective, reliable and comparable information at EU level enabling them to take requisite measures to:
 - protect the environment;
 - assess the results of such measures; and
 - ensure that the public is properly informed about the state of the environment
- The necessary technical and scientific support.²⁴

The principal activity of the EEA is to gather the information necessary for description of the present and foreseeable state of the environment from the following points of view:

- The quality of the environment;
- The pressures on the environment;
- The sensitivity of the environment.

The European Environment Agency furnishes information, which can be directly used in the implementation of the EU environmental policy.

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;

²³Codified version adopted by the Regulation (EC) No 401/2009 of the European Parliament and of the Council of 23 April 2009 on the European Environment Agency and the European Environment Information and Observation Network.

²⁴Article 1



- Chemical substances which are hazardous for the environment;
- Coastal and marine protection.²⁵

In particular, trans-boundary, multinational and global phenomena shall be covered.

The principal obligations of the EEA Member States comprise:

- Establishing a country-wide environmental information network (EIONET) with the Main Component Elements (MCEs);
- Informing EEA on MCEs of their national, i.e. country-wide environment information network;
- Identifying the institutions established in its territory which could be specifically entrusted with the task of cooperating with EEA as regards certain topics (European Topic Centres - ETC);
- Informing EEA on the institutions and organisations that could contribute to the work of the EEA, including those that could co-operate with the EEA regarding certain topics of particular interest– cooperation with ETC;
- Appointing one representative as a member of Management Board of the EEA;
- Appointing the National Focal Point (NFP);
- Informing EEA about the appointments of the member of the Management Board and NFP;
- Co-operating with the EEA and contributing to the activities of EIONET in accordance with the EEA work programme by collecting, collating and analysing of environmental data nationwide.²⁶

At the EU level and in the MSs, EIONET consists of the components, which are responsible for co-ordinating with the EEA and transmitting environmental data and information, or undertake environmental monitoring and modelling, as follows:

- NFPs, which are responsible for co-ordinating with the EEA, and transmitting information to be supplied at the national level to EEA and to national institutions, including ETCs, which form part of the international network. There is one NFP for each country;
- ETCs, which consist of environmental institutions or organizations, which are contracted by the EEA to execute specific tasks in their topic area identified in the EEA work programme;
- NRC are institutions identified as centres of excellence by Member States. These organizations may be contracted by the NFPs or ETCs to undertake tasks related to the EEA's programme;
- MCEs, consisting of institutions, which collect and hold environmental data at the national (country-wide) level.

²⁵ Article 3

²⁶ Article 4



1.4 GUIDE TO THE MAIN ADMINISTRATIVE STRUCTURES REQUIRED FOR IMPLEMENTING THE ACQUIS

With the aim of helping experts working for the European Commission and experts in the partner countries who are engaged in a process of approximation of their legislation and administration with those of EU, EU Commission issued the GUIDE TO THE MAIN ADMINISTRATIVE STRUCTURES REQUIRED FOR IMPLEMENTING THE ACQUIS.²⁷ The Guide is an internal non-binding document. However, as a highly authoritative instrument it is important for proper understanding of EU requirements regarding the (re)organisation of the administrative structures of the Candidate or Potential Candidate Countries and adequate structuring of a state apparatus in accordance with such requirements. As regards the sector Environment it is recommended that at least one authority at the country-wide level must assume overall responsibility for implementation of EU laws in the field of environment. Such a country-wide competent authority is also required in federal units, where the legislation is adopted and implemented at the level of entities and BD BiH governments. As a general rule, competent environmental authorities of the states should have means to obtain necessary information to fulfil their tasks from private and public sources and they should be able duly to report to the Commission.

Despite the informal nature of the Guide, it is an authoritative source of information containing a set of standards, on the basis of which an assessment can be made of the administrative capacity of an accession country for each chapter of the *acquis*, in terms of both:

- The way in which administrative structures fulfil their functions (e.g. independence, transparency); and
- The direct outputs they deliver.²⁸

The EU requirements for institutional adaptation of a potential candidate or candidate country comprise bringing its institutions, management capacity and administrative and judicial system up to the EU standards, with the aim of implementing *acquis* effectively in good time before accession.²⁹ Generally speaking, future MS must develop a well-functioning and stable public administration “built on an efficient and impartial civil service, and an independent and efficient judicial system.” As in each other area of the *acquis*, specific requirements are formulated for the environmental *acquis*, and they will be indicated below specifically for each environmental sector.³⁰

The Guide makes a distinction between administrative structures explicitly required by the *acquis* to be established and administrative structures which are not explicitly required, but the establishment of which would strongly support the effective implementation of the *acquis*. For each of these structures the key functions which they should fulfil are indicated as well as their core characteristics.³¹

The annual Progress Reports to the EU Commission contain a systematic assessment of the administrative capacity of a potential or candidate country, which is also an integral part of accession negotiations in each individual chapter of the EU *acquis*.³²

²⁷In February 2013

²⁸*Op. cit*, page 5

²⁹*Id.*

³⁰*Id.*

³¹*Id.*

³²*Id.*





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2. APPROXIMATION REQUIREMENTS

The approximation of legislation of a state heading towards EU membership with the EU acquis is a unique obligation of the state in line with the Copenhagen and Madrid criteria,³³ accepted by signing the SAA. In the environmental field, that obligation assumes bringing in line all its environmental legislation, rules and procedures with the EU environmental regulations, directives and decisions, as it is set out in SAA (2008), and defined by the Chapter 27 for future negotiations on accession between BiH and EU. The aim of environmental approximation is bringing into the effect the entire body of EU environmental acquis in the entire territory of the State of BiH.

The process of approximation can be seen from the point of view of three key elements:

- Transposition, that comprises adoption of new or changing of existing national legislation, rules and procedures in order to incorporate all requirements of EU environmental legislation into the legal system in BiH;
- Implementation (practical implementation), that comprises providing (building, enabling) institutions and providing the budget necessary to carry out the legislation containing transposed EU requirements concerning the environment;
- Enforcement that assumes providing necessary control and penalties to ensure the transposed legislation is complied with fully and properly.³⁴

The process of approximation is a structured planned process, based in advance on pre-adopted policy document(s) and continually strongly supported and monitored by the EU. The process develops in the policy and law frameworks defining and expressing both the commitments of BiH and EU for implementing necessary reforms and technically and financially supporting those reform activities.

In that regard, a necessity for a comprehensive and detailed insight into the BiH reality that would indicate activities and measures to be undertaken in appropriate time frames required an in-depth legal gap analysis to be performed as well as an institutional review and economic assessments of existing situation to be provided. These reviews, analyses and assessments were performed in the implementation framework of EnvIS Project, and provided reliable grounds for development of the texts of several strategic and planning/policy instruments, vitally important for successful implementation of the process of approximation in BiH and all its constitutional units.

³³ For more details see:

http://europa.eu/legislation_summaries/glossary/accession_criteria_copenhagen_en.htm, dostupno 09.06.2014.

³⁴ *Op. cit.*, page 8-9.



III EU ENVIRONMENTAL ACQUIS [BY SECTORS]



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1. INTRODUCTORY NOTES

This Chapter contains an up-dated concise review of the EU requirements for approximation of environmental legislation in BiH to the EU environmental acquis and necessary restructuring of environmental institutions in BiH for its effective implementation in BiH.

2. HORIZONTAL ISSUES

2.1 INTRODUCTORY NOTES

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 regardless of the media that may be in the focus in any case. In contrast to horizontal legislation, other sectors of the environmental acquis are concentrated only on precisely defined media (e.g. water, air). The horizontal legislation provides for a binding platform with requirements addressing:

- Environmental concerns in development of certain public and private projects (EIA);
- Environmental concerns in development of certain plans and programs (SEA);
- Ensuring free public access to environmental information;
- Ensuring public participation in decision-making in environmental matters;
- Ensuring access to judiciary in environmental matters;
- Establishing of the system of environmental liability with aim to prevent and remedy an environmental damage;
- Establishing and functioning of the infrastructure for information on spatial planning ;
- Establishing the system of reporting on the state of environment to the EU.

These requirements make a general legal framework for environmental protection in the EU MSs that cut across different environmental areas. They have been introduced in the legal system of EU through all legally binding instruments – directives, regulations and decisions.

2.2 ENVIRONMENTAL CONCERNS IN DEVELOPMENT OF CERTAIN PUBLIC AND PRIVATE PROJECTS(EIA)

2.2.1 Scope of transposition

The environmental concerns in development of certain projects are set out by *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 (EIA Directive).



The EIA Directive provides for all MSs to undertake an assessment of environmental impacts of public and private projects, which are likely to have a significant impact on the environment. Preparation of the Environmental Impact Study (EIS) is a crucial part of the entire procedure, and only after the approval of the EIS an investor may be granted consent to continue work on further realization of its project.

Annex I the EIA Directive contains a list of projects mandatory subject to an EIA procedure. This list contains projects that due to their size and nature would have certain significant impact on the environment. Annex II contains a list of those projects that may have significant impact on the environment, but the competent national authority is authorized to decide whether they will be subject to an EIA procedure, on a case by case basis, with obligation to take into account the criteria laid down in Annex III. The procedure for assessing whether a project listed in Annex II will be or will be not subject to an EIA procedure is called the “screening” process. The EIA Directive also requires MSs to ensure a legal framework that would require an EIA may be undertaken even for those projects that are not listed in the Annexes I and II if such projects, due to their nature and location may produce certain negative impacts on the environment.

In the course of the procedure, the competent national authorities are obliged to take into account all potential impacts of the project in case and also to ensure that cumulative impact of existing projects / installations and projects in development are taken into account on a case-by-case basis. Once it is defined that a project must be subject of the EIA procedure (regardless of whether it is a project listed in the Annex I or if it was identified through a screening procedure as listed in the Annex II), the competent authority shall define the scope of the EIA procedure to be undertaken.

The EIA Directive requires MSs to undertake necessary steps to provide for a free public access to environmental information and also to provide possibility for public participation in decision-making process thereof. The Directive also requires the potential interests of another country to be taken into account in a process of consultations, if it is likely that a project will have certain transboundary impacts.

EIA Directive has been amended by the 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.³⁵ The new elements introduced by the 2014 amendments to EIA Directive are aimed at strengthening the quality of the EIA procedure, aligning that procedure with the principles of smart regulation and enhancing coherence and synergies with other EU legislation and policies and also with MSs Strategies and policies. The new improved EIA procedures are inter alia also aimed at coordination and facilitation of cross-border cooperation context, and expected to comprise such issues as resources efficiency, sustainability, biodiversity protection and climate change, and also, while simplified, should support improvement of environmental protection, increase the efficient use of resources and sustainable growth.

35 OJ L 124/1.



2.2.2 Institutional adaptation

Institutional adaptation for efficient implementation and enforcement of the EIA related requirements comprise *inter alia*:

- Establishing authorities competent for conducting (implementing) the procedures of permission issuance and making of evaluation;
 - Ensuring adequate financial, human and technical resources to those competent authorities;
 - Ensuring those competent authorities take various decisions regarding EIA, i.e.:
 - Whether certain project shall be mandatory subject to an EIA, in accordance with the EIA Directive Annex I;
 - Which EIA Annex II project will be subject to an EIA;
 - Details of combining EIA and IPPC procedures;
 - Details on making information available to the public and interested public, investor, project developer and other interested public authorities and bodies;
 - Details on public participation in the decision-making process, in accordance with EIA Directive and Directive 2009/31/EC on geological storage of carbon dioxide;
 - Details on notifying public, interested public and other interested authorities and bodies on decisions regarding permit applications;
- Establishing protocols and administrative procedures with neighbouring countries on exchange of information and consultations regarding projects with potential transboundary impact, including the participation of public in the decision-making process.³⁶

2.3 ENVIRONMENTAL CONCERNS IN DEVELOPMENT OF CERTAIN PLANS AND PROGRAMMES (SEA)

2.3.1 Scope of transposition

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 (SEA Directive). The SEA Directive requires MSs to ensure duty of competent public authorities to identify and assess significant environmental impacts of certain public plans and programs. The Directive provides for MSs to determine which plans and programs have to be monitored. The Directive also contains annexes that provide guidance as to which information has to be addressed in a SEA (Annex I) as well as the

36GUIDE TO THE MAIN ADMINISTRATIVE STRUCTURES REQUIRED FOR IMPLEMENTING THE ACQUIS, pp.. 100-101.



type of assistance authorities require on how to evaluate certain impacts in conducting SEA procedures (Annex II).

When performing a SEA procedure, a MS must provide a high level of transparency. In that view the Directive requires MSs to guarantee a wide range of rights including those related to free public access of public in consultations regarding environmental aspects of proposed public plans and programmes. The authority in charge for preparation and adoption of a plan or program must make a report on SEA available to the public. This report shall have a separate chapter with explanation how public consultations have been performed and which issues have been of the interest to interested parties and to the public and how public opinion was incorporated into the SEA report.

2.3.2 Institutional adaptation

Institutional requirements regarding implementation of SEA comprise:

- Ensuring that:
 - there are authorities competent for taking decision on which plans and programmes are subject to SEA;
 - the methodology for the implementation of SEA is adopted;
 - the authorities competent for plans and programmes integrate planning and SEA procedures, and are capable of carrying out SEA;
- Ensuring that public is consulted at all SEA development stages, i.e.:
 - screening;
 - scoping;
 - reviewing;
 - decision-making;
- Establishing procedures and duty of the competent authorities:
 - to give information about how a SEA has been carried out;
 - regarding details on inclusive, participatory and transparent consultation procedures;
 - regarding a co-ordinated communication and decision-making;
 - regarding the opportunity given to other authorities and bodies concerned by the project / programme impact on their environmental responsibilities to express their opinions on the SEA;
- Establishing protocols and administrative procedures with neighbouring MSs on exchange of information and consultations regarding projects with potential transboundary impact, including public participation in decision making.³⁷

37Op. cit, page. 1001.



2.4 ENSURING FREE PUBLIC ACCESS TO ENVIRONMENTAL INFORMATION

2.4.1 Scope of transposition

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. This Directive was adopted with the goal of providing full compliance of EU legislation with the Aarhus Convention.³⁸ The Directive requires MSs to ensure that all environmental information held by public authorities shall be free for access:

- Upon request (passive dissemination of environmental information); or
- Upon the publishing the information on the own initiative of the public authority that possesses information (active environmental information dissemination).

The general requirement of this Directive is that environmental information has to be disclosed to the natural or legal person upon request and without expressing any particular interest in the person that submitted the request for access to the environmental information. The Directive left certain period for disclosure of the environmental information and set out three time limits

- As soon as possible (as desirable option);
- One month period (last deadline for all environmental information with the exception of certain information explained below); and
- Two months period if nature or complexity of the environmental information itself requires additional time for dissemination of the information.

The costs for disclosure of an environmental information have to be reasonable and should include only the real costs that the authority holding the information really have in a particular case.³⁹ The costs should not make a barrier for any person wishing to request environmental information.

The Directive determined exceptional cases when a public authority is not obliged to provide free access to environmental information. These exceptions are in accordance with the Aarhus Convention. They may be understood as protection of some other rights, rather than a real obstacle for realization of the general rule that any environmental information possessed by public authority should be granted upon request. In a case that due to protection of certain private interests of a third party environmental information should not be disclosed, the authority should explore the possibility that certain parts of the information may be disclosed without any harm to the legitimate interests of the third party. In that case, the authority shall disclose a part of environmental information. The right of free access to environmental information is a general right connected with a large number of different situations. From this perspective free access to information should be seen as an integrative part of some other procedures (e.g. EIA, SEA and IPPC procedures). This is an example where different rights established

³⁸ Convention on Public Participation, access to information and Access to Justice in Environmental Matters (Aarhus, 1998).

³⁹ Real costs means costs for photo-copying, printing and similar costs.



by different legislative instruments are connected and a full compliance with certain legislative instrument (e.g. directive) cannot be achieved if several aspects of certain rights/obligations are not taken into account jointly.

2.4.2 Institutional adaptation

Competent environmental institutions must be capable of processing requests for environmental information in a timely manner and also of reviewing requests (for environmental information requests that are not satisfied). Environmental institutions must also be capable of making environmental information available to the public and disseminating environmental information to the public through an established system (in terms of adequate staffing, databases and reporting facilities and publicising). Equally, they must ensure quality assurance of environmental information. Co-ordination between relevant competent environmental authorities and other authorities in the country that hold environmental information should be established so that dissemination “takes place smoothly within the specified strict timelines” One or more authorities should be appointed to implement this Directive and an administrative procedure must be established with aim of collecting of relevant data and reporting to the EU Commission.⁴⁰

2.5 ENSURING PUBLIC PARTICIPATION IN THE DECISION-MAKING PROCESS AND ACCESS TO JUSTICE IN ENVIRONMENTAL MATTERS;

2.5.1 Scope of transposition

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. A number of other environmental directives also regulate the public participation in environmental decision-making process.⁴¹

The Directive must be transposed into the national legislation of MSs with the main objective to provide that interested parties and public have the right and adequate mechanisms in place to participate in a process of decision-making in environmental matters. As stated in the overview of the Directive 2003/4/EC, this Directive also applies to different activities and full compliance with this Directive has to be assessed in relation with provisions of some other Directive(s). International relations between and among two or more EU legal acts have to be taken in consideration when assessing compliance of certain national legislative instruments with *acquis*.

Complexity of the issue of public participation in decision-making process regarding environmental matters is undoubtedly a challenge for any country. A number of steps should be taken towards achievement of a full compliance with all those legal instruments that are potentially relevant to

⁴⁰*Op. cit*, page 102.

⁴¹ Such as Directive 2001/42/EC of 27 June 2001 on the assessment of certain plans and programmes on the environment and Directive 2000/60/EC of 23 October 2000 establishing a framework for Community action in the field of water policy.



actions directly or indirectly connected with a wide range of rights attached to those interested in participating in the decision-making procedures.

2.5.2 Institutional adaptation requirements

In regards to preparation of plans and programmes under Annex I subject to a SEA (concerning waste management, protection of waters against nitrate pollution and air quality assessment and management) the competent institutions must provide an early and effective public participation. This obligation comprises:

- Identification of the public entitled to participate in decision-making;
- Providing early information on the draft plan / programme and the authority responsible;
- Receiving and evaluating comments made by public;;
- Providing information on decisions taken;
- Providing a rationale for reviewing considerations, including the outcome of public participation.⁴²

Competent institutions must provide an early and effective participation in decision-making by the public concerned in the procedures respecting EIA and IPPC permitting / permit up-dating under the IPPC Directive (recast), in terms of inter alia informing the public on the IPPC application, authority in charge for providing environmental information (e. g. EIA Study), and receiving and evaluating comments submitted by public and providing information on decisions taken. In case of decision- making on the projects, plans and programmes with transboundary impacts, competent institutions must allow participation of the public affected. The review procedures “before the court of law or another independent and impartial body” against first instance decisions taken on EIA / IPPC, must be available to the members of the public concerned.⁴³

2.6 ESTABLISHING OF THE SYSTEM OF ENVIRONMENTAL LIABILITY

2.6.1 Scope of transposition

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 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 dioxide⁴⁴, and by the 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*. The Directive provides for the legal ground for liability in two concrete cases of potential environmental damage:

⁴²Op. cit, page 102

⁴³Op. cit., page 102-103.

⁴⁴ 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



- Direct or indirect damage to the aquatic environment covered by the EU legislation on waters; and
- Direct or indirect damage to species and natural habitats protected at EU level by the Birds Directive.⁴⁵

As the Directive deals with the "pure ecological damage", it is based on the powers and duties of public authorities ("administrative approach") as distinct from a civil law system for "traditional damage" (damage to property, economic loss, personal injury).⁴⁶

2.6.2 Institutional adaptation requirements

Prevention and remedying of environmental damage should be attached to one or several competent authorities, the main responsibility of which shall be supervision and enforcement of the legislation containing transposed requirements of the environmental liability directive, especially relating to:

- Defining the necessary preventive measures to respond to an imminent threat of environmental damage;
- To give instructions to the operator on how to deploy these measures;
- Implement assessment procedure in order to evaluate whether environmental damage has taken place and whether an operator is liable;
- Determination whether the competent authority should take remedial action;
- Identifying persons in the competent authority who shall be responsible for overseeing clean-up operations.⁴⁷

Ensuring sufficient co-ordination and cooperation mechanisms that would support balance between harmonized rules, procedures and standards and sub-national implementation responsibilities is also required along with the requirement of ensuring that competent authorities have the expertise and means making them capable of determining which remedial measures should be taken in accordance with the criteria laid down in the Directive. Appropriate administrative cooperation mechanisms between MSs in case of transboundary environmental damage should also be ensured.⁴⁸

A special requirement relates to ensuring that appropriate administrative mechanisms for the smooth running of the reporting requirements under the Directive are in place.⁴⁹

2.7 ESTABLISHING AND FUNCTIONING OF THE INFRASTRUCTURE FOR SPATIAL PLANNING INFORMATION

2.7.1 Scope of transposition

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)*. The INSPIRE directive is implemented in various stages, with full implementation required by 2019.⁵⁰ The main objective of the Directive is to provide

⁴⁵ 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)

⁴⁶ <http://ec.europa.eu/environment/legal/liability/index.htm>, available 05.04.2014.

⁴⁷ GUIDE TO THE MAIN ADMINISTRATIVE STRUCTURES REQUIRED FOR IMPLEMENTING THE ACQUIS, pp. 103-104.

⁴⁸ *Op. cit.*, page 104

⁴⁹ *Id.*

⁵⁰ For more information see <http://inspire.ec.europa.eu/index.cfm/pageid/48>, available 05.04.2014.



compatible information systems related to environment and spatial planning and to provide efficient mechanism for exchange of these data and free access to them. Information that is of interest for the Directive comes from the areas of:

- Borders;
- Land use;
- Biodiversity;
- Population and species distribution;
- Habitats.
- Industrial zones, etc.

Annexes I, II and III contain list of information to be subject to INSPIRE.

2.7.2 Institutional adaptation requirements

The MSs are required to assign authorities, which shall be competent for:

- Regulatory, coordination and co-operation measures;⁵¹
 - Devising memoranda of understanding for various competent authorities that will work together to set-up and co-ordinate networks.
 - Establishing network services for providing:
 - discovery;
 - view;
 - download; and
 - transformation

of services for special data and for services allowing special data services to be invoked.

The services must operate using search criteria in accordance with Article 11(2) of the INSPIRE Directive. The quality control assessment shall include accessibility, user friendliness and compatibility with implementation rules set out by the INSPIRE Directive;

Concluding memoranda of understanding identifying which public authorities are involved, and for which tasks, in order to ensure that the network facilitates the exchange of spatial data and related services;

- Publishing guidance on the duties and roles of various public authorities that are obliged under the INSPIRE Directive to provide access to spatial data bases and services;
- Establishing and managing arrangements for the sharing of spatial data in accordance with the INSPIRE Directive Annexes I, II, III, and services between public authorities within and across

⁵¹ The term “measures” in the EU environmental context relates to acting of the European Parliament and the Council in accordance with the ordinary legislative procedure aimed at adopting “the measures for the approximation of the provisions laid down by law, regulation or administrative action in Member States which have as their object the establishment and functioning of the internal market”. - TFEU Article 114 paras 1 and 4 (TEC ex Article 95.)



the country borders; such arrangements must prevent any restrictions likely to create practical obstacles, occurring at the point of use, to the sharing of spatial data sets and services.⁵²

2.8 ENSURING PROTECTION OF ENVIRONMENT THROUGH CRIMINAL LAW

2.8.1 Scope of transposition

This very specific EU requirement is regulated by the *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*. The Directive establishes rules on how MSs shall prescribe certain activities as crimes against the environment and requires MSs to undertake necessary steps aimed at adequate punishment against persons committing certain crimes in breaching EU environmental legislation.

2.8.2 Institutional adaptation requirements

Institutional requirements following transposition of the Directive 2008/99/EC comprise:

- Assigning the competent authorities the responsibility for implementing the Directive, with various activities but especially for supervisory and enforcement power, and assuring adequate financial, human and technical resources are provided;
- Determining the balance between harmonized rules, procedures and standards and sub-national implementation responsibilities, when allocating competent authorities responsibilities, and ensuring sufficient coordination and cooperation mechanisms;
- Providing trainings of competent authorities and environmental inspectors to detect environmental offences through regular monitoring and supervision and through effective cooperation with third parties;
- Providing trainings of judges and prosecutors on the relevance and particularities of environmental crimes;
- Reporting to the EU Commission on the main provisions of national law, which MSs adopt with the aim of transposing requirements of this Directive, together with a Table showing how the provisions of the Directive correspond to the adopted national provisions.⁵³

2.9 OTHER INSTITUTIONAL ADAPTATION REQUIREMENTS

Other institutional adaptations require *inter alia*:

- Adequate assignment of competences for implementation of the *Regulation (EC) No 401/2009 of the European Parliament and of the Council of 23 April 2009 on the European Environment Agency and the European Environment Information and Observation Network*, as it was presented elsewhere *supra*;
- In regards of implementation of the Regulation (EU) No 1293/2013 of the

52 GUIDE TO THE MAIN ADMINISTRATIVE STRUCTURES REQUIRED FOR IMPLEMENTING THE *ACQUIS*, p. 104.

53 *Op. cit.*, page 105.



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) (LIFE III programme (Regulation EC (No) 1655/2000) and Life + Regulation EC (No) 616/2007) a competent authority should be appointed to act as a national focal point for evaluation and forwarding applications to the EU Commission. Such competent authority must be provided with the resources to undertake duties required under the Regulation. Representatives should be appointed to:

- attend meetings of the Life + committee;
- take implementing decisions;
- assist the EU Commission; and to
- evaluate Applications for funding.⁵⁴

Regarding the forest focus regulation, designating bodies competent for proposing national programmes and implementing them is the only EU requirement for institutional adaptation.

⁵⁴*Op. cit*, page 103.



3. WATER MANAGEMENT SECTOR

3.1 SCOPE OF TRANSPOSITION

3.1.1 Introductory notes

Water management is a regulated area to a great degree within the environmental sector. Adoption of legal instruments aimed to ensure comprehensive legal protection of waters in EU started in 1975 by adoption of Surface Water Directive (Council Directive 75/440/EEC of 16 June 1975 concerning the quality required of surface water intended for the abstraction of drinking water in the Member States). This Directive was later repealed by *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*. The regulation process continued by adoption of Drinking Water Directive 1980 (*Council Directive 80/778/EEC of 15 July 1980 relating to the quality of water intended for human consumption*), which was later repealed by *Council Directive 98/83/EC on the quality of water intended for human consumption*. Later on, in the 1990s, the Urban Waste Water Directive 1991 was adopted (*Council Directive 91/271/EEC concerning urban waste-water treatment*). Updating of water legislation including shellfish water, drinking water, bathing water and groundwater started in mid 1990s.

Generally, the EU recognized two main approaches (a combined approach) for water protection:

- The water quality objective approach provides rules on how to achieve the minimum quality requirements of water to limit cumulative impact the emissions from point and from diffuse sources;
- The emission value limits approach focuses on maximum allowed quantities and pollutants that may be discharged into water.

Existing EU water legislation contains a combined approach where Water Quality Objectives (WQOs) and Emission Limit Values (ELVs) are both taken in account when setting out the legal requirements for EU MSs. Such a combined approach responds to the requirements of several basic environmental principles:

- Precautionary principle;
- Prevention principle;
- Principle that environmental damage should be rectified at the source;
- Principle that different conditions in various areas should be taken into consideration.

The achieved consensus about the application of the main principles through this combined approach brought the EU to the development of a new water related legal framework.

3.1.2 Review

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 waste water treatment, as last amended by Regulation (EC) No 1137/2008 of the European Parliament and of the Council of 22 October 2008 (UWWTDirective)*

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 waste waters 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 596/2009 of the European Parliament and of the Council of 18 June 2009 (DWD)*

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, known as one of the "daughter Directives" to WFD fully covers the requirements regarding protection of groundwater against pollution by certain dangerous substances set out by the Directive 80/68/EEC, and repealed from December 2013 by the Directive. Additionally, The Commission has worked out and agreed with the Member States a proposal for a Commission Directive amending Annex II of the Groundwater Directive. The proposal is at the moment of preparation of EAS under the scrutiny of the Council and European Parliament;⁵⁵

- *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*

⁵⁵<http://ec.europa.eu/environment/water/water-framework/groundwater/review.htm>. available 09.06.2014.



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 or 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.

3.2 INSTITUTIONAL ADAPTATION REQUIREMENTS

Regarding transposition into the national legal system of the EU legislation on waters, a MS is required to:

- Designate competent authorities that shall be in charge for (e.g.):
 - identifying river basins;
 - preparing and enacting river basins management plans;
 - identifying bathing, shellfish and freshwater fish waters;
 - identifying agglomerations;
 - identifying nitrate vulnerable zones;
 - set-out water quality objectives;
 - set-out water quality standards;
 - set-out emission limit values for water;
- 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 waste water 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.⁵⁶

4. WASTE MANAGEMENT SECTOR

4.1 SCOPE OF TRANSPOSITION

4.1.1 Introductory notes

Legal instruments on waste can be grouped into a hierarchy. Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives 57(The Waste Framework Directive) establishes a framework for waste management. Within this framework there are two groups of “daughter” directives:

- The one dealing with specific types of wastes; and
- The other dealing with requirements for the issuance of permits and operation of waste disposal facilities.

Finally, there is a third group of legal instruments, which is concerned with the shipment of waste within, into and out of EU.

⁵⁶ GUIDE TO THE MAIN ADMINISTRATIVE STRUCTURES REQUIRED FOR IMPLEMENTING THE *ACQUIS*, p. 107.

⁵⁷ Repealed Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on waste (the codified version of Directive 75/442/EEC as amended), hazardous waste Directive 91/689/EEC, and the Waste Oils Directive 75/439/EEC.



4.1.2 Review

4.1.2.1 Waste Framework Directive

The “Waste Framework Directive” streamlines waste legislation, incorporating rules on a number of issues such as the management of hazardous waste and waste oils. The Directive focuses on waste prevention and puts in place new targets, which will help EU to move towards its goal of becoming a recycling society. It includes targets for EU MS to recycle 50% of their municipal waste and 70% of construction waste by 2020. The Directive introduces a five-step waste hierarchy where prevention is the preferable option, followed by re-use, recycling and other forms of recovery, with disposal such as landfill as the last resort.

The Directive sets out different requirements on MSs - to take “the necessary measures to ensure that waste is recovered or disposed of without endangering human health and without using processes or methods, which could harm the environment...”. To meet this general requirement, MS are obliged to prohibit the uncontrolled disposal of waste, to develop waste management and waste prevention plans and to establish “an integrated and adequate network of disposal installations”. The Waste Framework Directive provides for common definitions (including by-product definition and end-of-waste status definition) along with requirements for record keeping (by those collecting, transporting and disposing of waste), for registration systems (collectors and transporters), and for the licensing of disposers.

One of the aims of the Directive is the extended producer responsibility, i.e. acceptance (by producers) of the returned products, waste management and financial responsibility, providing public information on reuse and recycling of the products, etc.

It establishes a requirement the waste hierarchy to be followed, with the prevention of waste generation as the first priority in the waste management, and where technically, environmentally and economically possible, the separate collections of waste (at least paper, metal, plastic and glass but also waste oils and bio-waste).

Re-use, recycling, recovery and disposal have been defined more clearly than in the previous directives. The re-use should be encouraged. High quality re-cycling is promoted. Recycling targets have been set until the year of 2020. Disposal, the final stage of the waste hierarchy, must be carried out without endangering human health and without harming the environment. The Directive requires the producers and/or holders of waste to pay the costs for waste management, in accordance with the Polluter Pays Principle. An integrated network of waste recovery and disposal installations for municipal waste is required to be established, taking into account application of Best Available Techniques (BAT); if appropriate, in co-operation with other MSs. All installations must obtain a permit from the competent authority. Measures must be taken to control hazardous waste.

Waste management plans covering the whole territory of the country, including waste prevention programmes, are requested to be compiled and made publicly available on a relevant website. Relevant stakeholders must have the right to participate in their elaboration.

The Disposal of Waste Oils Directive (75/439/EEC) has been repealed by the Waste Framework Directive. The Waste Framework Directive requires MSs to ensure the safe collection and disposal of waste oils. Priority is given to the regeneration of waste oils, then to combustion under conditions defined in the Directive, and finally to their controlled storage or deposit.



Hazardous Waste (HW) is regulated by *the Waste Framework Directive*, which repealed *Hazardous Waste Directive (91/689/EEC)* with effect from 12 December 2010. HW is defined by reference to waste that displays one or more HW properties, which are listed in Annex III⁵⁸ of the Waste Framework Directive. A “cradle-to-grave” record keeping system is required - from the point of the HW generation up to its final disposal, and including any intermediate transfers. For the purposes of collection, transport and temporary storage of HW, the HW must be packaged and labelled in accordance with international and EU standards. It should also be accompanied by the appropriate documentation. Waste is presumed hazardous unless it can be demonstrated that the waste does not have certain properties specified as hazardous (the list of waste shall be binding as regards determination of the waste which is to be considered as HW). Mixing of HW with non-HW or of different categories of HW is not allowed except under specific circumstances. HW must not be mixed or diluted in order to be re-classified it as non-hazardous.

The properties which render waste hazardous are laid down in Annex III of the Waste Framework Directive and are further specified by 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*.⁵⁹ The *List of Wastes Decision* provides a system for categorising waste. It includes HW, and takes account of the origin and composition of the waste. It will also take account of any concentration limit values, where necessary. The List of Waste is binding as regards determination whether the waste is HW.

Regulation (EC) No 2150/2002 of the European Parliament and of the Council of 25 November 2002 on waste statistics (The Regulation on waste statistics) was adopted to ensure better monitoring of effective implementation of EU policy on waste management. It is 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*. The *Regulation on waste statistics* aims to ensure that data on the generation, recycling, re-use and disposal of waste are regular, comparable, current and representative. The data on which the statistics are based shall be collected by means of administrative sources, surveys (obligatory for businesses with more than 10 employees), statistical estimation procedures or a combination of these means.

4.1.2.2 Landfill Directive

Council Directive 99/31/EC of 26 April 1999 on the landfill of waste (The Landfill Directive), was adopted 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, air and human health. It is later 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*. It provides for a phased reduction in the total quantity of biodegradable municipal waste sent to landfills (a reduction to 75% of 1993 levels by 2002, to 50% by 2005, and to 25% by 2010). Methane from both new and existing landfills will need to be collected and used, or flared off. Pre-

⁵⁸ Properties of waste, which render it hazardous.

⁵⁹ http://ec.europa.eu/environment/waste/hazardous_index.htm. available 07.04.2014.



treatment of waste (via sorting, composting, incineration, etc.) is proposed before the waste is land filled. Co-disposal (the mixing of HW with municipal waste in the same landfill) is to be phased out. Prices for landfill disposal are to include the costs of closure and at least 50 years of aftercare. Landfills are divided into three classes: landfills for hazardous waste; landfills for non-hazardous waste; landfills for inert waste.⁶⁰ MSs determine the acceptability of waste at landfills applying procedure as set in 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.

4.1.2.3 Legislation on specific types of waste

Directive 94/62/EC of 20 December 1994 on packaging and packaging waste (Packaging Waste Directive) 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 2009⁶¹ addresses one of the fastest growing waste streams in the EU. It requires MSs to set up systems for the return and/or collection of used packaging, and for the reuse or recovery of the packaging waste collected. The Directive sets out minimum and maximum targets for collection of packaging waste by each MS (50 - 65% by weight) and for recycling (25 - 45% by weight, with a minimum of 15% for each packaging material). It also sets out concentration level limits for heavy metals present in packaging. Packaging must meet certain “essential requirements”, including minimisation of packaging volume and weight, and design allowing reuse and recovery. Several “daughter” directives establishing, *inter alia*, identification systems for packaging materials and database formats have recently been adopted.

Directive 2000/53/EC of the European Parliament and of the Council of 18 September 2000 on end-of life vehicles (Directive on End-of-Life Vehicles) 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.⁶² The aim of this Directive is to increase the rate of re-use and recovery. *This Directive was 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.*

The use of mercury, hexavalent chromium, cadmium and lead in the components of vehicles placed on the market has been prohibited. According to the Directive, MSs shall organise the storage and treatment of end-of-life-vehicles in accordance with the requirements of the Waste Framework Directive. The owner or holder of an end-of-life-vehicle shall receive a certificate of destruction when the vehicle is transferred to an authorised treatment facility. Authorised treatment facilities shall strip end of life vehicles before treatment and recover all environmentally hazardous components. Priority

60 For more information see: http://ec.europa.eu/environment/waste/landfill_index.htm. available 07.04.2014.

61 See <http://ec.europa.eu/environment/waste/packaging/legis.htm>. available 07.04.2014.

62 Guidance document for implementation of Directive on End-of-Life Vehicles, issued by EC, can be found on: http://ec.europa.eu/environment/waste/pdf/guidance_doc.pdf. Accessible 07.04.2014.



must be given to the re-use and recovery (recycling, regeneration, etc.) of vehicle components. The vehicle manufacturers are required to produce information on dismantling for each type of new vehicle placed on the market.

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 (Directive on batteries and accumulators), 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, prohibits the marketing of all alkaline manganese batteries containing more than 0.025% of mercury by weight, except alkaline manganese batteries intended for prolonged use in extreme condition (below 0 °C or above 50 °C) which may contain up to 0.05 % of mercury by weight. The prohibition excludes alkaline manganese button cells and batteries composed of button cells. The Directive also imposes obligations concerning the marketing and disposal of batteries and accumulators containing more than 25 mg mercury per cell, more than 0.025 % cadmium by weight, and more than 0.4 % lead by weight. These batteries and accumulators must be marked with a special chemical symbol indicating the heavy-metal content and a symbol indicating separate collection, as described in the Marking Directive (93/86/EEC). The Directive also establishes rules for the collection, recycling, treatment and disposal of batteries and accumulators. The MSs are required to provide for separate collection of spent batteries and accumulators and take measures to ensure that batteries and accumulators cannot be incorporated into appliances unless they can be readily removed by the consumers when spent.

Council Directive 96/59/EC of 16 September 1996 on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCB/PCT) (the Disposal of PCBs and PCTs Directive), amended by Regulation (EC) No 596/2009 of the European Parliament and of the Council of 18 June 2009 requires MSs to take the necessary measures to ensure that used PCBs/PCTs are disposed of, and that PCBs/PCTs and equipment containing such substances are decontaminated or disposed of as soon as possible. Equipment containing PCBs/PCTs must be labelled, and inventories made of all equipment with PCB volumes of >5 dm³. Used PCBs/PCTs and equipment containing PCBs/PCTs must be transferred as soon as possible to undertakings licensed to carry out the decontamination and/or disposal of PCBs/PCTs. The Directive defines the conditions under which decontamination and/or disposal is to take place. MS must draw up plans for the decontamination and/or disposal of inventoried equipment and the PCBs contained therein within three years.

PCBs are, among other things, also covered with 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.

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 (the Sewage Sludge Directive) provides for control over the use of sewage sludge in agriculture. It is amended with Council Directive 91/692/EEC of 23 December 1991, Council Regulation (EC) No 807/2003 of 14 April 2003, and Regulation (EC) No 219/2009 of the European Parliament and of the Council of 11 March 2009.⁶³ It establishes maximum limit values for concentrations of heavy metals (cadmium, copper, nickel, lead, zinc and mercury) in soil and in sludge for use in agriculture, as well as

⁶³http://europa.eu/legislation_summaries/agriculture/environment/l28088_en.htm#amendingact. available 07.04.2014.



maximum quantities of heavy metals, which may be added annually to agricultural land, in Annexes I A, I B and I C of the Directive. Records must be kept of the quantities, composition and properties of sludge produced and supplied for use in agriculture, and the places where the sludge is used. The Directive requires analysis of sludge and the soil on which it is used, according to the specified procedures for sampling and analysis.

Directive 2006/21/EC of the European Parliament and of the Council on the management of waste from the extractive industries (The Mining waste) is one of the largest waste streams in 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. Extractive industry waste facilities can operate only if a permit by the competent authorities is issued.

4.1.2.4 Shipment of waste legislation

The Shipment of Waste Legislation is regulated by Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste (the Waste Shipments Regulation), amended by Commission Regulation (EC) No 1379/2007 of 26 November 2007, Commission Regulation (EC) No 669/2008 of 15 July 2008, Regulation (EC) No 219/2009 of the European Parliament and of the Council of 11 March 2009, Commission Regulation (EC) No 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, Commission Regulation (EU) No 135/2012 of 16 February 2012.

UIt establishes procedures for controlling waste shipments, transposes the requirements of the Basel Convention⁶⁴ on supervision and control of shipments of waste (1989) as well as the Decision on the Control of Trans-boundary Movements of Wastes Destined for Recovery Operations,⁶⁵ adopted by the OECD in 2001. The Waste Shipment Regulation also applies to shipments of waste within a MS. It provides for a complex system of notifications and consent procedures (based on Consignment Notes and consent given by the country of dispatch, country of transit or country of destination, prior to any shipment) for all cross-border shipments of waste, depending on the type of shipment and the destiny of the waste. Competent authorities of dispatch and destination are responsible for ensuring that waste is disposed of/recovered in an environmentally sound manner, and for prohibiting and punishing illegal waste traffic. All cross-border shipments of waste must be covered by financial guarantees or equivalent insurance. The Waste Shipment Regulation distinguishes between waste destined for recovery and waste destined for disposal. It provides for separate regimes for shipments of waste across MS borders within the Community and for shipments of waste into and out of the EU and prohibits all shipments

64 UNEP Basel Convention on the Control of Trans-boundary Movements of Hazardous wastes and their Disposal (1989).

65 Decision of the Council C(2001)107/final concerning the control of transboundary movements of wastes destined for recovery operations, as amended by C(2004)20. <http://www.oecd.org/environment/waste/30654501.pdf>. Accessible 09.06.2014.



of hazardous waste for recovery from the EU to non-OECD states. Annexes II, III and IV correspond to the 1992 OECD Decision's "green", "amber" and "red" lists of waste. Wastes for which export is prohibited are listed separately (Annex V).

The European Parliament and the Council adopted *Directive 2012/19/EU of 4 July 2012 on waste electrical and electronic equipment (WEEE)*, with the aim to fight illegal export of waste more effectively. The WEEE Directive will force exporters to test and provide documents on the nature of their shipments when the shipments run the risk of being waste.

4.2 INSTITUTIONAL ADAPTATION

The EU requirements regarding institutional adaptation in the MSs Waste management sector comprise:

- Clear designation of relevant competent authorities for implementation of EU waste legislation (in terms of division of competences among different central, regional and local (municipalities, and cities) waste management companies, industrial / commercial waste producers, research institutions);
- Devising of competent authorities with responsibilities for undertaking activities related to planning and implementation of EU waste legislating, in terms of:
 - development of waste management strategy and waste management plans (including hazardous waste management plans), as well as implementation of planning at national and sub-national levels;
 - classification of landfill sites;
 - mining;
 - incineration of waste;
 - waste shipment;
- Empowering competent authorities to be in charge of:
 - setting technical standards (ELVs for certain polluters; approve sampling and monitoring programmes; approve standards for locations and running of landfill sites);
 - issuing licenses / permits;
 - supervising, monitoring and inspecting of waste management facilities and activities;
 - initiating and pursuing enforcement actions;
 - ensuring data collection, analysis and reporting⁶⁶;

66 GUIDE TO THE MAIN ADMINISTRATIVE STRUCTURES REQUIRED FOR IMPLEMENTING THE *ACQUIS*, pp. 105-106.



5. AIR QUALITY AND CLIMATE CHANGE

5.1 SCOPE OF TRANSPOSITION

5.1.1 Introductory notes

The air quality and climate change sector was developed due to a growing pressure from issues of trans-boundary and global atmospheric pollution. The EU developed a number of legal instruments aimed at combating a growing number of problems. For the purpose of this Strategy they are divided into three groups:

- Air quality;
- Air emissions; and
- Fuel standards and Green House Gases (GHG).

The full list of legal instruments forming the body of Air Quality and Climate Change EU acquis is contained in Annex I to this Strategy. Some legal instruments which were traditionally seen as part of Air Quality and Climate Change Sector, such as e.g. LCP Directive (2001/80/EC), are analysed in other sectors due to recent legislative developments (e.g. amended LCP and Waste Incineration (hereinafter WI) directives are parts of new IED (2010/75/EU)).

5.1.2 Review

5.1.2.1 Ambient air quality

In accordance with 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), each MS must designate competent authorities and bodies which will deal, inter alia, with:

- Assessment of ambient air quality;
- Approval of measurement systems (methods, equipment, networks and laboratories);
- Ensuring the accuracy of measurements;
- Analysis of assessment methods; and
- Cooperation with the other MSs and the EU Commission.

Furthermore, MSs are obliged to set up zones and agglomerations throughout their territories reflecting the population density and ecosystems exposed to air pollution where air quality assessment and air quality management must be carried out which will be subjected to classifications at least every five years in accordance with stipulated procedure.

Assessment and location of sampling points, in accordance with predefined criteria, must be carried out/set up for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter (PM₁₀ and PM_{2.5}), lead, benzene, carbon monoxide, and ozone. Furthermore, MS are obliged to ensure that throughout their zones and agglomerations, levels of sulphur dioxide, PM₁₀, lead, carbon monoxide, nitrogen dioxide, and benzene do not exceed the limit values set out for each MS. Fine particulate matter (PM_{2.5}) has significant negative impacts on human health and the threshold below which they would not pose treat has not been identified. Therefore, they should be regulated as other pollutants and their reduction should be attained by combination of general reduction of concentration and limit



value approach. The national exposure reduction target for PM_{2.5} is 2020, with limit value stage 1 taking place on 1 January 2015.

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 established a target value for the concentration of arsenic, cadmium, nickel and benzo(a)pyrene in the air from 31 December 2012 in zones and agglomerations. Once sufficient experience has been gained in relation to the implementation of this Directive, a consideration may be given to the possibility of merging its provisions with those of AAQ Directive.

Air quality plans should be developed for zones and agglomerations within which concentrations of pollutants in ambient air exceed the relevant air quality target values or limit values including any temporary margins of tolerance. The trans-boundary nature of specific pollutants, such as ozone and particulate matter, may require coordination between neighbouring MSs in drawing up and implementing ambient air quality plans and short-term action plans and in informing the public. These plans shall be communicated to the EU Commission without delay, but no later than two years after the end of the year the first exceedance was observed. In case of a risk that alert thresholds are exceeded, short term action plans must be drawn up.

Where any alert threshold, limit value or target value plus any relevant margin of tolerance or long-term objective is exceeded due to significant transboundary transport of air pollutants or their precursors, the MSs concerned must cooperate and, where appropriate, draw up joint activities, such as the preparation of joint or coordinated air quality plans.

Where the information threshold or alert thresholds are exceeded, information shall be provided as soon as possible to the competent authorities and public in the neighbouring MSs concerned. Public must be, inter alia, informed of ambient air quality and air quality plans.

5.1.2.2 Emissions into air

Air emissions instruments consist of a set of very different legal instruments which regulate different aspects of emissions of pollutants into the air, which can have adverse effects on humans and environment.

Directive 2001/81/EC of the European Parliament and the Council on national emission ceilings for certain pollutants (the NEC Directive), amended by Council Directive 2006/105/EC of 20 November 2006 and Regulation (EC) No 219/2009 of the European Parliament and of the Council of 11 March 2009 establishes national emissions ceilings for acidification and eutrophication and by setting upper limits for total emissions of several pollutants (sulphur dioxide, nitrogen oxide, volatile organic compounds and ammonia). Annex I of the Directive lists emissions ceilings for each of the current 28 MSs. MSs are more or less free to determine the means by which to comply with the Directive. The emphasis is placed on the more cost-effective measures.

MSs were required to undertake efforts for reduction to comply with the set emission ceilings by 2010 at the latest, with further targets imposed for 2020 in order to contribute to reductions in acidification, eutrophication and ground-level ozone pollution. In order to achieve these targets, programmes for the progression on reduction of emission of concerned pollutants must be drafted. MSs are obliged to prepare



and annually update national emission inventories and emission projections and communicate them to the EU Commission and EEA.

In addition to a directive which establishes national emissions ceilings, a subsector on air emissions also includes several directives on emissions of Volatile Organic Compounds (VOCs). These are Directive 94/63/EC of European Parliament and of the Council 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 (the VOC Petrol Stage I Directive), 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 (the and VOC Petrol Stage II Directive), whose aim is to reduce emissions of VOCs from the storage of petrol and its distribution and 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 decorative paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC (the Paints Directive), whose aim is to prevent the negative environmental effects of emissions of VOC from decorative paints and vehicle refinishing products.

Operations, installations, vehicles and vessels used for storage, loading and transport of petrol from one terminal to another or from a terminal to a service station must comply with technical provisions of the VOC Petrol Stage I Directive. The Directive furthermore stipulates how mobile containers must be designed and operated e.g. how loading into storage installations at service stations should be carried out. VOC Petrol Stage II Directive imposed an obligation for MSs to ensure that any new service station, or existing station undergoing major refurbishment be equipped with a Stage II petrol vapour recovery system starting from 1 January 2012.

MSs are obliged to establish a competent authority and to inform the EU Commission of it, and to ensure that products set in Annex I of the Directive are not placed on the market except when they do not exceed limit values set out in Annex II from 1 January 2010. MSs are also obliged to conduct monitoring and to inform the Commission on the results through the reporting obligation.

Furthermore, there is legislation on the approximation of the laws of the MS relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery which contains seven directives: the "mother" *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*, and the amendments *Directive 2002/88/EC*, *Directive 2004/26/EC*, *Directive 2006/105/EC*, *Directive 2010/26/EU*, *Directive 2011/88/EU*, and the last amendment *Directive 2012/46/EU (Non-road machinery Directive)*.

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants (POPs Regulation) whose objective is to protect human health and the environment from POPs 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 Protocol and the Protocol to the 1979 Convention on Long-Range Trans-boundary Air Pollution on Persistent Organic Pollutants, 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. This Regulation foresees a system of permitting for POPs.

5.1.2.3 Fuel Standards and GHG Legal Instruments

Regarding fuel standards, there are two directives, which will be reviewed in this document. These are 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 (Fuel Quality Directive), amended by Commission Directive 2000/71/EC of 7 November 2000, Directive 2003/17/EC of the European Parliament and of the Council of 13 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 Directive 2009/30/EC on the promotion of the use of energy from renewable sources, and the Council 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, (Sulphur content in liquid fuels Directive).

The Fuel Quality Directive provides for, in respect of road vehicles, non-road mobile machinery (including inland waterway vessels when not at sea), agricultural and forestry tractors, and recreational craft when not at sea, 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 oil 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. *Directive 2009/29/EC of the European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community (Emission Trading Directive)* establishes a scheme for trading GHG emissions to help meet the Community's commitments under the Kyoto Protocol⁶⁷ to reduce its GHG emissions by 8% from 1990 levels by 2008–2012, in an efficient manner. The Directive provides for the establishment of the EU-wide GHG emissions trading scheme (ETS) for GHG listed in Annex II of the Directive and applies to all activities listed in Annex I of the Directive, including large power stations and refineries and large factories that produce steel, cement, glass, ceramics and paper. The Directive obliges operators of these activities to acquire permits from permitting authorities; the permit conditions are defined by the Directive. When issuing permits for emissions of GHG, coordination or harmonisation with the permit stipulated in the Industrial Emissions Directive (IED) is desirable. The Directive also stipulates total allowances for aviation.

67 Kyoto Protocol to the United Nations Framework Convention on Climate Change (1997).



For every five year period, a national allocation plan must be drafted stating the total quantity of the allowance that it intends to allocate for that period and proposing its allocation. Furthermore, the Directive stipulates that a penalty of EUR 100 will be issued for each tonne of CO₂ equivalent emitted by an installation for which the operator did not surrender the allowance. The public must have access to decisions relating to the allocation of allowances, information on project activities in which a MS participates or authorises private or public entities to participate, and the reports on emissions required under the GHG emissions permit and held by the competent authority.

Operators are obliged to submit monitoring reports to the competent authority, which need to be verified by independent verifiers. Two regulations were adopted to implement this regulation. *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 Commission Regulation (EU) 206/2014 as regards global warming potentials for non-CO₂ greenhouse gases (*Regulation on reporting of GHG emissions*) lays down rules for the monitoring and reporting of GHG emissions and activity data pursuant to Emission Trading Directive. This Regulation is applicable from 1 January 2013. The operators have the obligation to carry out monitoring and reporting of GHG emissions in accordance with principles laid down in the Regulation, and a monitoring plan (standardised or simplified) approved by the competent authority. Every installation to which the Regulation is applicable needs to be categorised, monitoring boundaries need to be defined, and choice of monitoring (calculation based or measurement based) offered. An operator must submit to the competent authority an emission report that covers annual emissions for the reporting period, by 31 March of each year.

Since this report needs to be verified, the Commission adopted 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). The Regulation lays down provisions verification of these reports and for the accreditation and supervision of verifiers. This Regulation applies to verification of GHG emissions and tonne/kilometre data occurring from 1 January 2013. The role of the verifier is to give a final confirmation that the report submitted by the operator is free from material misstatements. The Regulation contains a detailed procedure for carrying out verification such as a prior verification checklist, content of risk analysis, verification plan, site visit in order to assess the operation of measuring devices and monitoring system, content of the verification report. In case misstatements are identified, it is a duty of the verifier to point them out to the operator and request their correction. The verifier needs to meet several requirements in order to be considered as a qualified verifier.

The public must have access to the registry containing information on the allowances issued, transferred, and cancelled, which is also set out by the Emission Trading Directive. This is why the EU Commission adopted - Regulation (EC) No 994/2008 for a standardised and secured system of registries (Regulation on 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 stipulating more provisions regarding this Register. The Regulation lays down general as well as operational and maintenance requirements concerning the standardised and secured registries system consisting of registries, and the Community independent transaction log (CITL). It also provides for a communication



system between the CITL and the independent transaction log (ITL) established, operated and maintained by the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC). The Regulation contains a number of specific provisions regarding the functioning of the register and the system as a whole.

The *Emission Trading Directive* also lays down provisions for reporting to the Commission. Following the adoption of the Emission Trading Directive, the Commission adopted several decisions, clarifying certain aspects of the Directive. These are:

- Aviation Regulation ((EU) No 82/2010) – which lists aircraft operators which performed an aviation activity listed in Annex I to the Emission Trading Directive specifying the administering MS for each aircraft operator;
- Aviation Decision (2009/450/EC) - which gave, in its Annex a detailed interpretation of aviation activities listed in Annex I to the Emission Trading Directive;
- Decision on double counting (2006/780/EC) – which lays down provisions for implementation of Article 11b (3) and (4) of the Emission Trading Directive
- Decision monitoring and reporting (2007/589/EC) - which gave, in its Annex the guidelines for the monitoring and reporting of greenhouse gas emissions from the activities listed in Annex I to the Emission Trading Directive;
- Decision on risk of carbon leakage (2010/2/EU) - which listed sectors and sub-sectors, which are exposed to a significant risk of carbon leakage.

More legal instruments were adopted containing elements tackling various aspects of climate change. *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 (Consumer Information Directive), amended by Directive 2003/73/EC, Regulation (EC) No 1882/2003 and Regulation (EC) No 1137/2008*, ensures that information relating to the fuel economy and CO₂ emissions of new passenger cars offered for sale or lease in EU is made available to consumers in order to enable consumers to make an informed choice. The Directive stipulates that the label on fuel economy and CO₂ emissions, which must be in accordance with the requirements described in Annex I of the Directive, must be attached to or displayed, in a clearly visible manner, near each new passenger car model at the point of sale. Furthermore, the Directive stipulates that the guide on fuel economy and CO₂ emissions must be produced in accordance with the requirements of Annex II of the Directive and that each poster (or alternatively, a display) must be exhibited with a list of the official fuel consumption data and the official specific CO₂ emissions data of all new passenger car models and that promotion literature must contain the official fuel consumption and the official specific CO₂ emission data of the passenger car models.

Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide (Storage of carbon dioxide Directive) establish a legal framework for the environmentally safe geological storage of CO₂ to contribute to the fight against climate change. The Directive ensures that CO₂ capture is regulated under the IED and that both CO₂ capture and pipeline transport are regulated under the EIA Directive. The Directive therefore is focused on the regulation of CO₂ storage. The Directive does not apply to geological storage of CO₂ with a total intended storage



below 100 kilotons, undertaken for research, development or testing of new products and processes. In accordance with the Directive, no storage site can be operated without a storage permit, which is issued by MSs. The procedure for granting of a storage permit must be open to all entities possessing the necessary capacities. Permits must be granted on the basis of objective, published and transparent criteria. The Directive defines content of the application, conditions for a storage permit and the content of the permit. MSs have duty to make the permit applications available to the Commission, which may give its opinion on the matter. The operator must carry out monitoring of the injection facilities and have to report to the competent authority. Inspection must be carried out. Also, the Directive stipulates obligations regarding closure and post closure financial security and mechanisms. Responsibilities stipulated in the Directive can be carried out by various competent authorities in one MS. Competent authorities are obliged to establish and maintain registers of storage permits granted and closed storage sites. The public must be informed on geological storage of CO₂.

The purpose of *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)* is to set emission performance standards for new passenger cars registered in EU, which forms a part of the EU integrated approach to reducing CO₂ emissions from light duty vehicles while ensuring the proper functioning of the internal market. The aim of the Regulation is to create incentives for the car industry to invest in new technologies. The Regulation actively promotes eco-innovation and takes into account future technological developments. The Regulation established the average CO₂ emissions for new passenger cars at 130 g CO₂/km by means of improvement in vehicle motor technology. From 2020, onwards, this Regulation set out a target of 95 g CO₂/km as average emissions for the new car fleet. The Regulation applies to motor vehicles of category M1 as defined in Annex II to Directive 2007/46/EC (passenger cars) which are registered in EU for the first time and which have not previously been registered outside EU ('new passenger cars'). For each calendar year, MS must record information for each new passenger car registered in its territory. MS must determine and transmit to the EU Commission the information listed in Part B of Annex II in respect of the preceding calendar year. The data shall be transmitted in accordance with the format specified in Part C of Annex II.

Decision 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 (Monitoring Mechanism Decision) establishes a mechanism for:

- Monitoring of all anthropogenic emissions by sources and removals by sinks of GHG not controlled by the Montreal Protocol on substances that deplete the ozone layer in the MSs;
- 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, GHG inventories, national systems and registries of EU and its MSs, and the relevant procedures under the Kyoto Protocol; and
- Ensuring the timeliness, completeness, accuracy, consistency, comparability and transparency of reporting by EU and its MSs to the UNFCCC Secretariat.



On the other hand, *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)* lays down the minimum contribution of MSs to meeting the greenhouse gas emission reduction commitment of EU for the period from 2013 to 2020 for GHG emissions and rules on making these contributions and for the evaluation thereof. Furthermore, the Decision lays down provisions for assessing and implementing a stricter EU reduction commitment exceeding 20 %, to be applied upon the approval by the EU of an international agreement on climate change leading to emissions reductions exceeding those currently required.

Finally, there is a 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) (Regulation on ozone depleting substances), as amended by Commission Regulation (EU) No 744/2010 of 18 August 2010, which intends to bring in line EU legislation with the requirements of the Montreal Protocol, as amended. The 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.

5.2 INSTITUTIONAL ADAPTATION REQUIREMENTS

5.2.1 Institutional aspects of atmospheric air quality

In order to implement EU *acquis* on ambient air quality the MSs are required to appoint competent authority(ies) appropriate in terms of its(their):

- Technical expertise;
- Relationships with other governmental and non-governmental bodies;
- Enforcement powers; and
- Authority to prepare and submit reports to the EU Commission.

After zones and agglomerations are designated, appropriate institutions should be appointed (for carrying out atmosphere air quality assessment, including monitoring and modelling) be capable of compilation of inventories and independent quality assurance in all zones and agglomerations.

Also, MSs are required to establish an effective sampling system and provide technical advice on pollutants that require quality assessment. Furthermore, they are required to:

- Provide for suitable arrangements for data handling and storage;
- Establish information database;
- Ensure that consultations with neighbouring states can be held when necessary;
- Ensure rapid informing of public when necessary.⁶⁸

68 GUIDE TO THE MAIN ADMINISTRATIVE STRUCTURES REQUIRED FOR IMPLEMENTING THE *ACQUIS*, p. 105.



5.2.2 Institutional aspects of climate change

Specific institutional requirements for various aspects of implementation of the respective EU legislation and climate change relating international treaties are identified and reviewed separately below.

5.2.2.1 GHG monitoring and reporting;

The requirements concerning institutional adaptation of Potential and Candidate Countries in regards of the GHG monitoring and reporting comprise:

- Establishment of the single system for the monitoring and reporting of GHG emissions, in line with UNFCCC CoP decisions, and designating competent authorities for:
 - ensuring fulfilling of all obligations, including organisational issues;
 - managing reporting procedures (submission of a report to the UNFCCC Secretariat determining the country's assigned amounts as equal to the country's respective levels determined pursuant Decision 2002/358/EC and the Kyoto Protocol);
- Specifically appoint an entity [institution] to monitor the implementation of the obligations set out by these decisions. Such entity may be established as a part of the ministry competent for environmental issues, but should have a regulatory cross-sectoral role to ensure:
 - that all public and private authorities required to submit an information report do so to one focal point;
 - that information received from various sources is quality controlled and verified by one entity [institution] to avoid gaps, duplication and fragmentation; and
 - accuracy, comparability and transparency of data;
- Streamlining of reporting systems concerning air pollutants under the Air Quality Directive (2008/50/EC), NEC Directive and CLRTAP in order to avoid overlaps, make better use of resources and avoid any conflicts between the reporting systems;
- Coordination by a national entity of various national organisations in order to produce a GHG inventory by using data gathered from best available sources (in accordance with the guidance agreed upon by the UNFCCC CoP;
- Ensuring that information reported by a national entity of MS to the EU Commission and to the UNFCCC Secretariat is:
 - complete;
 - accurate, consistent; transparent; and
 - comparable.

To facilitate this, the country should have in place appropriate regulatory and/or procedural systems that allow for the facilitated and coordinated compilation of the necessary information from all relevant data / information providers;

- Establishing a national administrator to maintain the national registry for accurate accounting of the:



- issuing;
- holding;
- transfer;
- acquisition;
- cancellation; and
- withdrawal

of AAUs, ERUs and CERs, and their carryover.⁶⁹

5.2.2.2 EU emission trading scheme

Competent authorities (one primary responsible and other responsible as implementing bodies for specific elements, e. g. for issuance of GHG emission permits and receipt of verified emission report) must be designated for implementation of the ETS Directive, in terms of:

- Identification of installations;
- Issuance of GHG emissions permit for such installations;
- Management of free allocation provided to installations (Article 10a and 10c of the EU ETS Directive);
- Overseeing of the compliance cycle; and
- Reporting procedures.

A competent administrator must be designated to manage accounts in the registry system, as well as an [institutional] entity (authority / body) for overseeing the monitoring, reporting and verification of the emissions (it can be a part of the competent authority or a separate body). Also, additional monitoring must be established for derogations and the proper use and surrender of JI / CDM credits⁷⁰.

It is recommended that an entity is specifically established to monitor implementation of EU ETS Directive and Effort Sharing Decision⁷¹, from a holistic approach, which should have a regulatory cross-sectoral role to ensure that all institutions and private authorities required to submit an information report do so to one focal point and that information received from various sources is quality controlled and verified by one entity to avoid gaps, duplication and fragmentation, as well as to ensure accuracy, comparability and transparency.

5.2.2.3 Carbon capture and storage

The institutional requirements regarding implementation of Carbon Capture and Storage Directive include:

- Designating competent authorities for implementation of the Directive in terms of:

⁶⁹*Op. cit.*, page 110-111.

⁷⁰ GUIDE TO THE MAIN ADMINISTRATIVE STRUCTURES REQUIRED FOR IMPLEMENTING THE *ACQUIS*, p. 112.

⁷¹ 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.



- permit issuing;
- monitoring;
- providing guidance and consultation; and
- put in place suitable coordination measures;
- Designating a competent authority that shall establish and maintain:
 - a registry for the storage permits granted; and
 - a permanent registry for closed sites and surrounding storage complexes;
- Establishing an inspection system for checking compliance with the Carbon Storage Directive and effects on environment and human health;
- Establishing a suitable dispute settlement arrangement before an independent authority (regarding settling of disputes relating to access to transport networks and to storage sites);
- Ensuring effective, proportionate and dissuasive enforcement of penalty system for environmental offences.⁷²

5.2.2.4 Quality of fuel

The requirements regarding fuel quality comprise designation of authorities and other organizations with responsibility for regulating the quality of fuel that would include:

- Monitoring the fuel quality;
- Collecting and summarizing of fuel quality data;
- Establishing a system for assessing the need for more stringent fuel quality standards (e.g. in certain areas for environmental reasons);
- Establishing an enforcement system to deal with non-compliance with legislation transposing the requirements of the EU acquis on fuel (including penalties for breaches the law)
- Ensuring adequate verification regarding information and data received from economic operators (including verification of compliance with sustainability criteria which must be taken into account in greenhouse gas reductions);
- Establish a system and procedure for monitoring compliance with fuel quality requirements;
- Establish a database or other system for collection of national fuel quality BiH⁷³

5.2.2.5 Cars / vans

The requirements concerning cars / vans comprise the designation of authorities and other organizations with responsibility for informing about the requirements on the CO₂ in light duty vehicle legislation, while ensuring sufficient coordination between authorities, aimed at ensuring:

- Efficiency;

⁷² GUIDE TO THE MAIN ADMINISTRATIVE STRUCTURES REQUIRED FOR IMPLEMENTING THE ACQUIS, page 112.

⁷³Op. cit., page 113.



- Legal certainty; and
- Transparency.

There are also requirements for setting up a data gathering and reporting system to comply with monitoring and reporting obligations pursuant to CO₂ from cars / vans legislation, and designating a competent authority for collection and communication of the monitoring data, and establishing an enforcement system to deal with non-compliances.⁷⁴

5.2.2.6 Ozone layer protection and fluorinated gases

One or more competent authorities are required to be designated, capable of:

- Consulting stakeholders and preparing and publishing guidance notes for them;
- Ensuring management of notification and authorisation procedures;
- Monitoring compliance with the regulations and carrying out enforcement measures;
- Establishing of adequate data collection and data handling procedures (in accordance with the reporting requirements);
- Creation of formal reporting procedures, etc.⁷⁵

6. INDUSTRIAL POLLUTION

6.1 SCOPE OF TRANSPOSITION

6.1.1 Introductory notes

Different approaches to controlling emissions into air, water and soil separately may encourage the shifting of pollution from one environmental medium to another rather than protecting the environment as a whole. This is why a permit (or a registration) is necessary in order to control pollution and prevent accidents and incidents and limit their consequences. Also, other instruments such as public access to data on emitted pollutants, consumer information about the product and audit schemes indirectly contribute to the protection of the environment from industrial pollution. This is why EU adopted legal instruments tackling the pollution from industrial sources from different perspectives.

The most “prominent” legal instrument that makes up this sector is the *Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (Industrial Emissions Directive)* (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);

⁷⁴Id.

⁷⁵Id.



- 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).

IED was adopted and published in 2010, and entered into force on 6 January 2011. However, despite the fact that the Directive already entered into force, certain parts of the IED will repeal the existing directives that were included into the IED in the future, i.e. with the following dates:

- IPPC, WI, VOC Solvents and three TiO₂ Directives – with effect from 7 January 2014;
- LCP Directive – with effect from 1 January 2016.

For the purpose of EAS, only IED will be reviewed. The reason for this is that currently the Project supposition is that the year of BiH's association with EU is 2020. Having this in mind, together with the fact that provisions of the IED are clearly stipulated and that dates of repeal of certain directives are also clearly stipulated therein, a separate analysis of directives that make up IED may be considered redundant. The date of repealing will be taken into consideration when formulating short-term and mid-term recommendations

In the same manner, only Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances (Seveso III Directive), amending and subsequently repealing Council Directive 96/82/EC (Seveso II) Directive, will be reviewed. Seveso III Directive was adopted on 4 July 2012 and will repeal Seveso II Directive as of 1 June 2015.

Consequently, for full transposition (and approximation of their requirements) of IED and Seveso III it might be decided the respective DSIPs and APIDs (as elaborated in this Strategy) to be designed that would make a reliable basis for the next iterative step into harmonizing of these environmental issues.

6.1.2 Review

6.1.2.1 Industrial Emissions Directive

Installations listed in Annex I of the IED, large combustion plants and waste (co-)incineration plants are required to hold a permit in order to operate. Installations and activities using organic solvents may be exempted from holding a permit but a procedure of registration must be in place. These installations and plants are considered to be the largest polluters and are contributing significantly to overall emissions within EU.

The permit should include all the measures necessary to achieve a high level of protection of the environment as a whole. The permit must contain conditions for consumption of raw materials and energy (energy efficiency), emissions into water, air, soil, emissions of noise, vibrations, heat, odour, prevention and recovery of waste and waste water, and accident prevention and control. This means



that the permit must be integrated. In case where more than one competent authority is involved or more than one permit is granted, the procedure for granting of the permit must be fully coordinated in order to guarantee an effective integrated approach by all authorities competent for this procedure.

The permit issuance conditions should be set out on the basis of best available techniques (BAT) (which must be in accordance with the BAT conclusions which must also be in accordance with the BAT Reference Documents (BREFs) which are drafted by the IPPC Bureau in Seville and adopted under the comitology procedure by the European Commission). However, where environmental quality standards require stricter conditions than those achievable by the use of BATs, additional measures will be included in the permit, without prejudice to other measures which may be taken to comply with environmental quality standards. Application for a permit must contain, inter alia, a baseline report on the quality of soil and groundwater, in order to enable restoration of the site to the initial state upon closure of the installation.

Conduct of the operator must be monitored continuously along with regular inspections. Public must be given an opportunity for access to, inter alia, content of the decision, including a copy of the permit and any subsequent updates as well as the reasons on which the decision is based. Furthermore, the public must be allowed to participate in the permit granting procedure and must have an opportunity to initiate the access to legal procedures. These permits are subject to a regular revision, but also may be randomly revised. A procedure regarding transboundary impacts is also regulated by IED.

IED stipulates the requirements which are binding only to certain polluting installations and activities; such as for example, ELVs and monitoring requirements for LCP are stipulated in Annex V of the IED. Certain derogations for LCPs are permitted in accordance with the Directive. Also, the Directive allows the large polluters not complying with the provisions of the Directive to operate until the end of 2023 under certain circumstances. Also, Member States are allowed to draft a Plan to reduce emissions in BiH to ease the implementation of the Directive. ELVs and monitoring requirements for WI and VOC installations are set out in Annexes VI and VII of the Directive respectively. Special provisions for installations producing TiO₂ are stipulated in Chapter VI and Annex VIII of the Directive

6.1.2.2 Seveso III Directive

Seveso III Directive (2012/18/EU) lays down the rules for the prevention of major accidents which involve dangerous substances, and the limitation of their consequences for human health and the environment. The List of dangerous substances is provided for by Annex I to the Directive. The operator of an establishment where dangerous substances are present has an obligation to take all the necessary measures to prevent major accidents and to limit their consequences for human health and the environment. The operator must notify the competent authority regarding items listed in the Directive.

The operator of such an establishment must adopt a document in writing setting out major-accident prevention policy (MAPP) and to implement it properly. The Safety Report, inter alia, demonstrates that MAPP and safety management system for its implementation has been put into effect. They must



be developed for all the establishments by 1 June 2018. Furthermore, operators are obliged to adopt an internal emergency plan (containing the information set out in Annex IV to the Directive), which also must be in place for all establishments not later than 1 June 2018.

MSs shall ensure that the objectives of preventing major accidents and limiting the consequences of such accidents for human health and the environment are taken into account in the land use planning (e.g. siting of new establishments, transport routes etc). The public must have access to, inter alia, Safety Report and Inventory of Dangerous Substances and must be allowed to participate in decision-making. The Directive also stipulates the actions that must be taken by the operator and MSs in case of major accidents. The Directive requires MSs to carry out inspection and lays down basic rules for it.

6.1.2.3 European Pollutant Release and Transfer Register (EPRTTR)

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, (E-PRTR), amended by Regulation (EC) No 596/2009 of the European Parliament and of the Council of 18 June 2009, 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.

6.1.2.4 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)⁷⁶ 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.

6.2 INSTITUTIONAL ADAPTATION REQUIREMENTS

Regarding the institutional framework for implementation of the IED (IPPC recast), a MS has been required to ensure “truly integrated control of pollution at source”. Having in view that the legislation in this environmental sector has a major implication for industrial activities and environmental protection in a country, numerous institutions and other stakeholders need to be involved in the process of control of pollution. Therefore a number of steps is required to be undertaken by a MS, as follows:

⁷⁶ EMAS user's Guide is established by the Commission Decision of 4 March 2013, setting out the steps needed to participate in EMAS, under Regulation (EC) No 1221/2009. Available at: http://ec.europa.eu/environment/emas/documents/legislative_en.htm. Accessible 09.04.2104



- Designation of the competent authorities for implementation of the IPC sector legislation;
- Ensuring that competent authorities and other stakeholders work in “an integrated and coordinated approach, avoiding overlaps”, transparently and with maximum consultation with all stakeholders;
- Ensuring the clear links between competent authorities and other organisations that have responsibilities for issues that affect pollution control and hazard management (local, health and planning authorities); ensuring in particular clear coordination mechanisms between competent authorities for Seveso and IED (IPPC recast) directives;
- Undertake supervision and regulation of organisations in charge of the permit issuance and enforcement (if separate organisations);
- Ensuring arrangements for effective participation in pollution control and hazard management of all interested bodies or groups, including the general public in accordance with the Directive 2003/35/EC, and establishing a public register and ensuring public access to IPPC (recast) applications, compliance data and related materials;
- Ensuring a suitable accreditation body is established;
- Ensuring the bodies competent for issuance of BAT Guidance, permitting arrangements and procedures, transitional arrangements pertained to industrial air pollution and combustion plants, development of accident prevention policy, emergency plans and safety reports, inspections, environmental management system and related accreditation, standards for eco-labelling;
- Ensuring an adequate system for data recording and processing and an operating and appropriate monitoring system;
- Ensuring that consultations with neighbouring countries are carried out;
- Ensuring the adequate means / procedures of consultation / reporting with the EU Commission, public, organisations affected by IPPC, organisations which undertake accident prevention, other countries where transboundary issues are concerned.⁷⁷

7. CHEMICALS

7.1 SCOPE OF TRANSPOSITION

7.1.1 Introductory notes

In the mid-1990s, the increased insight into the possible negative effect of chemicals led to the awareness that the EU legislation in force could not provide sufficient information about chemicals to be judged scientifically. In the late nineties after a considerable debate, EU developed new chemicals legislation *Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006*

⁷⁷GUIDE TO THE MAIN ADMINISTRATIVE STRUCTURES REQUIRED FOR IMPLEMENTING THE *ACQUIS*, pp. 108—109.



concerning the registration, evaluation, authorisation and restriction of Chemicals (REACH), which entered into force in 2007.⁷⁸ Since 2007, the REACH Regulation has been amended many times.⁷⁹ The REACH system is complemented by *Regulation (EC) No 1272/2008* on the classification, labelling and packaging of substances and mixtures. This Regulation integrates the classification criteria and rules on labelling of the United Nations' Globally Harmonized System (GHS) with EU legislation and includes the REACH provisions governing the inventory of classifications and labelling.

The EU legislative framework for chemical substances until the adoption of REACH was a group of many different directives and regulations developed since 1967 when the first *Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances* (Dangerous Substances Directive) was adopted. Until now, a lot of amendments of this directive have been adopted and a number (over 40 directives and regulations) pieces of legislation were adopted in order to regulate this very complex sector. There are several of these EU directives regulating specific issues related to the import and export of dangerous chemicals, evaluation and control of the risks of existing substances, classifications, packaging and labelling of dangerous preparations etc. Since 1999, the European Commission has been working on the consolidation of the legislation related to the chemicals management in the EU MSs. Due to the complexity and technical/scientific details as well as competing interests of the various political groups and national interest this process has lasted several years. REACH represents the instrument aimed at consolidation of legislation in this sector.

A brief indication of the scope of these legal instruments, follows:

- The *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*, and REACH Regulation establish:
- a central structure (Chemical Agency) responsible for co-ordination of health and environmental protection controls over chemicals;
- Requirements for transposition via a framework chemicals law and via additional hygiene standards;
- Requirements for developing of MSs monitoring & enforcement capacity, particularly at border crossings;
- Requirements for setting up of single registers of chemicals;
- Duty for providing public information to private sector on EU requirements.
- *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 replaces Regulation (EC) No 689/2008*⁸⁰ EU implements the Rotterdam Convention by this Directive which defines special requirements for import and export of regulated chemicals. It regulates labelling and packaging of all exports of hazardous chemicals to the third countries in accordance with EU standards, with effect from 1 March 2014. It provides for a stricter protection of human health

⁷⁸ Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 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) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

⁷⁹ See the List of amendments in Annex 1.

⁸⁰ That replaced Import and Export of Dangerous Chemicals Regulation ((EC) 304/2003).



and environment. A special focus is given to the management of adequate shelf-life of exported chemicals and to adequate storing. The Annex lays down the list of chemicals subject to export notification procedure and those subject to the Prior Informed Consent Procedure;

- Regulation (EC) No 850/2000 of the European Parliament and of the Council dated 29 April 2004 on persistent organic pollutants and amendments to the Directive 79/117/EEC as well as amendments to the Regulation (EC) No 1195/2006, 172/2007 and 323/2007, Regulation (EC) 2016/293/EU and 2016/460/EU amendments to Annexes I, IV and V which include hexabromocyclododecan (HBCDD), and by which the Stockholm Convention is being implemented on persistent organic pollutants (POPs) stipulates stricter standards of human health and environmental protection. The purpose of the Convention so to restrict, prohibit the production, use, emission, import, export of very toxic substances known as persistent organic pollutants for the purpose of protecting human health and environment.
- Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layer requires the assessment of the implementation of national phase-out programme for ODSs and undertaking of additional measures including the adoption of legislation aimed at meeting of international requirements. Until now, this Regulation has been amended several times;⁸¹
- *Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents* requires an assessment of the existing legislation and its implementation to be performed. This Regulation has been amended by the Commission 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, Commission Regulation (EC) No 551/2009 of 25 June 2009, Regulation (EU) No 259/2012 of the European Parliament and of the Council of 14 March 2012.
- *The 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*, requires setting in place additional controls over asbestos-containing products & controls on use in manufacturing, and sets the emission limits for asbestos from building demolition, manufacturing, etc.;
- 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, as amended by Regulation (EC) No 219/2009, requires developing a system for certifying laboratories to OECD standards for GLP.
- On 22 September 2010 the EU adopted Directive 2010/63/EU, which updates and replaces Directive 86/609/EEC on the protection of animals used for scientific purposes which requires the establishment of a permit system for animal experimentation. The new Directive took full effect on 1 January 2013;

⁸¹ The full list of amendments see in Annex I.



- 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;
- 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 biocide products, which revises and replaces Directive 98/8/EC concerning the placing of biocide products on the market with effect from 1 September 2013, requires the development of a system for authorisation and marketing of biocides.

7.1.2 Review

7.1.2.1 REACH - EZ/1907/2006 Regulation

The REACH - Regulation EC/1907/2006, amended several times until now,⁸² creates a single system for both “existing” and “new” chemicals with the main emphasis on:

- Registration;
- Reduction of testing on animals with data sharing;
- Better information on hazards and risks;
- Evaluation of the potential risks by asking industry for further information;
- Authorisation process;
- Preparation of the classification and labelling inventory; and
- Public access to information.

The REACH Regulation provisions transferred the task of proof for demonstrating the safe use of chemicals to the industry to ensure that risks to human health and environment are avoided or adequately controlled.

The main requirements can be listed as follows:

- Manufacturers and importers are required to gather information on the properties of their substances and to register the information in a central database;
- Enterprises that manufacture or import more than one tonne of a chemical substance per year are required to register the chemicals in a central database. Failure to register will mean the substance cannot be manufactured or imported into the EU market;
- The European Chemicals Agency in Helsinki acts as the central point in the REACH system - it runs the databases necessary to operate the system, co-ordinates the in-depth evaluation of suspicious chemicals and runs a public database in which consumers and professionals can find information on hazards;

⁸² Unofficial consolidated text for information purpose only available at: <http://echa.europa.eu/regulations/reach/legislation>. Accessible 14.04.2014.



- The progressive substitution of the most dangerous chemicals when suitable alternatives have been identified;
- The final users of chemicals must
 - apply the risk management measures for dangerous substances identified on the supplier Safety Data Sheets;
 - They have a right to make their use of a substance known to the manufacturer in order to make it an identified use and have it covered in their supplier's chemical safety assessment;
 - They have to provide sufficient information to allow the supplier to prepare an adequate exposure scenario for the use. Alternatively, they can conduct their own chemical safety assessment and report this use to the Chemicals Agency.. Other EU Chemicals legislation

The EU system of classification and labelling of dangerous substances and preparations is a framework requirement that also serves to define the scope of other EU environmental acts, including the Hazardous Waste Directive and the Seveso Directive(s) on prevention of major accidents.

The Regulation (EC) No 1272/2008 E of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006, which implements in the European Union the Globally Harmonised System of Classification and Labelling of chemicals at the UN level, has the purpose to ensure a high level of protection of human health and the environment as well as the free movement of chemical substances, mixtures and certain specific articles, by agreeing upon the criteria for classification and labelling of substances and mixtures and rules for labelling and packaging of hazardous substances and mixtures. The Regulation provides an obligation for manufacturers and importers of substances to notify the Agency of such classifications and label elements. It also prescribes establishing a list of substances with their harmonised classifications and labelling elements and establishing a classification and labelling inventory of substances.

The Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 replaced the Council Regulation (EC) No 3093/94 on substances that deplete the ozone layer, so as to adapt the Community rules to the technical developments which had occurred since that Regulation was adopted and in line with the changes made in 1995, 1997 and 1999 to the Montreal Protocol on Substances that Deplete the Ozone Layer. The Regulation on Ozone-Depleting Substances (94/3093) restricts / regulates the production, importation, exportation, supply, use, recycling, reclamation, recovery and destruction of certain ozone-depleting substances (ODSs), thereby implementing EU obligations under the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol, as amended.

The 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, supplements the other EU restrictions on asbestos by setting emission limit values for asbestos in air and in liquid effluents. It requires reduction of emissions at source and recycling of liquid effluents from asbestos



manufacture. According to this Directive, demolitions and transport and deposition of asbestos waste must be performed without release of asbestos.

The Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents prohibits the marketing and use of detergents unless they meet specific requirements for biodegradability of the surfactants in their formulation and specifies methods for testing biodegradability of surfactants.

*The 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*⁸³ requires that laboratories performing tests on chemical products under, *inter alia*, Directive 67/548/EEC, comply with the principles of good laboratory practice (GLP) of the OECD, in order to enable mutual acceptance of data on chemical products.

Directive 2010/63/EU, which updates and replaces Directive 86/609/EEC on the protection of animals used for scientific purposes which was designed to ensure that the number of animals used for experimental purposes, e.g., for testing toxicity of chemicals as per the Directive 67/548/EEC, is reduced to a minimum. It lays down minimum standards for housing and care, regulates the use of animals through a systematic project evaluation requiring *inter alia* the assessment of pain, suffering and lasting harm caused to the animals. It requires regular risk-based inspections and improves transparency through measures such as publication of non-technical project summaries and retrospective assessment. The development, validation and implementation of alternative methods is promoted through measures such as establishment of an EU reference laboratory for the validation of alternative methods supported by laboratories within MSs and requiring MSs to promote alternative methods. MSs must ensure that all breeders, suppliers and users are authorised by, and registered with, the competent authority. Such authorisation may be granted for a limited period, only if the breeder, supplier or user and its establishment is in compliance with the requirements of this Directive.

The new 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 biocide products aims to improve the free movement of biocide products within the EU while ensuring a high level of protection of both human and animal health and the environment. The Regulation provides for the approval of active substances and making available on the market and use of biocide products, including rules on the mutual recognition of authorisations and on parallel trade.

7.2 INSTITUTIONAL ADAPTATION REQUIREMENTS

Due to the fact that a large number of stakeholders is interested in or affected by the EU chemical legislation, and that different public authorities are involved in the implementation of legislation on chemicals in MSs (responsible e.g. for environment, health and welfare, labour, agriculture, industry, veterinary affairs), the MSs are required to ensure that

- competences are designated to institutions that have adequate human resources and equipment;

⁸³ Amended by the Regulation (EC) No 219/2009.



- competent authority shall consult stakeholders and prepare and publish guidance notes for them. The stakeholders include environmental institutions (regarding dangerous substances, manufacture of products including asbestos), construction industry, the public and research institutions, at all levels;
- Competent authority can manage notification and authorisation procedures and is able to monitor compliance with the regulations and carry out enforcement measures (i.e. that an effective inspection and enforcement system is established);
- Competent authority has established adequate data collection, processing and handling to allow meeting the reporting requirements of the chemical acquis, and has created formal reporting procedures and providing a summary of the collected statistical information;
- Competent authority can guaranty protection of commercially sensitive information;
- Relevant and adequate laboratories are authorised;
- Mechanisms to inform the public rapidly (in cases set out by the Directives 2001/18/EC and 98/81/EC, and Regulation 1946/2003).⁸⁴

8. NATURE PROTECTION

8.1 SCOPE OF TRANSPOSITION

The 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 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.

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.⁸⁵

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

⁸⁴ GUIDE TO THE MAIN ADMINISTRATIVE STRUCTURES REQUIRED FOR IMPLEMENTING THE ACQUIS, p. 109.

⁸⁵ 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.



zoo if requirements are breached. The Directive also requires imposing of effective, proportionate and dissuasive penalties for zoo management.

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.

8.2 INSTITUTIONAL ADAPTATION REQUIREMENTS

The EU requirements regarding approximation in this sector include taking the steps by the Candidate Countries that include:

- Designating competent authority(ies) for implementation of the nature protection legislation, which shall be responsible for carrying out the following activities
 - establishing a system of general protection of all birds in wild state (whereby the protection is afforded);
 - identifying and designated Special Protection Areas;
 - implementing procedures to prohibit import of certain seal products;
 - establishing management authorities and scientific authorities and designating customs offices for carrying out checks;
 - establishing strong enforcement and monitoring system;
- reporting to the EU Commission on designating of competent authorities and transposition and implementation of the EU nature protection sector legislation
- ensuring that competent authorities (according to constitutional or administrative arrangements) have necessary capacity to carry out adequately functions regarding to planning, site protection and management and public awareness responsibilities;
- arrangement in place for effective involvement and participation in decision-making of all stakeholders (including, besides all interested public institutions, farmers, landowners, hunters, fishermen, etc.).⁸⁶

9. ENVIRONMENTAL NOISE

9.1 SCOPE OF TRANSPOSITION

9.1.1 Introductory notes

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

⁸⁶VODIČ ZA OSNOVNE ADMINISTRATIVNE STRUKTURE POTREBNE ZA PROVEDBU PRAVNE STEČEVINE EU, str. 107-108.



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.

9.1.2 Review

9.1.2.1 Environmental noise directive

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.

Any noise limit values in force or planned have to be communicated to the Commission. Competent authorities of MSs must adopt action plans to reduce the exposure to noise in the appropriate locations, as identified by the noise maps, on the basis of limit values or other criteria. Strategic noise maps and action plans for all agglomerations of over 100,000 people, roads carrying more than three million vehicles a year and railways carrying more than 30,000 trains have to be produced. The list of these locations is to be provided to the Commission. The minimum requirements for the noise maps and action plans are set out in Annexes IV and V of the Directive, respectively.

Noise maps and action plans have to be reviewed and revised if necessary every subsequent five years, the first one of them being by 30 June 2012 at the latest. The strategic noise maps and action plans have to be made available to the public.

9.1.2.2 Outdoor equipment directive

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) 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.

9.1.2.3 Traffic noise legislation

The road traffic noise legal instruments comprise the

- *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 for the purposes of its 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;⁸⁷ 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

⁸⁷ Za informativne potrebe, konsolidovana verzija se može naći na:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1997L0024:20090907:EN:PDF>.

Dostupno 11.04.2013.



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.

The Directives taken together require MSs to ensure that the relevant categories of civil aircrafts registered in their territories are not used unless certificated in accordance with certain chapters of Volume 1 of Annex 16/5 to The Convention on International Civil aviation⁸⁸. Also, these legal instruments laid down rules to facilitate the introduction of operating restrictions at the EU airports in a consistent manner with the aim of limiting the number of people adversely affected by the aircraft noise. Furthermore, general rules on aircraft noise management, rules on the assessment of whether there is a need for operating restrictions and rules governing the implementation of such restrictions, particularly in relation to the aircrafts meeting only ICAO's Chapter 3 standards, where necessary, are set out. City airports are allowed to introduce more stringent conditions, as long as certain specified criteria are met.

The railway noise is regulated by the:

- 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;⁸⁹ (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.

9.2 INSTITUTIONAL ADAPTATION REQUIREMENTS

In regards of implementation of the EU legislation on environmental noise, the following requirements for institutional adaptation of Candidate Countries aimed at approximation are identified:

- Designating a competent authority appropriate in terms of:
 - its technical expertise;

⁸⁸ Poznata pod nazivom Čikaška konvencija (1944). Aneks 16 obuhvata samo neke kategorije letjelica.

⁸⁹ Vidjeti i Preporuku Komisije 2011/217/EU o ovlaštenju za puštanje u upotrebu strukturalnih podsistema i vozila u skladu sa Direktivom 2008/57/EZ.



- its relationship with other governmental and non-governmental bodies; and
- its enforcement powers
- to report to the Commission information on noise as required by the respective EU legislation
- Designating competent authorities responsible for making (and where relevant approving) strategic noise maps and action plans for agglomerations, roads, railways and airports (in accordance with the Environmental Noise Directive 2002/49/EC);
- Providing for suitable arrangements for:
 - Informing of the public about noise exposure;
 - effects of noise exposure;
 - public participation in decision-making; and
 - involvement of public in noise management;
 - ensuring consultations with neighbouring states are held when necessary for strategic noise maps and action planning;
 - designating competent authorities with responsibility for follow up of implementation of Directive 2000/14/EC, including market surveillance;
 - Appointing bodies responsible for carrying out of supervision of the conformity assessment procedure under Directive 2000/14EC⁹⁰.

⁹⁰GUIDE TO THE MAIN ADMINISTRATIVE STRUCTURES REQUIRED FOR IMPLEMENTING THE ACQUIS, pp.. 109-110.



IV. SOURCES OF INTERNATIONAL ENVIRONMENTAL OBLIGATIONS FOR BIH



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Ministry of Foreign Trade
and Economic Relations

1. INTRODUCTORY NOTES

International environmental treaties as a source of international obligations of BiH are not specifically reviewed in EAS. However, international environmental treaties, which the EU is a party to, and which in that way became parts of the EU acquis, must be incorporated into the BiH legal systems through the transposition of those EU legal instruments which they were incorporated by into the EU acquis. Thus, it is important to point out that in regards with all environmental treaties which EU and BiH are parties to, BiH has a twofold international obligation:

- To comply directly with a treaty through its implementation in its entire territory, and to participate in the activities of the institutional arrangement established by such treaty, including regular reporting to the CoPs;
- To comply indirectly with a treaty through transposition into its legal systems those parts of the EU acquis, which an environmental treaty was incorporated by means of into the EU acquis, and implement and enforce such legislation, including regular reporting to the EU institutions

In that context, the constitutional duty of the entities, BD of BiH and other administrative subdivisions thereof, are undoubtedly relevant for the implementation of international treaties in BiH. Respective issues of compliance through the activities and actions of the BiH environmental authorities aimed at implementation of international environmental treaties should be elaborated and designed fully in accordance with the constitutional competences of BiH, entities and BD of BiH through joint drafting of a set of harmonized implementing planning documents for each international treaty. These sets should be composed of an Adaptation Strategy applicable in the entire territory of BiH and the Strategy and Plans of Action (PoAs) applicable in the respective territories of FBiH, RS and BD of BiH. The procedures for their drafting and adoption should fully reflect the competences of environmental authorities established by the existing laws.

The list of relevant international environmental sources of obligations is given in ANNEX II to this Strategy.



V. BIH LEGAL AND INSTITUTIONAL FRAMEWORKS FOR APPROXIMATION



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Ministry of Foreign Trade
and Economic Relations

1. INTRODUCTORY NOTES

Legal rights and obligations regarding environment (preservation, protection and improvement) of the State of BiH and its political (constitutional) units (FBiH, RS and BD of BiH) can be seen as those based on the

- Constitution and legislation of BiH;
- Constitutions and legislation of FBiH, RS; and
- Final Award Decision of Arbitral Tribunal for Dispute Over Inter-Entity Boundary in Brcko Area, issued on 05 March 1999⁹¹ and respective legislation of BiH and BD of BiH.⁹²

A review of relevant BiH constitutional and legal provisions making general legislative and institutional frameworks and their environmental approximation is given below. These frameworks also make an environment in which BiH fulfils its international obligations accepted by signed / ratified international treaties (in this case the SAA) and inside which the constitutional parts of BiH, i.e. FBiH, RS and BD of BiH, have a duty to provide all necessary assistance to the State in that course.

2. CONSTITUTIONAL AND LEGAL PROVISIONS OF BIH

2.1 BIH CONSTITUTION

According to the BiH Constitution all governmental functions and powers (i.e. functions of the executive branch of power) not expressly assigned to the institutions of BiH are those of the entities FBiH and RS (and the Brcko District).⁹³ The entities and any subdivisions thereof (i.e. cantons, cities and municipalities) must fully comply with the Constitution and with decisions of the institutions of BiH.⁹⁴

It is recognised that the institutions of BiH are competent for foreign policy.⁹⁵

The entities have the duty to provide all necessary assistance to the government of BiH in fulfilling its international obligations of BiH.⁹⁶

Reading together, these three Constitutional provisions of Article III 1 (a), 3 (b) and 2 (b), it can be concluded that they make a satisfactory normative framework for the fulfilment of BiH international obligations accepted by SAA. This normative framework, rounded-up with several law provisions reviewed below, is actually the national legal framework in which the EAS is supposed to be implemented, taking fully into consideration the respective requirements of the entities and BD of BiH constitutional and legal systems.

91 See at: http://1997-2001.state.gov/www/regions/eur/bosnia/990305_arbiter_brcko.html. Accessible 28.04.2014.

92 Amendment I on the Constitution of BiH ("O.G. BiH" No. 25/09); Statute of BD (Consolidated text), (O.G. of BD BiH, No 2/10).

93 Article III.3(a).

94 Article III.3(b).

95 BiH Constitution, Article III 1 (a).

96 BiH Constitution, Article III 2 (b).



The Chair and the Ministers of the BiH Council of Ministers have responsibility for carrying out the policies and decisions of BiH regarding *inter alia* foreign policy.⁹⁷

Based on those constitutional provisions, several BiH laws regulated issues relevant for the competence of BiH institutions for environmental issues. A brief review of these laws and secondary legislation is given below.

2.2 LAW ON COUNCIL OF MINISTERS⁹⁸

In discharging of its duties and rights, the BiH Council of Ministers has the possibility to adopt different enactments, i.e.:

- Decisions;
- Conclusions;
- Drafts and proposals of the laws;
- Analyses;
- Information;
- Strategic documents;
- Programmes;
- Agreements;
- Protocols; and
- Other enactments.⁹⁹

According to Article 23, BiH Directorate for European Integrations (DEI) is *inter alia* competent for harmonization of all activities of BiH authorities as well as surveillance over the implementation of relevant decisions of those authorities regarding European integrations. DEI has duty to participate in activities and drafting of policy and legal instruments regarding the duty of BiH to act with the aim of inclusion in the EU integration process.¹⁰⁰

2.3 LAW ON MINISTRIES AND OTHER BIH ADMINISTRATIVE ORGANS IN BIH¹⁰¹

The BiH Ministry of Foreign Trade and Economic relations has been established by the Law on Ministries and other BiH Administrative in BiH¹⁰² with the competence to work on the issues which are the responsibility of BiH and relate to:

- Designing policies;

97 BiH Constitution, Article V. 4 (a).

98 Law on Council of Ministers. - ("OG of BiH", No. 30/3, 42/3, 81/06, 76/07, 81/07, 24/08) and Authentic Interpretation ("O.G. of BiH", No. 94/07).

99 Law on Council of Ministers, Article 17.

100 Article 23

101 "O.G. of BiH", No. 5/03, 42/03, 26/04, 42/04, 45/06, 88/07, 35/09, 59/09 and 103/09)

108 Article 15

102 Article 7 Paragraph 2.



- Basic principles;
- Coordination of activities; and
- Harmonization of plans of entities and BD of BiH authorities and international institutions, in the fields of environmental protection and development and use of natural resources.¹⁰³

In case of conflict of competences of the ministries, or in case certain tasks are not expressly assigned to certain ministry, but if they are similar to other tasks assigned to that ministry, the Council of Ministers shall by its decision decide which ministry shall be competent.¹⁰⁴

This Law also regulates in detail competence of the DEI.¹⁰⁵ DEI has the duty to establish functional relations with ministries, administrative organizations and entity governments regarding EU integration strategy and policies, harmonization of the laws and coordination of assistance.¹⁰⁶

The internal organization of ministries must be based on the principles set out in the BiH Law on Administration and a regulation on internal organization, adopted by the Minister of Foreign Trade and Economic Relations.¹⁰⁷ The Minister of Justice must issue his opinion on a regulation on internal organization, which finally must be confirmed by a decision of the Council of Ministers.¹⁰⁸

The Regulation on Internal Organization of the Ministry of Foreign Trade and Economic Relations (MoFTER) has been adopted by the Minister in April 2009, and confirmed by the BiH Council of Ministers at the 84th Session held on 17. April 2009. Two amendments followed the first in July 2009, confirmed by the BiH Council of Ministers at the 95th session held on 23 July 2009 and the second on 30. July 2010, confirmed by the BiH Council of Ministers at the 128 Session held 14. July 2010. Under the new Rulebook on internal organizations of the Ministry of Foreign Trade and Economic Relations BiH dated 15 July 2016, the Sector for Natural Resources, Energy and Environmental Protection was established by this Regulation, it has several departments, three of which are closely related to this Strategy, competent for:

- Water Resources and Tourism;
- Environmental Protection; and
- Project Implementation.

The Department for Environmental Protection is competent, *inter alia*, for legal, analytical, professional-operative and information-documentation tasks relating to

- Proposing of policies, basic principles, coordination of activities and harmonization of plans of the authorities of entities and institutions on international level regarding environment;
- Drafting, proposing and implementation of development policy, international cooperation and BiH programmes;

103 Article 9 Paragraph 2

104 Article 16 Paragraph 2

105 Article 18

106 Id.

107 Article 22



- Analytical follow up and working out of professional analyses, information and opinions regarding environmental issues and international cooperation and implementation documents of RIO1992 and Agenda 21, as well as working out and implementation of own programmes of BiH and strategies in this area;
- Coordination of drafting of strategic BiH documents regarding setting out and development of environmental policy;
- Collaboration with EU structures (European Commission and EEA) in the field of development of BiH environmental policy and harmonization of environmental legislation and standards with EU environmental *acquis* and its practical implementation.¹⁰⁹

The Ministry of Civil Affairs of BiH was established by the Law on Ministries and other administrative bodies in BiH and is competent for the work and carrying out tasks in the competence of Bosnia and Herzegovina relating to the establishment of basic activities coordination principles, harmonization of plans of entities authorities and definition of strategies at the international level in several fields, one of them being health and social protection.

2.4 LAW ON ADMINISTRATION¹¹⁰

According to Article 11 of this Law, in execution of the development policy and enforcement of the laws and other legislation, MoFTER has the competences regarding the formulation of policy and implementing environmental legislation, in terms of setting out development strategies *inter alia* regarding to the environmental field.

In mutual relations when discharging their duties, administrative authorities of BiH are obliged to delivery required data and information to each other, to exchange information and experiences and to establish joint professional and other working bodies and collaborate in other ways.¹¹¹

Article 32 establishes that relations between BiH administrative authorities and administrative authorities of entities and BD of BiH must be based on their competences set out in the constitution and laws, as well as on cooperation, mutual information and negotiations.¹¹² BiH authorities have the right to request data, reports and other documentation necessary for discharging their duties from executive and other authorities of the entities and BD of BiH. BiH authorities have the obligation to deliver data to the executive and other authorities of the entities and BD of BiH, which are necessary for functioning of those authorities.¹¹³

2.5 OTHER LEGISLATION RELEVANT TO ENVIRONMENTAL ISSUES

Constitutional provisions and provisions of other legislation making a broader legislative framework for implementation of environmental legislation in BiH (for example listed in the Table I below), entities and

¹⁰⁹Id.

¹¹⁰ "Official Gazette of BiH", No 32/02, 102/09.

¹¹¹ Article 31 Paragraph 2

¹¹² Article 32

¹¹³ Article 33 Paragraphs 1 and 2



BD of BiH were not specifically investigated, except, as a case may be, in the context and with the purpose of making a more comprehensive review of existing environmental legislation in BiH, entities and BD of BiH.

Table I: OTHER RELEVAN LEGISLATION IN BIH

No.	Title of the legislation
1	Law on Council of Ministers ("O.G. of BiH", No. 30/03, 42/03, 81/06, 76/07, 81/07, 24/08)
2	Law on Ministries and other Administrative Bodies ("O.G. of BiH", No. 5/03, 42/03, 26/04, 42/04, 45/06, 88/07, 35/09, 59/09 and 103/09)
3.	Law on Administrative Procedure ("O.G. of BiH", No. 29/02, 12/04, 88/07, 93/09), 41/13
4.	Law on Administration ("O.G. of BiH", No. 32/02, 102/09)
5.	Law on Administrative Disputes ("O.G. of BiH", No. 19/02, 88/07, 83/08, 74/10)

3. FRAMEWORK APPROACH TO ENVIRONMENTAL APPROXIMATION

3.1 INTRODUCTORY NOTES

Development of this strategic document coincides with several factors specifically determining its nature and (administrative) profile. Firstly, it should be taken into account that the EU Commission in its Progress Report for BiH for 2013 assessed that BiH:

[...] is at a standstill in the European integration process while other countries in the region are moving ahead. The political representatives do not share a vision on the overall direction and future of the country or on how it should function. There is no thorough internal political dialogue on fundamental issues such as the EU integration process nor any priority-setting related to it

The EU agenda has not been a priority for the political representatives of the country resulting in no progress in its European perspective. [...] The lack of genuine political support for the EU agenda is reflected in very limited progress also as regards approximation to EU laws and standards. This concerns in particular the fields of veterinary and food safety; competition; public procurement; energy; environment and climate change; transport; employment and social policies.¹¹⁴

¹¹⁴ EC Bosnia and Herzegovina 2013 PROGRESS REPORT, Accompanying the document COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL - Enlargement Strategy and Main Challenges 2013-2014{COM(2013) 700 final}, Brussels, 16.10.2013 SWD(2013) 415 final.



The Commission has decided to postpone further discussions on IPA II until the country is back on track in the EU integration process. In the absence of tangible progress, Bosnia and Herzegovina risks losing significant IPA funds.¹¹⁵

2015 Progress report of BiH states that preparations in these areas are at early stage but there was some progress. In the coming year, Bosnia and Herzegovina should put forward and start implementing the country's contribution to the expected 2015 UN Climate Agreement, establish a harmonised legal framework for environmental protection and climate action, strengthen strategic planning and implementation of the *acquis* in these areas, strengthen administrative capacity and monitoring systems and improve inter-institutional coordination among all authorities.

The work should focus on the implementation of UN sustainable development goals (SDG 17) and improve activities in the implementation of Paris Agreement of UN General Convention on Climate Change.

Secondly, it should be pointed out that development of EAS reflects commitment of both BiH and EU authorities to put the approximation process in environmental sectors set out in the SAA Chapter 27, in a structured, well managed pattern that will lead BiH more efficiently towards integration into EU in the forthcoming planning period.

Thirdly, fulfilling international obligations of BiH (in terms of approximation of environmental obligations) and providing necessary financial and TA assistance of EU to BiH in that process, preferably through the IPA II Programme, and preferably for implementation of the "heavy investment" directives (relating to UWWT, drinking water, flood management and waste land filling) are specific circumstances influencing certain aspects of EAS.

Thus, EAS taken together with implementing the strategic instruments of FBiH, RS and BD of BiH, should be seen as a set of strategy / planning instruments aimed at fostering the process of approximation in the period 2014—2020. Adoption of these instruments at the respective administrative levels, on the legal grounds found in positive BiH, FBiH, RS and BD of BiH legislation, and under the legally established procedures shall provide clear conditions for the next iterative step in transposition of the EU environmental *acquis*, better implementation of environmental legislation at all levels and consequentially to bringing environmental protection in BiH closer to the requirements of EU.

Therefore, besides their obvious nature, which is a response to the administrative reasons, which underlay requirements for development and adoption of EAS and implementing Entity/BD of BiH instruments, these instruments can be seen as agents fostering desirable transformation and strengthening of the environmental sector in BiH.

¹¹⁵ EC COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL - Enlargement Strategy and Main Challenges 2013-2014, Brussels, 16.10.2013 COM(2013) 700 final.



3.2 OVERVIEW OF CURRENT SITUATION IN BIH

3.2.1 Summary on Environmental Competences of the Public Authorities

On the basis of research of constitutional and legislative frameworks existing in BiH, it is possible to summarise briefly the competences for environmental matters of public authorities in BiH.

In accordance with the existing regulations, Bosnia and Herzegovina is competent for:

- Implementation of international treaties;
- Defining policies, general principles, coordinating activities and harmonizing plans of entity authorities and institutions at the international level within the competences of BiH;
- Coordinating activities to approximate the legal system of BiH with the standards for EU accession (*EU acquis*);
- Environmental Statistics in cooperation with competent entity institutions;
- Ozone protection
- Drinking water health safety;
- Coordination of activities in Phyto-sanitary Protection;
- Freedom to access information and access to justice
- Protection of animals used for scientific purposes; and
- Noise from airplanes and traffic noise.

More detail on these competences can be found below in the sub-chapter dealing with current situation by sectors.

All other environmental competences currently fall under the competencies of FBiH, RS, BD of BiH and local communities.

Under the Constitution of FBiH both the Federal Government and the Cantons share responsibility for environmental protection.¹¹⁶ The Constitution allows this responsibility to be exercised jointly or separately, or by the Cantons as coordinated by the Federal Government.¹¹⁷

The Constitution of FBiH empowers the Federal Government to make policy and enact laws concerning environmental policy.¹¹⁸ The Parliament of FBiH has a power to enact laws to exercise responsibilities allocated to the Federal Government.¹¹⁹

FBiH is administratively divided into 10 Cantons.¹²⁰ A number of Cantons have introduced environmental legislation. The EAS does not deal with internal constitutional issues of FBiH. The FBiH Constitution obliges the cantons and the Federation Government to consult one another on an on-

¹¹⁶ Section III, Article 2, Paragraph 1, line c, of the Constitution of Federation of Bosnia and Herzegovina.

¹¹⁷ Section III, Article 3, of the Constitution of Federation of Bosnia and Herzegovina.

¹¹⁸ Section III, Article 3, of the Constitution of Federation of Bosnia and Herzegovina.

¹¹⁹ Section IV, Article 20, Paragraph 1, line d, of the Constitution of Federation of Bosnia and Herzegovina.

¹²⁰ Section III, Articles 2 (c) and 3 of the Constitution of Federation of Bosnia and Herzegovina.



going basis with regard to these responsibilities.¹²¹ The Constitution further requires the Federation to act with respect for Cantonal prerogatives, the diverse situations of the Cantons, and the need for flexibility in implementation when enacting laws and regulation binding throughout the Federation.¹²²

Pursuant to Article 68 of the RS Constitution, RS regulates and provides for the environment.¹²³ RS National Assembly is a legislative authority which renders laws, other regulations and general enactments.¹²⁴ The Government of RS has the power to propose laws and other legislative acts, to ensure the implementation, enforce laws and other legislative acts, pass decrees, decisions and other executive powers necessary for the enforcement of the law.

Pursuant to the Law on Territorial Organization of RS ("Official Gazette RS", No. 69/09 and 70/12), a territorial organization is set up to comprise 64 municipalities. The Constitution does not mention power sharing in environmental matters between RS and its municipalities. The municipalities in RS have an obligation to, through its authorities, and in accordance with the law, inter alia, take care of meeting specific needs of citizens regarding environmental protection.

An Amendment to the Constitution of BiH determined the BD of BiH as a local self-government unit (LSGU) with its own institutions, laws, regulations, powers and statute. BD of BiH has an authority over all environmental issues that do not fall under competences of BiH authorities.

3.2.2 Current state of transposition

In reality, the process of transposition of environmental legislation has begun in RS, FBiH and BD of BiH in 2002, 2003 and 2004 respectively, with the adoption of the following laws:

- Law(s) on Environmental Protection;
- Law(s) on Waste Management;
- Law(s) on Air Protection;
- Law(s) on Nature Protection;
- Law(s) on Water Protection.

The Law(s) on Water Protection were replaced in RS and FBiH later with laws on water.

The competent authorities in FBiH, RS and BD additionally adopted a number of secondary legislation instruments aimed at implementation and execution of the laws. It is known, from the process of association of other countries with EU, that transposition of the EU acquis into the legal system of BiH (or Countries Candidates and Potential Candidates) is an iterative process, lasting for years. Therefore it is reasonable to expect that all existing environmental legislation in BiH will be revised (in-depth) in future with the aim of improving it and making closer to the EU environmental acquis.

121 Section III, Article 3, of the Constitution of Federation of Bosnia and Herzegovina.

122 Section III, Article 3, of the Constitution of Federation of Bosnia and Herzegovina.

123 Art. 64 and 68 of the Constitution of Republic of Srpska.

124 Art. 70 and 68 of the Constitution of Republic of Srpska.



Since 2002, the progress in developing of BiH capacity to implement European standards, i.e. gradually to approximate its legislation and policies with the *acquis* (including environmental *acquis*), in line with SAA priorities, has been assessed yearly by the EU Commission Progress Report. The assessment of the level of transposition and implementation of environmental *acquis* in the Western Balkan countries and Turkey has been under monitoring of the European Commission performed through the implementation of regional projects (RENA, ECRAN). The latest report covers the year of 2015.

3.2.3 Strategy & Policy Instruments in Bosnia and Herzegovina

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 country. 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 of the country in forthcoming period. At the moment, such policy instruments are missing in BiH. However, it is a realistic prospect that the EAS as a strategic instrument applicable in the entire territory of BiH as well as entities and BD of BiH instruments are necessary for application of EAS in their respective territories.

In the last decade (2005-2015), several policy instruments were adopted by the environmental authorities in BiH; The Action Plan for Defense from floods and rivers management in BiH 2014-2017 was developed and adopted by the BiH Council of Ministers in January 2015, while for example the National Action Plan (NAP) for Reduction of Pollution Caused by Land-Based Activities (drafted in 2005) is still pending instigation of the procedure for adoption by the competent BiH authorities.

Actually, during drafting the present text of EAS, only three strategic documents adopted at BiH level were identified; the data are shown in the Table II below.

Table II: BiH STRATEGY & POLICY INSTRUMENTS

No.	Title	Adopted by/year	Published
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1	Strategy of BiH and Action Plan for Biodiversity and Landscapes' Protection (2008-2015)	Council of Ministers/ 155 th session, 3 July 2011	-
2	Strategy of Low Carbon Development and Climate Changes Adaptation	Council of Ministers/ 65 th session, 8 October 2013	-
3.	Strategy of Radioactive Waste Management	Council of Ministers /2013	"Official Gazette of BiH", No 01/14.

These policy instruments, as well as other instruments – the purpose of which is broader than environmental protection only (e.g. regarding development or certain specific issues) - should be mutually harmonized and consistent. However, for the purpose of approximation of environmental legislation in BiH to the EU acquis (i.e. EU environmental legislation), these adopted documents make an insufficient basis for activities in the period 2014-2020 and for the appropriate planning of technical and financial assistance by EU, that should be provided in the same period. A number of specific strategy and policy documents should be adopted by the competent environmental authorities of BiH, in a very short period of time, having in view that the EU plans for the period 2014-2020 shall be revised in 2017. Without those documents adopted, the country might be exposed to the risk of losing the EU support for environmental sector in this entire period and diminishing the capability of fulfilling its internationally accepted binding duties, as set out in the SAA.

Respective policy instruments that should be adopted by the entities and BD of BiH are vital implementation instruments aimed essentially at providing assistance to the country of BiH in fulfilling its accepted international binding duties in the entire territory of BiH.

3.3 Coordinated strategic approach to approximation

The development of draft text of strategic / policy instruments in BiH aimed at the approximation of the environmental sector should be performed following the clear logic of legislative / policy competences divided between different administrative levels of environmental authorities and hierarchy of documents. In that sense, the following pattern should be applied by the environmental authorities in BiH:

- BiH Environmental Approximation Strategy (EAS) is drafted as a State of BiH document, implementable in the entire territory of BiH.
- The entity and BD of BiH instruments / documents for implementation of the BiH EAS (in the respective parts of the BiH territory) are drafted and should be adopted by the respective authorities and in the respective procedures established by the laws of the entities and BD of BiH legislation.



- Directive Specific Implementation Plans (DSIPs) should be drafted and adopted by competent BiH authorities as the State of BiH documents, implementable in the entire territory of BiH.
- Action Plans for Implementation of (EU) Directives (APIDs) are drafted (as instruments applicable in the Entities and BD of BiH) and should be finalized and adopted by the respective authorities and in the respective procedures established by the entities and BD of BiH legislation.
- The entities and BD of BiH environmental policy documents should be drafted for implementation in their territories, i.e. for the three parts of the BiH territory and adopted by the respective environmental authorities and in the respective procedures established by the entities and BD of BiH laws.
- The text of BiH Environmental Policy should be drafted and adopted by the competent authorities of the State of BiH and in the respective procedure, in accordance with the legislation at BiH level.
- Implementation Plans (IPs) for fulfilling BiH duties accepted by signing of international environmental treaties, should be drafted and adopted by the relevant authorities at BiH level in the respective procedure, as the instruments applicable in the entire territory of BiH.
- Drafting and adopting of numerous strategies, policies and plans in BiH, aimed at the approximation of the environmental sector, should be treated by the competent authorities of the State of BiH as a coordinated process that would include all interested BiH authorities of entities and BD of BiH. Those instruments must be mutually consistent and coherent in the contents and time schedules designed. Entities and BD of BiH shall adopt the documents in accordance with their environmental legislation and in the procedures set in their respective legislation.
- Regarding EIONET (and relations with) & reporting duties to the EEA, the following strategy, policy and planning instruments should be developed and adopted (with the limited term of their validity¹²⁵), with the aim for BiH to fulfil its international duties accepted by SAA, and to ensure implementation of those international requirements in the entire territory:
- A strategic document, harmonized with the BiH EAS;
- An EIONET Regulation Specific Implementation Plan (implementable in the entire territory of the State);
- Entities / BD of BiH Plans of Action for implementation of the EIONET Regulation requirements in their respective territories (in accordance with the BiH Regulation Specific Implementation Plan);
- Regarding fulfilling other BiH duties for reporting in accordance with the Standardized Reporting Directive (SRD), the following documents should be drafted and adopted:
- The Directive Specific Implementation Plan (SRDSIP) should be drafted and adopted by the competent BiH authorities as the State of BiH document, implementable in the entire territory of BiH;

125 They can be in power and implemented only during the period of association. From the moment of getting the status of an EU MS, these policy (and consequentially adopted legislation) regulating these issues must be derogated. This derogation should be inserted into the final provisions of the respective instruments. However, even in case is not, these instruments shall be derogated by the binding provisions of EU law.



- Action Plans for Implementation of SRDSIP should be drafted (as instruments applicable in the respective parts of the territory of BiH) after (or in parallel with) adoption of SRDSIP, for both entities and BD of BiH, and adopted by the respective authorities and in the respective procedures set in the entities and BD of BiH legislation.

It is reasonable and realistic to expect this approach to provide coordinated (as well as consistent and coherent from the standpoint of existing BiH, entities and BD of BiH legal systems) activities / actions needed for an effective legislative approximation process.

The process of coordination of environmental approximation activities / actions can be established by the established coordination mechanism of European Union integration in Bosnia and Herzegovina during the implementation of the activities related to the integration of Bosnia and Herzegovina into the European Union. . (Official Gazette of BiH No.72/16)

This legally binding mechanism should also be used for regular adaptation of the activities on environmental approximation in accordance with changes of Community environmental *acquis*

This process particularly abides by Article 9 of the Law on Ministries and Other Administration Organs in BiH.

3.4. Monitoring of approximation process

Following the obligations of BiH resulting from SAA, monitoring of the approximation process of the environment sector should be a part of the overall monitoring of the EU approximation process in the country. All activities, which have been envisaged in the EAS for the pre-accession period, have to be subject to a regular monitoring and review. A comprehensive monitoring mechanism is important when the number of stakeholders involved is likely to increase during the approximation process. It is therefore one of the main priorities of BiH to establish formal and structured systems, particularly for communication, coordination, monitoring and reporting.

In BiH, MoFTER in co-operation with the DEI is the competent institution for co-ordination, monitoring and reporting on the implementation of the activities related to the EU environmental approximation process. Monitoring and reporting related to the EU approximation process for the SAA Chapter 27 Environment include:

- Collecting and elaborating data and information on the level of implementation of the activities, defined in the EAS BiH and in the relevant documents for its implementation at the entities and BD of BiH level, in particular concerning the:
 - legal harmonisation / transposition & implementation of environmental *acquis* (Table of Concordance - ToC, Implementation Questionnaire - IQ);
 - institutional arrangements (organisation, capacities);
 - progress in the carrying out of investment plans
 - enforcement activities;
- Regular communication with stakeholders on the EU environmental approximation process at the State and entities and BD of BiH levels;



- Coordination of the preparation and drafting of monthly, quarterly and annual progress reports (for the Minister, DEI, Council of Ministers);
- Coordination of the preparation and drafting of progress reports (periodically) for EUD/EC and EU/BiH Sub-Committee meetings

The process of co-ordination, monitoring and reporting of implementation of the environmental approximation process should be established and performed in accordance with positive law as was indicated supra in the sub-chapter Coordinated Strategic Approach to Approximation.

The purpose of monitoring of the process of environmental approximation described above should be providing a permanent insight into the pace of implementation of planned activities regarding environmental approximation as the basis for rapid undertaking of suitable measures for enabling smooth and continuous progress of environmental approximation in BiH in accordance with SAA. Therefore, all strategies, policies and plans should be flexible and subject of necessary changes and adjustments to developing circumstances in the overall framework of EU integration of the country. Clear and not complicated procedures for such adjustments should be adopted at all administrative levels.



4. CURRENT STATE BY SECTORS

4.1 HORIZONTAL ISSUES

4.1.1 Introductory notes

Bosnia and Herzegovina is a decentralized country with a high level of legislative autonomy given to the entities and BD of BiH. In the context of environmental protection, BiH authorities have very limited competence, as it was noted earlier, and most of the EU legal requirements have been transposed or will be transposed by the entities and BD of BiH legislation. At this point, for the purpose of EAS it should be emphasised that BiH is responsible for the implementation of all obligations arising from international environmental treaties. Additionally, upon becoming an EU Member State, BiH shall be responsible for regular reporting on the environment to the authorities of EU in accordance with Directive 91/692/EEC (SRD).

A specific obligation of BiH is to efficiently coordinate actions related to the implementation of international treaties that BiH ratified. The BiH (State level) authorities are competent and responsible for coordination and harmonization of activities aimed at full transposition and implementation of international treaties dealing with environmental matters. Another aspect in this context is the fact that BiH is responsible for implementation of SAA, inter alia for transposition of EU acquis into the legal system of BiH, as was extensively elaborated earlier.

It is a big responsibility of BiH to take over the responsibility for efficient coordination of activities related to environmental protection in its entire territory, including different levels of power, with the main objective being to enable successful transposition of the EU environmental acquis and later on the implementation of adopted legislation.

BiH also participates in the transposition of some specific EU legislative acts in exercising some of its competencies. Namely, BiH adopted the Law on Free Access to Information,¹²⁶ which the law is dealing with all information held by BiH level public bodies. With regard to the transposition of the Directive on free access to environmental information, BiH has the obligation to transpose all requirements of the Directive into the BiH legislation. BiH is also a party of the two international environmental conventions, the Espoo and Aarhus Conventions, but still has not ratified/acceded protocols and amendments to these.

4.1.2 Gaps identified

The main gap in the context of horizontal sector is a visible lack of efficient mechanisms for the coordination and harmonization of activities among environmental authorities at different levels. Also, some gaps were identified regarding the legislation covering the public access to environmental information, in terms of

- Collection, collation and submitting of information to EU;
- Definitions which are not fully in compliance with definitions in the respective EU legislation;

¹²⁶ "OG of BiH", No. 28/00, 45/06, 102/09, 62/11 and 100/13.



- Provisions related to a legal interest in procedure for obtaining the information;
- Provisions related to costs of information provided;
- Provisions related to establishing of a register on information available at the competent environmental authorities;
- Lack of provisions banning confidentially of certain data regarding the environmental pollution.

There is also a gap related to ratification/accession of protocol and amendments respectively to the Espoo and Aarhus Conventions

4.1.3 Some conclusions

In BiH, FBiH, RS and BD of BiH certain harmonization of environmental legislation with relevant EU legal acts has been achieved. It is needed to move in the direction of full takeover of the EU environmental legislation and harmonisation thereof in both entities and BD for the purpose of a higher degree of harmonised environmental legislation with the EU legislation.

Horizontal legislation itself is a general legal framework for the EU environmental protection and has to be understood in its complexity and multi-polar interrelations with different sectoral legislation. Provisions transposed on a case-by-case basis, randomly, cannot be taken as full transposition of environmental *acquis* since practically all requirements of horizontal legislation must be taken together and transposed in its integrative sense.

Analyses that have been made so far, especially reports on Monitoring in progress in transposition and implementation of environmental *acquis*¹²⁷ observed provision by the provision. Such approach may bring certain results in quantifying of progress made, but for needs of full compliance by FBiH, RS and BD of BiH legislation, it would be necessary to understand the overall purpose and position of horizontal legislation and to approach it with due care related to internal relations among different legal acts. In part of the text dealing with transposition of concrete requirements of EU legislation, it was emphasised that transposition in certain cases was done only in respect to individual provision of certain EU legal acts, missing the opportunity to achieve transposition in an integrated manner.

Internal communication between the environmental authorities of BiH, FBiH, RS and BD of BiH is of the utmost importance, having in mind the complexity of the BiH constitutional structure and the need for a high level of coordination and harmonization of the process of transposition, which is one of international duties accepted by the State of BiH. This position requires an active role by all competent institutions involved. This assumes the importance of specific elaboration of a feasible approach to coordination regarding the collection, collation and submitting the information on transposition, implementation and enforcement of EU environmental *acquis* in BiH to the European Commission and EEA. Since this issue appears below in various discussions of sectoral legislation, it will be discussed here with limited references to this issue in the later text.

127 Reports on Progress Monitoring have been prepared only for FBiH and RSa. BiH and BD of BiH were not involved in the process so far.



The reporting system to the European Commission and EEA, shall be regulated by way of the adopted coordination mechanism. In this context, the institution competent for the reporting to the European Commission and EEA shall do the following:

- Collection of information on transposition, implementation and enforcement of EU environmental *acquis* from the competent BiH, entities and BD of BiH authorities;
- Transmission of information to the European Commission and EEA

The collection and transmission of information must encompass the entire territory of BiH and might include, but would not be limited to the following:

- Information on:
 - methods used in the measurement of the chemical composition of fine particulate matter(PM_{2,5});
 - methods for sampling and measurement of Volatile Organic Compounds (VOC);
 - lists of zones and agglomerations where exceeding of the limit values for a given pollutant are attributable to natural sources - Ambient Air Quality (hereinafter: AAQ) Directive;
- Certain information regarding the zones and agglomerations where any of the target values laid down in Annex I of the Directive relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air are exceeded;
- Inventories of emission projections (NEC Directive);
- Information on applied derogations in terms of emissions trading and information from economic operators (Emission Trading Directive);
- Carbon storage permit applications (in accordance with the requirements of Storage of Carbon Dioxide Directive) as well as other related material that shall be taken into account by the competent authority when it seeks to make:
 - a decision on the award of a carbon storage permit;
 - a draft carbon storage permit, and
 - a final decision on the application;
- National allocation plan for emission trading, information on the issue, holding, transfer, and cancellation of emission trading allowances (Emission Trading Directive);
- Information (in accordance with the Waste Framework Directive) on:
 - waste considered as hazardous, even when it does not appear as such on the list of waste;
 - waste not considered hazardous even when it appears as such on the list of waste;
 - record on meeting the set of waste targets;
 - general rules for permit exemption;
 - waste management plans; and



- waste prevention programmes;
- Information on the reduction of biodegradable waste going to landfills (Landfill Directive);
- Information on, *inter alia*:
 - ELVs;
 - BATs;
 - Reports by competent authorities on sulphur dioxide, nitrogen oxide and dust emissions and energy input;
 - certain data for each Large Combustion Plant (LCP); (Industrial Emissions Directive - IED);
- Information on major accidents involving dangerous substances (Seveso III Directive);
- Information from strategic noise maps and summaries of the action plans (Environmental Noise Directive).

In order to facilitate this process, the entities and BD of BiH legislation, when transposing certain aspects of environmental *acquis*, should include provisions on the transmission to the competent authority of information on the transposition and implementation of certain legal instruments as well as more detailed provisions on some of the issues listed above, with the aim of supporting the State of BiH to fulfil its internationally accepted duty to inform in time the EU authorities on such issues

4.2 WATER MANAGEMENT SECTOR

4.2.1 Review

Regarding the transposition of water *acquis*, in accordance with existing BiH legislation, BiH plays a role in, at least, three directions:

- Conclusion and implementation of international treaties related to water management;
- Performing efficient coordination and harmonization of activities regarding the implementation and enforcement of international treaties related to water management; and
- Performing efficient coordination and harmonization of activities aimed at transposition of EU water *acquis* into the entities and BD of BiH legal systems and subsequent implementation and enforcement of the entities and BD of BiH legislation containing transposed water related EU *acquis*.

From the point of view of international treaties, there are no gaps between EU and BiH. The State of BiH is the only partner of the EU in the process of environmental approximation. From this point of view, BiH authorities are responsible for ensuring the application of EU water *acquis* in its entire territory. Therefore, in order to successfully fulfil its international obligation, and in accordance with its Constitution, constitutions of entities and the Statute of BD of BiH, Bosnia and Herzegovina is competent for coordination and harmonization of activities in the process of transposition, implementation and enforcement of EU water *acquis*.

The water sector is a very sensitive one, with a significant potential impact on the environment of other countries. The river basin management system includes a need for an intensive international



cooperation among countries sharing the same river basin area. Given the fact that each of the water laws of entities and BD of BiH regulates water management issues within their territories only, they are instruments of transposition of and must be in accordance with WFD, including the principle of water management at the river basins level. However, from the prospective of the State of BiH, the water management becomes complex, because BiH has practically established three river basin districts for a portion (a part) of the international Danube River Basin lying within BiH and other two river basin districts have been established for a portion of the international Adriatic Sea basin lying within BiH. Moreover, none of the above mentioned river basin districts cover the territory of BD of BiH. Taking into account that river basin districts are the main units for water management, very strong coordination procedures are needed in BiH, in order to make all those river basin districts are working in a coordinated manner.

Additionally, countries sharing an international river basin (e.g. the Danube or Sava) are required to prepare national river basin management plan that in most of cases is only a part of the entire river basin management plan in the international context. Therefore there is a strong necessity for articulation of such activities on the State level in BiH but also on the international level. It is exactly for this reason the International Commission for the protection of the Danube River and the International Sava River Basin Commission were established. The single management plans for the Danube and Sava River basins have already been rendered.

Coordination and harmonization of activities in this context doesn't mean any interfering with or intervention in the constitutional / legislative competences of the environmental institutions in BiH. The purpose of designing an effective coordination and harmonization mechanism is to enable adequate response to the existing international obligations of BiH, i.e. to the explicit EU water related binding legal requirements.

The Regulation on the health safety of drinking water¹²⁸ provides for the requirements and standards that must be met by drinking water, including:

- Maximum allowed value of wholesome safety and quality parameters;
- Methods for laboratory testing; and
- Measures to monitor wholesome safety of drinking water.

The main objective of this Regulation is to protect human health from the harmful effects of any contamination of water intended for drinking, through ensuring wholesome quality of water. The Regulation was drafted by the Food Safety Agency of BiH, in close cooperation with the competent authorities of the entities and BD of BiH. It contains provisions that transpose the requirements of the Drinking Water Directive.

The Regulation on Natural Mineral and Natural Spring waters¹²⁹ sets out the basic requirements related to health safety and quality to be met by natural mineral and natural spring waters; determines

¹²⁸ Official Gazette BiH No 40/10, 43/10, 30/12

¹²⁹ Official Gazette BiH No 26/10.



conditions for the utilization and recognition of natural mineral and natural spring water, as well as the contents of their declaration.¹³⁰

A Rulebook on wholesome safety of drinking water is in force in Republika Srpska (Official Gazette of Republika Srpska No 75/15).

4.2.2 Basic gaps identified

The main gaps identified comprise the following:

- The level of coordination and harmonization of activities in the EU acquis transposition between different level of authorities is not satisfactory;
- The existing human and financial resources do not provide for a necessary basis of long-term sustainability and implementation of EU legislation and international obligations and the existing institutional infrastructure needs to be improved;

4.2.3 Institutional aspects

Pursuant to the Regulation on the Internal Organization of the Ministry of Foreign Trade and Economic Relations dated 15 July 2016, the Water Resources, Tourism and Environmental Protection Sector is established comprising three Departments, namely the Water Resources Department, Tourism Department and Environmental Protection Department.

The Water Resources Department coordinates the activities related to the water sector.

According to the BiH Law on Food,¹³¹ water intended for human consumption (drinking water) is a food product, and falls under the legal regime of this Law. In Republika Srpska, water intended for human consumption is covered by the Law on Food (Official Gazette of Republika Srpska No 19/17).

The Agency for Food Safety, in cooperation with the competent authorities of entities and BD of BiH, as well as in collaboration with laboratories for food control, the competent inspection authorities and public health institutions in BiH, is responsible for:

- Collecting and processing data on the safety of drinking water;
- Assessment of the risks to human health;
- Educating stakeholders;
- Cooperating with national and international institutions in the field of food safety;
- Promotion of scientific research within its jurisdiction

4.3 WASTE MANAGEMENT SECTOR

4.3.1 Review

At the State of BiH level, there is only one bylaw dealing with waste, Regulation on Handling of Pharmaceutical Waste.¹³² The Regulation contains provisions transposing certain definitions from the

¹³⁰ Regulation, Article 1

¹³¹ "Official Gazette of BiH", No 50/04.

¹³² "Official Gazette of BiH", No 23/11.



Waste Framework Directive, provisions on waste hierarchy, waste management plan, collection, treatment, and labelling of waste. This Regulation is only limited to the pharmaceutical waste. Competent authority, according to the Regulation, is the Agency for Medicine and Medical Means of BiH. BiH legislation relating to waste management is listed in the Table 3.

Table III: BiH LEGISLATION ON / REGARDING WASTE MANAGEMENT

No.	Title
1	Law on medicine and medical means ("O.G. of BiH", No. 58/08)
2	Regulation on handling of pharmaceutical waste ("O.G. of BiH", No. 23/11)
3.	Law on statistics of BiH ("O.G. of BiH", No. 26/04 and 42/04)

4.3.2 Gaps identified

Precise identification of gaps regarding the effective and efficient fulfilling of accepted international obligations by BiH concerning waste is out of the scope of this EAS, except in the context of approximation to EU acquis. More details regarding the latter shall be contained in the relevant strategic documents of FBiH, RS and BD of BiH, aimed at implementation of EAS within their territories.

4.4 AIR QUALITY AND CLIMATE CHANGE

4.4.1 Transposition

4.4.1.1 Overall notes

Transposition of the legislation on the ambient air quality in BiH has commenced and competent authorities have been set up. The entities and BD of BiH have adopted legislation partially transposing acquis on air quality and climate change. However, amendments to existing legislation and introduction of new legislation need to be carried out in order to transpose fully the relevant EU legal instruments. Setting up of zones and agglomerations, needs to be top priority in all parts of BiH. The time limits for implementation of limit values for some pollutants included in the air quality legal instruments may be negotiated with the Commission, at a later stage of BiH association with EU.

National emissions ceilings for BiH have been defined by the regulations adopted by competent authorities in both entities. Competent authorities in BiH need to come to an agreement in order to phase into national emission ceiling allowing the industry in the country to adjust to stringent environmental quality standards over time. The goal should correspond to national emission ceilings in countries similar to BiH in terms of industrial activities

There are large gaps in transposition of the ambient air emissions legal instruments, including, but not limited to the VOC Petrol Directive, the VOC Petrol Stage II Directive, and Paints Directive.



Republika Srpska rendered the Regulation on conditions for limitation and prohibition of production, sales and use of chemicals¹³³ based on the Law on Chemicals and it prescribes the contents of volatile organic compounds due to the use of organic solvents in certain paints and varnishes used on buildings, their equipment and integral parts and vehicle refinishing products in line with the Directive 2004/42/CE. What is interesting is the lack of regulations on VOC, particularly bearing in mind that BiH is a signatory to Stockholm Convention on Persistent Organic Pollutants and strives for becoming a signatory to the Protocol on VOC to the European Convention on Long-Range Transboundary Air Pollution. In accordance with the Regulation on conditions for limitation and prohibition of the production, sales and use of chemicals, Republika Srpska regulated the limitations and prohibitions of the production, sales and use of the said substances.

Regarding the quality and content of fuels, the Decision on quality of liquid oil fuels¹³⁴ was adopted at the State level. This Decision provides for requirements for quality of fuel including the sulphur content. The laws on air protection of FBiH, RS and BD of BiH contain legal grounds for adoption of secondary legislation on the methods of measurements and control of content of sulphur in the fuels. None of these legislative instruments have been adopted yet.

Concerning emissions of GHG (ETS), BiH has an opportunity to set up a functional system in this regard and to integrate relevant parts of that system with already established system in the country, such as environmental permitting system in order to utilise its limited resources. All MSs, regardless of the fact if they are Annex I or non-Annex I countries to the Kyoto Protocol, are requested to participate in the ETS. This also applies to BiH, which is a non-Annex I country. BiH will need to transpose the EU legal instruments on GHGs. However, its transposition might not be a top priority. Decision to establish the authorised body for the implementation of Clean Development Mechanisms (CDM) of the Kyoto Protocol of the UNFCCC in BiH¹³⁵ gives an opportunity for project developers to turn emission reduction into units that are tradable on ETS.

Table III: BiH LEGISLATION ON AIR QUALITY AND CLIMATE CHANGE

No.	Title
1	Law on basics of traffic safety on roads in BiH ("O.G. of BiH", No. 6/06, 75/06, 44/07, 84/09, and 48/10)
2	Regulation on homologation of vehicles, parts of devices and equipment of vehicles ("O.G. of BiH", No. 41/08)
3.	Instruction on implementation of homologation on types of vehicles ("O.G. of BiH", No. 89/10)
4.	Instruction on implementation of homologation procedure for individual vehicles ("O.G. of BiH", No. 89/10)

¹³³ " Official Gazette of RS" No 100/10 and 63/13

¹³⁴ " Official Gazette of BiH" No 27/02, 28/04, 16/05, 14/06, 22/07, 101/08, 71/09, 58/10 and 73/10.

¹³⁵ " Official Gazette of BiH" No 102/10.



5.	Decision on lowest technical requirements for newly produced vehicles when homologating type of vehicle and homologating individual vehicles ("O.G. of BiH", No. 89/10)
6.	Decision on quality of liquid oil fuels ("O.G. of BiH", No. 27/02, 28/04, 16/05, 14/06, 22/07, 101/08, 71/09, 58/10 and 73/10)
7.	Decision on conditions and method of implementation of Montreal Protocol and gradual phasing out from use of substances that deplete the ozone layer in BiH ("O.G. of BiH", No. 36/07)
8.	Decision on establishment of authorised body for the implementation of Clean Development Mechanisms of the Kyoto Protocol of the UNFCCC in BiH ("O.G. of BiH", No. 102/10)

4.4.1.2 Review of transposed legislation

4.4.1.2.1 Air Quality and Air Emissions

At the level of BiH no legislation transposing the EU legislation on ambient air quality or air emissions have been adopted, because this sector falls under exclusive competence of entities.

4.4.1.2.2 Fuel standards and GHG legal instruments

The Council of Ministers adopted the Decision on quality of liquid oil fuels¹³⁶ 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. The Decision stipulates standards setting physical and chemical characteristics of liquid oil fuels, their 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 Decision also contains provisions on the content of sulphur in fuel oils and gas oil but the values are not exactly in accordance with the ones stipulated in the Directive. Furthermore, the Decision does not contain provisions on reporting.

The Decision on conditions and method of implementation of Montreal Protocol and gradual phasing out of use of substances that deplete the ozone layer in BiH¹³⁷ stipulates conditions for implementation of international obligations deriving from the Vienna Convention on protection of the ozone layer (1985) and Montreal Protocol (1987) to the Convention, as amended. The Decision, inter alia, contains provisions on the import and export of these substances, and import and export of products containing these substances.

4.4.1.3 Gaps identified in transposition

The gaps in BiH legislation were identified as follows:

- The Decision on quality of liquid oil fuels does not contain the following:

136 " Official Gazette of BiH" No 27/02, 28/04, 16/05, 14/06, 22/07, 101/08, 71/09, 58/10 and 73/10.

137 " Official Gazette of BiH" No 36/07.



- all the relevant definitions (e.g. missing definition of the American Society for Testing and Material Method, critical load);
- provisions on placing petrol and diesel on the market
- provisions on designating the suppliers responsible for monitoring and reporting the life cycle of greenhouse gas emissions per unit of energy from fuel or energy.
- same parameters regarding the content of sulphur in fuel and gas oils
- Legislation on non-road machinery does not exist in BiH;
- Legislation on ozone depleting substances does not contain provisions on the trade with non-Parties to Montreal Protocol and Leakages and Emissions of Controlled substances.

4.4.2 Current Institutional Set-up

In accordance with the Decision on Quality of Liquid oil fuels¹³⁸, evaluation of approximation of quality of liquid oil fuels is carried out by the inspection authorities.

According to this Decision, the competent authority for issuance of permits for the import and export of substances that deplete the ozone layer in BiH¹³⁹ and import and export of products containing these substances (implementation of the Montreal Protocol) is MoFTER with the participation of FMOIT, MOCEPPE, and DUPPA, depending on where the importer/exporter comes.

The Council of Ministers has also adopted the Decision on Establishment of an authorised Body for the Implementation of Clean Development Mechanism (CDM) of the Kyoto Protocol of the United Nations Framework Convention on Climate Change (UNFCCC) in Bosnia and Herzegovina¹⁴⁰ (Official Gazette of BiH 102/10) and the Decision on amendments to the Decision on the establishment of a competent body for the project implementation of Clean Development Mechanism Kyoto Protocol of the UN Framework Convention on Climate Change in Bosnia and Herzegovina¹⁴¹ Official Gazette of BiH 45/15).

The Council of Ministers of BiH determined the Ministry of Spatial Development, Construction and Ecology of Republika Srpska as an operational focal point on behalf of Bosnia and Herzegovina for the purpose of the UN Framework Convention on Climate Change (UNFCCC). Therefore, the Ministry of Spatial Development, Construction and Ecology of Republika Srpska represents the country in the implementation of activities related to the UNFCCC and coordinated the actions of other organs at all levels in the context of meeting the requirements of the Convention.

¹³⁸ "Official Gazette of BiH" No 27/02, 28/04, 16/05, 14/06, 22/07, 101/08, 71/09, 58/10 and 73/10.

¹³⁹ "Official Gazette of BiH" 36/07 and 67/15.

¹⁴⁰ "Official Gazette of BiH" 102/10.

¹⁴¹ "Official Gazette of BiH" br. 45/15.



4.5 INDUSTRIAL POLLUTION

4.5.1 Current situation

Currently, the BiH authorities do not have any competences pertaining to Industrial Pollution Sector.

The data collected for PRTR at the entity level are currently neither transmitted to the EU institutions nor are available on the internet. There is no BiH legislation regulating:

- Assignment of the authority at the level of BiH for reporting to the 'EU institutions
- Content and structure of BiH PRTR;
- Free internet access to BiH PRTR;
- Respective reporting duties;
- Fulfilling international obligations specifically regarding implementation e.g. SEA Protocol (Kiev, 2003) and the Aarhus Convention.

With the purpose of regulating these issues, a set of texts of legal instruments (for BiH, FBiH, RS and BD of BiH) have been drafted (in the format of outputs of the IPA 2007 Project Support to the Implementation of the IPPC Directive in BiH).¹⁴² The texts were mutually harmonized. However, in the time of finalizing the text of EAS, these legislative instruments are still pending their adoption.

4.6 CHEMICALS

4.6.1. Status of transposition

4.6.1.1 Introductory notes

Regarding the transposition of the chemical *acquis*, BiH plays a three-fold role:

- Concluding of international treaties and fulfilling international obligations set therein, which is exclusive the competency and responsibility of BiH;
- Designation of adequate coordination and harmonization framework for development, adoption, implementation and enforcement of an efficient legal regime for chemicals; and
- Adoption of certain concrete strategic, policy, planning and legal instruments aimed at transposition of certain substantive provisions for the chemicals sector.

Authorities in charge of the chemicals sector in BiH should carry out harmonization activities aimed at transposition, implementation and enforcement of the EU *acquis* and establish a partnership and communication with the European Chemical Agency.

For a structured approach of the environmental authorities in BiH to those approximation activities in a chemical sector, adequate DSIP(s) and APIDs, as elaborated conceptually somewhere else in this Strategy, should be adopted and implemented.

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The BiH legislation on chemicals comprises the legal instruments listed in the Table V.

Table V: BiH LEGISLATION ON CHEMICALS

No.	Title
1	Law on Phyto-Pharmaceuticals ("O.G. of BiH", No. 49/04)
2	Decision to ban registration, import and transport of active substances ("O.G. of BiH", No. 55/08, 35/10, 79/10 and 63/11)
3.	Decision to ban registration, import and transport of active substances ("O.G. of BiH", No. 47/09, 15/10, 02/11 and 06/12)
4.	Decision to ban registration, import and transport of PPs containing active substance butoxycarboxim ("O.G. of BiH", No. 72/10)
5.	Decision to ban registration, import and transport of PPs containing the active substance biphenthin ("O.G. of BiH", No. 72/10)
6.	List of active substances allowed for use in the PPs in BiH (OG BiH 3/12),
9.	Regulation on protection of laboratory animals, and conditions that must be met by legal persons engaged in carrying out experiments on animals ("O.G. of BiH", No. 46/10)

4.6.1.2 Review

Law on Food stipulates a definition of „contaminant“, and provides for a legal ground for procedures that must be performed during the processing, preparation, treatment, packaging, transport and storage of food containing such ("contaminant") substances, or potential impact on environment. The Regulation on Maximum Allowed Concentrations of Specific Contaminants in Food provides for the maximum allowed concentrations of nitrates, mycotoxins, metals, metalloids, 3-monochloride propanediol (3-MCPD), polycyclic aromatic hydrocarbons, dioxins and polychlorinated biphenyls similar to dioxins in food, and measures that must be taken in the case of exceeding the maximum of their allowed concentrations. The provisions of the Regulation are in accordance with related EU legislation.

The procedures of data collecting and risk assessment related to contaminants and their residues in food are covered by the Law on Food at the level of BiH. Collection, analysis and summing up of the data fall within the competence of the Agency for Food Safety of BiH and its partners and counterparts within BiH.

The Law on Phyto-Pharmaceuticals in BiH¹⁴³ regulates transport and monitoring, registration of active substances found in the form of PPs, registration of PPs, issuance of permits on the basis of the Law, transportation, use and monitoring of PPs, residues of PPs, keeping of a register of PPs and register of PPs traders, exchange of data and record keeping regarding PPs, technical requirements for devices

143 " O.G. of BiH", No 49/04.



for application of PPs, competencies of bodies responsible for implementation of the Law and secondary legislation subsequently adopted for implementation of the Law.

There are no rules regulating the classification, packaging and labelling of chemicals adopted at the BiH level, i.e. covering the entire territory of the country. These activities are under the responsibility of entities and BD of BiH.

The Law on Phyto-Pharmaceuticals of BiH transposed requirements of EU Directive 91/414/EEC on trading with pesticides and registration procedures for PPs. The competent body for registration is the BiH Administration for Plant Health Protection.¹⁴⁴ BiH has not yet adopted secondary legislation in accordance with the Law, which would transpose Annexes I -VI of the Directive. In close collaboration with the competent FBiH and RS authorities, the BiH Administration adopted a List of Active Substances Allowed for Use in the PPs in BiH¹⁴⁵ which transposed requirements of Annex I of the Directive, i.e. new Regulation (EU) No. 540/2011 of 25 May 2011, which implements Regulation (EC) No. 1107/2009 of the European Parliament and Council with regard to the list of approved active substances.

There is still no established procedure for data collection and risk assessment for the PPs, in accordance with the requirements of the EU legislation. This issue is also in the competence of the entities and BD of BiH. Article 12 of the BiH Law on Phyto-Pharmaceuticals provides for the procedure for restrictions of trade and use of phyto-pharmaceuticals. So far, the BiH Council of Ministers has adopted secondary legislation (decisions) that prohibit the trade of specific active substances that are found in the PPs, listed in the Table VI below.

Table VI: BiH LEGISLATION ON PROHIBITION OF TRADE OF ACTIVE SUBSTANCES

No.	Title
1	Decision to ban registration, import and transport of active substances ("O.G. of BiH", No. 55/08, 35/10, 79/10 and 63/11)
2	Decision to ban registration, import and transport of active substances ("O.G. of BiH", No. 47/09, 15/10, 02/11 and 06/12)
3.	Decision to ban registration, import and transport of PPs containing active substance butoxycarboxim ("O.G. of BiH", No. 72/10)
4.	Decision to ban registration, import and transport of PPs containing the active substance biphenthin ("O.G. of BiH", No. 72/10)

The control of import of PPs is performed by phyto-sanitary inspection at border crossings authorized for the trade of PPs. The PPs may be imported only if they have a license granted by the BiH Administration for Plant Health Protection.

Protection of laboratory animals is regulated by the Regulation on Protection of Laboratory Animals, and Conditions that must be met by Legal Persons Engaged in Carrying out Experiments on Animals

¹⁴⁴ BiH Administration for Plant Health Protection

¹⁴⁵ " O.G. of BiH", No 3/12.



Official Gazette of BiH¹⁴⁶ The Regulation is harmonized with the Directive 86/609/EEC, which provides for licensing for animal experiments. The competent authority for granting of these licences is the Veterinary Office as an administrative organization within MoFTER.

4.6.1.3 Main gaps identified

The gaps in the BiH legislation were identified as follows:

- The Constitution and laws define the competencies of entities authorities with regard to regulating of chemicals management and a cooperation between competent authorities need to be established in line with coordination system of the European integration process
- With regard to the management of chemicals legislation, the adoption of new or updating of the existing legislation in Republika Srpska and Federation of BiH legislation needs to be done in a coordinated and harmonized manner ;
- A clear tasks division on how FBiH, RS and BD of BiH authorities competent for management of chemicals should inform the State authorities regarding the steps undertaken in the regime of comprehensive maintenance of the register arising from EU legislation on chemicals should be defined by the coordination system of European integration.

4.6.2 Current institutional setup

REACH is the main EU legal instrument regulating chemicals and their safe use in EU. In that context a concise overview follows, indicating the institutions in BiH, competent to deal with chemicals and responsible for ensuring that BiH meets the respective EU requirements.

The BiH Administration for Plant Health Protection is an administrative organization within MoFTER, which is responsible for the health of plants, production and sale of seeds and planting materials, protection of new varieties, trade and use of phyto-pharmaceuticals and mineral fertilizers. By the Decision of the Council of Ministers of BiH¹⁴⁷ the Administration was established as the competent authority responsible for the coordination and implementation of the Rotterdam Convention¹⁴⁸ in BiH, and accordingly, for all related obligations under EU acquis.

The Administration for Plant Health Protection is competent for:

- Submitting assessment of the future import of chemicals to which the Prior Informed Consent procedure is applied, to the Secretariat of the Rotterdam Convention
- Submitting notice on the export of chemicals, to the Secretariat of the Convention
- Submitting proposals for inclusion into Annex III of the Convention of very hazardous pesticide formulations;
- Providing access to information regarding the provisions of the Convention, to the relevant authorities, and to other interested parties;

146 " O.G. of BiH", No 46/10

147 "O.G. of BiH", No 15/10.

148 Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade; Bosnia and Herzegovina joined the Convention by accession on March 19, 2007.



- Implementation of the Law on Phyto-Pharmaceuticals of BiH¹⁴⁹, which provides for registration, traffic surveillance and marketing active ingredients and phyto-pharmaceuticals.

By the Law on Veterinary in BiH¹⁵⁰ and Decision of the Council of Ministers of 18 December 2000, the Veterinary Office of BiH was founded, as a body under the direct jurisdiction of MoFTER. The Law provides for the purpose of the veterinary services in BiH and points out the following responsibilities of the Veterinary Office:

- Protecting and improving of animal health;
- Implementing identification systems and control of animal movement schemes (AIMCS);
- Provision of measures to protect the population through control of animal diseases and the prevention of transmission of these diseases from animals to humans;
- Ensuring that the raw materials and food products of animal origin are safe;
- Ensuring the safety of water for animals;
- Ensuring protection measures for the environment against pollution through pathogens that appear in animals, as well as hygiene and safety conditions surrounding the animal health protection;
- Implementing of measures of disinfection, fumigation and pest control;
- Protecting of animals from cruelty and suffering, as well as ensuring the welfare of animals;
- Facilitating veterinary education and informing the public.¹⁵¹

In the chemicals sector, the BiH Veterinary Office is competent for regulating the protection animals that are used in scientific research. The BiH Veterinary Office has a legal obligation to carry out its competences in a harmonized manner and in accordance with the operational activities of the veterinary services of the entities.

The Food Safety Agency of BiH is an independent administrative organization established under the Food Law and Decision of the Council of Ministers of BiH. The Agency is responsible for the following activities:

- Risk analysis (assessment, management and communication of risk);
- Initiating, preparing, drafting and proposing regulations on food;
- Providing advice and scientific and technical assistance in the preparation of regulations and policies of BiH in all fields which have a direct or indirect impact on food and animal feed
- Providing information on all matters within its jurisdiction and providing information about the risks;
- Issuing opinions on products, including food and animal feed, relating to genetically modified

149 "O.G. of BiH", No 49/04.

150 "O.G. of BiH", No 34/02.

151 Article 2



organisms;

- Promoting and coordinating the development of unique methodologies in the areas of risk assessment as part of its activities;
- Establishing a system and network of organizations operating within its activities and being responsible for their actions;
- Performing other duties necessary to carry out its powers and responsibilities.

4.7 NATURE PROTECTION

4.7.1 Notes on transposition

According to the BiH Constitution, BiH has the competencies to conclude international treaties and coordinate activities in the nature protection sector.

4.7.2 Main gaps identified

The gaps in the BiH legislation were identified as follows:

- BiH is not a party to the following international treaties that are part of EU *acquis* related to nature protection:
 - Bonn Convention of 23 July 1979 on the conservation of migratory species of wild animals;
 - Agreement of 16 June 1995 on the conservation of African-Eurasian migratory water birds, and other agreements as well.
- Institutions of Bosnia and Herzegovina

The Council of Ministers at its Session held on 13th July 2011 adopted the BiH Strategy and Action Plan for the protection of biological and landscape diversity for the period 2008-2015. This document contains basic directions for the efficient and sustainable management of biological and landscape diversity. The Decision was based on the research study "BiH - A COUNTRY OF DIVERSITY".¹⁵² Implementation of the Strategy is monitored by the Council of Ministers and MoFTER in cooperation with the competent authorities of the entities.

FBiH Ministry of Environment and Tourism has been designated as the operational focal point on behalf of BiH for the Convention on Biological Diversity (CBD). Accordingly, the FBiH Ministry represents the country in the implementation of the CBD activities and coordinates the work of other bodies at all levels in the context of the implementation of the CBD requirements.

¹⁵² Bosnia and Herzegovina – Land of Diversity, First national Report of Bosnia and Herzegovina for the Convention on Biodiversity; FMoET, Sarajevo, 2008.



4.8 ENVIRONMENTAL NOISE

4.8.1 Notes on transposition

4.8.1.1 Introductory notes

The BiH legislation on environmental noise is listed in Table VII.

Table VII: BiH LEGISLATION ON ENVIRONMENTAL NOISE

No.	Title
1	Law on aviation of BiH ("O.G. BiH", No. 39/09)
2	Regulation on initial homologation of aircrafts and aircraft components ("O.G. of BiH", No. 21/06)
3.	Regulation on airports ("O.G. of BiH", No. 9/11)
4.	Regulation on permitted limits of noise ("O.G. of SRBiH", No. 46/89)

4.8.1.2 Review

The EU legislation on traffic noise is partially transposed into the legal system of BiH (State level). For example, the Motor vehicles tyres Directive is a part of the EC Whole Vehicle Type-Approval (EC WVTA) system. In accordance with the Instruction on Implementation of Homologation on Types of Vehicles and Instruction on Implementation of Homologation Procedure for Individual Vehicles,¹⁵³ adopted by the Minister of Communication and Transport of BiH, the Certificate of Conformity (a part of EC WVTA) may be submitted in BiH in order to avoid a separate licensing procedure. Since the requirements of the Directive are part of the EC WVTA system, obligations from the Directive are transposed into the BiH legislation. Furthermore, articles 8, 11 and Annex IV of the Decision on Lowest Technical Requirements for Newly Produced Vehicles when Homologating the Type of Vehicle and Homologating Individual Vehicles¹⁵⁴, adopted by the Minister of Communication and Transport of BiH, partially transposed the requirements of the Motorcycle Noise Directive.

Airplane noise directives are transposed in BiH through the relevant legislation at the State level pertaining to civil aviation, mainly through the Law on Aviation of BiH¹⁵⁵, , Regulation on Initial Homologation of Aircrafts and Aircraft Components¹⁵⁶ and Regulation on Airports.¹⁵⁷ Legislation on environmental noise and outdoor equipment can be adopted relatively soon and some activities pertaining to this have already been initiated in BiH, especially in FBiH.

4.8.1.3 Gaps identified

The gaps in the BiH legislation on environmental noise were identified as follows:

- The BiH legislation on traffic noise only partially transposed the requirements of the respective directive (e.g. reduced noise limits for motor vehicles); and

¹⁵³ " Official Gazette of BiH" No 89/10.

¹⁵⁴ " Official Gazette of BiH" No 89/10.

¹⁵⁵ " Official Gazette of BiH" No 39/09.

¹⁵⁶ " Official Gazette of BiH" No 21/06.

¹⁵⁷ " Official Gazette of BiH" No 9/11.



- The BiH legal instruments on railway noise did not transpose respective EU requirements at all.

4.8.2 Competent BiH institutions

In accordance with the existing legislation at the State level¹⁵⁸, Instruction on implementation of homologation on types of vehicles¹⁵⁹ and Instruction on implementation of homologation procedure for individual vehicles¹⁶⁰, the competent authority for traffic noise is MCTBiH, which is responsible for homologation of vehicles. Cars in BiH cannot be registered if they do not meet the requirements of these and other relevant legal acts at the State level. The issuance of car registration is carried out by various ministries of internal affairs in BiH (RS, cantonal).

BiH Directorate for Civil Aviation is a competent authority for airplane noise as stipulated by the Law on Aviation of BiH,¹⁶¹ Regulation on Initial Homologation of Aircrafts and Aircraft Components¹⁶² and Regulation on Airports.¹⁶³

158 Decision on lowest technical requirements for newly produced vehicles when homologating type of vehicle and homologating individual vehicles ("O.G. of BiH", No. 89/10).

159 " Official Gazette of BiH" No 89/10.

160 " Official Gazette of BiH" No 89/10.

161 " Official Gazette of BiH" No 39/09.

162 " Official Gazette of BiH" No 21/06.

163 " Official Gazette of BiH" No 9/11.



VI. ECONOMIC ASPECTS OF APROXIMATION



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Ministry of Foreign Trade
and Economic Relations

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*, BiH, 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.¹⁶⁴

Economic and financial planning capacity is as yet developed to a relatively low level within the various BiH 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 BiH PARAMETERS

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 VIII and IX below:

164 “EU Funds in Central & Eastern Europe”, KPMG Progress Report 2007-2012, April 2012, available at: http://ec.europa.eu/environment/emas/documents/legislative_en.htm



Table VIII: COMPARATIVE INDICATORS
(Base years for data, 2006-2012)

	<i>Units</i>	BiH	EU 27	BiH compared to EU27 average
GENERAL				
Population	Million	3,84	502,5	0,76%
GDP/Capita	€	3.324	23.296	14,27%
Inflation	KM/€	2,1%	2%	---
Household Income	€/Household	2.335	19.000	12,29%
Household Expenditure on Utilities¹⁶⁵	%	8,9%	18,30%	48,63%
Expenditure on Environment	% of GDP	0,27%	1,76%	15,34%
ENVIRONMENT				
Drinking Water Supply	% of Population Served	71,42%	93%	76,8%
Purified Drinking Water Supply	% of Population Served	46,00%	100%	46,0%
Urban Wastewater Collected	% of Population Served	21,7%	93%	23,33%
Urban Wastewater Treated	% of Wastewater Treated	3,83%	87%	4,4%
Municipal Solid Waste Collected	% of Population Served	78,64%	99%	79,43%
Compliant Treatment (Lfill/Incin)	% of MSW	9,11%	99%	9,2%
Municipal Solid Waste Recycled	% of MSW	5,00%	43,50%	11,49%
Emissions NOx	Kg/Capita	14,32	20,59	69,56%
Emissions SO2	Kg/Capita	109,11	11,62	939,02%
Emissions CO2	Tons/Capita	5,34	9,90	53,92%

¹⁶⁵According 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 IX: KEY ASSUMPTIONS & LEVELS OF COMPLIANCE TARGETTED

	<i>Units</i>	<i>BiH</i>	<i>Assumptions</i>
GENERAL			
Population	Million	3,84	In decrease 0,3%
GDP/Capita	€	3.324	GDP increase; 1% -2013; 3,5%-2014; 5%
Inflation	KM/€	2,1%	KM and € assumed 2% in €
Household Income	€/Household	2.335	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	71,42 %	Assumed reach 93%
Purified Drinking Water Supply	% of Population Served	46,00 %	Assumed reach 100%
Urban Wastewater Collected	% of Population Served	21,7%	Assumed reach 90%
Urban Wastewater Treated	% of Wastewater Treated	3,83%	Assumed reach 99%
Municipal Solid Waste Collected	% of Population Served	78,64 %	Assumed reach 99%
Compliant Treatment (Lfill/Incin)	% of MSW	9,11%	Assumed reach 99%
Municipal Solid Waste Recycled	% of MSW	5,00%	Assumed reach 43,5%
Emissions NOx	Kg/Capita	14,32	No linear reduction EU
Emissions SO2	Kg/Capita	109,11	Assumed targets for 2025
Emissions CO2	Tons/Capita	5,34	17,8 NOx; 11,5 SO2; 8,0 CO2

The indicators for BiH 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 10% at present, and in the industrial emissions control, specifically in SO₂ emissions, which are very high, mostly on account of BiH's 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 BiH. 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:

- The state budget;
- Budgets of the entities, cantons and local governments;
- 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 BiH of adopting the *acquis*" and not to be confused with the total environmental costs for BiH, 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 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 BiH’s financial and economic capacities.
- A best to date cost of approximation evaluation for the sectors is indicated above.

The starting point of considerations in this Chapter was preliminary analysis 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 BiH’s needs and priorities is designed and includes a clear module of input parameters for policy manipulation on a sector by sector basis. This is the interface used in designing of this Chapter. 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.

2.2.2 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.

2.2.3 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

2.2.4 Definition of administrative costs, capital and operating expenditures

2.2.4.1 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. Entities and BD of BiH Governments 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 BiH in EAS and to each entity and BD of BiH (in the strategic documents of Entities and BD of BiH).

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.

2.2.4.2 Investment expenditures (Capex) and Operating & Maintenance expenditures (Opex)

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.

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.

2.2.5 Establishing multiannual cost flows and multiannual costs targets

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 BiH 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 BiH, 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 refined in the EAS and Entity and BD of BiH implementation instruments.

2.2.6 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 BiH 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 BiH 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 BiH.

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 BiH’s overall affordability 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 Report¹⁶⁶ 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 and future strategic documents of the Entities and BD of BiH.

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

¹⁶⁶ Based on the information from: “Strategy for Environmental Protection for the period 2008-2018 BD od BiH/ Strategija za zaštitu okoliša za period 2008.-2018. BD BiH”



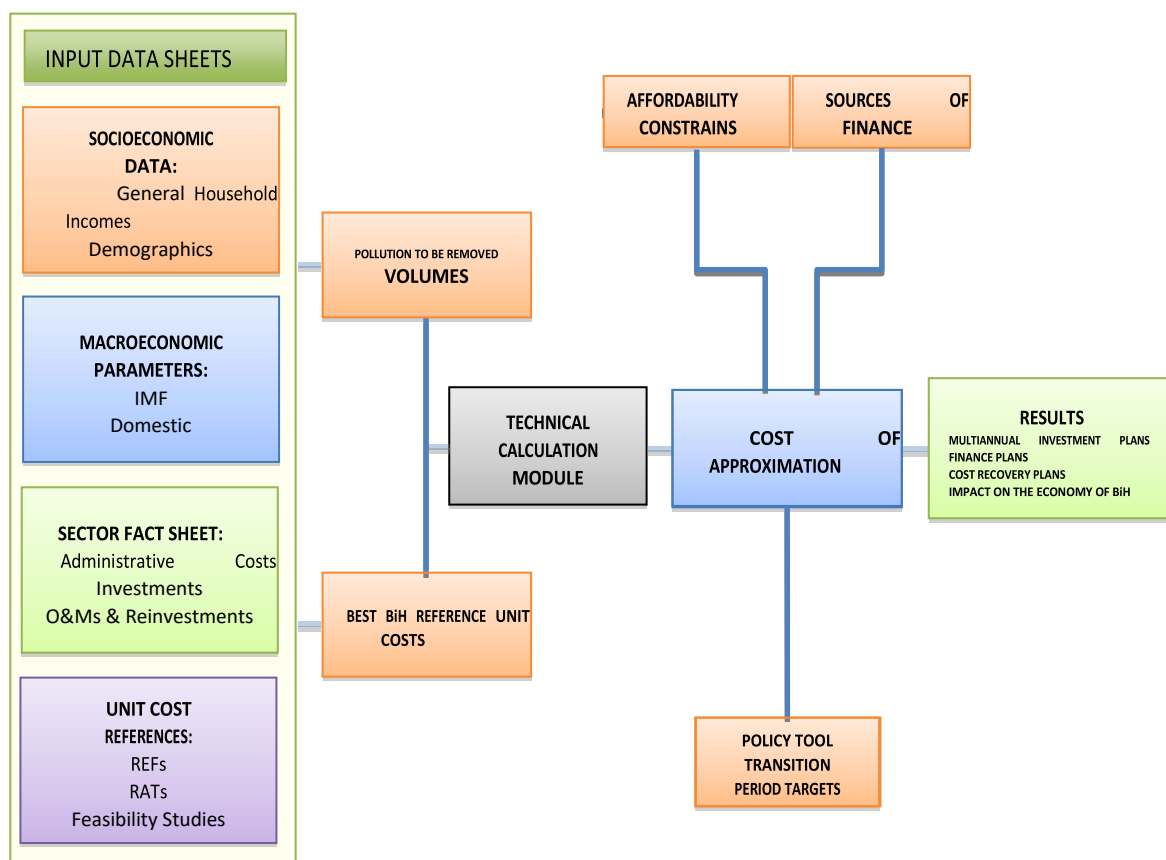


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Ministry of Foreign Trade
and Economic Relations

Graph 1: THE ARCHITECTURE OF THE EAS COST OF APPROXIMATION MODEL



COST APPROXIMATION BY SECTORS

2.2.7 Water management sector

2.2.7.1 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 six yearly 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.

2.2.7.2 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 Policy¹⁶⁷ 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.

¹⁶⁷<http://ec.europa.eu/agriculture/cap-post-2013/>.



The *acquis* leaves 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 IX: DEFINITION OF THE EXISTING GAP

Water services	Total of (in %)	BiH	EU
Drinking Water Supply	Population Served	71,42%	93%
Purified Drinking Water Supply	Population Served	46,00%	100%
Urban Wastewater Collected	Population Served	21,7%	93%
Urban Wastewater Treated	Wastewater Treated	3,83%	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 and the cost estimate for said directive is derived from the information contained in the documents prepared to define Water Strategy and Policy in BiH (2011)¹⁶⁸.

Pursuant to the constitutional structure of BiH, the management of waters lies within the competence of the entities.

¹⁶⁸ “Strategy of Water Management of FBiH/ Strategija upravljanja vodama” and “Water Policy in BiH” October 2011. Prepared for the COUNCIL OF MINISTERS OF BOSNIA AND HERZEGOVINA and the MINISTRY OF FOREIGN TRADE AND ECONOMIC RELATIONS



The Integral Water Management Strategy in RS for 2015-2024, was rendered pursuant to the RS Law on Waters and officially adopted in the RS National Assembly in March 2016 – the decision relative to the adoption of the Strategy is published in the RS Official Gazette 17/16. As for the Federation of BiH, the Water Management Strategy was adopted for 2010-2022. This document was adopted in line with the FBiH Law on Waters by both houses of the FBiH Parliament in December 2011.

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 waste water, including both collection and treatment;
- Flood protection

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 along with the consent of BiH water competent authorities.

2.2.7.3 Unit costs

2.2.7.3.1 General observations

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

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 distribution of said agglomerations below 10.000 persons has been done extrapolating the existing population distribution data in neighbouring states, with a similar pattern, to BiH. Once the requirements are met to include all missing data, including the census figures, this theoretical distribution can be substituted for actual figures. 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.

2.2.7.3.2 Urban waste water

2.2.7.3.2.1 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.

2.2.7.3.2.2 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.

2.2.7.3.3 Drinking water

2.2.7.3.3.1 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. Treatment requirements for these different sources have also been assumed.

2.2.7.3.3.2 *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.

2.2.7.3.3.3 *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.

2.2.7.3.4 **Protection against Floods**

The cost has been estimated on the basis of Water Management Strategy and results of the analysis with the “Water policy support in BiH” project, financed from IPA 2007.

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.

2.2.7.4 **Targets for compliance**

2.2.7.4.1 **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 BiH’s position 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 BiH that BiH will have to assume vis a



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.

2.2.7.4.2 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.

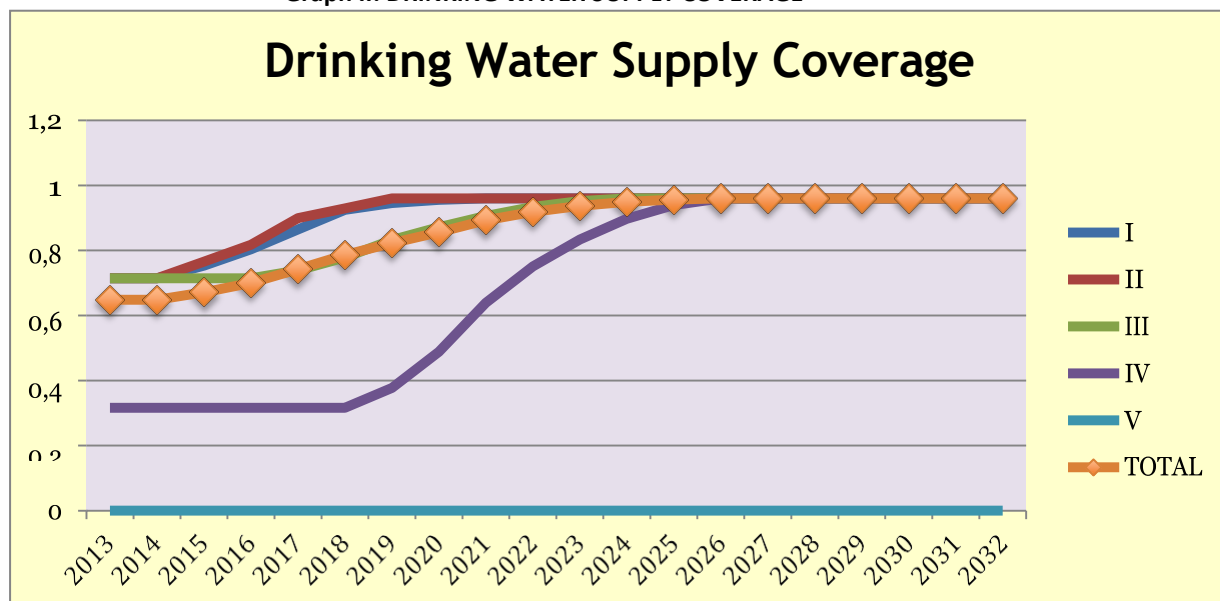
Table X: DRINKING WATER TARGETS FOR COMPLIANCE

Concept	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%
	UKUPNO	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%
	UKUPNO	66%	66%	67%	68%	77%	81%	85%	90%	95%	97%	98%	99%	100%

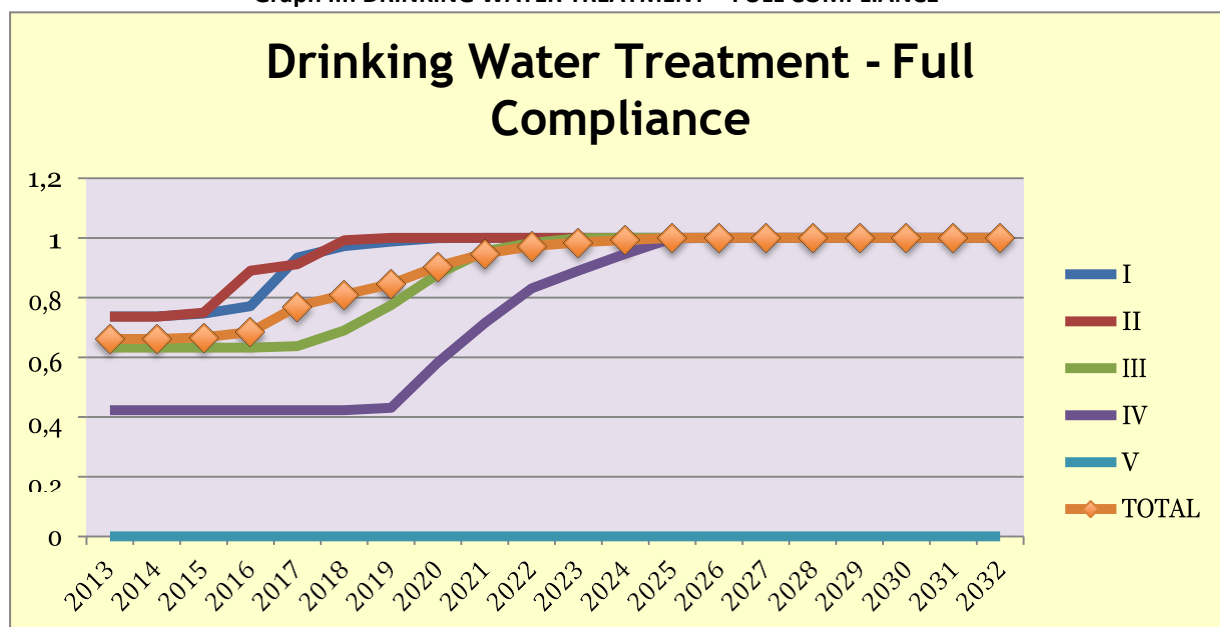
Below the convergence of the different types of agglomerations is illustrated graphically, both for coverage and quality standards.



Graph II: DRINKING WATER SUPPLY COVERAGE



Graph III: DRINKING WATER TREATMENT – FULL COMPLIANCE



2.2.7.4.3 Urban waste water

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 to that segment

Table XI: URBAN WASTE WATER

Concept	Agglomeration	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Urban Wastewater	I	70%	74%	78%	83%	87%	89%	90%	91%	92%	92%	92%	92%	92%	92%	92%	92%	92%	92%	92%	92%	92%



This project is funded by the European Union
Projekat finansira Evropska unija

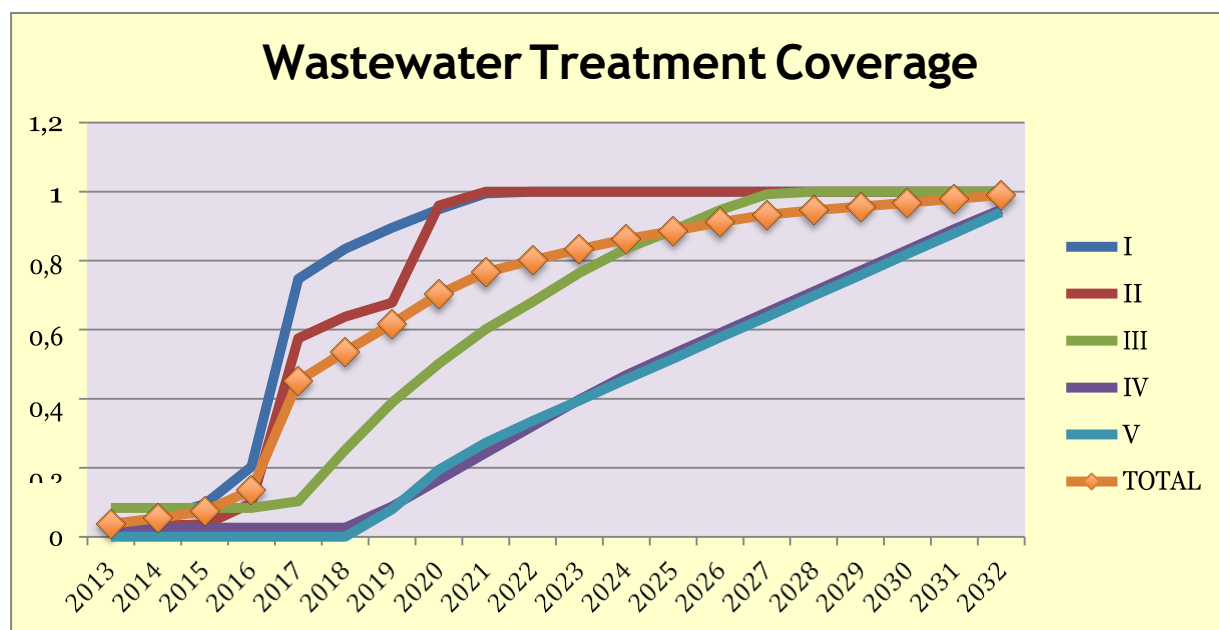


Ministry of Foreign Trade
and Economic Relations

As % of Population	II	45%	45%	55%	65%	75%	75%	81%	87%	93%	93%	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%	90%
	IV	20%	20%	20%	20%	20%	20%	24%	30%	35%	39%	44%	49%	54%	58%	61%	65%	70%	74%	77%	80%	80%	80%
	V	0%	0%	0%	0%	0%	0%	5%	14%	21%	26%	31%	35%	40%	45%	50%	54%	59%	64%	68%	73%	73%	73%
	UKUPNO	46%	48%	50%	53%	56%	58%	62%	66%	69%	71%	73%	75%	77%	79%	81%	83%	84%	86%	87%	88%	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%	100%
	II	3%	3%	10%	57%	64%	64%	64%	68%	96%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	III	8%	8%	8%	8%	10%	22%	33%	42%	58%	64%	70%	78%	82%	87%	92%	96%	99%	100%	100%	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%	100%
	V	0%	0%	0%	0%	0%	0%	8%	19%	26%	33%	39%	45%	51%	57%	63%	69%	75%	82%	88%	94%	100%	100%
	UKUPNO	4%	6%	12%	43%	48%	54%	61%	68%	73%	77%	79%	82%	85%	87%	90%	92%	95%	97%	98%	99%	100%	100%

Below the convergence of the different types of agglomerations is illustrated graphically, both for coverage and treatment standards.

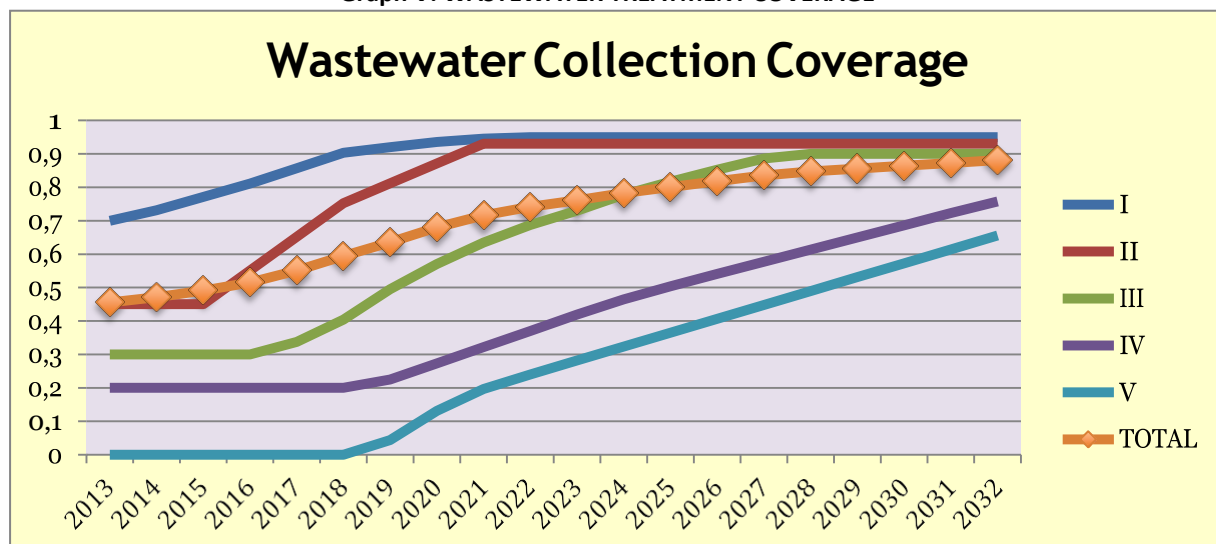
Graph IV: WASTEWATER COLLECTION COVERAGE



).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).

2.2.7.4.4 Flood protection

In accordance with the results of Water policy support in BiH project and other relevant study documents, 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 BiH to achieve full compliance.

Table XII: 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	1	2	3	4	5	6	7	8	9	10	11	12	13
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 BiH which, as previously indicated, does not as yet exist in these terms. The catastrophic floods in May 2014 resulting in losing of human lives and grave material damage throughout the entire country



require an urgent development of a specific policy in this sense at all levels in BiH. Precise indicators of approximation cost shall be known after the elaboration of the flood risk management plans.

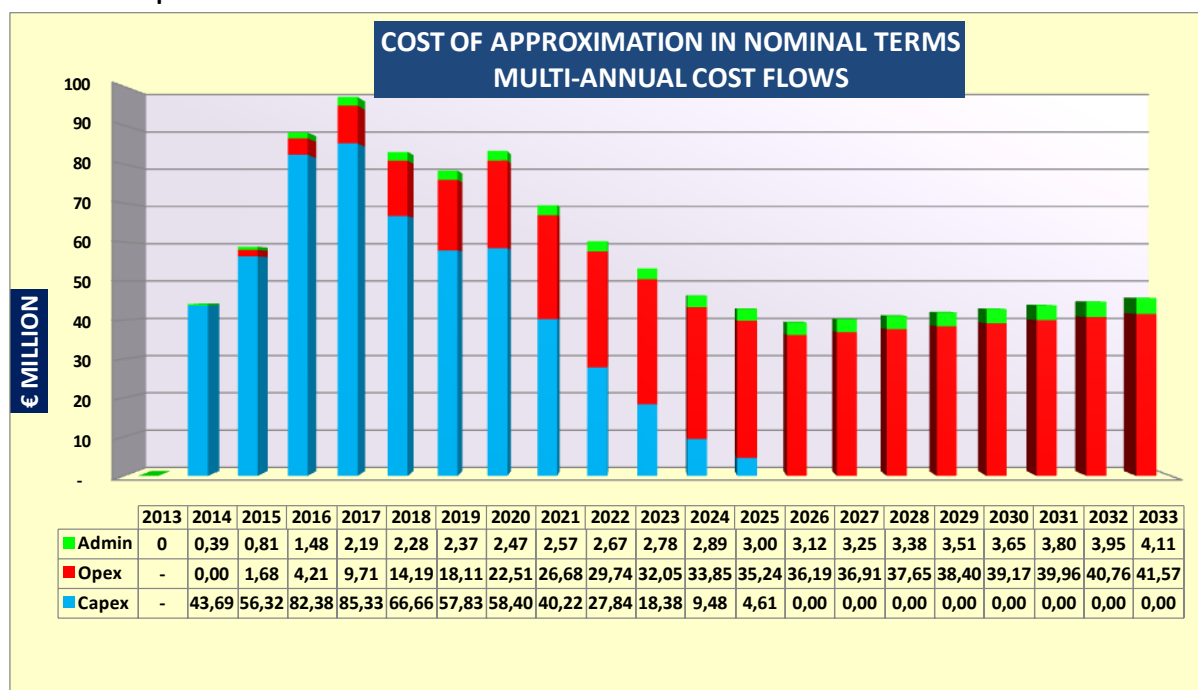
2.2.7.5 Cost of approximation

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.

2.2.7.5.1 Drinking water

Capex peaks at just over €85 Million per annum in 2017, mainly on account of the short-term Flood Protection urgent actions envisaged. Opex increases to a substantial €42 Million per annum in 2033. Administrative Costs build up as Opex does, but on a much lower scale, and reach €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



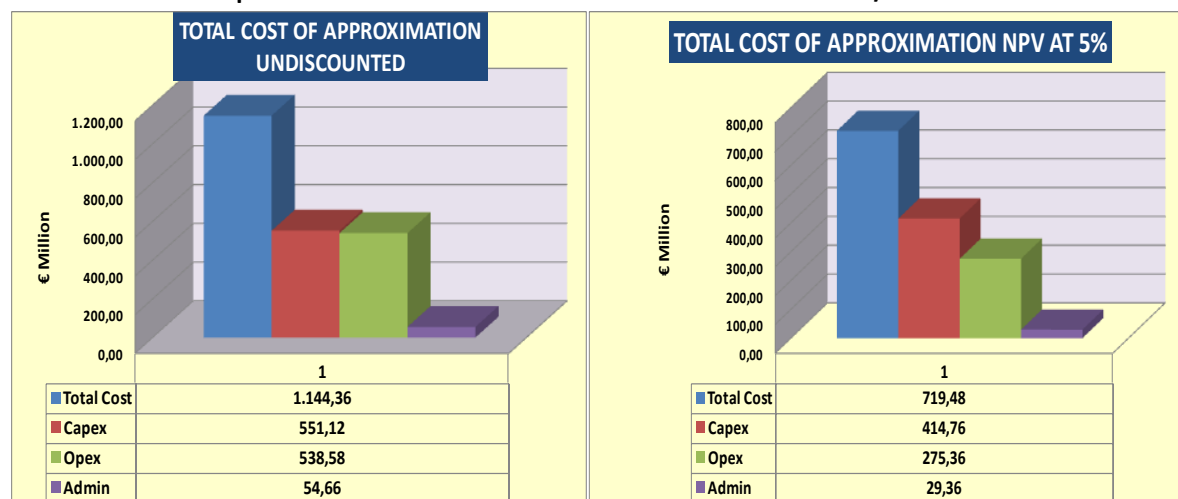
The total cost of €1.144 Million to 2033 is, however, a general figure the true value of which depends on the chronological deployment of the costs. Such a magnitude, payable in 2014 is not the same as if it is due, for example in 2033. Thus to define a comparable figure and eliminate time distortions, 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 € 415 Million to be incurred prior to 2025;



- Opex, to 2033, is a considerable (and ongoing) cost amounting to that date to €275 Million in present day terms;
- Administrative costs are estimated at € 29 Million, averaging, in NPV terms, approximately € 4 Million per annum.

Graph VII: TOTAL COST OF APPROXIMATION UNDISCOUNTED/DISCOUNTED



Overall, the approximation cost in Drinking Water is estimated to be € 719 million.

2.2.7.5.2 Urban wastewater

Capex peaks at just over €147 million per annum in 2016, mainly on account of the short term wastewater works to be undertaken in major agglomerations.

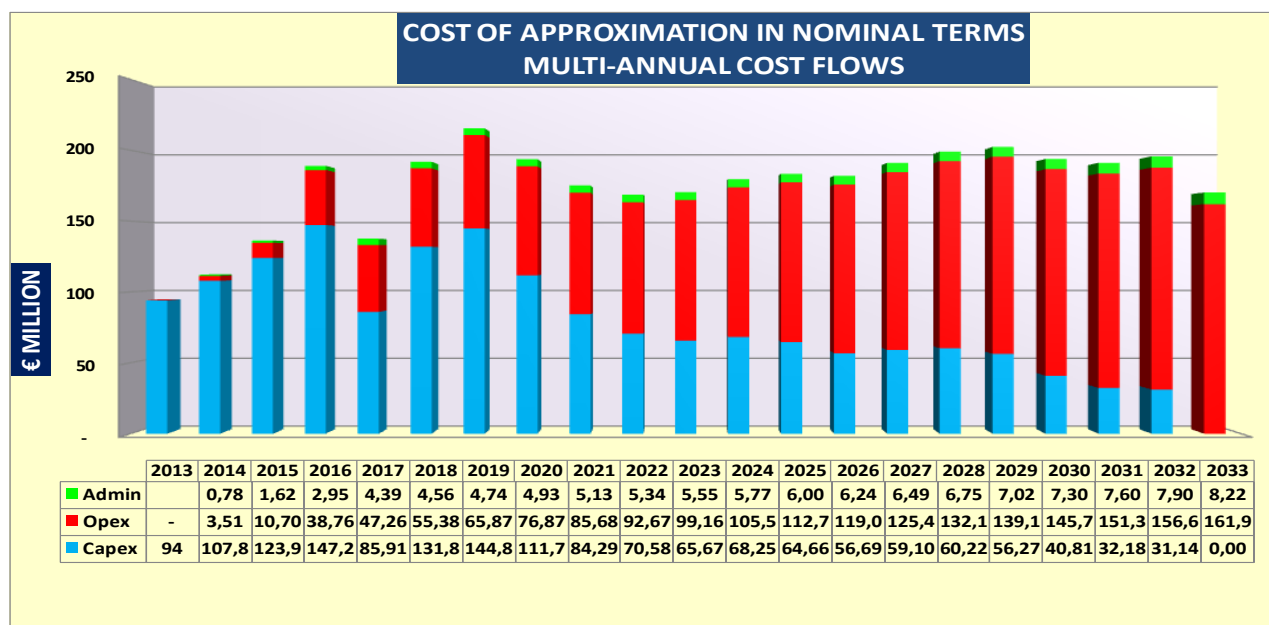
Opex increases to a substantial €162 Million per annum in 2033.

Administrative costs build up as Opex does, but on a much lower scale, and surpass €8 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



The total cost of €3.672 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.

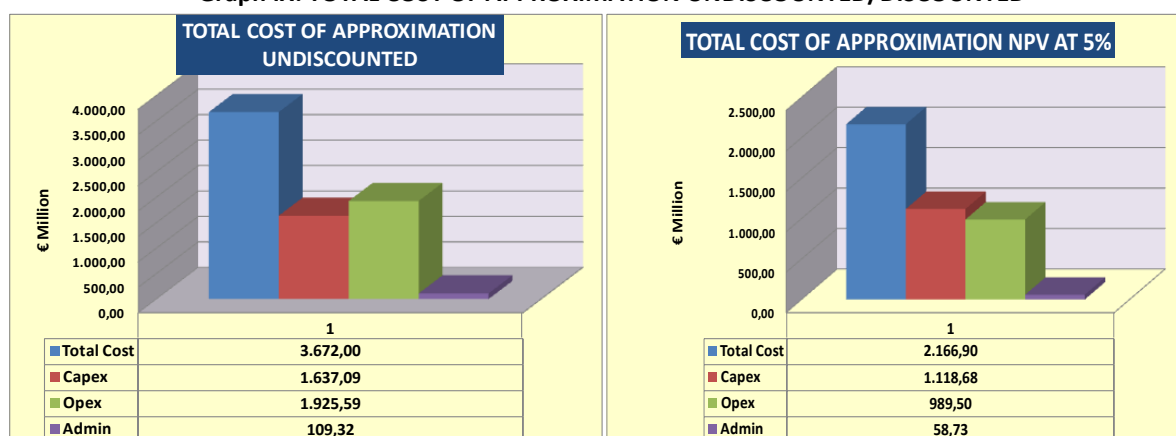
Thus to define a comparable figure and eliminate time distortions, the cost flows are discounted back to their value in 2013 terms. This is the Net Present Value (NPV) concept and is the indicator used in economics to determine present day costs of a policy decision.

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 €1.119 million to be incurred prior to 2033;
- Opex, to 2033, is a considerable (and ongoing) cost amounting to that date to €990 million in present day terms.
- Administrative costs are estimated at €59 million, averaging, in NPV terms, approximately €8 million per annum.



Graph IX: TOTAL COST OF APPROXIMATION UNDISCOUNTED/DISCOUNTED



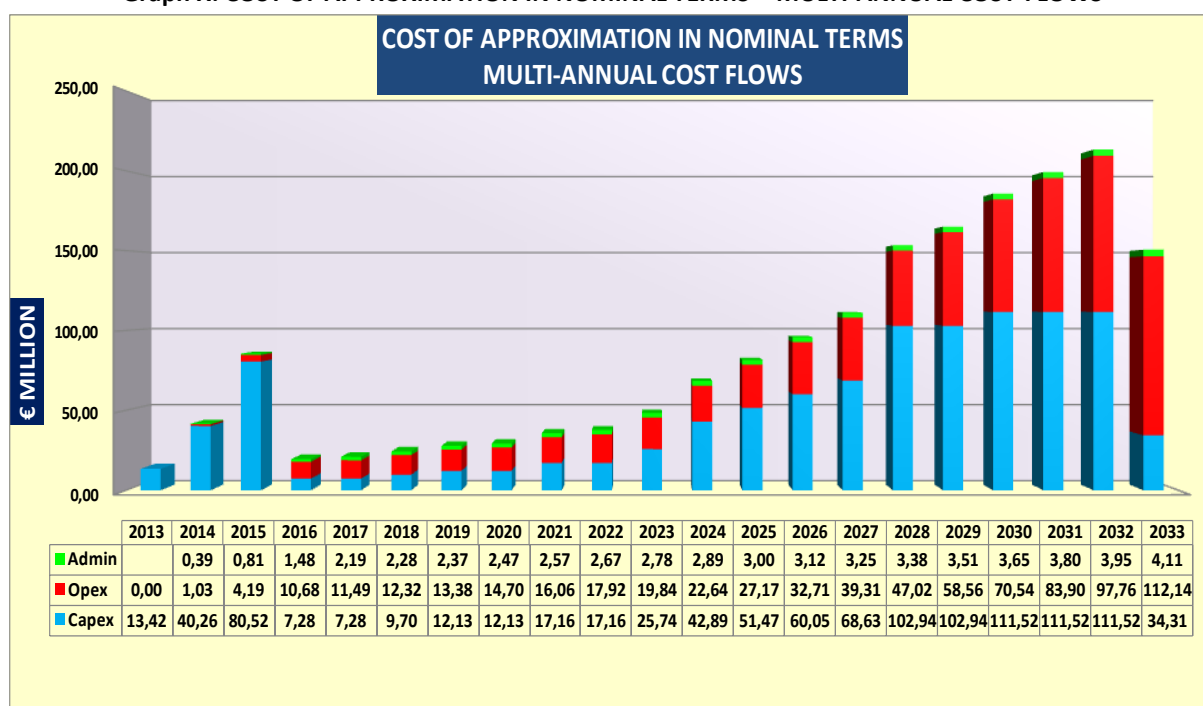
Overall, the approximation cost in urban wastewater is estimated to be €2.167 million, a considerable amount by any standard.

2.2.7.5.3 Flood protections

Capex peaks at just over €112 Million per annum in 2030, although it reaches €81 Million in 2015. Opex increases to a substantial €122 Million per annum in 2033. Administrative Costs build up as Opex does, but on a much lower scale, and amount to €4 Million per annum in 2033.

The cost of approximation undiscounted, that is, in nominal terms, is indicated below.

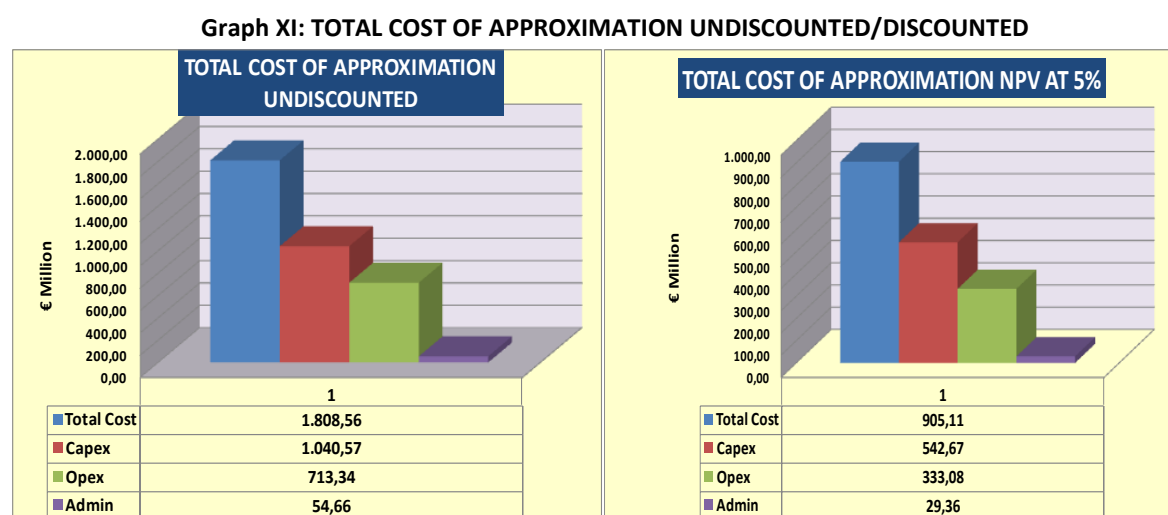
Graph X: COST OF APPROXIMATION IN NOMINAL TERMS – MULTI-ANNUAL COST-FLOWS



The total cost of €1.808 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 €543 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 €29 million, averaging, in NPV terms, approximately €4 million per annum.



Overall, the approximation cost in flood protection sector is estimated to be €905 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.

2.2.7.6 Considerations 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.

2.2.8 Waste management sector

2.2.8.1 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.

2.2.8.2 Rationale for the cost estimate

Based on the draft Waste Management Strategy (PHARE 2000), FBiH Waste Management Strategy and Plan, and the feasibility studies performed, a starting point for the waste management situation in BiH 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 XIV: POPULATION DISTRIBUTION ACCORDING TO COMPLIANCE GAP STATUS

Waste Management Regions	Population	% Full Cost
Regions with Established Landfills	1.407.961	35,00%
Regions with Works Commenced	585.706	90,00%
Regions with Inter-municipal Agreement	1.171.156	100,00%
Undefined	678.801	100,00%
TOTAL FOR BiH	3.843.624	

This provides us a basic, but reasonably realistic indication of the infrastructure gap to be addressed in economic terms.



2.2.8.3 Unit costs

2.2.8.3.1 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 BiH 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 BiH projects and feasibility studies.

These references are summarized below.

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

2.2.8.3.2 Feasibility studies in BiH

Available FS figures have been derived from available projects. The average equivalent cost per capita is indicated below.

Table XV: FEASIBILITY STUDY REFERENCES

IN BIH	€/PE
CAPEX	86
OPEX	16

2.2.8.3.3 International references

Average equivalent unit costs in other regionally related countries are summarized below.

Table XVI: RESULTS IN AVERAGE €/PE

RESULTS IN AVERAGE €/PE		
REFERENCE	CAPEX	OPEX
SERBIAN SECTOR	70,37	15
ROMANIA	91,04	15

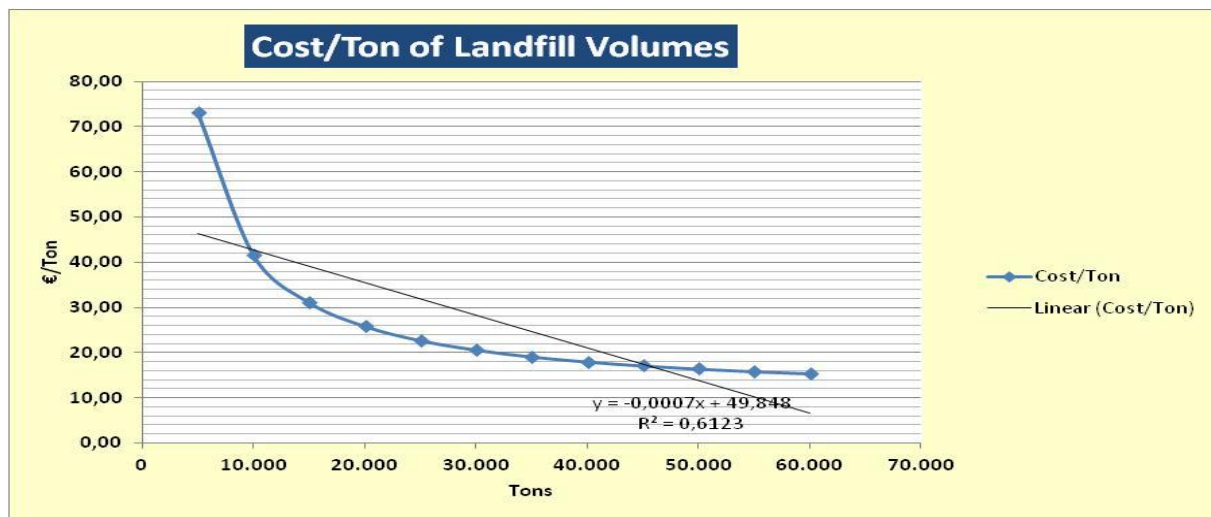


BULGARIA	85,30	17
CROATIA	80,51	11
POLAND	92,49	17
BOSNIAN FS	85,66	16
EAS BREF UNIT COST FOR BIH	84,23	15,14

2.2.8.3.4 Adjustment of these references to the conditions in BiH

The distribution of costs indicated above are for average sized regions which are probably of a greater size than will be applied in BiH, given its complicated orography 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 BiH's idiosyncratic conditions, a cost/ton index was developed, which is applied to the different types of regions detailed above.



Table XVII: 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 BiH as follows.

Table XVIII: 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	5	1.407.961	281.592	95.741	100,00	85,66	85,66
Regions with Works Commenced	4	585.706	146.427	49.785	106,30	85,66	91,05
Regions with Inter-municipal Agreement	8	1.171.156	146.395	49.774	106,30	85,66	91,05
Undefined	9	678.801	75.422	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 XIX: UNIT COSTS FOR 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 BiH feasibility studies. 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.

2.2.8.4 Targets for 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 BiH's position 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 XX: TARGETS FOR BRIDGING THE GAP

TARGETS FOR BRIDGING THE GAP (COMPLIANCE)															
Agglom.	Popul.	% of total p.e.	Current 2013	2014	2015	2016	2017	2018	Projected 2019	Projected 2020	2021	2022	2023	2024	2025
REL	1.407.961	SERVICE D	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	SERVICE D	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	SERVICE D	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
UNDEFINED	678.801	SERVICE D	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%
			0	0	0	0	0	33.940	101.820	203.640	305.460	407.280	543.041	610.921	644.861
TOTAL	PERSONS		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%
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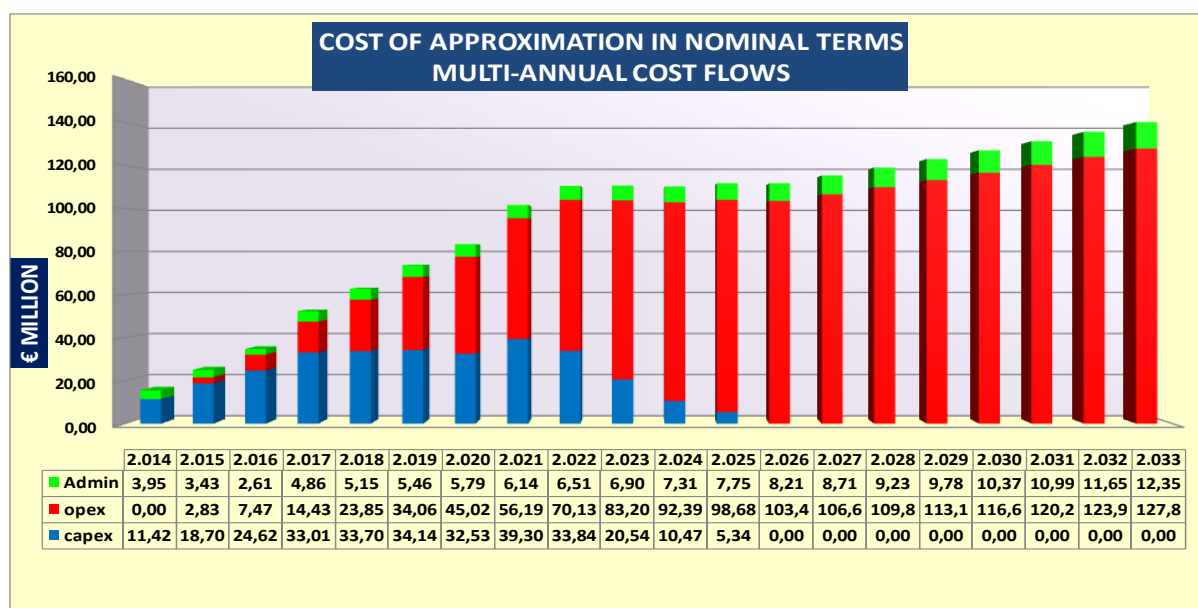
From the current status and the defined target, a chronological targeting sequence for approximation has been defined. This, obviously, is a for the EAS purpose best estimate and does not reflect a specific policy for BiH which, as previously indicated, does not as yet exist in these terms.

As can be observed, the target date for approximation to the EU 28 country average objectives is 2025.

2.2.8.5 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 XIII: COST OF APPROXIMATION IN NOMINAL TERMS – MULTI-ANNUAL COST-FLOWS

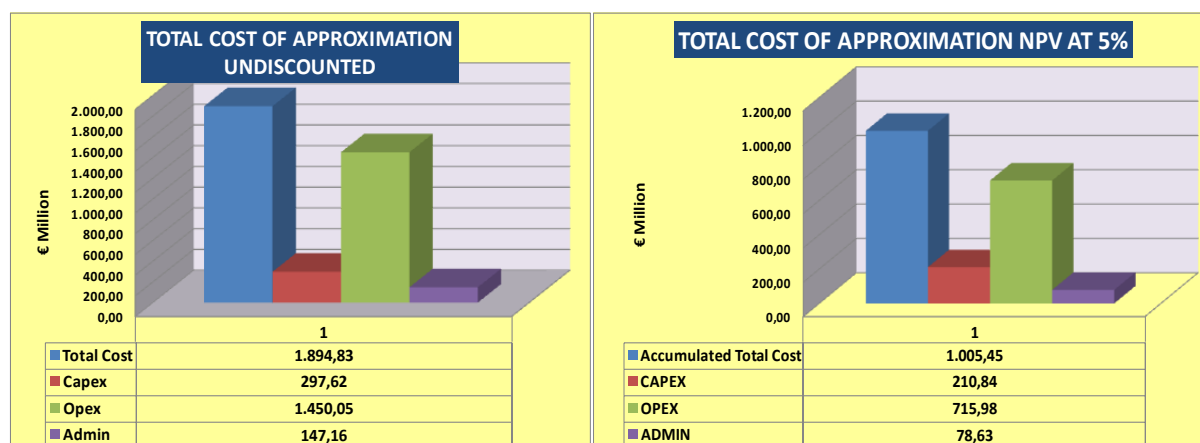


Capex peaks at just over €39 million per annum in 2021. Opex increases to a substantial €128 million per annum in 2033. This reflects an important characteristic of the waste sector, that it is Opex heavy, i.e. a unit of investment in the field of waste management implies a large stream of opex costs that impinge directly on the household affordability constraints. Administrative costs build up as Opex does, but on a much lower scale, and reaches €12 million per annum in 2033.

The cost of approximation undiscounted, that is, in nominal terms, is indicated below.



Graph XIV: TOTAL COST OF APPROXIMATION UNDISCOUNTED/DISCOUNTED



The total cost of €1,895 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 €210 million to be incurred to 2025. Capex, to 2033, is a considerably higher (and ongoing) cost amounting to that date to €716 million. Administrative costs Amount to €79 million, averaging, in NPV terms, just over €4 million per annum.

2.2.8.6 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 programs to assist in waste remediation and disposal. 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.

2.2.9 Emissions to air (DIE)

2.2.9.1 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.

Thesetypesofemissions 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 EAS and strategic documents of Entities and BD BiH 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 BiH. Coordination with industry, particularly in the energy sector, will be essential.

2.2.9.2 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 (e.g. a competent authority) 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 BiH 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, the United Nations Framework Convention on Climate Change (UNFCCC) 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.

2.2.9.3 Abatement costs

Abatement costs have been derived from the application of the Regional Air Pollution and Simulation model (RAINS). Model 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 BiH, where such data has not been generated. They are summarized in the Table XXI below.

Table XXI: 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 BiH 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 XXII: ABATEMENT COSTS FOR BiH

ABATEMENT COSTS FOR BiH	NO_x	SO₂	NMVOCs
In € per Ton Removed	9.403	11.317	39.224

2.2.9.4 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 bear 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 XXIII: 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%

2.2.9.5 Costs 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 XXIV: EXISTING LEVELS OF EMISSIONS (ESTIMATED FOR BiH 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.	81.310	448.890	27.010
BEST ESTIMATES VARIOUS SOURCES	2004.	55.000	419.000	37.803
BEST PROJECT ESTIMATE	2013.	80.000	450.000	40.000

To estimate the volume of pollution to be removed, a BAU Scenario has been established showing the expected growth of emissions in BiH over the coming years.



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Ministry of Foreign Trade
and Economic Relations

Table XXV: TOTAL GHG EMISSIONS GROWTH

TOTAL GHG EMISSIONS GROWTH		
Year	Volume	Increase
2010.	23.121	BASELINE
2015.	25.750	1,11
2020.	26.870	1,16
2025.	28.320	1,22
2030.	31.270	1,35

The year 2010 is established as a baseline scenario. This means that it is assumed to be the Volume of emissions which BiH 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

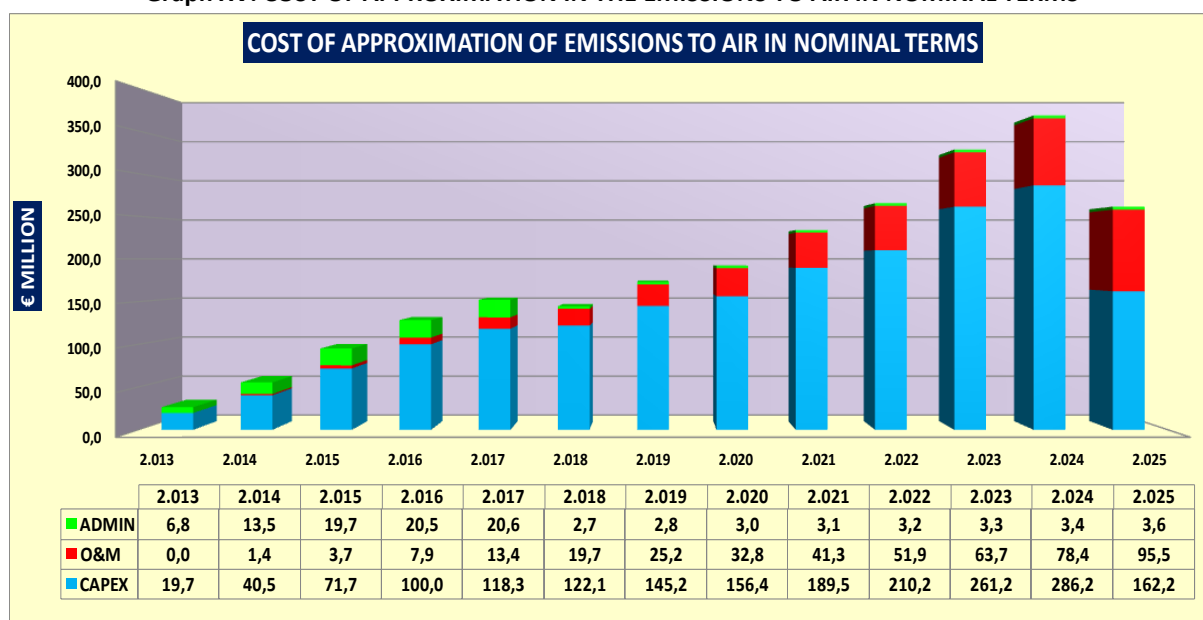
Table XXVI: VOLUMES TO BE ABATED

EQUIVALENT ABATEMENT TO 2025	NO _x	SO ₂	NMVOCS
In Tons based on 2013 volumes	17.600	99.000	8.800

These proposed emission limits can by no means be considered a fixed objective of BiH policy, but are a proposal that would roughly comply with the *acquis* (and the Gothenburg 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 XV: COST OF APPROXIMATION IN THE EMISSIONS TO AIR IN NOMINAL TERMS



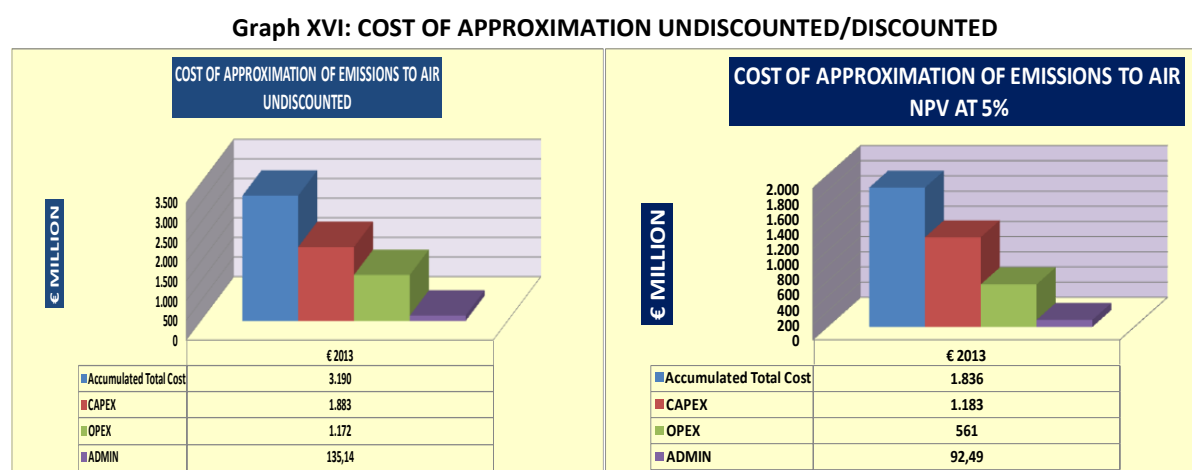
Capex peaks at just over € 286 Million per annum in 2024. Opex increases to €95 Million per annum in 2025. This is a substantial and recurring cost that will have to be fully absorbed by cost recovery from users. Administrative costs are high in the first five years, when it is assumed that the actions required to set up the different inventories, action plans, etc. will be concentrated. Administration costs after this initial stage remain at approximately €3 million p.a.

The total cost of €3.190 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 €1.183 million to be incurred prior to 2025. Opex, to 2033, is a considerable (and ongoing) cost amounting to that date to €561 million in present day terms. Administrative costs are estimated at €92 million, mainly concentrated in the first 4-5 years of the implementation plans.

This magnitude is indicated in the chart below.



Overall, the approximation cost of Emissions to Air is estimated to be €1.836 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 XXVII: 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	917	449	0	1.366	2025
Cement	14	8	0	22	2023
VOCs	85	5	0	90	2023
Other (Estimated at an additional 15%)	167	99	0	266	2023
Administration	0	0	92	92	2023
TOTAL AIR	1.183	561	92	1.836	2025

2.2.10 Nature and biological diversity protection

2.2.10.1 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.

2.2.10.2 Rationale for cost assessment

Although the work on designating potential NATURA 2000 sites in BiH 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 territory that might be accounted for by such sites in BiH. The existing legislation regulating nature protection at the entities' and Brcko District of BiH 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 BiH.



2.2.10.3 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 XXVIII: UNIT COSTS APPLIED IN €/Ha TO NEW PROTECTED SURFACES

UNIT COSTS	€/Ha
MANAGEMENT PLANS	11,85
FARMLAND	3,00
BUFFER ZONES	1,00
TRANSACTION COSTS	14,00
EQUIPMENT	3,51

2.2.10.4 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: PROTECTED AREAS IN EUROPE, AN OVERVIEW (2012)¹⁶⁹.

169 "Protected Areas in Europe – an overview", European Environment Agency Report Br.. 5/2012, ISSN 1725-9177, objavljen 22. oktobra 2012. godine <http://www.eea.europa.eu/publications/protected-areas-in-europe-2012>, dostupan: 1. jula 2014. godine.



Table XXIX: SURFACE OF PROTECTED AREAS IN BiH

REVIEW OF PROTECTED AREAS BiH Country's surface = 51.10km 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 & Ib	3	NATIONAL PARKS	40.545	6.000	46.545	0,79%	0,91%
II	2	NATURE PARKS	43.211	59.000	102.211	0,84%	1,99%
V	2	PROTECTED LANDSCAPES	8.514	375.000	383.514	0,17%	7,48%
IV	3	NATURE RESERVES	1.419	200.000	201.419	0,03%	3,93%
III	8	MONUMENTS	7.853		7.853	0,15%	0,15%
VI		HABITAT MANAGEMENT AND OTHER PROTECTED AREAS OF CULTURAL-HISTORIC SIGNIFICANCE		40.000	40.000	0,00%	0,78%
TOTAL	18		101.541	680.000	781.541	1,98%	15,25%

Table XXX: 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)	84.309										
Required Extension	698.000	3%	5%	7%	10%	12%	12%	12%	12%	12%	15%
Extension in ha		20.940	34.900	48.860	69.800	83.760	83.760	83.760	83.760	83.760	104.700
Extension Convergence %		3%	8%	15%	25%	37%	49%	61%	73%	85%	100%



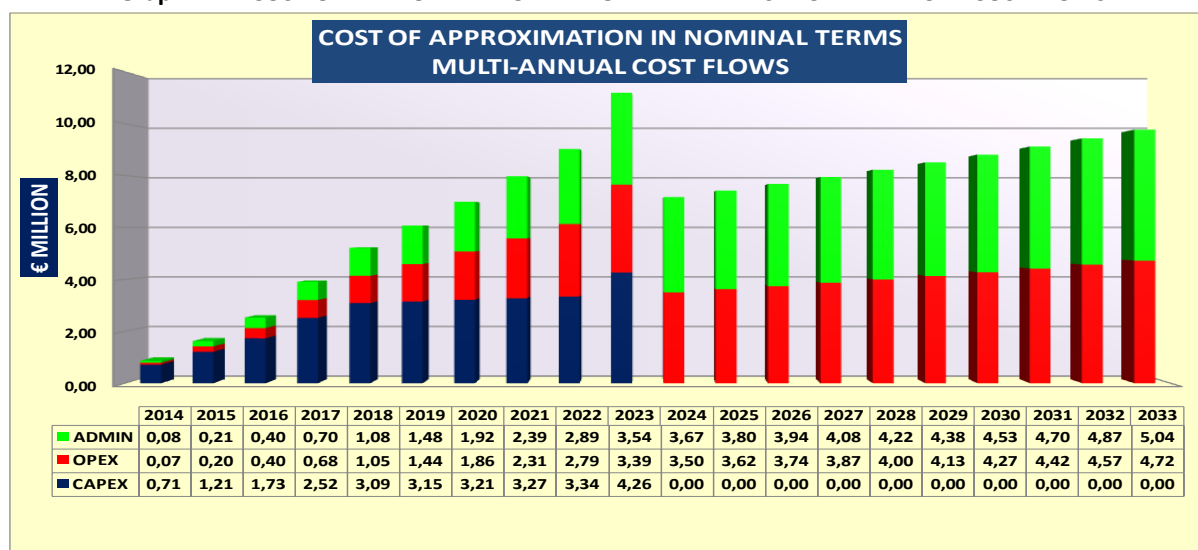
From the current status and the defined target, a chronological targeting sequence for approximation can be defined. This, obviously, is an EAS best estimate and does not reflect a specific policy for BiH, which, as previously indicated, does not exist as yet in these terms

2.2.10.2 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 €4 million in 2023. Opex grows from a negligible 2014 figure to €4,72 per annum in 2033. This is not a significant figure in the context of BiH policy, but it is qualitatively important and must be adequately provisioned in BiH's different budgets. Administrative costs build up as Opex does and reaches €5 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 XVII: COST OF APPROXIMATION IN NOMINAL TERMS MULTI-ANNUAL COST FLOWS

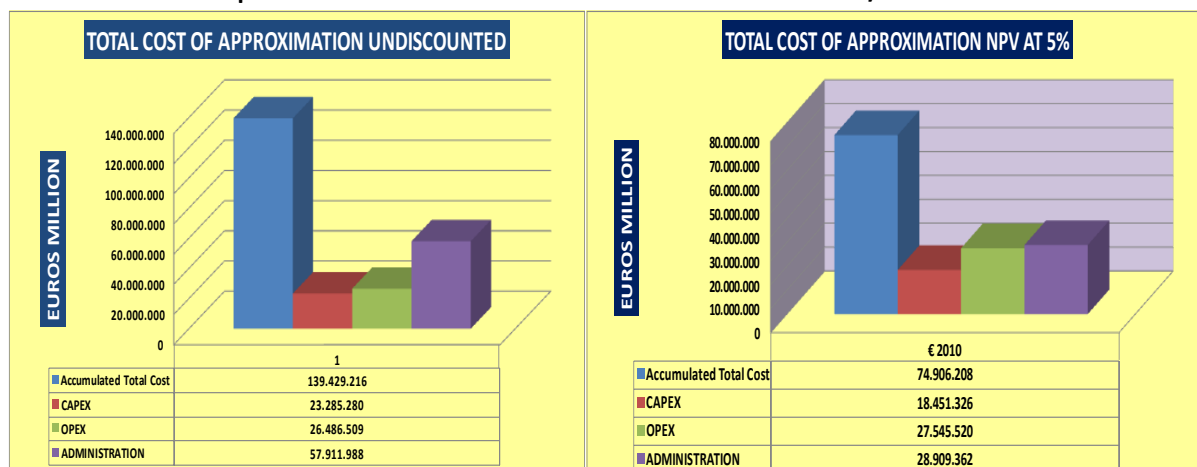


The total cost of €139 million to 2033 is, however, a general figure the true value of which depends on the chronological deployment of the costs. Such a magnitude, payable in 2014 is not the same as if it is due, for example in 2033. Thus, to define a comparable figure and eliminate time distortions, 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 XVIII: 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 €28,9 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 €18.5 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 €28 Million up to 2033.

Overall, the approximation cost in nature protection is estimated to be €75 million.

2.2.10.3 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 entities and BD of BiH budgets.

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 BiH 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 BiH. Other funding opportunities should also be pursued including national research programmes and bilateral donors.

2.2.11 Other sectors

2.2.11.1 Noise

2.2.11.1.1 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 noisemaps.



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.

2.2.11.1.2 Cost 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).

Estimated requirements for additional expenditures from the entities and BD of BiH budgets in € (costs of personnel recruitment of the institutions) are listed in Table XXXI.

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 can be estimated at 150% of personnel costs over the period to 2025 and distributed in proportion to total amount of increased staff;
 - A reasonable estimate can be to assume that new employees will be needed.
- This would generate the expenses of personnel presented in the Table XXXI below

Table XXXI: PERSONNEL COST OF APPROXIMATION FOR NOISE

COST OF APPROXIMATION FOR NOISE									
PERSONNEL COSTS	Unit Cost	2013		2014		2015		2016	
		Increase	Total	Increase	Total	Increase	Total	Increase	Total
Additional Staff	Units	0	0	2	2	2	4	4	8
Gross Salary € Increasing at 3%	15.000	15.000	0	15.450	30.900	15.914	63.654	16.391	131.127
Overheads 70%			0		21.630		44.558		91.789
Training: 150% of Personnel Costs			0		78.795		162.318		334.374
TOTAL			0		131.325		270.530		557.291

2.2.11.1.3 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 applied only to Sarajevo (Greater Sarajevo 711.613 residents) as it 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 Sarajevo, Banja Luka, Tuzla, Zenica, Istocno Sarajevo, Bijeljina, Brcko and Mostar, which together account for some 1.400.360 residents. Cost has been distributed over 2015 and 2016.

Equipment for laboratories is estimated at 70% 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 a specific program to increase industrial competitiveness in line with experiences in other transition economies, distributed as follows: 70% in 2015 and 30% in 2016.





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Table XXXI: 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	711.613	88.952	549.812	68.727	0	0
NOISE MAPS TRANSPORT	€0.25/Resident	0	0	0	0	700.180	175.045	700.180	175.045
AIRPORT							1.000.000		
EQUIPMENT FOR LABS	300.000	0,00%	0	40,00%	120.000	40,00%	120.000	20,00%	60.000
ACTION PLANS AGGLOM	€0.25/Resident	0	0	0	0		0	711.613	177.903
ACTION PLANS TRANSPORT	€0.25/Resident	0	0	0	0	700.180	175.045	700.180	175.045
INDUSTRIAL PROGRAM	150.000	0,00%	0	0,00%	0	70,00%	105.000	30,00%	45.000
TOTAL			0		208.952		1.643.817		632.993

Overall the total impact on the budgets of the entities and BD of BiH can be estimated as follows

Table XXXII: STATE BUDGET ALLOCATIONS NEEDED FOR COMPLIANCE IN NOISE

COST OF THE NOISE DIRECTIVE IN €	2013	2014	2015	2016
FROM THE STATE BUDGET	0	340.277	1.914.346	1.190.284

NOTE: All these figures are reasonable preliminary estimates, which serve as examples of the type of data, which needs to be input with BiH 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 BiH 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.

2.2.11.2 Chemicals

2.2.11.2.1 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. BiH 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. 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.

For the purposes of EAS it is assumed that the total amount of additional human resources needed throughout the system, will be 30. This is based on experience in neighbouring states further advanced in the approximation process.

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.



2.2.11.2.2 Compliance targets

The targets assumed for approximation for various sub-sectors are mentioned below. The targets assumed and cost assessment in the field of chemicals is an illustration and is based on the example of other countries. Furthermore, considering the amendments of EU regulations in the fields of chemicals, the said data need to be update in the coming period.



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Table XXXIII: TARGETS FOR COMPLIANCE IN THE CHEMICALS SECTOR

SUBSTANCE	TARGET ACHIEVEMENT						
	2013	2014	2015	2016	2017	2018	2019
Asbestos	0%	20%	40%	70%	100%	100%	100%
GMOs	0%	20%	40%	60%	80%	100%	100%
PCBs	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 BiH can create the required coordination structures to approach this objective in a harmonized framework as from 2014.

Table XXXIV: COST TO THE ADMINISTRATION OF COMPLIANCE

ADMINISTRATIVE COSTS	2013	2014	2015	2016	2017	2018	2019	2020
ADDITIONAL PERSONNEL	0,00	0,05	0,09	0,18	0,27	0,28	0,30	0,31
MATERIALS	0,00	0,03	0,06	0,13	0,19	0,20	0,21	0,22
TRAINING	0,00	0,75	1,00	1,25	1,25	1,05		
STUDIES & OTHER	0,00	0,75	1,00	1,25	1,25	1,05		
FROM THE STATE BUDGET	0,00	1,58	2,15	2,81	2,96	2,58	0,51	0,53

Investment needs, based on neighbouring transition economies have been estimated for compliance by BiH in the following Table.

Table XXXV: CAPEX COSTS TO INDUSTRY

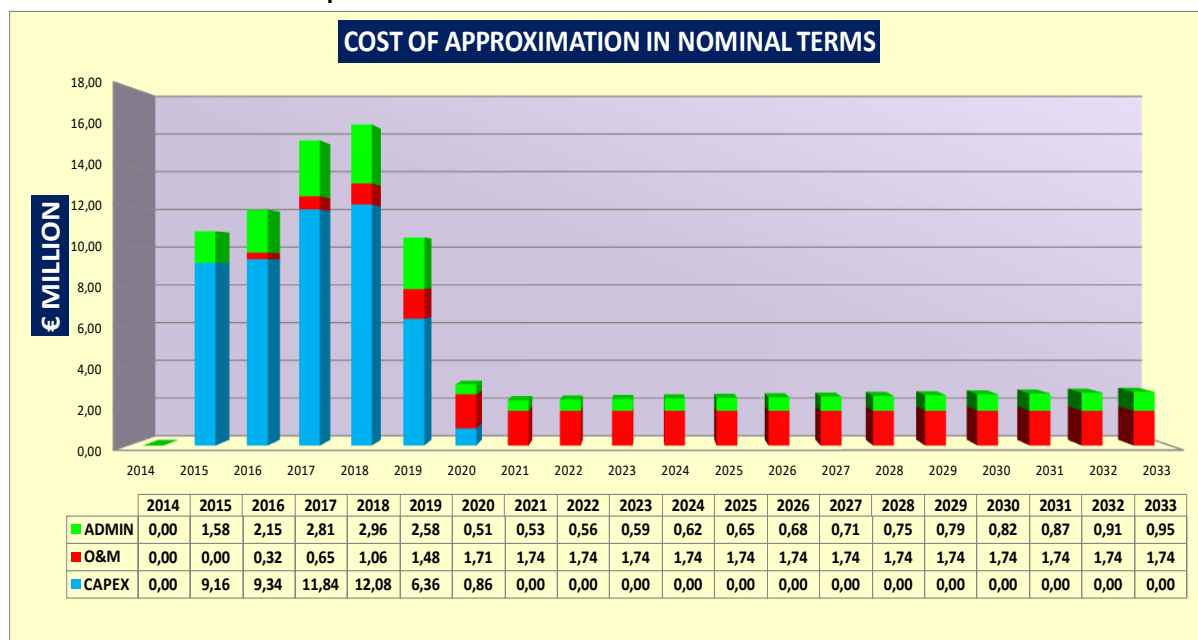
INVESTMENT COSTS OF ACHIEVING TARGETS (in € Million)	
DIRECTIVE	Economically Adjusted Undiscounted Investment Costs
Asbestos	18,0
GMOs	20,0
PCBs	3,0
Biocides	0,8
Other	5,0
TOTAL	46,80

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.

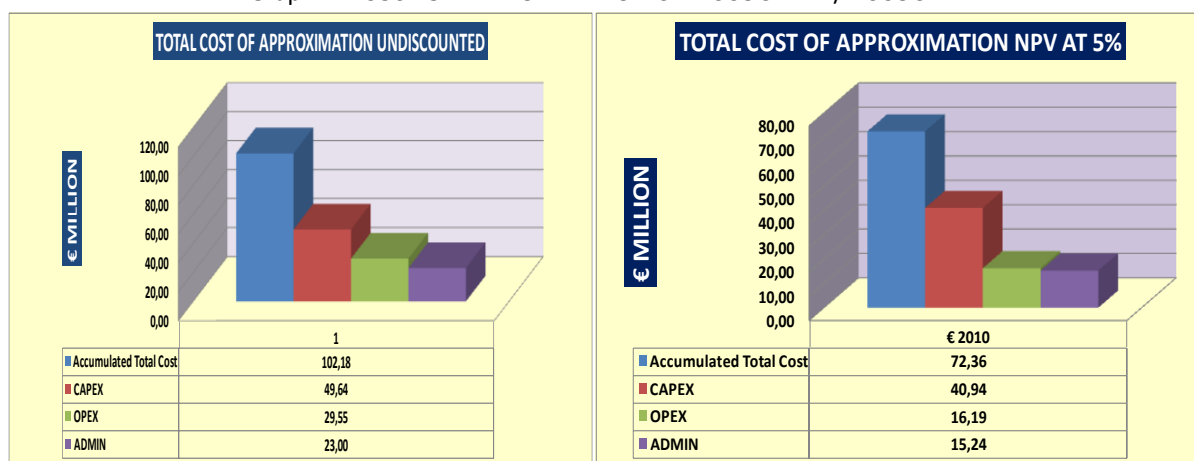


Graph XIX: COST OF APPROXIMATION IN NOMINAL TERMS



The Total Cost of € 102 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 €41 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 €16 Million in present day terms. Administrative costs are estimated at €15 Million to 2033.

Graph XX: COST OF APPROXIMATION UNDISCOUNTED/DISCOUNTED



Overall, the approximation cost of the Chemicals sector is estimated to be € 72 million.



2.2.11.2.3 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, cantonal, entities & BD of BiH budgets & ecological funds;
- Project finance without recourse to the governmental guarantees from IFIs and commercial banks;

2.3 TOTAL COSTS OF APPROXIMATION AND DISTRIBUTION BY SECTORS

2.3.1 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 BiH will have to face to apply the acquis.

Such figures are summarized below for the periods 2013-2020, 2025, 2030 & 2033.

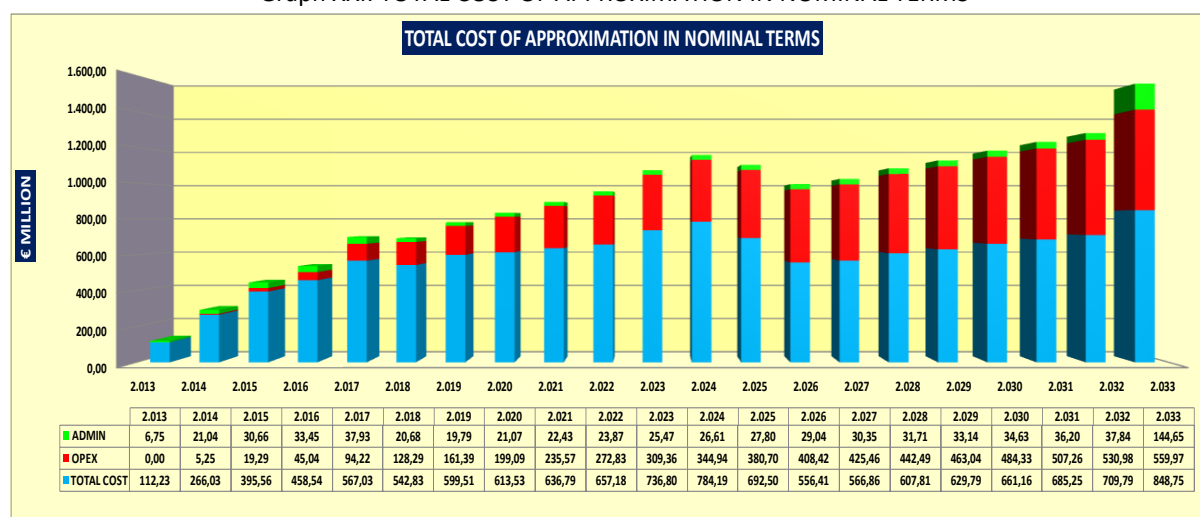
Table XXXVI: MULTI-ANNUAL COST OF APPROXIMATION

MULTI-ANNUAL COST OF APPROXIMATION (€ Million)											
SECTOR	2013	2014	2015	2016	2017	2018	2019	2020	2025	2030	2033
Nature Protection	0,00	0,86	1,62	2,53	3,90	5,21	6,07	6,99	7,42	8,81	9,76
Solid Waste Management	0,00	15,37	24,96	34,70	52,30	62,71	73,66	83,34	111,77	127,02	140,17
Water Management	85,73	183,23	260,08	276,35	342,47	319,91	343,50	328,77	309,62	413,24	366,62
Emissions to Air	26,49	55,49	95,16	128,47	152,26	144,57	173,21	192,16	261,27	109,49	329,45
Noise, Chemicals & GMOs	0,00	11,08	13,73	16,49	16,10	10,43	3,07	2,27	2,42	2,60	2,74
TOTAL COST	112,23	266,03	395,56	458,54	567,03	542,83	599,51	613,53	692,50	661,16	848,75

Annual disbursements grow from an estimated €250 Million for 2014 to a peak of almost €800 Million in 2025. In the following chart, the evolution of costs is illustrated graphically.



Graph XXI: TOTAL COST OF APPROXIMATION IN NOMINAL TERMS



This flow shows the peak in 2025. This is due to the completion of Capex in the 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 BiH are clarified. It is however, a reasoned and reasonable estimate that constitutes a first draft preliminary order of magnitude.

2.3.2 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 XXXVIII: DISTRIBUTION OF COSTS BY SECTORS

TOTAL COST AND DISTRIBUTION BY SECTORS			
SECTOR	NOMINAL	NPV @ 5%	SECTOR%
Nature Protection	139,43	74,91	1,07%
Solid Waste Management	1.894,83	1.005,45	14,30%
Water Management	6.669,21	3.829,19	54,46%
Emissions to Air	3.519,45	2.046,57	29,11%



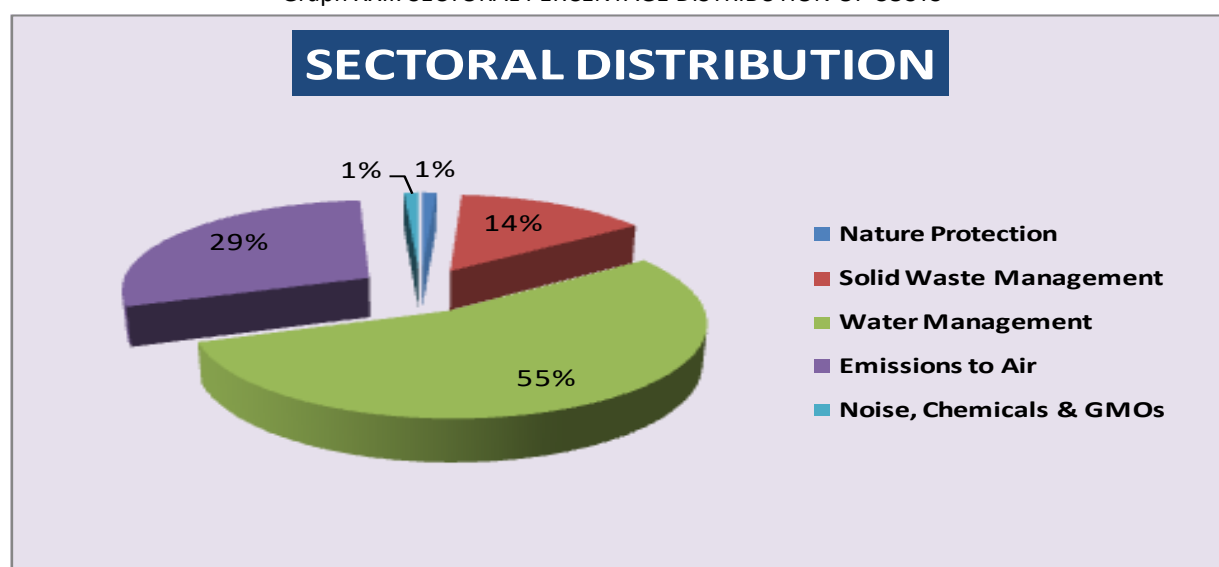
Noise& Chemicals	105,63	75,31	1,07%
TOTAL COST	12.328,55	7.031,42	100,00%

As can be observed, the Total Cost of Approximation amounts to €11,955 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 BiH in 2013 €. The said figure amounts to €7.031 million. This will be the figure quoted as total cost of approximation.

The Graph XX below illustrates the total cost distribution into sectors

Graph XXII: SECTORAL PERCENTAGE DISTRIBUTION OF COSTS



As can be observed, the highest costs will be incurred in the water sector, almost €3.8 billion and 55% of the total cost. Second in importance will be emissions to air, €1.8 billion, 27% of the total. Third will be Waste, € 1 Billion and 15% of the Total. These results are in line with empirical observations in previous transition/approximation processes.

2.3.3 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



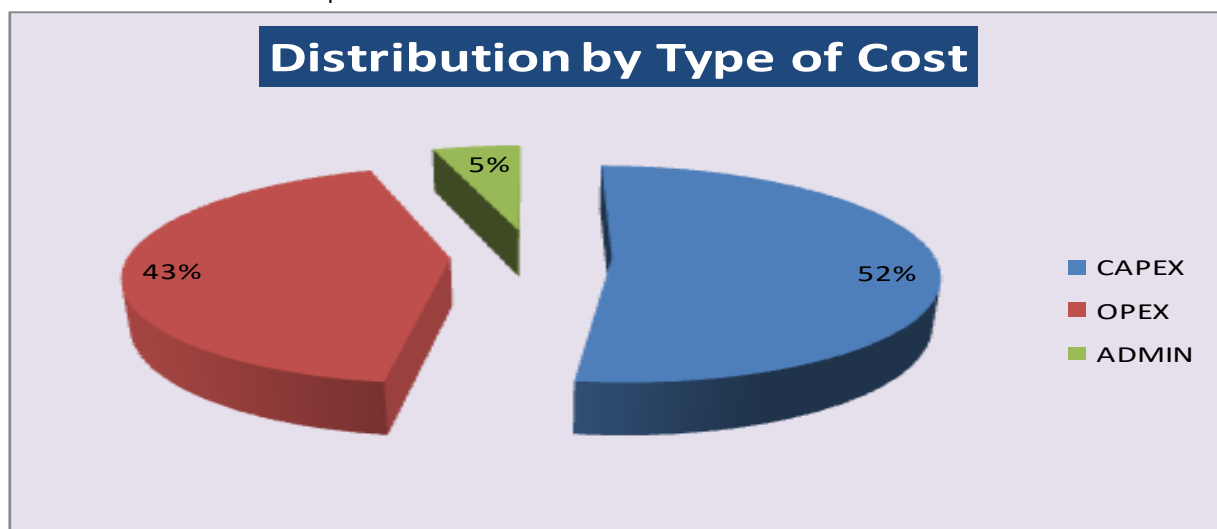
- A certain proportion of Capex will need to be financed locally. This is the local contribution component. The financing capacity of various BiH institutions will also be limited and act as a constraint to the development of the approximation process.
- Administrative costs will need to be met by allocations from the budgets of various BiH 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 XXXIX and Graph chart XXII the total NPV cost has been distributed into the indicated types of cost.

Table XXXIX: DISTRIBUTION BY TYPE OF COST

TOTAL COST AND DISTRIBUTION BY TYPE OF COST			
SECTOR	CAPEX	OPEX	ADMIN
Nature Protection	18,45	27,55	28,91
Solid Waste Management	210,84	715,98	78,63
Water Management	2.109,68	1.602,06	117,45
Emissions to Air	1.281,36	628,68	136,53
Noise, Chemicals & GMOs	40,94	16,19	18,18
TOTAL	3.661,27	2.990,45	379,71
PERCENTAGE OF COST TYPE	52,07%	42,53%	5,40%

Graph XXIII: PERCENTAGE DISTRIBUTION BY TYPE OF COSTS



As can be observed, Capex will amount to over € 3.5 Billion, 52% of the total. Opex, the greatest limiting component due to its impact on scarce affordability, amounts to almost €3 billion, 43% of the total.



Administrative costs amount, in turn, to €336 million, a sizeable figure if compared to the budgets in BiH, which will need to be used efficiently to ensure that the multiplier effect mentioned on mobilization of donor funds takes place.



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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 XL: HOUSEHOLD INCOME AVAILABLE FOR COST RECOVERY

EVOLUTION OF HHI (€/HH)											
		2014	2015	2016	2017	2018	2019	2020	2025	2030	2033
HHI AVERAGE €/HH 2012= €2.335	2.358	2.482	2.631	2.789	2.956	3.133	3.321	3.521	5.075	7.167	8.416
COMPOSITE INDEX AVERAGE	101,00	105,24	111,56	118,25	125,34	132,87	140,84	149,29	215,19	303,91	356,87
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 World Bank Maximum Recommended Threshold)	590	620	658	697	739	783	830	880	1.269	1.792	2.104
HH EQ AT HH SIZE FOR LOWER INCOME OF 3,27 -0,05%	1.175.420	1.175.420	1.175.420	1.169.543	1.163.695	1.157.877	1.152.088	1.146.327	1.117.954	1.090.283	1.074.011
ANNUAL DOMESTIC AFFORDABILITY (€ Million)	693	729	773	815	860	907	957	1.009	1.418	1.954	2.260
PRESENT EXPENDITURE ON UTILITIES PER HH (Best Estimate: 8,9% of Average HH)	210	221	234	248	263	279	296	313	452	638	749
GROSS HHI AVAILABLE FOR COMPLIANCE	483	508	539	567	597	628	661	696	967	1.316	1.511

The maximum available for new investments and their Opex is based on the expected evolution of average HHI 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 BiH's affordability constraints can sustain.



Table XLI: FINANCE NEEDED FOR COMPLIANCE

GROSS HHI AVAILABLE FOR COMPLIANCE	483	508	539	567	597	628	661	696	967	1.316	1.511
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	24	51	81	113	149	188	245	306	764	1.316	1.511
ADDITIONAL OPEX COSTS FOR COMPLIANCE (Includes Admin Costs as part of Opex to sustain System)	6,75	26,29	49,95	78,49	132,15	148,97	181,18	220,16	408,50	518,97	704,62
ADDITIONAL CAPEX COSTS FOR COMPLIANCE	105,47	239,74	345,61	380,05	434,88	393,86	418,33	393,37	284,00	142,19	144,13
NET FINANCE NEEDED FOR COMPLIANCE TARGETS	-88,07	-215,18	-314,72	-345,10	-417,81	-354,38	-354,93	-307,46	71,21	654,55	661,98

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 €149 million and Opex €132 million. To cover all costs under the investment plan, net finance to a maximum of €355 million will be required by 2019.

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, BiH 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 XLII below.

Table XLII: TRANSITION PERIODS REQUIRED FOR COMPLIANCE

SECTOR/HEAVY INVESTMENT DIRECTIVES	ACCESSI ONTRANSITION 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 BIH

The Impact on BiH of the burden of approximation, is evaluated from the perspective of:

- Consumers, both households and industrial/commercial;
- BiHasawhole, 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

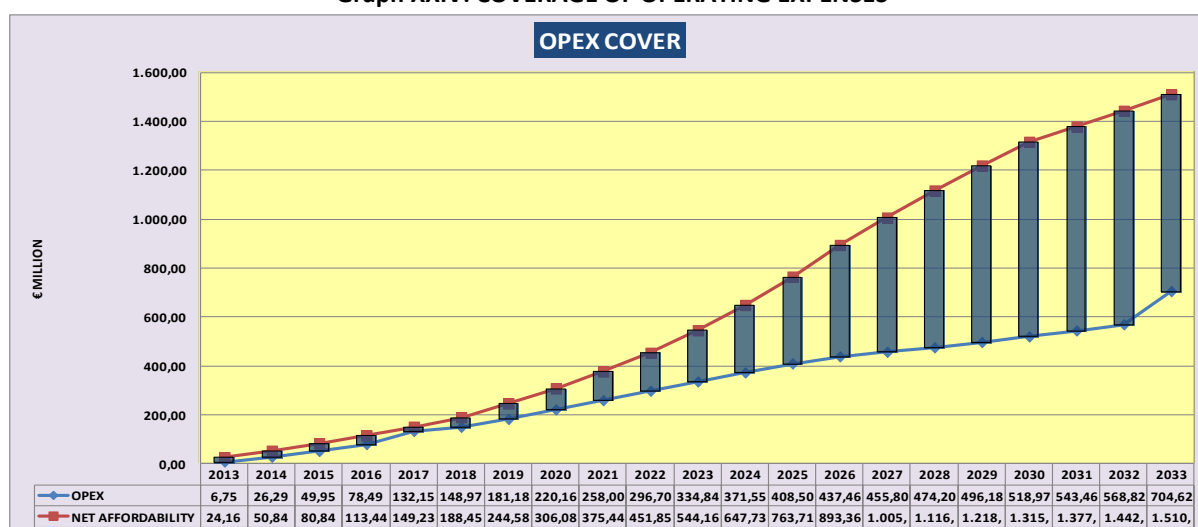


positive impacts that have been tested in the US and Western Europe for an extended period. They constitute an important part of the economic evaluation process in all large infrastructure projects.

3.4.1 Burden on consumers

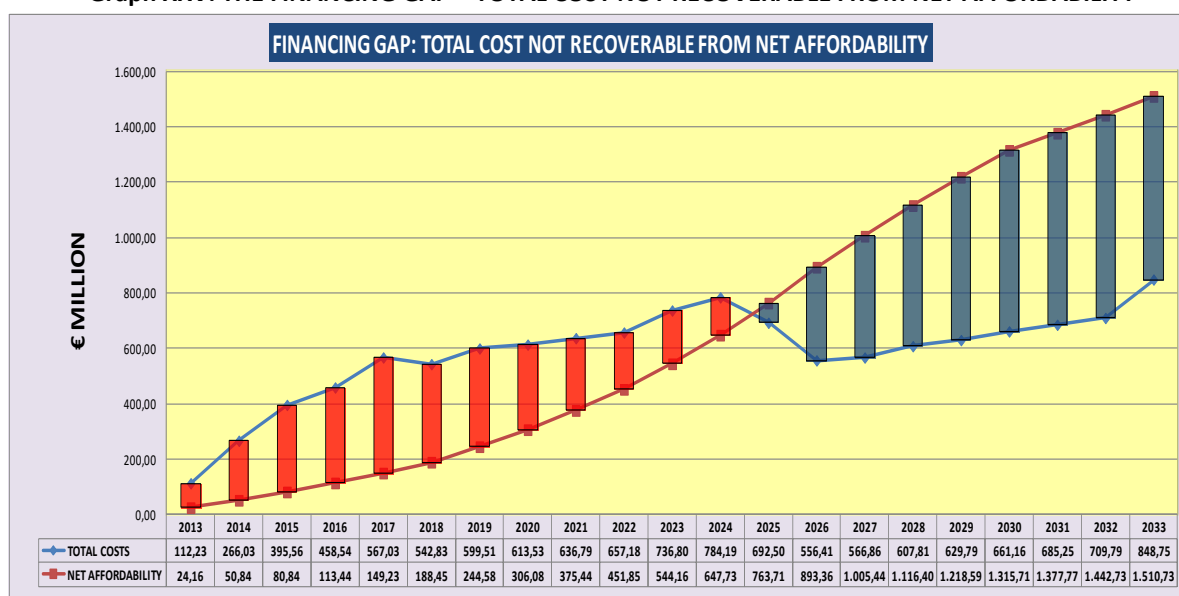
The capacity to pay for Opex is shown in the graph below.

Graph XXIV: COVERAGE OF OPERATING EXPENSES



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 XXV: THE FINANCING GAP – TOTAL COST NOT RECOVERABLE FROM NET AFFORDABILITY



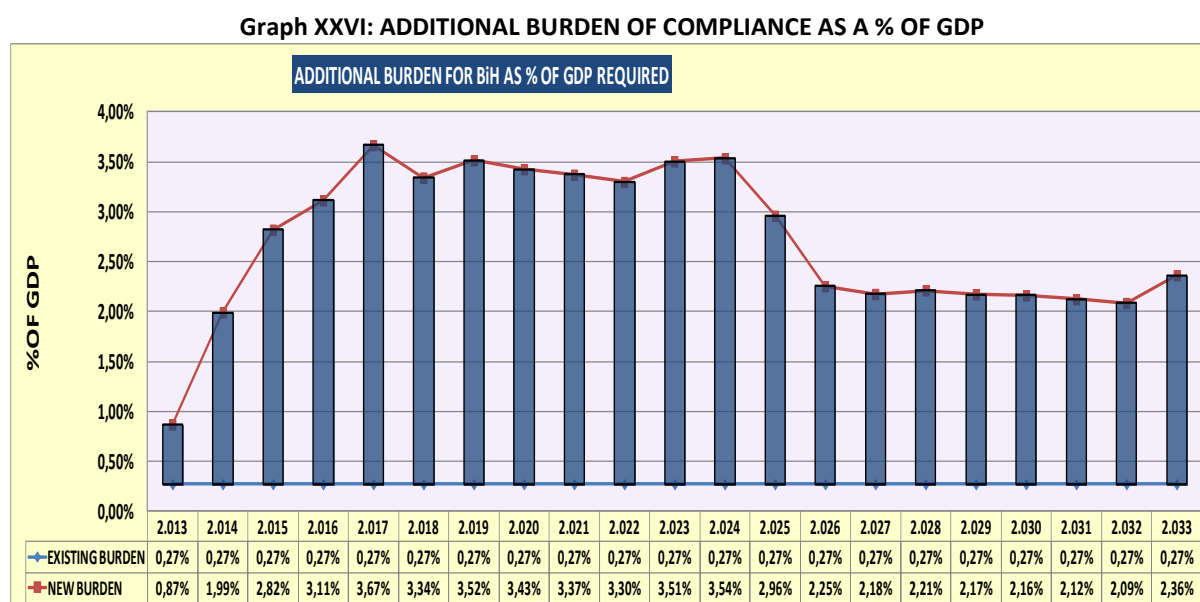
It is evident that there is a large funding gap, that is, the part of the cost not recoverable from user charges, until 2025, shown here as the red columns. As from that date, however, it is expected that the economy of BiH will generate sufficient repayment capacity to comply with the level of debt required under this approximation plan (blue columns).



3.4.2 Burden on BiH 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 BiH's GDP is shown in the Graph XXVI below.



Additional GDP to the Environment sector should be at above 3% level until 2026. This implies a very challenging effort for BiH 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 FOR 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 Funding gap

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 XXIII.



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 XLIII: COVERAGE OF THE FINANCING GAP

FINANCING GAP COVERAGE	2013	2014	2015	2016	2017	2018	2019	2020	2025	2030	2033
TOTAL COST	112	266	396	459	567	543	600	614	692	661	849
COST RECOVERY	24	51	81	113	149	188	245	306	764	1.316	1.511
FUNDING GAP AFTER COST RECOVERY	88	215	315	345	418	354	355	307	-71	-655	-662
ESTIMATED GRANTS AVAILABLE FROM EU FOR ENVIRONMENT *	20	20	20	20	20	20	20	20	180	200	200



NET FINANCING FROM NON GOVERNMENT SOURCES (22%) **	23	53	76	84	96	87	92	87	62	31	32
OTHER DONORS (4% Inv. Direct+Intl TA 4%)	4	11	16	18	23	22	24	25	28	26	34
COMERCIAL & PRIVATE SECTOR INVESTMENTS*** (6,87%Comm.+6% Other)	14	31	44	49	56	51	54	51	37	18	19
REQUIRED FROM PUBLIC SECTOR	-47	-101	-158	-174	-223	-175	-165	-126	378	931	946

* 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 XLIV: PUBLIC SECTOR SUPPORT REQUIRED

PUBLIC SECTOR SUPPORT	2013	2014	2015	2016	2017	2018	2019	2020	2025	2030	2033
PUBLIC SECTOR SUPPORT REQUIRED	-47	-101	-158	-174	-223	-175	-165	-126	378	931	946
DOMESTIC FUNDING SOURCES											
Environmental Institutions											
Environmental Protection Agency											
Ekofunds											
Local Self Government											
Economic Instruments											
Other from Public Sector Budgets (0,27% OF gdp)	35	36	38	40	42	44	46	48	63	83	97
PUBLIC SECTOR RESOURCES FOR APPROXIMATION	35	36	38	40	42	44	46	48	63	83	97
ACUMULATED RESOURCES	35	36	38	40	42	44	46	48	63	83	97
ACUMULATED SUPPORT REQUIREMENTS	-47	-148	-306	-480	-704	-879	-1.044	-1.170	-523	3.308	6.234
PUBLIC SECTOR EXTERNAL FINANCING NEEDS	-12	-112	-268	-441	-662	-835	-998	-1.122	-460	3.390	6.331

The results indicate a need for a relatively strong public sector support. When more detailed data on the entity 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 BiH of applying the environmental acquis, irrespective of whether BiH 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)¹⁷⁰ developed for Romania in 2005 and adapted to 2010 Serbian conditions.

4.2.2 Monetization

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 BiH 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 BiH 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.

170 EU-PHARE 2005 Project for Romania: "Technical Assistance for Elaboration of the Environmental Cost Assessment and Investment Plan", implemented by Eptisa



4.3 RESULTS OF THE BENEFITS CALCULATION

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 & 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 BiH and in the reference countries, which are the EU 27 as established, mainly, in the ECOTEC study of 2000/2001¹⁷¹ 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 BiH 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 BiH 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 XLV: SUMMARY OF MONETISED BENEFITS

SUMMARY OF MONETISED BENEFITS				
		RANGE OF BENEFITS (€ MILLION PER ANNUM)		
		LOW	MEDIUM	HIGH
WATER	Drinking Water	6	19	39
	Surface Water	1	2	4
	River Ecosystems	2	6	12
	Wastewater Treatment	15	29	44

171 "The Benefits of Compliance with the Environmental Acquis for the Candidate Countries", Final Report, C/1849/PtB, ECOTEC Research & Consulting Limited, juli 2001.



WASTE	Methane Capture	1	2	2
	Energy from Methane	0	0	1
	Carbon Dioxide Capture	24	38	54
	Leachate & Disamenity from Landfills	1	2	4
	Recycling & Composting	16	120	282
AIR & INDUSTRIAL POLLUTION	Reduction in Mortality	32	46	60
	Reduction in Morbidity	91	273	456
	Agriculture	0	0	0
	Construction & Materials	0	0	0
TOTAL ANNUAL MONETISED BENEFITS:		189	538	959

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 XLVI below.

Table XLVI: TOTAL BENEFITS OF COMPLIANCE

BENEFITS OF COMPLIANCE *	
	BENEFITS
WATER	1.399
WASTE	3.965
AIR & INDUSTRIAL POLLUTION	7.831
ALL OTHER	NOT MONETISED
TOTAL BENEFITS:	13.195

* * 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 comparison

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 XLVII: 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	1.399	3.829
WASTE	3.965	1.005
AIR & INDUSTRIAL POLLUTION	7.831	2.047
ALL OTHER	NOT MONETISED	150
TOTAL BENEFITS:	13.195	7.031

* 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 BiH.

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 BiH;
- That in view of the benefit to cost ratio, the implementation of the environmental acquis in BiH, should be a priority for the administrations at all levels, whether BiH decides to join the EU or not.





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5. CONCLUSIONS AND RECOMMENDATIONS

5.1 GENERAL ECONOMIC

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 BiH 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 entity and BD of BiH levels;
- An affordability study at BiH and at least entity levels 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 of entities and BD of BiH 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 entity and BD of BiH levels;
- 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 BIH

5.2.1 Strategic impact in the short term

BiH 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).

The designated entity level Institutions will need to become part of BiH operating structures which implies strong additional administrative and planning requirements.



In parallel, the detailed implementation plans will have to be prepared for, at least, the heavy investment directives. This, due to BiH's constitutional structure, will require specialized entity and BD of BiH levels action plans.

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

BiH's Institutions 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 BiH 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 plans

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 BiH, 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 ACTIONS

5.3.1 Short-term actions recommended

For the coming period, the following actions are recommended

- To create a clear form of coordination responsible for Chapter 27 Environment. BiH will implement measures at all levels, but the management of the project pipeline and the coordination of trans-national financing sources (especially of IPA II) will require some form of country-wide coordination;
- To urgently request TA in the following areas, that must be assumed by BiH regarding the approximation process:
 - EU grant objectives and procedures;
 - the indirect management system;
 - CBA (Cost Benefit Analysis);



- affordability and Tariff setting;
- financial Planning and Modelling.

5.3.2 Medium term actions recommended

On a Medium term basis, in the period 2017-2020, 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 BiH governing institution priority as it will serve the best interests of the entities, BD of BiH and BiH by aiding the mobilization of EU grants, key to improve the living standards of all Bosnian people.

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 €25 million to environment). 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.

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.



VII. SUPPORT ACTIONS FOR APPROXIMATION



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Ministry of Foreign Trade
and Economic Relations

1. INTRODUCTORY NOTES

Actions needed for environmental approximation in BiH toward environmental acquis of EU, are designed and prioritized on the basis of presented review of the EU requirements and identified and assessed institutional and economic circumstances in BiH. This chapter contains a general approach to transposition and institutional adaptation and, thereafter, a more specific designation of sectoral actions / activities. These actions and activities, taken together with those that are designated in the implementing instruments of FBiH, RS and BD of BiH will compose a unified system of harmonized measures, which should be implemented:

- In order to bring environmental sector in BiH closer to the EU acquis, while fulfilling accepted international obligations;
- During the period 2018—2020;
- Through by BiH, FBiH, RS and BD of BiH discharging fully their competences designated by their existing laws, in the constitutional frameworks;
- With accession driven financial and technical support of EU, through IPA II Programme

2. OVERALL APPROACH

2.1 TRANSPOSITION

Transposition of EU legislation from eight environmental sectors into the BiH legal systems, elaborated in this document, commenced (with the exception of the environmental noise management) in 2002, 2003 and 2004 in RS, FBiH and BD of BiH respectively. The transposition has slowed down in the last several years.

For the entire period of environmental approximation (i.e. for the period 2018-2020, or the period following the SAA entry into force) it is recommended that MoFTER (in close collaboration with DEI) plays a strong pro-active role in the coordination and harmonization of transposition activities that might include *inter alia*:

- Intensive collaboration with authorities competent for environmental protection of FBiH, RS and BD of BiH, regarding:
 - planning of order and time of transposition activities;
 - sharing the tasks in drafting of new environmental legislation;
 - providing model drafts of legislative acts that should be adopted;
 - drafting implementation plans (DSIPs & APIDs, and IPs & respective PoAs) for transposition of EU legislation (directives and Regulations) and fulfilling international obligations based in accepted international environmental treaties;



- Intensive collaboration with other BiH governmental institutions in development and adoption of policy, strategy and legislative instruments, for which adoption the BiH institutions are competent;
- Active involvement in clarification, explanation and promotion of the roles of different environmental institutions at all levels in transposition and implementation of EU environmental acquis;
- Active participation in and sharing of responsibility with other for environmental issues competent authorities for environmental reporting in the framework of planning and realisation of BiH foreign policy.

For the entire period of approximation of environmental legislation, the FBiH, RS and BD of BiH authorities competent for environmental issues should participate in developing of strategic, policy and planning instruments at all levels in BiH and undertake all available measures and activities aimed at full transposition of the EU environmental acquis into their respective legal systems, in accordance with their constitutional and legal responsibilities and existing procedures.

2.2 INSTITUTIONAL ADAPTATION

Analyses conducted have shown that the general competent institutions for environmental protection in BiH 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, it seems that they will not be in position to take over most of the institutional responsibilities in regards to the currently not transposed legal instruments. Necessity for (re)-organisation and strengthening of most of them, at all administrative levels, seems obvious. 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 legal systems in BiH on one side, and the complexity and level of decentralization of the constitutional structure of BiH on the other side, suggest that the activities in the period of implementation of this Strategy and of the entity and BD of BiH implementing instruments, should be focussed on the following:

- Each piece of EU environmental acquis that should be transposed into the legal systems in BiH, should be assigned to a specific public authority of:
- FBiH
- RS;
- BD BiH;

from the standpoint of:

- its transposition into the FBiH, RS and BD of BiH legal systems;



- 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 BiH, FBiH, RS or BD of BiH legal systems, should be assigned to a specific BiH 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 (i.e. fulfilling BiH international obligation stemming from SAA.

3. SECTORS RELATED APPROACH

3.1 HORIZONTAL ISSUES

Above reviewed findings indicate the following actions and measures need to be undertaken regarding approximation of horizontal environmental legislation, in short- and mid-term periods:

- In close cooperation with the entities' and BD of BiH's authorities, MoFTER should soon start procedures for ratification / accession to PRTR Protocol (Kiev, 2003), SEA Protocol (Kiev 2003) and amendments to ESPOO and Aarhus Conventions;
- In order to overcome the gap related to coordination and harmonization, MoFTER might, through competent entities coordinators for European integration, instigate (and propose) joint annual planning with DEI of the activities pertaining to the process of environmental approximation, as it is designed in this Strategy. That joint planning would deal with coordination and harmonization of environmental approximation process as a part of overall coordination of EU integrations of BiH with EU. The scope of that joint planning process should relate to efficient discharging of responsibilities of these institutions, in line with the coordination mechanism. This is an urgent need and from a time perspective, this task should be done as soon as possible;
- Special attention should be paid to preparation of DSIPs for the directives dealing with free access to environmental information and public participation in decision-making on environmental matters, due to the nature of these directives (as significantly influencing all other directives; free access to environmental information and public participation in decision-making on environmental matters, as well as access to justice, are basic principles in the entire environmental protection sector). It could be developed within a period of two years. This DSIP would make a framework for undertaking necessary activities and development of respective APIDs for Implementation of the EU directives in the entities and BD of BiH.
- DSIPs should also be developed in full cooperation of BiH, FBiH, RS and BD of BiH environmental authorities and adopted by the competent BiH authorities for all other horizontal issues and their implementation should be supported by APIDs adopted by the competent authorities of entities and BD of BiH;



- Preparation of DSIPs for all horizontal directives could alternatively be replaced with developing only one plan for all horizontal issues. Overall coordinator of this task shall be MoFTER with strong involvement of related authorities from the entities and BD of BiH. This task should be executed within a period of two years;
- Preparation of FBiH, RS and BD of BiH Action Plans for Implementation of Directives (APIDs). These activities have to be executed within a period of two years.

In addition to these activities, activities shall be implemented that would be aimed at:

- Carrying out of an in depth comparative analyses of harmonization (in BiH) of legislation related to EIA and SEA Directives; and
- A good starting analysis of EU legislative acts and step by step approach would be a great step ahead in preparation for transposition of INSPIRE and environmental liability directives.

3.2 WATER MANAGEMENT

The findings presented in the previous chapters indicate the following activities should be implemented

- Preparation (development) of water management strategic and policy documents and river basin management plans is within the competence of entities and BD of BiH, while MoFTER is competent for coordination of activities at the level of BiH. This inter- institutional cooperation should be provided through:
 - implementation of specific (internationally financially supported) projects (aimed at providing TA); and
 - work of joint working groups that would draft documents on the basis of the TA project outputs suitable for initiating procedures for adoption of the respective strategic and policy instruments and river basin management plans in accordance and under the procedure set out by FBiH, RS and BD of BiH legislation.
 - Strategies, policies and management plans of river basins should be prepared in accordance with the international obligations accepted by BiH.
- Having in mind that competence for an overall coordination of all activities related to EU approximation of BiH is assigned to the Directorate for European Integration (DEI) it is necessary that MoFTER coordinates its activities with DEI
- With the aim of full transposition and implementation of EU directives regulating water management and identification of adequate financial needs and investment priorities in water sector, DSIPs, applicable in the entire territory of BiH, should be developed within a period of two years. Coordination and harmonization of activities should be conducted by MoFTER. By these plans, all water management authorities in BiH, should be assigned with specific list of tasks related to transposition, implementation and enforcement of specific provisions of EU legislation on water into the entity and BD of BiH legal systems. As a framework planning instruments, DSIPs should serve to satisfy two purposes:



- to provide successful coordination and harmonization of FBiH, RS and BD of BiH activities (in time and in methodology applied) aimed at:
 - full transposition of EU water acquis into their legal systems;
 - implementation of their legislation containing transposed EU requirements;
 - enforcement of such legislation;
 - identification of investment needs in the entire territory of BiH;
 - identification of activity and investment priorities in the country; and
- to fulfil accepted international obligations of BiH, in accordance with SAA and Constitution of BiH, i.e to provide conditions for smooth international communication of BiH, taking into account that river basins in BiH are only parts of wider international river basin districts
- Detailed action plans (APIDs) of activities aimed at application of DSIPs in the entities and BD of BiH should be developed and adopted by the entities and BD of BiH in accordance with their legislation and under the procedures set out therein. MoFTER should provide coordination and monitoring of this process, what would provide conditions for fulfilling reporting duties of BiH to EU Commission and EEA.

3.3 WASTE MANAGEMENT

Analyses preceding development of this Strategy provided a basis for justification of implementing in BiH of the following activities aimed at full transposition, implementation and enforcement of the EU acquis on waste management and fulfilling in that way international obligations of BiH accepted by ratification of SAA:

- Directive Specific Implementation Plans (DSIPs) for each of the listed waste management relating directives should be prepared under coordination by MoFTER in collaboration with DEI. Representatives of the competent entity and BD of BiH environmental authorities should participate in the work;
- Subsequently or in parallel with development and adoption of these DSIPs, MoFTER should coordinate and assist the FBiH, RS and BD of BiH competent authorities in developing their Action Plans for Implementation of (each waste management relating) directive (APIDs), which would be adopted by the entities and BD of BiH authorities in accordance with their respective legislation;
- DSIPs and APIDs shall be developed and adopted within a period of two years.

As short-term priorities (2 – 4 years) might be identified drafting of relevant strategic and planning documents aimed at full transposition and implementation of EU acquis regarding waste management - e.g. separate collection, reuse, recycling, recovery, reduction of biodegradable waste going to landfills, etc.



3.4 AIR PROTECTION AND CLIMATE CHANGE

In the air protection and climate change sectors the following activities should be implemented in order to achieve full compliance with EU environmental acquis and by BiH accepted international obligations:

- Regulating the sulphur content in the liquid fuels at the State level, by amending the decision on quality of liquid oil fuels in a way it to completely comply with the Directive on sulphur content in liquid fuels and allowing FBiH, RS and BD to pass more stringent legislation in case they deem necessary;
- The Decision on quality of liquid oil fuel¹⁷² stipulates provisions for quality of fuel including the content of sulphur. On the other hand, laws on air protection of FBiH, RS and BD of BiH contain legal basis for adoption of secondary legislation on content of sulphur in fuels. None of the this legal instruments have been passed yet but in the case they do, there is chance that same matter might be double regulated, and more importantly that it will be regulated differently, what would cause legal uncertainties. This issue could be resolved by regulating the matter by amending the existing BiH Decision.

These priorities should be implemented in a period of two to four years.

In a mid-term term period (4 – 6 years) the following activities should be undertaken:

- Drafting of the BiH Implementation Plan for Stockholm Convention covering the entire State territory in order BiH to implement its international obligations under the Stockholm Convention (to which BiH is a party to).
- Drafting of National Allocation Plan (NAP) and Action Plans (APIDs) covering the territories of FBiH, RS and BD of BiH, in accordance with NEC Directive. NAP should be adopted every five years, stating total quantity of allowances for BiH and its constitutional units, in the planned period. Drafting process should include representatives of competent environmental authorities of BiH, FBiH, RS, and BD of BiH. This activity should be carried on under the procedure in accordance with Articles 10, 11, 16, and 28 of the Law on Administration of BiH and Article 9 (2) of the Law on Ministries and other Administrative authorities of BiH. The National Allocation Plan tables must be communicated to the European Commission at least 12 months before the start of each subsequent period.
- Provisions regarding informing consumers on fuel economy and CO₂ emissions are also non-existent in BiH. A legal instrument regulating this issue needs to be adopted at the State level (by the BiH Ministry of Communications and Transport) on the basis of Law on Basics of Traffic Safety on Roads in BiH.¹⁷³ This act (e.g. regulation) should include, inter alia, obligation that label on fuel

¹⁷² "Official Gazette of BiH", No 27/02.

¹⁷³ "Official Gazette of BiH", No 6/06, 75/06, 44/07, 84/09 i 48/10.



economy and CO₂ emissions must be attached to or displayed, in a clearly visible manner, near each new passenger car model at the point of sale. Furthermore, each poster (or alternatively, a display) must be exhibited with a list of the official fuel consumption data and the official specific CO₂ emissions data of all new passenger car models. Also, promotional literature must contain the official fuel consumption and the official specific CO₂ emission data of the passenger car models;

- Provisions regarding the passenger cars emissions are non-existent in BiH. A legal instrument (e.g. regulation) regulating this issue needs to be passed at the State level by the Ministry of Communications and Transport of BiH on the basis of Law on Basics of Traffic Safety on Roads in BiH. This regulation should set the average CO₂ emissions for new passenger cars at 130 g CO₂/km at the moment of promulgation and at 95 g CO₂/km as average emissions for the new car fleet from 2020 onwards. This regulation should contain provisions regarding the communication with the European Commission.

As the mid-term priorities (4 – 6 years) the following activities of competent authorities have been identified:

Following establishment of clear legal bases and adoption of secondary legislation (decrees, regulations, decisions) on POPs in relevant entity and BD of BiH legislation, and appointment of FMOET, MOCEPPE and DUPPA as competent authorities, their representatives should participate in drafting of an Implementation Plan (and Plan of Action) in order for BiH to implement its obligations.

- The Ministry of Communications and Transport of BiH should be designated as a competent authority for consumer information relating to fuel economy and CO₂ emissions and passenger cars emissions. Minister of Communication and Transport of BiH should adopt legal instruments to regulate these two issues on the basis of the Law on the Traffic Safety Basics on the Roads in BiH.¹⁷⁴
- Responsibility for controlling emissions from non-road machinery should be conferred to the respective authorities of BiH, FBiH, RS and BD of BiH in terms of coordination of all activities in order to fulfil accepted international obligations, and transposition, implementation and enforcement of the respective international and EU requirements.

3.5 INDUSTRIAL POLLUTION

The competent authorities should adopt an implementing instrument on management of the Pollutant Release and Transfer Register (PRTR) from the industrial facilities. This activity should be implemented in a short-term period (2 – 4 years).

3.6 CHEMICALS

In order to bring the chemical management in BiH in compliance with the EU acquis on chemicals, the following activities should be undertaken:

174 "Official Gazette of BiH", No 6/06, 75/06, 44/07, 84/09 and 48/10.



- The Ministry of Foreign Trade and Economic Relations is competent for coordinating the environmental approximation process including the regulation on chemicals management in EU.
- Ministry for Civil Affairs is competent for certain coordinating activities relative to the chemicals management in BiH (in line with the EU regulations).
- With the aim of full transposition of EU legislation into the legal systems in BiH, the MFTER shall need to have an intensive and continuous cooperation with the Ministry of Civil Affairs of BiH.
- Based on the precise task distribution, a legal ground(s) for efficient communication with the European Agency for Chemicals, need to be established. Respective aspects of specific provisions of FBiH, RS and BD of BiH legislation, which would transpose EU chemical acquis, should also be elaborated.
- FBiH, RS and BD BiH must intensify further work on transposition of EU legal requirements in the chemical sector and approximation of legislation in BiH.
- This is an activity of the short-term priority and should be started in FBiH and BD of BiH.
- Having in mind differences in status of transposition of EU chemical acquis between FBiH, RS and BD of BiH, certain unofficial support should be provided among FBiH-RS-BD of BiH where there is need for that.

3.7 NATURE PROTECTION

There is a need for further work on ratification / accession to international treaties that BiH did not ratify or accede yet. FBiH adopted Law on Nature Protection¹⁷⁵ and Republika Srpska as well¹⁷⁶, whereas it has not been adopted in BD of BiH.

Having in view the findings presented in this document earlier, the following activities aimed at full compliance with the Community *acquis* shall be undertaken:

- Instigating as soon as possible the procedure for accession to the Bonn Convention (1979) on the conservation of migratory species of wild animals and the Agreement on the conservation of African-Eurasian water birds (1995);
- Conditions shall be provided for efficient BiH communication with and reporting to the EU institutions (as a part of fulfilling of international obligations accepted by BiH);
- Preparing strategic, policy and planning instruments (e.g. DSIPs), which would cover the entire territory of the country (as framework instruments) and APIDS, which would be implemented in the respective territories of FBiH, RS and BD of BiH, for all EU directives regulating the nature protection in EU. The drafting process shall be coordinated and activities harmonized by MoFTER, with necessary participation of DEI, and with equal participation of competent authorities of FBiH, RS and BD of BiH;
- These tasks should be accomplished within a short-term period of two to four years;

¹⁷⁵ "O.G. FBiH, No 66/13.

¹⁷⁶ Official Gazette RS No 20/14



- Having in mind differences in status of transposition among RS, FBiH and BD of BiH, certain unofficial mutual assistance and support might be established.

3.8 ENVIRONMENTAL NOISE

The major legislative instruments (laws and implementing (secondary) legislation regulating environmental noise in BiH are missing. This sector is probably the least transposed part of the EU environmental *acquis* into the legal systems in BiH.

Due to the fact that transposition of the EU *acquis* on noise into the BiH legal systems is at a very low level, activities should be undertaken in order to attain the full transposition. This can be carried out through adoption of new legal instruments in BiH.



VIII. ANEXES



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Ministry of Foreign Trade
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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 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
3	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
4	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
5	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.
6	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)
7	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)
8	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 - WFD
2	Council Directive 91/271/EEC of 21 May 1991 concerning urban waste water treatment, as last amended by Regulation (EC) No 1137/2008 of the European Parliament and of the Council of 22 October 2008 – UWWT Directive
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 596/2009 of the European Parliament and of the Council of 18 June 2009 – Drinking Water Directive
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 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 - 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
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

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

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	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 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 CO ₂ 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 CO ₂ 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 18 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	Directive 67/548/EEC on classification, labelling and packaging of dangerous substances (as amended & adapted), repealed with the effect from 1 June 2015 by the 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
2	Directive 1999/45/EC on the classification, packaging and labelling of dangerous preparations as amended, repealed with the effect from 1 June 2015 by the 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



3	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; Regulation EC/12016/2235 of 12 December 2016; Regulation EC/2017/227 of 9 February 2017.
4	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)
5	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).



6	Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layers, amended by: Regulation (EC) No 2038/2000; Regulation (EC) No 2039/2000; Decision 2003/160/EC; Regulation (EC) No 1804/2003; Decision 2004/232/EC; Regulation (EC) No 2077/2004; Regulation (EC) No 29/2006; Regulation (EC) No 1366/2006; Regulation (EC) No 1784/2006; Regulation (EC) No 1791/2006
7	Regulation EC/689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals (replacing: Import and Export of Dangerous Chemicals Regulation ((EC) 304/2003) as amended by Regulation (EC) 1213/2003, 775/2004 and (EC) 777/2006)
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 amending Regulation (EC) No 1195/2006, 172/2007 and 323/2007, Regulation (EC) No 2016/293/EU and 2016/460/EU amendments Annexes I, IV and V.
9	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 201.
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	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)
12	Directive 2010/63/EU on the protection of animals used for scientific purposes
13	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



14	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 biocide products, which repealed Directive 98/8/EC concerning the placing of biocide products on the market
15	Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

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]

This Annex contains a list of relevant international environmental treaties that EU and BiH are or potentially should be parties to.

GLOBAL RELEVANCE TREATIES

No.	Title		Signing		BiH		EU Party from
			Date	Place	Status	O.G.	
1	CONVENTION ON WETLANDS OF INTERNATIONAL IMPORTANCE ESPECIALLY AS WATERFOWL HABITAT (RAMSAR)		02.02.1971	Ramsar, Iran	SUC; 2001	01.03.92	n/a
2	THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS (MARPOL) (IMO)		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	



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	6	Bonn Amendment	22.06.1979 [CoP]	Bonn, Germany			
	7	Gaborone amendment	30.04.1983 [2 nd Ext. CoP]	Gaborone, Botswana			
8		VIENNA CONVENTION FOR THE PROTECTION OF THE OZONE LAYER (UNEP)	22.03.1985	Vienna, Austria	SUC	SFRJ-MU 1/90 & 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	27-29.06.1990 [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 th CoP]	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 (amended Dumping Protocol)		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, DC, 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 [4 th CoP]	Geneva, Switzerland			
	41	Amendment to Annex A	25-29.04. 2011	Geneva, Switzerland			



COUNCIL OF EUROPE TREATIES

No.	Title	Signing		BiH		EU
		Date	Place	Status	O.G.	
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

No.	Title		Signing		BiH		EU
			Date	Place	Status	O.G.	
44	CONVENTION ON LONG-RANGE TRANS-BOUNDARY AIR POLLUTION (CLRTAP)		13.11.1979	Geneva, Switzerland	SUC; 06/03/1992	SFRJ-MU 11/86 & 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,			
		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, IV, V 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	ACC; 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 May 2012 [5 th Meeting of the Parties]	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



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