

Harmonising the ‘business-as-usual scenario’ development for the MSFD: A study on the ‘baseline policies’

A STUDY REPORT

Prepared by AKTiVS Ltd.

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List of abbreviations

BAU	“Business-as-usual” scenario
BD	Biodiversity
BS	Baltic Sea
BSAP	(HELCOM) Baltic Sea Action Plan
CBA	Cost-Benefit Analysis
CEA	Cost-Effectiveness Analysis
CIS	Common Implementation Strategy
D	Descriptor (of GES)
EC	European Commission
EU	European Union
ESA	Economic and Social Analysis
GES	Good Environmental Status
IAS	Invasive alien species
NIS	Non-indigenous species
MS	Member States
MSFD	Marine Strategy Framework Directive (2008/56/EC)
PF	Policy framework
PoM	Program of measures
RBMP	River Basin Management Plans
WG ESA	Working group on “Economic and Social Analysis” as part of the CIS for the MSFD
WFD	Water Framework Directive (2000/60/EK)

Introduction

This study has been implemented as part of the GES-REG project¹ WP5 on the “Economic and Social analysis” (ESA) for the MSFD. WP5 of the project aimed to support development of cost-effective and socio-economically efficient programmes of measures for reaching ‘Good Ecological Status’ (GES) in the central and north-eastern sub-basins of the Baltic Sea.

The study was conducted under **WP5 Task 5.2 “Coordinating methodologies and improving information base for the “business-as-usual” scenario (BAU) development”**.

Identifying policies to be included in the BAU was noted among the most relevant issues for harmonisation of the national BAU approaches.² For the recommendations to be developed as part of GES-REG WP5 it was proposed:

- 1) to develop a list of environmental policy frameworks that could be considered (commonly) in the BAU for the national MSFD programs of measures (called as ‘baseline policies’ in this study) and
- 2) to develop principles for identifying policies and measures to be included in the BAU for the national MSFD programs of measures.

General aim of the study was to serve information for developing these recommendations.

The methodological approach included appraisal of the “existing” (incl., forthcoming till 2020) policies with an impact on the marine (Baltic Sea) environment and assessment of implementation effectiveness of these policies. To support the analysis the information and assessments were collected in a (Excel) database – “inventory” of the ‘baseline policies’ and measures, which is seen as useful tool to support the countries’ work on the BAU development for the MSFD program of measures.

The report starts with explaining role of the BAU in developing the MSFD programs of measures and guidelines at the EU level for developing the BAU and analysing the ‘baseline policies’ (section 1). The section 2 describes objectives, scope and methodological approach of the study. The section 3 provides the main results of the study from the evaluation of the ‘baseline policies’, including analysis of the ‘baseline policies’ that were included in the countries’ “Initial Assessments”, explanation of the developed (Excel) “inventory”, appraisal of the “existing” policies and assessment of their implementation effectiveness. The section 4 provides illustration with detailed results on the evaluation of the policies for selected pressure (introduction of non-indigenous species). Recommendations in light of harmonising the national approaches on policies to be considered in the BAU are provided in the last section.

¹ The project “Good Environmental Status through Regional Coordination and Capacity Building” (GES-REG) is co-financed by the European Regional Development Fund under Central Baltic INTERREG IV A Programme 2007-2013 and the project’s partners. Its overall aim was to support coherent and coordinated implementation of the Marine Strategy Framework Directive (MSFD, 2008/56/EC) in the central and north-eastern sub-regions of the Baltic Sea – in the Gulf of Finland, northern part of the Baltic Proper and Gulf of Riga.

² See the section 5 of the GES-REG WP5 report Pakalniete K., Muraško A. (2012) “*Comparative analysis of the BAU development results in the national “Initial Assessments” of the project’s countries*”.

1 'Baseline policies' according to the MSFD

The MSFD requires taking into account in the program of measures (PoM) relevant existing and forthcoming policies with an impact on the marine environment. It also requires assessing contribution of these measures (effect) to achieving environmental targets (see the information box below).

Box 1.1. Requirements of the MSFD Article 13 on "Programs of measures":

(2) Member States shall integrate the measures devised pursuant to paragraph 1 into a programme of measures, **taking into account relevant measures required under Community legislation, in particular (...), as well as forthcoming legislation on environmental quality standards in the field of water policy, or international agreements.**"

(7) Member States **shall indicate in their programmes of measures how the measures are to be implemented and how they will contribute to the achievement of the environmental targets established pursuant to Article 10(1).**

Existing and forthcoming environmental policies are analysed as part of the BAU. Role of the BAU in developing the MSFD program of measures (PoM) is illustrated in the figure below. The BAU overall consists of two elements – assessments on (1) development of marine uses and (2) implementation of existing and planned till 2020 policies with an impact on the marine environment.

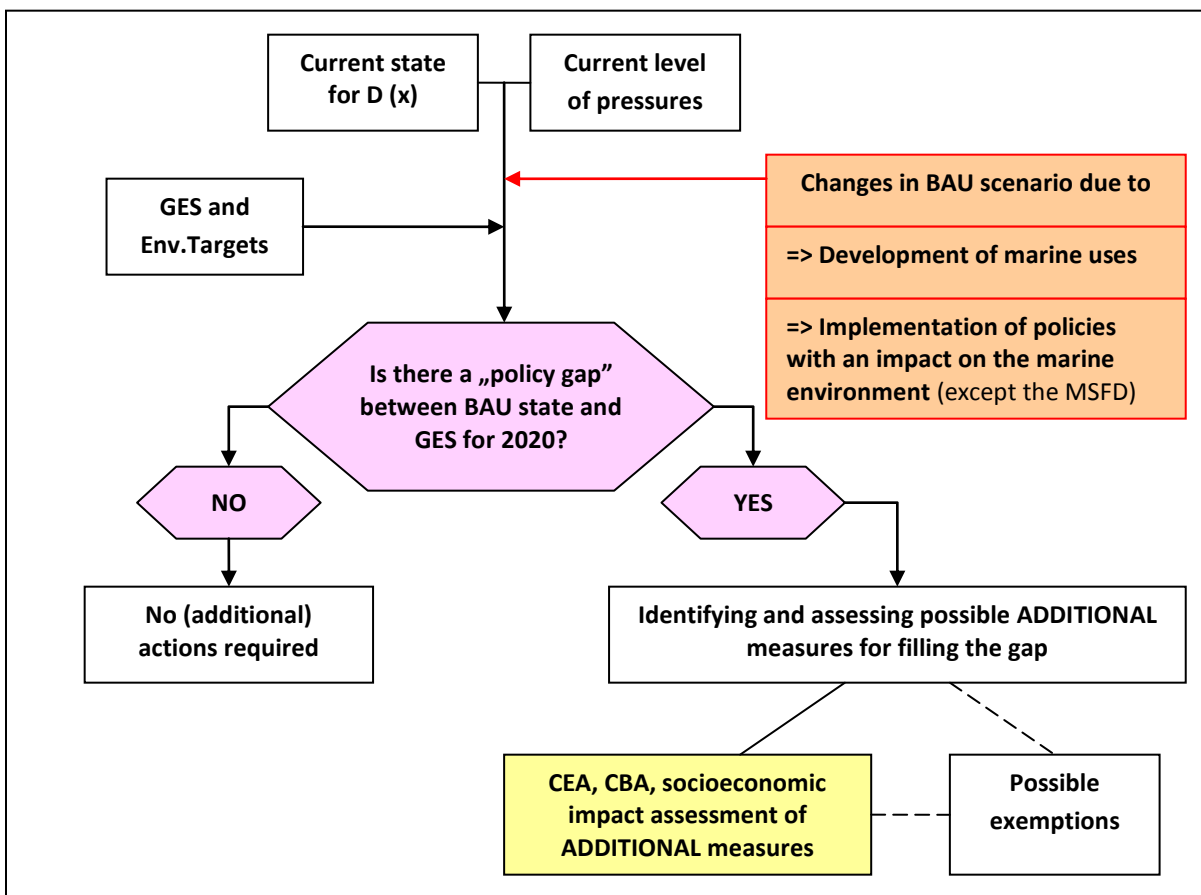


Figure 1.1. Role of the BAU in developing the MSFD programs of measures. Source: K. Pakalniete

The BAU has important role in the “gap analysis” to indicate potential difference between GES and situation that might occur in the absence of additional measures to achieve GES. The BAU therefore have role in **setting context for development of additional measures to achieve GES**.

It is expected that the PoM (to be prepared by the Member States till the end of 2015) would largely consist of measures of the ‘baseline policies’. Thus their assessments (incl. their effect) should be considered properly since the BAU forms “reference point” for assessing if there is a “policy gap”, which will need to be filled in by additional measures. In this way the BAU determines socioeconomic implications for economy and society (if additional measures need to be considered). The Directive requires conducting specific economic analysis of such additional measures, thus the BAU determines also the economic analysis needs for development of the PoM.

General **recommendations for the BAU development, including, for considering existing and forthcoming policies**, are provided in the WG ESA “Guidance document” on the ESA for “Initial Assessments”.³ According to this document (p 25) “A *baseline, or a Business As Usual scenario, describes the anticipated evolution in the environmental, social, economic and legislative situation in a marine environment over a certain time horizon in the absence of the policy under consideration (i.e. if the MSFD is not implemented).*” The role of the BAU is to provide assessment of how the marine environment might evolve over time, given potential trends in uses of marine waters and the existing legislative and regulatory frameworks governing those waters (including those that would be implemented till 2020, except the MSFD). The BAU outcome is an assessment of anticipated changes in pressures and marine environment (characterised by GES Descriptors and Indicators).

Relevant principles for considering and assessing the existing and forthcoming policies as part of the BAU that are recommended by the WG ESA “Guidance document” are provided in the information box below.

Box 1.2. Relevant principles for considering “existing” policies in the BAU development from the WG ESA “Guidance document” (2010).

Which policies should be included in the BAU scenario

“BAU scenarios should also take account of the existing legislative and regulatory frameworks governing uses of marine waters, as this places limits and constraints on uses, and could mitigate pressures even in the absence of MSFD. Consideration of the existing legislative and regulatory frameworks is therefore essential to ensuring that a scenario of the evolution of the marine environment in the absence of MSFD can be developed.” (p 28).

“The effects of marine legislation and policies and terrestrial legislation and policies that significantly affect the marine environment should be included within BAU scenarios.” (p 28)

“(.) take account of the impact of relevant legislation, regulations and voluntary agreements originating from international forums, e.g. the UN, the EU, Regional Seas Conventions, and from Member States themselves.” (p 29)

How to consider effect of these policies

“An assessment of the impact of legislation and regulation should identify the uses of marine waters affected, and identify the impact on the pressures generated by that activity. Policy appraisal and evaluation evidence could provide a useful source of data for these impacts. However, the impact of existing legislation may be unclear from the existing evidence base. If this is the case, Member States could undertake

³ WG ESA (2010) „Economic and Social Analysis for the Initial Assessment for the Marine Strategy Framework Directive: A Guidance document.” EC

qualitative analysis, using stakeholder and other expert opinion to assess the potential impact that existing legislation and regulations may have on uses of marine waters and the pressures they generate. Sensitivity analysis may also be used to identify the potential impact of different assumptions around the impacts of existing legislation and regulations. However, the analysis should not always assume that policies and legislation are fully successful and deliver the full range of outputs and outcomes expected if there is not sufficient evidence available to support this." (p 29)

How to deal with changes (till 2020) in the policies

"The BAU scenario should also take account of relevant legislative and regulatory reforms that are likely to come into effect prior to 2020. This includes, for example, the reforms to the Common Fisheries Policy, which will come into effect in 2013, and the upcoming Ballast Water Convention. However, as the precise content of these future developments will be uncertain, it will be difficult to assess the impacts of these policies on uses of the marine environment and the pressures they create. Consequently, it is suggested that the BAU scenario should identify policies and legislation under development, but should not make assumptions about future content, beyond assuming that the range of current measures contained within those policies continue to remain in effect." (p 29-30)

Coordination of approaches for the BAU scenario development

Due to transboundary character of pressures and impacts there are relevant regional and transboundary trends and features that may have potential impacts to be identified and presented in the BAU. *"It is therefore suggested that the methodology and assumptions used to generate the BAU scenarios should be consistent in the whole marine region or sub-region and that transboundary impacts and features are taken into account. This may require regional cooperation and coordination of Member States of the marine (sub)region (..)" (p 32)*

The MSFD CIS Recommendations' document for developing the MSFD PoM⁴ proposes **4 categories of the measures** (see the information box below). The general division is between **"existing measures"** (categories 1a and 1b) and **"new measures"** (categories 2a and 2b). **The "existing measures" need to be accounted in the BAU.** The "new measures" need to be included in the PoM, if the "policy gap" is expected between the BAU state and GES, and the Article 13.3 requirements apply to these measures (e.g. assessing technical feasibility, cost-effectiveness, cost-benefit analysis of these measures).

Box 1.3. Categories of measures for the MSFD PoM according to the CIS Recommendations' Document for PoM. (Source: MSFD CIS Recommendations document "Programmes of measures under MSFD: Recommendations for establishment / implementation and related reporting".)

"A Programme of Measures (PoM) is a set of measures that the MS is responsible for implementing, put into context with each other, referring to the environmental targets they address. The Programme of Measures includes existing and new measures.

Existing measures (Art 13.1 & 13.2) are:

Category 1a: Measures relevant for the maintenance and achievement of GES under the MSFD, that have been adopted under other policies and implemented;

Category 1b: Measures relevant for the maintenance and achievement of GES under the MSFD that have been adopted under other policies but that have not yet been implemented or fully implemented;

New measures (Art 13.3) are:

Category 2a: Additional measures to maintain and reach GES which build on existing

⁴ MSFD CIS Recommendations document "Programmes of measures under MSFD: Recommendations for establishment / implementation and related reporting".

implementation processes regarding other EU legislation and international agreements but go beyond what is already required under these;

Category 2b: Additional measures to maintain and reach GES which do not build on existing EU legislation or international agreements.”

As can be seen from the specification, the “existing measures” are linked to other policies (than the MSFD), these are adopted measures, and include both – those already implemented and those not yet implemented (or not fully implemented). If a measure is related to other policy but go beyond what is required under this policy (according to its objectives/requirements), such measure is classified as “new measure” (the category 2a).

Taking into account the relevance of proper assessment of the ‘baseline policies’ and possible further implications that it can arise, it can be suggested that similar **principles** are followed by countries in the same marine region **on which policies should be taken into account in the BAU**. In reality these are many tens of ‘baseline policy’ frameworks and hundreds of measures. Deciding on which of them should and could be included in the BAU becomes complex in particular due to various legal statuses and implementation statuses of these policies and measures (in particular, in case of forthcoming policy frameworks, anticipated measures) that impact certainty of their implementation. Moreover these characteristics of the policies and measures often differ among countries. This study aims to provide recommendations for joint principles that could be suggested for the project’s countries.

2 Objectives, overall methodological approach and scope of the study

The general aim of the study was to develop recommendations for the project's countries on policies that could be taken into account in the BAU to assess the "policy gap" for reaching GES (where the gap needs to be assessed between the BAU state and GES). The specific **objective was to serve information and develop approach for identifying policy frameworks (PFs) and measures that should and could be accounted in the BAU**. Since this is seen in the context of development of the PoM, the developed approach had also more far-reaching aim to support **assessing implementation effectiveness of the "existing" policies** and identifying significant gaps in these policies, as well as identifying opportunities for improvements in the "other" policies (potential for measures of the category 2a).

The **methodological approach** developed to serve the objectives above included:

- 1) appraisal of the existing and forthcoming (till 2020) policies, including identification of relevant policy frameworks, collecting information for characterising them and their prescribed measures, developing assessments on various implementation characteristics of the measures (e.g. legal status, implementation status, obstacles hindering the implementation);
- 2) assessment of implementation effectiveness of these policies, which was based on assessing uncertainty about measures and/or their implementation.

Detailed information about the used approach is provided in the chapter 3.4. To support the analysis the information and assessments were collected in a (Excel-based) tool. This "inventory" of the 'baseline policies' and measures aims to support the countries' work on the BAU development for the PoM.⁵ More information about the structure and content of the "inventory" as well as explanations for its use are provided in the chapter 3.3.

Due to the international coordination context, the **international policies** are covered but additional national policies (not related to the international PFs) were not analysed. However the principles recommended as a result of the study for classifying policies as the 'baseline policies' can be applied to the national policies also. Those international policies **that are relevant for the Baltic Sea** are covered, which means also the sea-region specific policies besides the EU and global ones.

Due to limitations of the study not all pressures on the marine environment could be addressed. However the policies addressing most relevant **pressures** (causing environmental problems in the Baltic Sea and having the largest number of the 'baseline policies'). These pressures are nutrient pollution, contamination with hazardous substances (the main groups of substances are separated) and introduction of non-indigenous species.

Although the international policies are covered only, the **national scale analysis** was necessary since relevant implementation characteristics of these policies and measures differ among the countries. These characteristics impact certainty of measures' implementation, which is seen among the key elements to decide on measures to be considered in the BAU. The national scale analysis was conducted concerning Latvia and also Estonia (for part of the policy frameworks).

The next section describes the main results of the study from the evaluation of the PFs and measures, and the section 4 provides illustration with detailed results on the evaluation of the policies for selected pressure (introduction of non-indigenous species).

⁵ The "inventory" is available at the project's homepage: <http://gesreg.msi.ttu.ee/en/results>.

3 Evaluation of the ‘baseline policy’ frameworks and measures

This section starts with information about the policy frameworks (PFs) included in the analysis, and also review on how these PFs have been considered in the BAU of countries’ “Initial Assessments” (2012). Relevant PFs to be included have been identified based on the countries’ “Initial Assessment” results and information review.

The chapter 3.3 describes the developed “inventory” of ‘baseline policies’ and measures, and the chapter 3.4 provides the main results from the evaluation of the PFs and measures. The evaluation approach is based on the appraisal of policies and the assessment of implementation effectiveness of the “existing” policies, which is based on assessing uncertainty about measures and/or their implementation of these policies. To develop such assessment, specific characteristics of measures were identified that can influence the certainty. These characteristics are (i) legal status of PFs and measures, (ii) implementation status of PFs and measures, (iii) clarity on measures to be taken and (iv) relevant obstacles hindering the implementation of measures.

These characteristics were analysed and specified for each included PF/measure (these results are included in the “inventory”). Since national scale analysis was needed for this, it was done, as far as possible, concerning Latvia and Estonia. The assessments were developed based on information review, own expert knowledge and consultations with national institutions (as part of the national scale analysis).

The summary assessment on uncertainty about measures and/or their implementation is developed for each measure taking into account the assessments for these individual characteristics. Approach for developing the uncertainty assessment is described in the chapter 3.4.5 and the section 4 illustrates the results of evaluation for ‘baseline policies’ addressing selected pressure.

3.1 Policy frameworks covered by the study

More than 60 **existing and forthcoming (till 2020) international environmental policy frameworks (PFs) relevant for the Baltic Sea** are evaluated as part of the study. The analysed PFs concern the following **pressures** on the marine environment:

- 1) Nutrient pollution;
- 2) Contamination with hazardous substances:
 - Synthetic substances and compounds;
 - Non-synthetic substances and compounds, incl.
 - heavy metals,
 - hydrocarbons;
- 3) Biological disturbance – introduction of non-indigenous species and microbial pathogens.

The study covers international PFs of various types – Conventions, EU Directives and Regulations, EU Strategies and Plans, (HELCOM) Recommendations and other (e.g. EU Common Agricultural Policy, EU Integrated Maritime Policy).⁶

⁶ The following types of PFs are distinguished overall: Conventions, EU Directives, EU Regulations, Plans, Strategies, Policies.

The PFs identified as relevant during the appraisal of policies and analysed as part of the study are listed in the table 3.1.⁷ They are listed by each analysed pressure. The same PF may appear for several pressures if it includes requirements/measures concerning various pressures. The table provides information on type of a PF, its short name (as used in the study, incl. in the Excel “inventory”) and full name.

Some clarifications should be given concerning the HELCOM Baltic Sea Action Plan (BSAP) and HELCOM Recommendations covered by the study (incl. in the “inventory”) – they are provided in the information box below.

Box 3.1. Approach for including in the study (incl., in the Excel “inventory”) information about the HELCOM BSAP and HELCOM Recommendations.

HELCOM BSAP includes around 110 actions overall. It was not possible to include each of them in the “inventory” and to conduct the analysis on such detailed level. More aggregated information is included in the “inventory” with an aim to indicate directions/types of actions (e.g. setting specific targets/restrictions/prohibitions e.g. load reduction targets for nutrients, development of the National Action Plans, adopting specific HELCOM Recommendations (which include specific requirements/measures and those are specified separately in the “inventory”), international cooperation, integration with other policies). For detailed information on implementation of the BSAP actions (on the actions level) see, for instance, HELCOM (2013) and WWF (2013).

Majority of the BSAP actions are covered by the “inventory” and analysed, in particular, under specific HELCOM Recommendations, which are included as separate policy frameworks in the “inventory”. However, not all BSAP actions could be covered by the used approach. For instance, the actions for reducing pollution from agriculture and for reducing the use of and impact from hazardous substances might not be covered sufficiently. If relevant, additional actions can be considered in the national BAUs when conducting the BAU work nationally. National information (e.g. from reporting to HELCOM) on implementation of the BSAP can be used for this work.

There are more than 120 (valid) **HELCOM Recommendations** overall (the full list can be found at <http://helcom.fi/helcom-at-work/recommendations>). However they can be seen with different legal status and have different implementation statuses (or certainty of implementation in the future) in the countries. For instance, only 11 Recommendations are agreed by HELCOM countries with the BSAP⁸ and less than 10 more are agreed by the HELCOM Ministerial Declarations (in 2010 and 2013). And even concerning these Recommendations (less than 25 from more than 120 in total) recent overviews of implementation of the BSAP (in 2013) show significant gaps in their implementation.

In order to follow the general principles on what policies could be accounted in the BAU (with sufficient level of certainty of their implementation in the BAU timeframe), some kind of criteria were needed to select the Recommendations that should be included. The main selection criterion was that **the Recommendations agreed with the BSAP (2007) are included only** (could be seen with status of “high level agreement”). However also those agreed by the HELCOM 2010 and 2013 Ministerial Declarations could be seen with similar status thus could be analysed as part of the BAU work for national PoM. (A list of such

⁷ Brief general information on each PF is provided in the Annex 1 (the PFs are described here in alphabetic order), more detailed information about each PF can be found in the Excel “inventory”.

⁸ In relation to the analysed pressures, two “action plans” can be considered in addition – “Action Plan for the protection of the environment from offshore platforms” and “Road map towards harmonised implementation and ratification of the 2004 International Convention for Control and Management of Ships’ Ballast Water and Sediments”.

Recommendations is provided in the Annex 1, under “HELCOM BSAP and HELCOM Recommendations”.)

It should be noted that there are some exceptions – few Recommendations agreed with the BSAP are not covered. In relation to the analysed pressures, they are:

- 28E/4 “Amendments to Annex III of the Helsinki Convention “Criteria and Measures Concerning the Prevention of Pollution from Land-Based Sources”” amending Part II of the Annex III concerning pollution from agriculture (was not included since by adopting these Recommendations countries agree on amendments in the Annex III of the Convention, but the Recommendations doesn’t address directly implementation of the measures of this Annex, although the BSAP emphasizes implementation of these measures);
- 28E/14 “Development of harmonised principles for quantifying diffuse losses throughout the Baltic Sea catchment area” (was not included since it is not related directly to reducing pressures/improving the state).

The Recommendations were selected **for each analysed pressure** (the Recommendations as part of the BSAP for other pressures/environmental themes, e.g. biodiversity protection, are not included). It should be noted that the list of Recommendations for each pressure here may differ from what is listed for each pressure (“segment”) in the BSAP. In the BSAP they are listed by targeted pressure. Here the same Recommendations may appear under other pressure also if its requirements/measures could give any positive effect concerning this (other) pressure also. For instance the Action Plan on “zero-discharges” from offshore (oil and gas) platforms is included here under the nutrients pressure also (not mentioned under this pressure in the BSAP), since it concerns also emissions to air (e.g. NOx emissions).

Table 3.1. A list of the policy frameworks (PFs) covered by the study.

Type of PFs	Name of PFs
NUTRIENT POLLUTION	
Conventions (C)	<p>CBD, Convention on Biological Diversity</p> <p>Helsinki Convention, Convention on the Protection of the Marine Environment of the Baltic Sea Area</p> <p>Geneva Convention, Convention on Long-range Transboundary Air Pollution</p> <p>Gothenburg Protocol (2005)</p> <p>MARPOL 73/78, International Convention for the Prevention of Pollution from Ships</p> <p>UNCLOS, United Nations Convention on the Law of the Sea</p>
Directives (D)	<p>IED, 2010/75/EU, Directive on industrial emissions</p> <p>IPPC, 2008/1/EC, Directive concerning integrated pollution prevention and control</p> <p>Large combustion plants directive, 2001/80/EC, Directive on the limitation of emissions of certain pollutants into the air from large combustion plants</p> <p>NECD-II, Directive on national emission ceilings for certain atmospheric pollutants (Revised)</p> <p>Nitrates Directive, 91/676/EEC, Directive concerning the protection of waters against pollution caused by nitrates from agricultural sources</p> <p>Port reception facilities directive, 2000/59/EC, Directive on port reception facilities for ship-generated waste and cargo residues</p> <p>Recreational craft directive, 94/25/EC, Directive on the approximation of the laws, regulations and administrative provisions of the Member States relating to recreational craft</p> <p>UWWTD, 91/271/EEC, Directive concerning urban waste water treatment</p>

	<p>Waste incineration directive, 2000/76/EC, Directive on the incineration of waste</p> <p>WFD, 2000/60/EC, Directive establishing a framework for Community action in the field of water policy (The Water Framework Directive)</p>
Regulations (R)	Reg. on detergents 648/2004
Plans (PL) ⁹	<p>HELCOM BSAP, the Baltic Sea Action Plan (BSAP)¹⁰</p> <p>HELCOM BSAP: Recom. on municipal WWT, Recommendation 28E/5 on municipal waste water treatment</p> <p>HELCOM BSAP: Recom. on on-site WWT, Recommendation 28E/6 on on-site wastewater treatment of single family homes, small businesses and settlements up to 300 person equivalents (p.e.)</p> <p>HELCOM BSAP: Recom. on substitution of phosphorus in detergents, Recommendation 28E/7 on measures aimed at the substitution of polyphosphates (phosphorus) in detergents</p> <p>HELCOM BSAP: Recom. on application of the “no-special-fee” system, Recommendation 28E/10 on application of the no-special-fee system to ship-generated waste and marine litter caught in fishing nets in the Baltic Sea area</p> <p>HELCOM BSAP: Recom. on introducing economic incentives, Recommendation 28E/13 on introducing economic incentives as a complement to existing regulations to reduce emissions from ships</p> <p>HELCOM BSAP: Action Plan on “zero-discharge”, Action Plan for the protection of the environment from offshore platforms</p> <p>Plan for BD, Strategic Plan for biodiversity 2011-2020</p>
Policies (PO)	<p>CAP, 2014-2020, EU Common Agricultural Policy</p> <p>IMP, EU Integrated Maritime Policy</p>
Strategies (S)	<p>BD Strategy, EU Biodiversity Strategy 2020</p> <p>Blueprint, EU Strategy on the use of water resources „Blueprint to safeguard Europe’s water resources”</p> <p>EUSBSR, EU Strategy for the Baltic Sea Region</p>
INTRODUCTION OF NON-INDIGENOUS SPECIES	
Conventions (C)	<p>CBD, Convention on Biological Diversity</p> <p>Bern Convention, Convention on the Conservation of European Wildlife and Natural Habitats</p> <p>BWM Convention, International Convention for the Control and Management of Ships Ballast Water and Sediments</p> <p>Helsinki Convention, Convention on the Protection of the Marine Environment of the Baltic Sea Area</p> <p>UNCLOS, United Nations Convention on the Law of the Sea</p>
Directives (D)	Habitats Directive , 92/43/EEC, Directive on the Conservation of natural habitats and of wild fauna and flora

⁹ On included information concerning the **HELCOM Recommendations** – see the explanations in the information box 3.1.

¹⁰ On included information concerning the **HELCOM BSAP** – see the explanations in the information box 3.1.

Regulations (R)	Reg. on alien species in aquaculture , 708/2007, Regulation concerning use of alien and locally absent species in aquaculture
Plans (PL)	HELCOM BSAP , the Baltic Sea Action Plan HELCOM BSAP: BWM Conventions "Road map" , Road map towards harmonised implementation and ratification of the 2004 International Convention for Control and Management of Ships' Ballast Water and Sediments Plan for BD , Strategic Plan for biodiversity 2011-2020
Policies (PO)	IMP , EU Integrated Maritime Policy
Strategies (S)	BD Strategy , EU Biodiversity Strategy 2020 EUSBSR , EU Strategy for the Baltic Sea Region Strategy on IAS , EU Strategy on invasive alien species
POLLUTION WITH HAZARDOUS SUBSTANCES (synthetic and non-synthetic, excluding hydro-carbons)	
Conventions (C)	AFS Convention , Convention on the Control of Harmful Anti-fouling Systems on Ships Basel Convention , Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal COLREG , Convention on the International Regulations for Preventing Collisions at Sea Geneva Convention , Convention on Long-range Transboundary Air Pollution Protocol on POPs (2003) , Gothenburg Protocol (2005) and Protocol on heavy metals (2003) Helsinki Convention , Convention on the Protection of the Marine Environment of the Baltic Sea Area HNS Convention , The International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea London Convention , Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter MARPOL 73/78 , International Convention for the Prevention of Pollution from Ships STCW , International Convention on Standards of Training, Certification and Watchkeeping for Seafarers Stockholm Convention , Stockholm Convention on Persistent Organic Pollutants (POPs) UNCLOS , United Nations Convention on the Law of the Sea
Directives (D)	Directive on liability , 2004/35/CE, Directive on environmental liability with regard to the prevention and remedying of environmental damage IED , 2010/75/EU, Directive on industrial emissions IPPC , 2008/1/EC, Directive concerning integrated pollution prevention and control Large combustion plants directive , 2001/80/EC, Directive on the limitation of emissions of certain pollutants into the air from large combustion plants NECD-II , Directive on national emission ceilings for certain atmospheric pollutants (Revised) Priority Substances Directive , 2008/105/EC, Directive on environmental quality standards in the field of water policy Seafarers training directive , 2008/106/EK, Directive on the minimum level of training of seafarers Sewage sludge directive , 86/278/EEC, Directive on the protection of the environment, and

	<p>in particular of the soil, when sewage sludge is used in agriculture</p> <p>Seveso directive-II, 96/82/EC, Directive on the control of major-accident hazards involving dangerous substances</p> <p>Ship-source pollution directive, 2005/35/EC, Directive on ship-source pollution and on the introduction of penalties for infringements</p> <p>Waste incineration directive, 2000/76/EC, Directive on the incineration of waste</p> <p>WFD, 2000/60/EC, Directive establishing a framework for Community action in the field of water policy (The Water Framework Directive)</p>
Regulations (R)	<p>CLP Regulation, 1272/2008, Regulation on classification, labelling and packaging of substances and mixtures</p> <p>POPs Regulation, 850/2004, Regulation on Persistent Organic Pollutants (POPs)</p> <p>REACH Regulation, 1907/2006, Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals</p> <p>Reg. on organotin compounds, 782/2003, Regulation on the prohibition of organotin compounds on ships</p> <p>Reg. on plant protection products, 1107/2009, Regulation concerning the placing of plant protection products on the market</p> <p>Reg. on waste shipments, 1013/2006, Regulation on shipments of waste</p>
Plans (PL)	<p>HELCOM BSAP, the Baltic Sea Action Plan</p> <p>HELCOM BSAP: Recom. on practices for small-scale combustion, Recommendation 28E/8 on environmentally friendly practices for the reduction and prevention of emissions of dioxins and other hazardous substances from small-scale combustion</p> <p>HELCOM BSAP: Action Plan on "zero-discharge", Action Plan for the protection of the environment from offshore platforms</p> <p>HELCOM BSAP: Recom. on sub-regional co-operation in response, Recommendation 28E/12 on strengthening of sub-regional co-operation in response field</p>
Policies (PO)	IMP , EU Integrated Maritime Policy
Strategies (S)	<p>Blueprint, EU Strategy on the use of water resources „Blueprint to safeguard Europe’s water resources“</p> <p>EUSBSR, EU Strategy for the Baltic Sea Region</p>
OIL POLLUTION (incl. accidental pollution)	
Conventions (C)	<p>Basel Convention, Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal</p> <p>CBD, Convention on Biological Diversity</p> <p>CLC, Convention on civil liability for oil pollution damage</p> <p>COLREG, Convention on the International Regulations for Preventing Collisions at Sea</p> <p>Helsinki Convention, Convention on the Protection of the Marine Environment of the Baltic Sea Area</p> <p>HNS Convention, The International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea</p> <p>MARPOL 73/78, International Convention for the Prevention of Pollution from Ships</p> <p>OPRC, International Convention on Oil Pollution Preparedness, Response and Co-operation</p>

	<p>SOLAS, International Convention for the Safety of Life at Sea</p> <p>STCW, International Convention on Standards of Training, Certification and Watchkeeping for Seafarers</p> <p>UNCLOS, United Nations Convention on the Law of the Sea</p>
Directives (D)	<p>Directive on liability, 2004/35/CE, Directive on environmental liability with regard to the prevention and remedying of environmental damage</p> <p>Port reception facilities directive, 2000/59/EC, Directive on port reception facilities for ship-generated waste and cargo residues</p> <p>Seafarers training directive, 2008/106/EK, Directive on the minimum level of training of seafarers</p> <p>Ship-source pollution directive, 2005/35/EC, Directive on ship-source pollution and on the introduction of penalties for infringements</p>
Regulations (R)	<p>Reg. on waste shipments, 1013/2006, Regulation on shipments of waste</p>
Plans (PL)	<p>HELCOM BSAP, the Baltic Sea Action Plan</p> <p>HELCOM BSAP: Recom. on application of the “no-special-fee” system, Recommendation 28E/10 on application of the no-special-fee system to ship-generated waste and marine litter caught in fishing nets in the Baltic Sea area</p> <p>HELCOM BSAP: Recom. concerning navigation in ice conditions, Recommendation 28E/11 on further measures to improve the safety of navigation in ice conditions in the Baltic Sea</p> <p>HELCOM BSAP: Recom. on sub-regional co-operation in response, Recommendation 28E/12 on strengthening of sub-regional co-operation in response field</p> <p>HELCOM BSAP: Action Plan on “zero-discharge”, Action Plan for the protection of the environment from offshore platforms</p> <p>Plan for BD, Strategic Plan for biodiversity 2011-2020</p>
Policies (PO)	<p>IMP, EU Integrated Maritime Policy</p>
Strategies (S)	<p>BD Strategy, EU Biodiversity Strategy 2020</p> <p>EUSBSR, EU Strategy for the Baltic Sea Region</p>

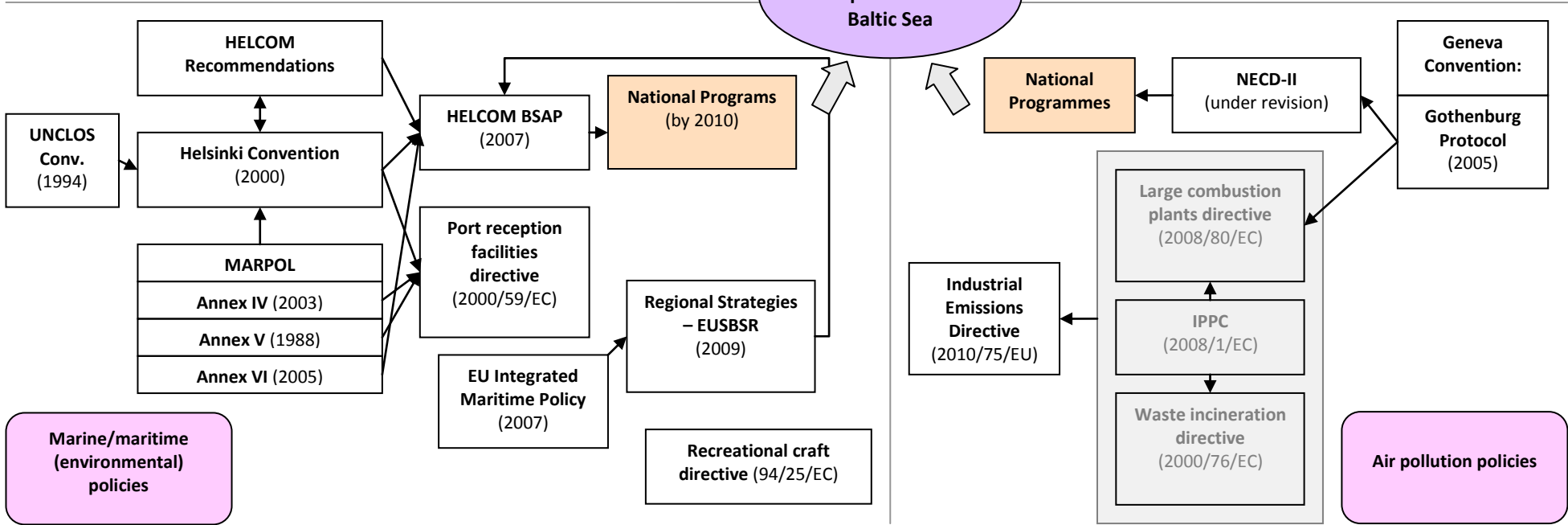
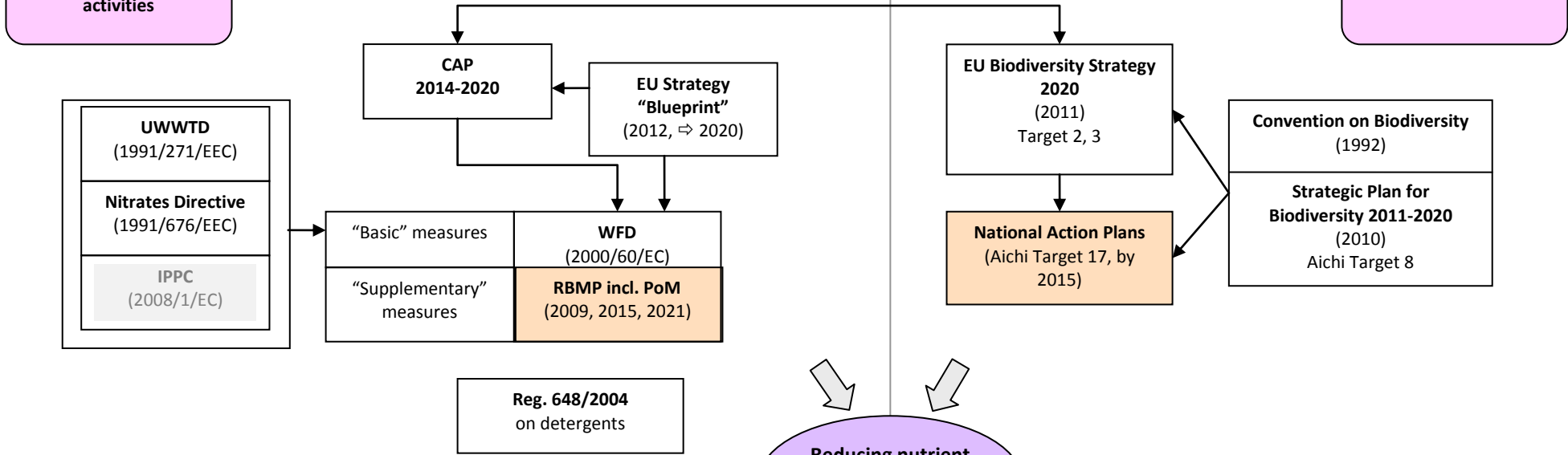
The next figures provide schematic overviews of the covered policy frameworks for each analysed pressure. These figures (3.1-3.4) presents the PFs concerning (1) nutrients pollution to the sea, (2) pollution of hazardous substances (excl. oil pollution) to the sea, (3) oil pollution to the sea (incl. accidental oil pollution) and (4) introduction of non-indigenous species. The schematic overviews allow understanding hierarchy and inter-linkages among the PFs.

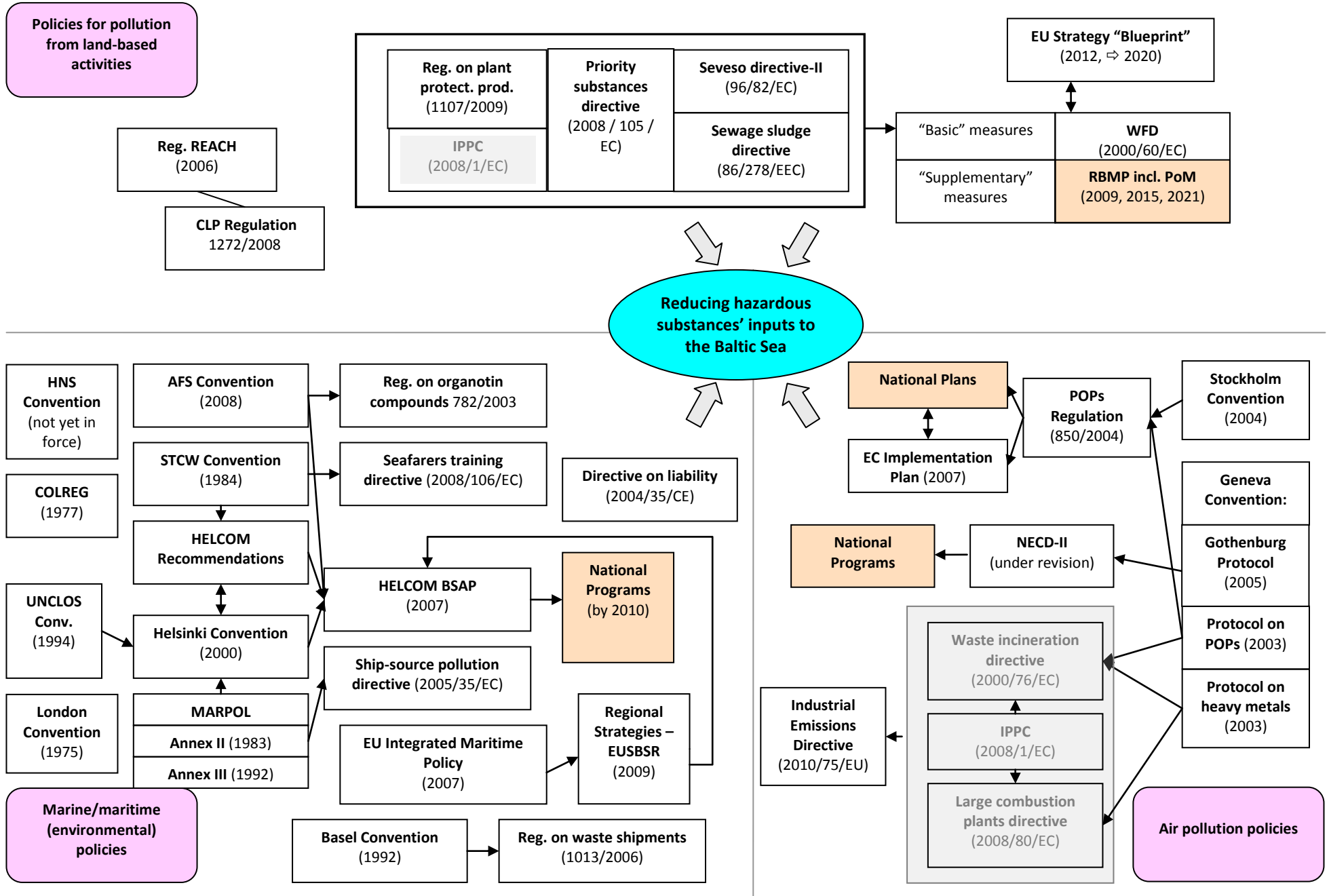
As can be seen, the PFs can be grouped overall as belonging to 4 policy areas – policies concerning pollution from land-based activities, biodiversity protection policies, marine/maritime (environmental policies) and air pollution policies.

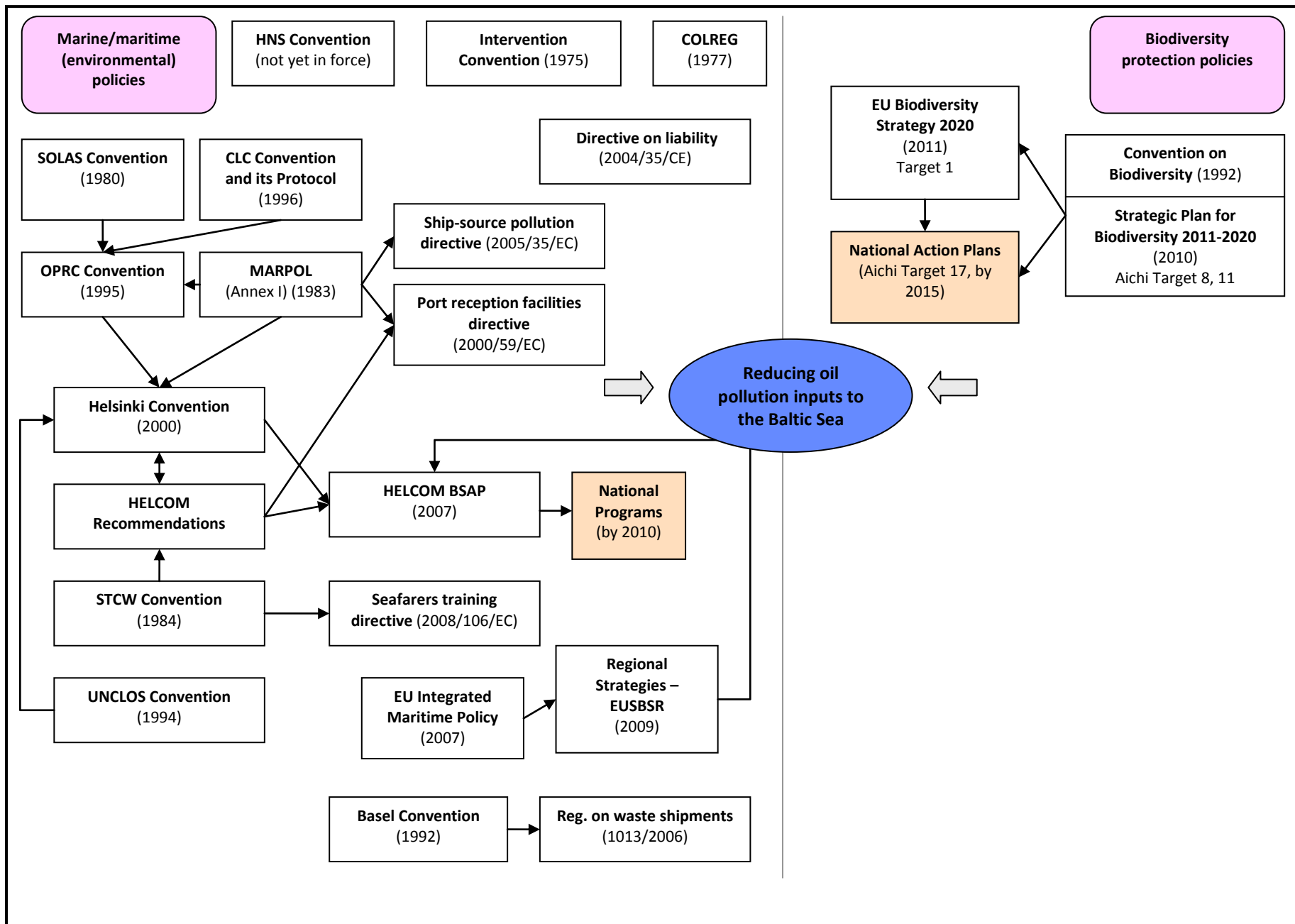
Light red colour highlights the PFs where development of national plans/programs of measures is prescribed (thus the actual measures are set nationally). Light grey colour highlights the PFs that will be replaced by other PFs.

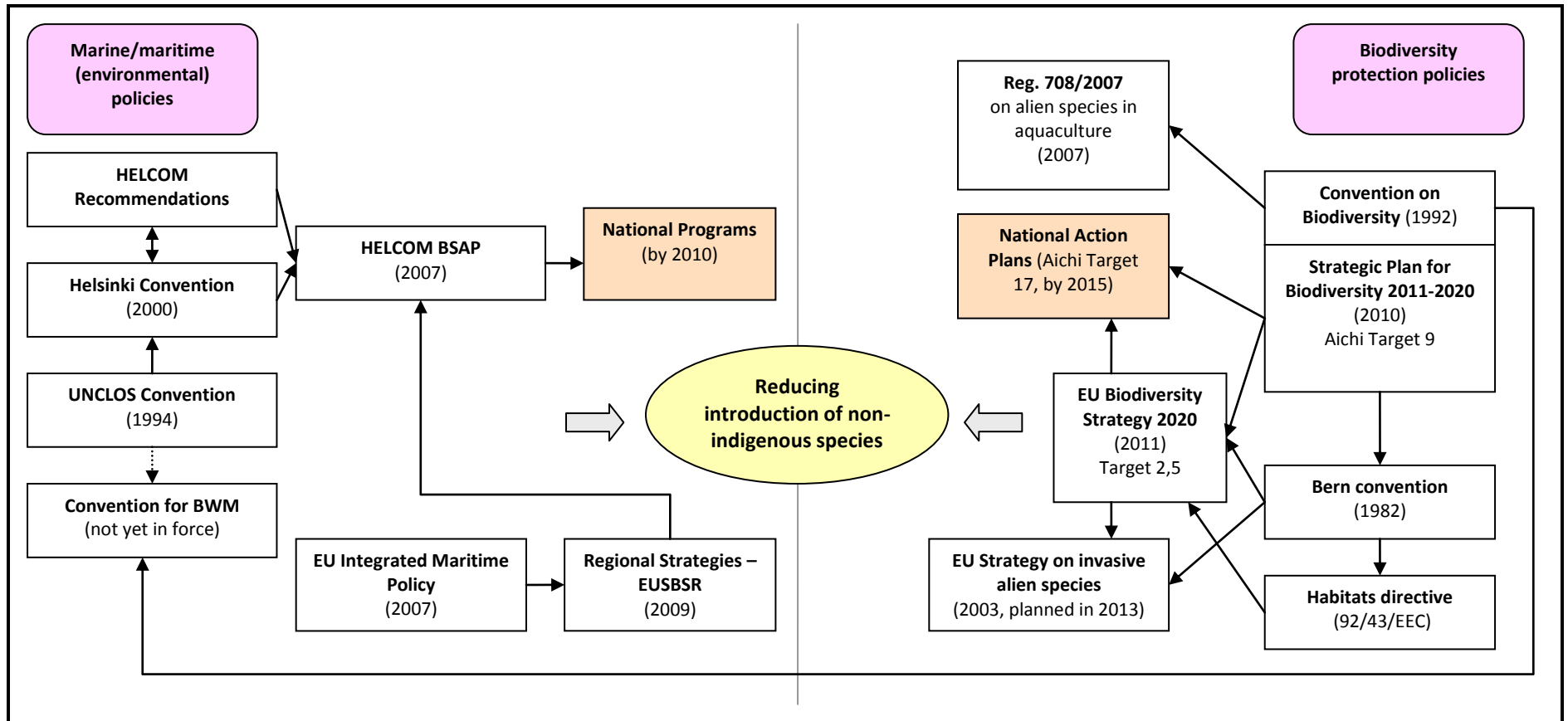
Policies for pollution from land-based activities

Biodiversity protection policies









3.2 Policy frameworks noted in the BAU of the countries' "Initial Assessments" (2012)

The next table shows for each analysed PF whether it is noted among the BAU policies in the countries' "Initial Assessments" (2012). It can be concluded that there are considerable differences among the countries. This was the reason of considering this issue in light of the international harmonisation of the national BAU approaches.

Table 3.2. Policy frameworks noted for the BAU in the countries' "Initial Assessments" (IA) in 2012. Source: Pakalniute K., Muraško A. (2012).

Note regarding the BAU results for Finland: BAU has been developed for nutrients pollution only. It has been reported as part of the cost of degradation analysis based on the PROBAPS/BalticSUN study results. Thus the PFs considered in this study are taken as IA results for the BAU.

Note regarding HELCOM Recommendations: Only the recommendations adopted as part of the HELCOM BSAP are included in the study. If the HELCOM BSAP is noted among the BAU policies in the IA, it is assumed that also the given recommendations are considered in the BAU.

Policy frameworks analysed in the study	Noted in BAU of the national IA (Yes/No)			
	SE	LV	EE	FI
Policy frameworks concerning NUTRIENTS POLLUTION				
CONVENTIONS	SE	LV	EE	FI
CBD , Convention on Biological Diversity	No	No	No	No
Helsinki Convention , Convention on the Protection of the Marine Environment of the Baltic Sea Area	Yes	No	No	No
Geneva Convention , Convention on Long-range Transboundary Air Pollution: Gothenburg Protocol (2005)	No	Yes	No	No
MARPOL 73/78 , International Convention for the Prevention of Pollution from Ships:				
-Annex IV	Yes	Yes	No	?
-Annex V	Yes	No	No	?
-Annex VI	Yes	Yes	No	?
UNCLOS , United Nations Convention on the Law of the Sea	No*	No	No	No
DIRECTIVES	SE	LV	EE	FI
IED , 2010/75/EU, Directive on industrial emissions	No	No	No	No
IPPC , 2008/1/EC, Directive concerning integrated pollution prevention and control	Yes	Yes	Yes	Yes
Large combustion plants directive , 2001/80/EC, Directive on the limitation of emissions of certain pollutants into the air from large combustion plants	No	No	No	?
NECD-II , Directive on national emission ceilings for certain atmospheric pollutants (Revised)	No	Yes	No	No**
Nitrates Directive , 91/676/EEC, Directive concerning the protection of waters against pollution caused by nitrates from agricultural sources	Yes	Yes	Yes	Yes

* Noted in relation to marine litter only. ** Atmospheric deposition is assumed to remain constant in the BAU of PROBAPS study.

Port reception facilities directive , 2000/59/EC, Directive on port reception facilities for ship-generated waste and cargo residues	No	Yes	No	?
Recreational craft directive , 94/25/EC, Directive on the approximation of the laws, regulations and administrative provisions of the Member States relating to recreational craft	Yes	No	No	No
UWWTD , 91/271/EEC, Directive concerning urban waste water treatment	Yes	Yes	Yes	Yes
Waste incineration directive , 2000/76/EC, Directive on the incineration of waste	No	No	No	?
WFD , 2000/60/EC, Directive establishing a framework for Community action in the field of water policy (The Water Framework Directive)	Yes	Yes	Yes	Yes
REGULATIONS	SE	LV	EE	FI
Reg. on detergents 648/2004	No	No	No	No
PLANS	SE	LV	EE	FI
HELCOM BSAP , the Baltic Sea Action Plan	Yes*	No**	Yes	No
HELCOM BSAP: Recom. on municipal WWT , Recommendation 28E/5 on municipal waste water treatment	No	No	Yes	No
HELCOM BSAP: Recom. on on-site WWT , Recommendation 28E/6 on on-site wastewater treatment of single family homes, small businesses and settlements up to 300 person equivalents (p.e.)	No	No	Yes	No
HELCOM BSAP: Recom. on substitution of phosphorus in detergents , Recommendation 28E/7 on measures aimed at the substitution of polyphosphates (phosphorus) in detergents	No	Yes	Yes	No
HELCOM BSAP: Recom. on application of the “no-special-fee” system , Recommendation 28E/10 on application of the no-special-fee system to ship-generated waste and marine litter caught in fishing nets in the Baltic Sea area	Yes	No	Yes	No
HELCOM BSAP: Recom. on introducing economic incentives , Recommendation 28E/13 on introducing economic incentives as a complement to existing regulations to reduce emissions from ships	Yes	No	Yes	No
HELCOM BSAP: Action Plan on “zero-discharge” , Action Plan for the protection of the environment from offshore platforms	No	No	Yes	No
Plan for BD , Strategic Plan for biodiversity 2011-2020	No	No	No	No
POLICIES	SE	LV	EE	FI
CAP , 2014-2020, EU Common Agricultural Policy	No	Yes	No	No
IMP , EU Integrated Maritime Policy	No	No	No	No
STRATEGIES	SE	LV	EE	FI
BD Strategy , EU Biodiversity Strategy 2020	No	No	No	No
Blueprint , EU Strategy on the use of water resources „Blueprint to safeguard Europe’s water resources”	No	No	No	No
EUSBSR , EU Strategy for the Baltic Sea Region	No	No	No	No

* Only concerning shipping as nutrients pollution source. ** Only Recom 28E/7.

Policy frameworks concerning contamination with HAZARDOUS SUBSTANCES (excl. oil pollution)				
CONVENTIONS	SE	LV	EE	FI
AFS Convention , Convention on the Control of Harmful Anti-fouling Systems on Ships	Yes	No	No	NA
Basel Convention , Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal	Yes	No	No	NA
COLREG , Convention on the International Regulations for Preventing Collisions at Sea	No	No	No	NA
Geneva Convention , Convention on Long-range Transboundary Air Pollution: - Gothenburg Protocol (2005), - Protocol on POPs (2003), - Protocol on heavy metals (2003)	No No No	Yes No No	No No No	NA
Helsinki Convention , Convention on the Protection of the Marine Environment of the Baltic Sea Area	No	No	No	NA
HNS Convention , The International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea	No	No	Yes	NA
London Convention , Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter	No	No	No	NA
MARPOL 73/78 , International Convention for the Prevention of Pollution from Ships: Annex II and Annex III	Yes	No	No	NA
STCW , International Convention on Standards of Training, Certification and Watchkeeping for Seafarers	No	No	No	NA
Stockholm Convention , Stockholm Convention on Persistent Organic Pollutants (POPs)	No	No	No	NA
UNCLOS , United Nations Convention on the Law of the Sea	No*	No	No	NA
DIRECTIVES	SE	LV	EE	FI
Directive on liability , 2004/35/CE, Directive on environmental liability with regard to the prevention and remedying of environmental damage	No	No	No	NA
IED , 2010/75/EU, Directive on industrial emissions	No	No	No	NA
IPPC , 2008/1/EC, Directive concerning integrated pollution prevention and control	No	No	No	NA
Large combustion plants directive , 2001/80/EC, Directive on the limitation of emissions of certain pollutants into the air from large combustion plants	No	No	No	NA
NECD-II , Directive on national emission ceilings for certain atmospheric pollutants (Revised)	No	No	No	NA
Priority Substances Directive , 2008/105/EC, Directive on environmental quality standards in the field of water policy	No	Yes	No	NA
Seafarers training directive , 2008/106/EK, Directive on the minimum level of training of seafarers	No	No	No	NA

* Noted in relation to marine litter only.

Sewage sludge directive , 86/278/EEC, Directive on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture	No	No	No	NA
Seveso directive-II , 96/82/EC, Directive on the control of major-accident hazards involving dangerous substances	No	No	No	NA
Ship-source pollution directive , 2005/35/EC, Directive on ship-source pollution and on the introduction of penalties for infringements	No	No	No	NA
Waste incineration directive , 2000/76/EC, Directive on the incineration of waste	No	No	No	NA
WFD , 2000/60/EC, Directive establishing a framework for Community action in the field of water policy (The Water Framework Directive)	No	No	No	NA
REGULATIONS	SE	LV	EE	FI
CLP Regulation , 1272/2008, Regulation on classification, labelling and packaging of substances and mixtures	No	No	No	NA
POPs Regulation , 850/2004, Regulation on Persistent Organic Pollutants (POPs)	No	No	No	NA
REACH Regulation , 1907/2006, Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals	No	Yes	No	NA
Reg. on organotin compounds , 782/2003, Regulation on the prohibition of organotin compounds on ships	No	No	No	NA
Reg. on plant protection products , 1107/2009, Regulation concerning the placing of plant protection products on the market	No	No	No	NA
Reg. on waste shipments , 1013/2006, Regulation on shipments of waste	No	No	No	NA
PLANS	SE	LV	EE	FI
HELCOM BSAP , the Baltic Sea Action Plan	No	No	No	NA
HELCOM BSAP: Recom. on practices for small-scale combustion , Recommendation 28E/8 on environmentally friendly practices for the reduction and prevention of emissions of dioxins and other hazardous substances from small-scale combustion	No	No	No	NA
HELCOM BSAP: Recom. on sub-regional co-operation in response , Recommendation 28E/12 on strengthening of sub-regional co-operation in response field	No	Yes	No	NA
HELCOM BSAP: Action Plan on "zero-discharge" , Action Plan for the protection of the environment from offshore platforms	No	No	No	NA
POLICIES	SE	LV	EE	FI
IMP , EU Integrated Maritime Policy	No	No	No	NA
STRATEGIES	SE	LV	EE	FI
Blueprint , EU Strategy on the use of water resources „Blueprint to safeguard Europe’s water resources”	No	No	No	NA
EUSBSR , EU Strategy for the Baltic Sea Region	No	No	No	NA
Policy frameworks concerning OIL POLLUTION				
CONVENTIONS	SE	LV	EE	FI
Basel Convention , Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal	No	No	No	NA

CBD , Convention on Biological Diversity	No	No	No	NA
CLC , Convention on civil liability for oil pollution damage	Yes	No	No	NA
COLREG , Convention on the International Regulations for Preventing Collisions at Sea	Yes	No	No	NA
Helsinki Convention , Convention on the Protection of the Marine Environment of the Baltic Sea Area	No	No	No	NA
HNS Convention , The International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea	No	No	No	NA
MARPOL 73/78 , International Convention for the Prevention of Pollution from Ships: Annex I	Yes	No	No	NA
OPRC , International Convention on Oil Pollution Preparedness, Response and Co-operation	Yes	No	No	NA
SOLAS , International Convention for the Safety of Life at Sea	Yes	No	No	NA
STCW , International Convention on Standards of Training, Certification and Watchkeeping for Seafarers	Yes	No	No	NA
UNCLOS , United Nations Convention on the Law of the Sea	No	No	No	NA
DIRECTIVES	SE	LV	EE	FI
Directive on liability , 2004/35/CE, Directive on environmental liability with regard to the prevention and remedying of environmental damage	Yes	No	No	NA
Port reception facilities directive , 2000/59/EC, Directive on port reception facilities for ship-generated waste and cargo residues	Yes	Yes	No	NA
Seafarers training directive , 2008/106/EK, Directive on the minimum level of training of seafarers	No	No	No	NA
Ship-source pollution directive , 2005/35/EC, Directive on ship-source pollution and on the introduction of penalties for infringements	No	No	No	NA
REGULATIONS	SE	LV	EE	FI
Reg. on waste shipments , 1013/2006, Regulation on shipments of waste	No	No	No	NA
PLANS	SE	LV	EE	FI
HELCOM BSAP , the Baltic Sea Action Plan	Yes	No*	No	NA
HELCOM BSAP: Recom. on application of the “no-special-fee” system , Recommendation 28E/10 on application of the no-special-fee system to ship-generated waste and marine litter caught in fishing nets in the Baltic Sea area	Yes	No	No	NA
HELCOM BSAP: Recom. concerning navigation in ice conditions , Recommendation 28E/11 on further measures to improve the safety of navigation in ice conditions in the Baltic Sea	Yes	No	No	NA
HELCOM BSAP: Recom. on sub-regional co-operation in response , Recommendation 28E/12 on strengthening of sub-regional co-operation in response field	Yes	Yes	No	NA
HELCOM BSAP: Action Plan on "zero-discharge" , Action Plan for the protection of the environment from offshore platforms	Yes	No	No	NA

* Only Recom 28E/12.

Plan for BD , Strategic Plan for biodiversity 2011-2020	No	No	No	NA
POLICIES	SE	LV	EE	FI
IMP , EU Integrated Maritime Policy	No	No	No	NA
STRATEGIES	SE	LV	EE	FI
BD Strategy , EU Biodiversity Strategy 2020	No	No	No	NA
EUSBSR , EU Strategy for the Baltic Sea Region	Yes	No	No	NA
Policy frameworks concerning NON-INDIGENOUS SPECIES				
CONVENTIONS	SE	LV	EE	FI
CBD , Convention on Biological Diversity	No	No	No	NA
Bern Convention , Convention on the Conservation of European Wildlife and Natural Habitats	No	No	No	NA
BWM Convention , International Convention for the Control and Management of Ships Ballast Water and Sediments	Yes	Yes	Yes	NA
Helsinki Convention , Convention on the Protection of the Marine Environment of the Baltic Sea Area	No	No	No	NA
UNCLOS , United Nations Convention on the Law of the Sea	No	No	No	NA
DIRECTIVES	SE	LV	EE	FI
Habitats Directive , 92/43/EEC, Directive on the Conservation of natural habitats and of wild fauna and flora	No	No	No	NA
REGULATIONS	SE	LV	EE	FI
Reg. on alien species in aquaculture , 708/2007, Regulation concerning use of alien and locally absent species in aquaculture	No	No	No	NA
PLANS	SE	LV	EE	FI
HELCOM BSAP , the Baltic Sea Action Plan	No	No	No	NA
HELCOM BSAP: BWM Conventions "Road map" , Road map towards harmonised implementation and ratification of the 2004 International Convention for Control and Management of Ships' Ballast Water and Sediments	No	No	No	NA
Plan for BD , Strategic Plan for biodiversity 2011-2020	No	No	No	NA
POLICIES	SE	LV	EE	FI
IMP , EU Integrated Maritime Policy	No	No	No	NA
STRATEGIES	SE	LV	EE	FI
BD Strategy , EU Biodiversity Strategy 2020	No	No	No	NA
EUSBSR , EU Strategy for the Baltic Sea Region	No	No	No	NA
Strategy on IAS , EU Strategy on invasive alien species	No	No	No	NA

3.3 "Inventory" of policy frameworks and measures

The study included developing an Excel-based tool – an "inventory" of the 'baseline policies' and their prescribed measures with an impact on state of the (Baltic Sea) marine environment. The inventory aims to provide information for characterising and assessing these PFs and their measures to support evaluation of these policies in light of the specified objectives for the BAU development (described in the section 2).

The “inventory” includes all PFs identified as relevant during the policies’ appraisal (listed in the section 3.1). It includes detailed information characterising each PF and requirements/actions/measures it prescribes, and assessment of relevant aspects of their implementation in the project’s countries.

The inventory is developed as an **Excel-based tool**. It includes introductory sheets that explain structure and content of the inventory, and the “inventory” sheet with the database of PFs and measures.

The “inventory” (database) consists of two parts – (1) characterisation of a PF and (2) characterisation of requirements/actions/measures¹¹ prescribed by it (see also the next table).

- **The policy frameworks' part** is structured along the following thematic sections:
 - I- Name and brief characterisation of a PF.
 - II- Pressures (according to the MSFD Annex III), types of pollution sources and activities targeted by a PF.
 - III- The key characteristics of a policy framework, incl. legal status, spatial and temporal scale of the implementation, if it prescribes measurable targets and/or actions, links with other policy frameworks. Extent of implementation of a PF is assessed for each project’s country.
- **The measures’ part** (Section IV) includes name and brief characterisation of a measure, general type of a measure (e.g. regulatory measures, economic instruments, technical measures), legal and implementations status in the project's countries (e.g. mandatory/voluntary; existing/anticipated) and assessments on other relevant characteristics of measures for their evaluation in light of the objectives.

Table 3.3. General structure of the “inventory” (database) of ‘baseline policies’ and measures (M.).

Section I		Section II		Section III		Section IV – on Measures	
Name of PF	Name of M.	...
PF1	M1	...
PF1	M2	...
PF1	M3	...
PF1
PF2	M1	...
PF2	M2	...
PF2
...

The key **“feature” of the database is possibility to “filter” information of interest**. It allows, for instance, to “filter” from the “inventory” all information for a particular PF (incl. all pressures addressed by it and all measures prescribed by it for each pressure), or, for instance, to “filter” all information for a particular pressure (e.g. nutrients) – all the PF and measures concerning this pressure. The policies can be reviewed also for a specific sector creating pressures (e.g. policies

¹¹ Due to simplicity reasons they all are called as “measures” in this report.

concerning agriculture, aquaculture, industry, marine hydrocarbon extraction, shipping, municipal wastewaters), or any other characteristic of PFs or measures. To allow using “filters”:

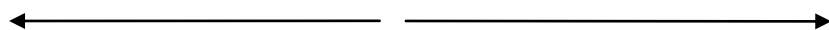
- each PF is recorded in the database as many times as pressures it addresses (if it addresses more than one pressure);
- a PF and the pressure it addresses then is recorded as many times as measures prescribed by that PF for the given pressure (see the examples below).

Table 3.4. EXAMPLE when “filtering” information by policy frameworks: EU Directive (2000/59/EC) on port reception facilities for ship-generated waste and cargo residues.

(*) If a policy framework addresses more than one pressure, it can be that measures prescribed by it are the same for all pressures (like in the example below). Then the same measures are recorded repeatedly for each pressure (to allow filtering a PF and measures by pressures) but marked with different colour for every next pressure. However, measures of the same PF can also differ for various pressures.

The PFs’ part of “inventory”

The Measures’ part of “inventory”



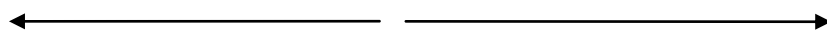
Name of PF	Pressures	Name of requirements/ actions/ measures (*)	Brief description of requirements/actions/measures (*)
Port reception facilities directive	nutrients	Port reception facilities	MS shall ensure the availability of <u>port reception facilities adequate</u> to meet the needs of the ships normally using the port.
Port reception facilities directive	nutrients	Waste management (reception and handling plans in ports)	An appropriate <u>waste reception and handling plan shall be developed and implemented</u> for each <u>port</u> . MS shall evaluate and approve the waste reception and handling plan, monitor its implementation and ensure its re-approval at least every 3 years and after significant changes in the operation of the port.
Port reception facilities directive	nutrients	Delivery of waste	The master of a ship calling at a Community port shall, before leaving the port, <u>deliver all ship-generated waste and cargo residues to a port reception facility</u> .
Port reception facilities directive	nutrients	Fees for ship-generated waste	MS shall ensure that the <u>costs</u> of port reception facilities for ship-generated waste, incl. the treatment and disposal of the waste, shall be <u>covered through the collection of a fee from ships</u> .
Port reception facilities directive	nutrients	Controlling	MS shall ensure that any ship may be subject to an <u>inspection</u> in order to verify that it complies with requirements addressed to it under this Directive and that a sufficient number of such inspections is carried out.
Port reception facilities directive	nutrients	Information and education	MS shall <u>take all necessary measures</u> to ensure that masters, providers of port reception facilities and other persons concerned are <u>adequately informed</u> of the requirements addressed to them under this Directive and that they comply with them.
Port reception facilities directive	nutrients	Penalties	MS shall lay down a system of <u>penalties</u> for the breach of national provisions adopted pursuant to this Directive and shall take all the measures necessary to ensure that those penalties are applied. The penalties thus provided shall be effective, proportionate and dissuasive.
Port reception facilities directive	hydro-carbons	Port reception facilities	MS shall ensure the availability of <u>port reception facilities adequate</u> to meet the needs of the ships normally using the port.

Name of PF	Pressures	Name of requirements/ actions/ measures (*)	Brief description of requirements/actions/measures (*)
Port reception facilities directive	hydro-carbons	Waste management (reception and handling plans in ports)	An appropriate <u>waste reception and handling plan shall be developed and implemented</u> for each <u>port</u> . MS shall evaluate and approve the waste reception and handling plan, monitor its implementation and ensure its re-approval at least every 3 years and after significant changes in the operation of the port.
Port reception facilities directive	hydro-carbons	Delivery of waste	The master of a ship calling at a Community port shall, before leaving the port, <u>deliver all ship-generated waste and cargo residues to a port reception facility</u> .
Port reception facilities directive	hydro-carbons	Fees for ship-generated waste	MS shall ensure that the <u>costs</u> of port reception facilities for ship-generated waste, incl. the treatment and disposal of the waste, shall be <u>covered through the collection of a fee from ships</u> .
Port reception facilities directive	hydro-carbons	Controlling	MS shall ensure that any ship may be subject to an <u>inspection</u> in order to verify that it complies with requirements addressed to it under this Directive and that a sufficient number of such inspections is carried out.
Port reception facilities directive	hydro-carbons	Information and education	<u>MS shall take all necessary measures</u> to ensure that masters, providers of port reception facilities and other persons concerned are <u>adequately informed</u> of the requirements addressed to them under this Directive and that they comply with them.
Port reception facilities directive	hydro-carbons	Penalties	MS shall lay down a system of <u>penalties</u> for the breach of national provisions adopted pursuant to this Directive and shall take all the measures necessary to ensure that those penalties are applied. The penalties thus provided shall be effective, proportionate and dissuasive.

Table 3.5. EXAMPLE when "filtering" information by pressures: examples of policies addressing introduction of non-indigenous species (NIS) and microbial pathogens – (1) "HELCOM BSAP: BWM Conventions "Road map"" and (2) EU Regulation on alien species in aquaculture (708/2007).

The PFs' part of "inventory"

The Measures' part of "inventory"



Name of PF	Pressure	Name of requirements/ actions/ measures	Brief description of requirements/actions/measures
HELCOM BSAP: BWM Conventions "Road map"	NIS and pathogens	Ratification of BWM Convention	<u>Ratifying the BWM Convention</u> as soon as possible, but in all cases not later than 2013.
HELCOM BSAP: BWM Conventions "Road map"	NIS and pathogens	List of NIS	Requesting HELCOM HABITAT and HELCOM MONAS to <u>compile</u> (by the end of 2008) a HELCOM <u>list of NIS</u> , cryptogenic and/or harmful native species in the BS, incl. available information on characteristics, distribution, abundance and ecological impact, and keeping the list updated as new knowledge becomes available.
HELCOM BSAP: BWM Conventions "Road map"	NIS and pathogens	Cooperation	Establishing <u>co-operation</u> with other relevant regions <u>for continuous exchange of information on NIS</u> , cryptogenic and harmful native species in other aquatic environments, incl. high risk invaders, and making this information available for risk assessments.
HELCOM BSAP: BWM Conventions "Road map"	NIS and pathogens	List of HELCOM Target Species	<u>Selecting and agreeing</u> (by the end of 2008) on the <u>HELCOM Target Species</u> , i.e. species that may impair or damage the environment, human health, property or resources, relevant for risk assessments (based on the HELCOM list and available information on potentially harmful and invasive species in other aquatic ecosystems).

Name of PF	Pressure	Name of requirements/ actions/ measures	Brief description of requirements/actions/measures
HELCOM BSAP: BWM Conventions "Road map"	NIS and pathogens	Baseline surveys in ports	Conducting (by the end of 2008) <u>baseline surveys</u> of prevailing environmental conditions in <u>major ports</u> and outlining the <u>major long-distance high risk voyages</u> in order to gather data necessary to conduct and/or evaluate and consult risk assessments.
HELCOM BSAP: BWM Conventions "Road map"	NIS and pathogens	Criteria for risk assessment	Specifying and agreeing (not later than 2009) on <u>criteria to distinguish between "unacceptable high" and "acceptable low" risk scenarios for regional voyages</u> , i.e. voyages within the BS region, taking into account data gathered during developing "HELCOM list of non-indigenous, cryptogenic and/or harmful native species" and "List of HELCOM Target Species" and information obtained from exchange with other relevant regions and baseline surveying.
HELCOM BSAP: BWM Conventions "Road map"	NIS and pathogens	Ballast water exchange roles	<ul style="list-style-type: none"> • Joining the OSPAR initiative to request vessels transiting the Atlantic or entering the NE-Atlantic from routes passing the W-African Coast <u>to conduct on a voluntary basis BW exchange before arriving</u> at the OSPAR area or passing through this area and heading to the BS. • Undertaking a similar initiative for vessels leaving the Baltic and transiting through the OSPAR region to other destinations so the BW would not be exchanged until the vessel was 200 nm off the coast of NW-Europe in waters > 200 m deep.
HELCOM BSAP: BWM Conventions "Road map"	NIS and pathogens	Cooperating	Cooperating with OSPAR on any other relevant topics for the benefit of both regions and as necessary for harmonised implementation of the BWM Convention.
HELCOM BSAP: BWM Conventions "Road map"	NIS and pathogens	Monitoring	Adjusting/extending (by 2010) the HELCOM <u>monitoring programmes</u> to obtain reliable data on NIS in the BS, incl. port areas, in order to gather the necessary data to conduct and/or evaluate and consult risk assessments.
HELCOM BSAP: BWM Conventions "Road map"	NIS and pathogens	Information system	Cooperating in order to establish (by 2010, but in all cases not later than 2013) the <u>regional information system</u> for the relevant data obtained during port surveys, monitoring and risk assessments.
HELCOM BSAP: BWM Conventions "Road map"	NIS and pathogens	Port reception facilities	Providing (by 2010, but in all cases before the latest target ratification date which is 2013) <u>adequate reception facilities</u> for <u>sediments</u> in ports and terminals where cleaning and repair of ballast tanks occurs.
HELCOM BSAP: BWM Conventions "Road map"	NIS and pathogens	Navigation Telex System (NAVTEX)	<u>Linking</u> (by 2010) the <u>port surveys and monitoring to NAVTEX</u> or the equivalent, whereby ships can be alerted not to take up BW during outbreaks of harmful species and other high risk conditions.
Reg. on alien species in aquaculture	NIS and pathogens	Measures (appropriate measures nationally)	MS shall <u>ensure that all appropriate measures are taken to avoid adverse effects</u> to BD.
Reg. on alien species in aquaculture	NIS and pathogens	Permit issuing	Aquaculture operators intending to undertake the introduction of an alien species or the translocation of a locally absent species shall obtain a <u>permit</u> from the competent authority of the receiving MS.
Reg. on alien species in aquaculture	NIS and pathogens	Quarantine	<u>Quarantine</u> has to be applied for the release of aquatic organisms into 'open aquaculture facilities' in the case of 'non-routine introductions'. It is a process by which aquatic organisms and any of their associated organisms can be maintained in complete isolation from the surrounding environment.

Name of PF	Pressure	Name of requirements/ actions/ measures	Brief description of requirements/actions/measures
Reg. on alien species in aquaculture	NIS and pathogens	Pilot release	<u>Pilot release</u> has to be applied before the release of the aquatic organisms into 'open aquaculture systems' in the specific cases. It is the introduction of alien species or translocation of locally absent species on a limited scale to assess ecological interaction with native species and habitats in order to test the risk assessment assumptions.
Reg. on alien species in aquaculture	NIS and pathogens	Contingency plans	For all 'non-routine introductions' and pilot releases, the applicant shall draw up a <u>contingency plan</u> for the approval of the competent authority.
Reg. on alien species in aquaculture	NIS and pathogens	Environmental risks assessment	In the case of 'non-routine movements', an <u>environmental risk assessment shall be carried out</u> .
Reg. on alien species in aquaculture	NIS and pathogens	Notification requirement (transboundary)	Where the potential or known environmental effects of a proposed movement of an organism are liable to affect neighbouring MS, the <u>CA shall notify the MS or States concerned and the Commission</u> of its intention to grant a permit by sending a draft decision, accompanied by an explanatory memorandum and a summary of the environmental risk assessment.
Reg. on alien species in aquaculture	NIS and pathogens	Monitoring	Alien species shall be <u>monitored</u> after their release into 'open aquaculture facilities' for a period of two years or a full generation cycle.
Reg. on alien species in aquaculture	NIS and pathogens	Obligation to keep information	MS shall keep a <u>register of introductions and translocations</u> containing a historical record of all applications made and the associated documentation gathered before the issue of a permit and during the monitoring period.

The PFs' part of the "inventory" includes 20 columns with relevant information about a PF. Besides the pressures, pollution sources and activities a PF addresses, reviewed characteristics are, for instance, its geographical scale (e.g. global, EU, Baltic Sea region), legal status (e.g. mandatory), overall implementation status (existing/anticipated), time of adoption and relevant implementation milestones, extent of implementation in the project's countries (e.g. on-going, completed) etc.

The measures' part, besides name and description of each measure, provides information and assessments that have been collected and developed as part of the study to evaluate measures according to the developed evaluation approach. The information and assessments aim to support evaluation of measures for identifying measures to be considered in the BAU and for assessment of implementation effectiveness of the "existing" policies. The approach used for developing various assessments and the evaluation of measures is described in details in the next chapter.

Few issues should be noted concerning the "inventory" and information included in its measures' part:

- The "inventory" reflects situation with 'baseline policies' for time of its completion (May of 2013).
- The measures' part of the "inventory" is not completed for the Conventions, also for few PFs of other type (for Strategies "EUSBSR" and "Strategy on IAS", Policy "IMP" and Plan "Plan for BD"). Since these PFs are implemented via other, more "operational" PFs, measures are analysed for these other PFs only to avoid double-counting of the same measures in the "inventory".

- Measures in the “inventory” are specified according to international PFs. For instance, if the requirement includes development of national “action plan”/“program of measures” the nationally set measures under this plan/program are not specified – they need to be analysed (nationally) where relevant as part of the BAU work for development of the national PoM.
- All relevant requirements, actions, measures prescribed by a PF are taken as “measures” and included in the “inventory”. This approach is not fully in line with definition of a measure, but it is used since (most of) these are implemented via concrete measures at the end (even if each measure could not be specified in the “inventory”). All relevant requirements/actions/measures are included also since the practice shows that effectively implemented policy mix is required for reaching environmental targets and such “mix” need to include various policy measures and instruments (including effective control, penalties, regulatory measures etc.).
- Due to the applied principles as noted above it is often the case that one “measure” (record in the “inventory”) can comprise several (thematically related) measures. For instance, when a PF prescribes specific requirement and various measures need to be implemented (nationally) to meet that requirement.

3.4 Assessment of the policy frameworks and measures

The developed assessment approach aims to serve information for:

1. identifying policies and measures that should and could be accounted in the BAU to assess the “policy gap” for reaching GES (where the gap needs to be assessed between the BAU state and GES),
2. assessing implementation effectiveness of the “existing” policies and identifying significant gaps in these policies,
3. identifying opportunities for improvements in the “other” policies (potential for measures of the category 2a).

The assessment approach is based overall on **assessing implementation effectiveness of the “existing” policies**. It is analysed **by assessing uncertainty about measures and/or their implementation of these policies**. To develop such assessment, specific **characteristics of measures** were identified **that can influence the certainty**. These characteristics are:

- legal status of PFs and measures,
- implementation status of PFs and measures,
- clarity on measures to be taken,
- relevant obstacles hindering the implementation of measures.

These characteristics were analysed and specified for each included PF/measure¹² (these results are included in the “inventory”). Since national scale analysis was needed for this, it was done, as far as possible, concerning Latvia and Estonia. The assessments were developed based on information

¹² The measures’ are not analysed for PFs that are implemented via other, more “operational” PFs (e.g. conventions, strategies). The measures are analysed for these other PFs only to avoid double-counting of the same measures in the “inventory”.

review, own expert knowledge and consultations with national institutions (as part of the national scale analysis).

The summary assessment on uncertainty about measures and/or their implementation is developed for each measure taking into account the assessments of individual characteristics (e.g. legal and implementation status of a measure, if there are relevant obstacles hindering its implementation). A qualitative 5-categories scale is used (from “low” to “high” uncertainty).

The next chapters explain in more details the assessment for each characteristic and the summary assessment on uncertainty. The specific assessment approach for each is briefly explained, as well as selected results are provided for illustration.

3.4.1 Legal status of policy frameworks and measures

The legal status was analysed for both – a PF and (each of) measures prescribed by it. It is specified for PFs using the following categories – “mandatory”, “adopted” and “voluntary”. Due to the specific context of the study to analyse policies for the BAU, all the included PFs have the “mandatory” status in general. The category “adopted” is a sub-category of “mandatory” and it is used to distinguish between the PFs that are strictly obligatory (e.g. EU Directives and Regulations) and that are “agreed” to be implemented by countries (e.g. Conventions, EU Strategies). There are only two exceptions, where the status is not specified, because the PFs are not in force yet due to insufficient ratifications nationally – the “BWM Convention” and “HNS Convention” (according to the used categories, they would have “adopted” status when they come into force).

Similar categories are used for measures – “mandatory”, “agreed” and “voluntary”. The “agreed” is a sub-category of “mandatory” (similar to the category “adopted” for PFs). General idea of this category is to indicate (possibly) different certainty level of measures’ implementation (than for the measures with “mandatory” status). The category “agreed” is applied also to many measures of the PFs with “mandatory” status – when a requirement/action is mandatory overall but concrete measures are set/decided nationally and implementation of measures depends considerably on country-specific conditions (in particular, financial resources, sufficient control nationally).

The legal status of PFs is the same for all the countries (since these are common international PFs). The status of measures is specified for each country (EE, FI, LV, SE)¹³ and differences among the countries can be found concerning part of measures, thus national scale analysis is recommended overall for reliable specification.

The next table shows the legal status of the analysed PFs and their measures by types of PFs. The specified category of each PF and measure can be found in the “inventory”.

The results show that the legal status of measures can differ from status of the PF by which they are prescribed (for instance, “mandatory” for a PF but also “agreed” or even “voluntary” for some of its measures, or “adopted” for a PF but also “voluntary” for some of its measures).

It can be concluded overall that **the legal status should be analysed on the measures’ level for reliable assessment of measures’ implementation because the assessment on the PFs’ level would**

¹³ It was analysed for Latvia and Estonia. For Finland and Sweden it is specified for part of measures. The actual status (nationally) in Latvia and Estonia was analysed based on review of information and expert knowledge. The actual status of measures in Finland and Sweden was not checked nationally. It is specified were possible based on knowledge about the analysed policies (e.g. when specific measures are prescribed by EU Directives we may assume similar legal status for all the countries).

be too rough. And it can differ among the countries for the same measure thus the national scale analysis is important.

Table 3.6. Legal status of the covered policy frameworks (PFs) and their prescribed measures, by types of PFs.

^[1] Relevant Protocols of the Conventions are accounted as separate PFs. Two of the Conventions included in the “inventory” were not yet in force due to insufficient ratifications nationally (“*BWM Convention*” and “*HNS Convention*”), thus are not accounted here.

^[2] Since these PFs are implemented via other, more “operational” PFs, measures are analysed for these other PFs only to avoid double-counting of the same measures in the “inventory”.

^[3] The requirement of the “*WFD*” on “Supplementary measures in the WFD Programs of measures” (such measures have voluntary status in Latvia), and the requirement of “*Nitrates Directive*” on “Establishing a Code of “Good Agricultural Practice” to be implemented by farmers on a voluntary basis”.

^[4] “*HELCOM Recommendations*” are included under this type, each is accounted as separate PF.

Types of PFs	Number of PFs (of each type)	Legal status of the PFs	Legal status of the measures (M.)
EU Directives (D)	17	“Mandatory”	“Mandatory” for majority of the M. (~80 %). “Agreed” for the rest. Few cases of “Voluntary” status (could be in Latvia only). ^[3]
EU Regulations (R)	8	“Mandatory”	“Mandatory” for majority of the M. (~85 %). “Agreed” for the rest. Few cases of “Voluntary” status.
Conventions (C)	22 ^[1]	“Adopted”	The M. were not analysed. ^[2]
Strategies (S)	4 (“ <i>BD Strategy</i> ”, “ <i>Blueprint</i> ”, “ <i>EUSBSR</i> ”, “ <i>Strategy on IAS</i> ”)	“Adopted”	The M. were not analysed for “ <i>EUSBSR</i> ” ^[2] and “ <i>Strategy on IAS</i> ” (was not yet approved). For the other two Strategies: “Agreed” for majority of the M. But also “Voluntary” or “Mandatory” in few cases, or “Not known” in few cases (where an action is prescribed but concrete M. are not specified yet).
Plans (PL)	12 ^[4]	“Adopted”	“Agreed” for majority of the M, “Voluntary” in few cases. For “ <i>Plan for BD</i> ”: the M. were not analysed. ^[2]
Policies (PO)	2 PFs 1) “ <i>CAP</i> ”, 2) “ <i>IMP</i> ”	1) “Mandatory” 2) “Adopted”	1) “Mandatory”, “Agreed”, “Voluntary”. 2) The M. were not analysed. ^[2]

The next table provides an illustration on the used approach and results for specifying the legal status of measures. The “*WFD*” (and its measures for reducing nutrients’ pollution) is used as the example. The legal status of the PF (“*WFD*”) is “mandatory”, but the prescribed measures have various statuses. Statuses can differ for the same measures also among the countries (Latvia and Estonia are used as examples).

Table 3.7. An illustration on the used approach and results for specifying the legal status of measures – the WFD and its measures for reducing nutrient's pollution.

^[1] The used general types of measures: “Reg” Regulatory and administrative measures; “Ec” Economic instruments; “In” Information, institutional capacity building and awareness rising measures, incl. concerning requirements on public information and consultation; “T/T” Technical/technological measures; “Rch” Research measures; “Various” Where various types of actions/measures are joined as one record in the inventory (incl. measures of previous types); “Nat” Where concrete actions/measures are set/decided nationally; “NK” Where specific actions are not set/specified yet, only general agreement on taking actions.

^[2] Categories of the legal status: “mandatory” (M), “agreed” (Ag), “voluntary” (V).

Name of requirements/ actions / measures	Brief description of requirements/actions/measures	General type of measures ^[1]	Legal status ^[2]	
			LV	EE
National programs/plans	MS shall ensure that a river basin management plan (RBMP) is produced for each RBD, incl. establishment of a Program of measures (PoM). Each PoM shall include the 'basic' and, where necessary, 'supplementary' measures (specified in Art. 11). RBMP shall be published at the latest 9 years after the date of entry into force of the Directive and all the measures shall be made operational at the latest 12 years after that date.	Reg	M	M
Updating RBMP and PoM	RBMP shall be reviewed and updated at the latest 15 years after the date of entry into force of the Directive and every 6 years thereafter. Any new/revised measures established under an updated PoM shall be made operational within 3 years of their establishment.	Reg	M	M
Assessments: Art.5 report	MS shall ensure that for each RBD an analysis of its characteristics, a review of the impact of human activity on the status of surface waters and on groundwater, and an economic analysis of water use is undertaken (Art.5). The analyses and reviews shall be reviewed, and if necessary updated at the latest 13 years after the date of entry into force of the Directive and every 6 years thereafter.	Reg	M	M
Measures ("Basic" measures)	Basic measures' included in the PoM shall consist of measures under Nitrates Directive, UWWTD, IPPCD, Bathing water directive, Drinking water directive, Sewage sludge directive, Plant protection products directive, Seveso directive; and other measures set by Art.11(3).	Various	M	M
Measures ("Supplementary" measures)	Supplementary measures' included in the PoM (when necessary) may include measures provided in the part B of Annex VI (a non-exclusive list).	Nat	V	M
Monitoring	<u>Monitoring of waters used for the drinking water abstraction</u> : MS shall monitor those bodies of water which provide >100 m3 drinking water a day as an average.	Reg	M	M
Monitoring	<u>Monitoring of surface and groundwater status and protected areas</u> : MS shall ensure the establishment of programmes for the monitoring of water status in order to establish a coherent and comprehensive overview of water status within each RBD. These programmes shall be operational at the latest 6 years after the date of entry into force of the Directive unless otherwise specified in the legislation concerned.	Reg	M	M
Recovery of costs for water services	MS shall take account of the principle of recovery of the costs of water services, incl. environmental and resource costs, having regard to the conducted economic analysis and in accordance in particular with the "polluter pays" principle. MS shall ensure (by 2010): - that water-pricing policies provide adequate incentives for users to use water resources efficiently, - an adequate contribution of the different water uses, disaggregated into at least industry, households and agriculture, to the recovery of the costs of water services.	Nat	Ag	Ag

Name of requirements/ actions / measures	Brief description of requirements/actions/measures	General type of measures ^[1]	Legal status ^[2]	
Public involvement	MS shall <u>encourage the active involvement</u> of all interested parties in the implementation of the Directive, in particular in the production, review and updating of the RBMP, incl. <u>providing relevant information</u> .	In	M	M
Reporting (to EC)	<ul style="list-style-type: none"> • MS shall send copies of the RBMP and all subsequent updates to the Commission and to any other MS concerned within 3 months of their publication. • MS shall submit summary reports of the analyses and reviews (Art.5) and the monitoring programmes, • MS shall, within 3 years of the publication of each RBMP or update, submit an interim report describing progress in the implementation of the planned PoM. 	Reg	M	M
Penalties	MS shall determine <u>penalties</u> applicable to breaches of the national provisions adopted pursuant to the Directive. The penalties thus provided for shall be effective, proportionate and dissuasive.	Reg	M	M

3.4.2 Implementation status of policy frameworks and measures

The implementation status was analysed for both – a PF and (each of) measures prescribed by it.

For PFs, the implementation status is specified as “Existing” or “Anticipated”¹⁴, as well as extent of implementation is assessed using the following categories:

- “Not started”¹⁵ when a PF is not in force yet (could be also for cases if a PF considers specific (future) implementation time period, or if a PF is adopted but its implementation timing is not started yet).
- “On-going” when implementation of a PF is on-going (although the measures can have various statuses of implementation).
- “Fully in place” when all measures are put in place (“Existing”).

In some cases the implementation extent is assessed as follows:

- “?” when implementation extent could not be assessed (mainly where more detailed analysis is required nationally, which was not possible due to limitations of the study).
- “-” when a PF is not adopted and no information exists confirming such plan.¹⁶
- “NK” when a PF prescribes relevant measures with assessed implementation status “NK”.¹⁷
- “NAP” when measures of a PF are not applicable to a country.¹⁸

¹⁴ The status is not specified for the “HNS Convention” only, which is not ratified yet and it is unclear whether it would be ratified in the BAU timeframe. The “BWM Convention” is also not ratified but its status is assessed as “Anticipated”.

¹⁵ This category is used for “Strategy on IAS”, “BWM Convention”, “NECD-II”.

¹⁶ This is the case of “HNS Convention” concerning all the countries and the “London Convention” concerning Latvia and Estonia.

¹⁷ Used only for the “HELCOM BSAP: Recom. on municipal WWT” and the “HELCOM BSAP: Recom. on on-site WWT” concerning Latvia, since implementation of part of their measures is unknown/highly uncertain.

¹⁸ Used only for the “HELCOM BSAP: Action Plan on “zero-discharge”” (concerning Latvia and Estonia), since there are no off-shore oil or gas platforms in the national marine waters.

Comparison of the results shows that although the status of PFs is the same for all countries (since these are common international PFs) their extent of implementation can be different. Considerable differences can be found concerning implementation status of the measures¹⁹, thus the national scale analysis is needed for reliable assessment of actual implementation status.

For measures, the implementation status is specified using the following categories:

- “Existing” when a measure is “put in place” or implementation is on-going.
- “Anticipated” when implementation is anticipated (e.g. as part of the next implementation cycle of an existing PF, or when a PF considers specific (future) implementation time period for implementing a measure, or a PF is adopted but implementation timing of a measure is not started yet).
- “Both” when a PF has implementation cycles or specific (incl. future) implementation time period and there is evidence that, besides the existing measures, new (additional) measures may be set in its next cycle (till 2020).²⁰

In some cases the implementation status is assessed as follows:

- “?” when implementation status could not be assessed (mainly where more detailed analysis is required nationally, which was not possible due to limitations of the study).
- “-” when the implementation according to existing (national, other EU) regulations is only expected and no special actions are planned nationally due to a PF, or when implementation of a measure is not planned nationally (due to justifiable reasons).
- “NK” when implementation according to the existing (national, other EU) regulations might only be expected thus there is considerable uncertainty in implementation of a measure.
- “NAp” when a measure is not applicable to a country.

The next table shows the implementation status of the analysed PFs and their measures (the PFs are grouped by the categories of their implementation status). The specified category of each PF and measure can be found in the “inventory”. The implementation extent of PFs and implementation status of measures is shown concerning Latvia, since it can differ among the countries.

The results (for Latvia) show that the PFs with the category of implementation extent “on-going” compose almost 60 % of all PFs, and their measures can have various implementation statuses (“existing”, “anticipated”, implementation not expected).

It can be concluded overall that **the implementation status should be analysed on the measures’ level for reliable assessment because the assessment on the PFs’ level would be too rough. And it can be different for the same measure depending on the country thus the national scale analysis is important.**

¹⁹ The extent of implementation of PFs and the implementation status of measures was analysed for Latvia and Estonia. For Finland and Sweden it is specified as far as possible. The actual status (nationally) in Latvia and Estonia was analysed based on review of information and expert knowledge. The actual status in Finland and Sweden was not checked nationally. It is specified where possible based on general information about the analysed policies.

²⁰ For example, the “WFD” (with its 2nd implementation cycle 2014-2021), or National Biodiversity Strategies/Action plans required under the “BD Strategy” that need to be developed till 2015.

Table 3.8. Implementation status of the covered policy frameworks (PFs) and their prescribed measures.

^[1] Explanations on the assessment categories are provided in the text before the table.

^[2] When the PFs are implemented via other, more “operational” PFs, the measures are analysed for these other PFs only to avoid double-counting of the same measures in the “inventory”.

For PFs		Implementation status of the measures (M) – for Latvia (since can differ depending on the country) ^[1]
Implementation status	Extent of implementation – for Latvia (since can differ depending on the country) ^[1]	
Existing (All PFs except the few ones with the other categories – see below)	Fully in place (18 PFs)	“Existing” for almost all M. Few cases with “-“ (the M. is not relevant/implementation is not planned due to justified reasons) or “?” (status could not be assessed).
	On-going (39 PFs)	“Existing” (for ~30 % of the M.) “Anticipated” (for ~25 % of the M.) “Both” (for ~15 % of the M.) The M. were not analysed ^[2] (for ~15 % of the M.) “NAp”, “NK”, “-“, “?” (for ~15 % of the M.)
	“NK” (2 PFs)	“NK” (uncertainty in implementation of the M.), “-“ (implementation is not planned due to justified reasons), “Existing”, “Anticipated”.
	“NAp” (1 PF)	“NAp” (Not applicable to Latvia).
	“?” (2 PFs)	“?” Implementation status of the M. could not be assessed.
	“-“ (1 PF, not ratified)	(The M. were not analysed.)
	Anticipated (“BMW Convention”, “NECD-II”, “Strategy on IAS”)	Not started
Not in force yet (“HNS Convention”)	“-“	(The M. were not analysed.)

The next tables provide two illustrations on the used approach and results for specifying the implementation status of measures. The EU strategy “Blueprint” (and its measures for reducing nutrients’ pollution) and “HELCOM BSAP: Recom. 28E/5 on municipal WWT” are used as the examples.

The “Blueprint” is assessed with “existing” implementation status and “on-going” overall extent of implementation, but the prescribed measures mainly have “anticipated” implementation status. The “HELCOM BSAP: Recom. on municipal WWT” is assessed with “existing” implementation status and “NK” overall extent of implementation for Latvia and “on-going” for Estonia, but the prescribed measures have various implementation statuses and differ among the countries.

Table 3.9. An illustration on the used approach and results for specifying the implementation status of measures – the “Blueprint” and its measures for reducing nutrient’s pollution.

^[1] Categories of the implementation status: “Anticipated” (A), “?” when implementation status was not assessed (nationally), “NK” when implementation according to the existing (national, other EU) regulations thus considerable uncertainty in implementation of a measure, “-” when implementation according to the existing (national, other EU) regulations and no special actions are planned nationally due to a PF.

* New CAP (2014-2020) needs to be checked for time of developing the PoM.

** Such measures cannot be accounted in the BAU (since their implementation is not planned/little likely).

Name of requirements/ actions / measures	Brief description of requirements/actions/measures	Implem. Status ^[1]	
		LV	EE
CAP cross-compliance requirements and direct payments	1. Add WFD requirements to <u>cross-compliance under CAP</u> (as soon as the conditions in the Commission proposal are fulfilled (i.e. at the earliest in 2014). 2. Green CAP pillar I to support Natural Water Retention Measures (through ecological focus areas) (as of 2014).	A*	A*
Enforcement actions	<u>Enforcement actions</u> for better implementation of existing legislation (incl. mobilising EU funding from CAP and Structural funds).	A	A
Guidance on Green Infrastructure	Developing CIS (WFD Common Implementation Strategy) <u>Guidance on Natural Water Retention Measures (Green Infrastructure)</u> by 2014.	A	A
Public funding	Use Structural & Cohesion Funds & EIB loans to support Natural Water Retention Measures (2014-2021).	-**	A
Vulnerable zones	<u>Extend nitrate vulnerable zones</u> and <u>reinforcing action programmes</u> (Nitrates Directive).	NK**	?
WW treatment (urban)	Prepare <u>implementation plans</u> by 2014 and <u>improve compliance rates</u> on WW treatment through long-term investment planning (incl. EU funds and EIB loans) by 2018 (UWWTD).	A	A
Emission standards in Permits	Ensure that <u>industrial emissions permits</u> provide for Emission Limit Values that are in line with BAT and take into account relevant water objectives (Industrial Emissions Directive) (as of 2016).	A	A
Water pricing and cost recovery	<u>Enforce</u> water pricing/cost-recovery obligations under the WFD, incl. metering when relevant. Make water pricing/cost recovery <u>an ex ante condition under</u> the Rural Development and Cohesion policy funds (as of 2014).	A	A
Re-use of water	Propose (regulatory) instrument on <u>standards for water re-use</u> (by Commission by 2015).	A	A
Information and education	Support awareness-raising tools on water consumption (e.g. voluntary labelling & certification schemes).	NK**	A

Table 3.10. An illustration on the used approach and results for specifying the implementation status of measures – the “HELCOM BSAP: Recom. on municipal WWT” (with measures for reducing nutrient’s pollution).

^[1] Categories of the implementation status: “Existing” (E), “?” when implementation status was not assessed (nationally), “NK” when implementation according to the existing (national, other EU) regulations thus considerable uncertainty in implementation of a measure, “-” when implementation according to the existing (national, other EU) regulations and no special actions are planned nationally due to a PF.

* Such measures cannot be accounted in the BAU (since their implementation is not planned/little likely).

Name of requirements/ actions / measures	Brief description of requirements/actions/measures	Implem. Status ^[1]		Comments
		LV	EE	
WW treatment (urban)	Domestic sewage (or WW of similar type) should be treated so that the treatment results in the following reductions: - In WWTP with a load of 300 - 2 000 p.e.: ≥ 80% of BOD5 (or 25 mg/l), ≥ 70% of Ptotal (or 2 mg/l), ≥ 30% of Ntotal (or 35 mg/l) if discharging to marine areas sensitive to N [by the end of 2018]. - In WWTP with a load of 2 000 – 10 000 p.e.: ≥ 80% of BOD5 (or 15 mg/l), ≥ 80% of Ptotal (or 1 mg/l), ≥ 30% of Ntotal if discharging to marine areas sensitive to N [by the end of 2018]. - In WWTP with a load of 10 001 – 100 000 p.e.: ≥ 80% of BOD5 (or 15 mg/l), ≥ 90% of Ptotal (or 0.5 mg/l), ≥ 70-80% of Ntotal (or 15 mg/l) if discharging to marine areas sensitive to N [by the end of 2015]. - In WWTP with a load of > 100 000 p.e.: ≥ 80% reduction of BOD5 (or 15 mg/l), ≥ 90% of Ptotal (or 0,5 mg/l), ≥ 70-80% of Ntotal (or 10 mg/l) if discharging to marine areas sensitive to N [by the end of 2010 if > 200 000 p.e. or 2012 if > 100 000 p.e.].	NK *	E	* Implemented partially – as far as it is according to UWWTD requirements. Only few investment projects in selected (the large) cities implemented in addition. The national priority is implementation of UWWTD. The Recom. sets more stringent requirements, but there is no funding for this (also in the next EU funding period 2014-2020).
National programs/plans	Establishing a <u>programme for the implementation</u> of the Recomm. and providing the HELCOM with information on the programme (by the end of 2009).	- *	E	* There is no special program (and not planned at the moment). WFD RBMPs are considered as the “program”.
Reporting (to HELCOM)	<u>Reporting</u> to the HELCOM every three years starting at the end of 2010 with data from 2009.	E	E	
Revision	Re-evaluating the Recom. and reconsidering it in 2015 taking into account new developments on national or international and EU level for MS.	NK *	?	* See comment for the measure 1.

3.4.3 Clarity on measures to be taken

In relation to the clarity on measures to be taken, the assessment takes into account two perspectives:

1. Whether concrete measures are prescribed/specified directly by a PF, or it only sets requirements/direction of actions but concrete measures/actions to be taken are decided/set nationally.

The latter case means that the national scale analysis is needed for reliable assessment of measures and their implementation. It also may impact uncertainty of implementation since

larger uncertainty may be seen overall for such measures comparing to, for instance, measures specified directly by (mandatory) EU policy framework (e.g. directive, regulation).

2. Whether measures are known that their effect can be assessed and included in the BAU and consider for the “policy gap” analysis.

This is relevant for “existing” PFs where (new) measures are anticipated in the BAU timeframe. The analysis shows that not always such measures could be known/sufficiently clear for the time of developing the national PoM.

All the measures included in the “inventory” were assessed using the following categories:

- “Yes” when concrete actions/measures are known and specified directly by a PF.
- “No(Nat)” when concrete actions/measures to be taken depend on countries.
- “Both” when measures are partly specified by a PF, partly decided/set nationally.²¹
- “No(Ant)” when concrete actions/measures are unknown currently but might be specified in the future (in the BAU timeframe).

The next table provides examples of measures (from various PFs) with the assessment “No(Nat)” where concrete actions/measures to be taken depend on countries. The table after provides examples of measures with the assessment “No(Ant)” where measures are not sufficiently known to be included in the BAU. It should be noted that this assessment reflects situation for time of completing the “inventory” (May of 2013) and some measures might be clear for the time of preparing the national PoM (should be checked when preparing the PoM).

The results show that more than 30 % of all measures included in the “inventory” are assigned the category No(Nat) and around 5 % the category No(Ant). Considerable part of them is related to “technical” measures with direct effect in terms of reducing pressures/improving the state. Thus it is concluded that **detailed analysis on the measures level and on the national scale is recommended for reliable assessment on what can be accounted in the BAU.**

²¹ This category is used for few cases only. For instance, requirement of the “WFD” on including in the PoM the “basic measures”, which mainly come from various EU Directives but can include also “basic measures” set nationally. Or requirement of the “Nitrate Directive” that MS shall establish action programmes in respect of designated vulnerable zones, which can include both – measures specified by the Directive and measures set nationally.

Table 3.11. Assessment of clarity on measures (M.) to be taken – examples of measures (from various PFs) that are set/implemented nationally.

* “No(Nat)” means that only general requirements/directions of actions are specified by a PF, but concrete actions/measures to be taken depend on countries.

Name of a PF	Name of requirements/ actions / measures	Brief description of requirements/actions/measures	Clarity on M.*	Comments
HELCOM BSAP: Recom. on municipal WWT	National programs/plans	Establishing a programme for the implementation of the “Recommendation” and providing the HELCOM with information on the programme (by the end of 2009).	No(Nat)	LV: There is no special program (and not planned at the moment). WFD RBMPs are considered as the “program”. (=> The M. is not accounted in BAU.)
HELCOM BSAP: Recom. on on-site WWT	Sludge management	<ul style="list-style-type: none"> • Attention should be paid to reducing sludge formation and to promoting systems which enable recycling of nutrients back to agricultural use. • Sludge should be collected, stored and transported to a municipal WWTP or a designated sludge handling unit in manner that avoids leakages. • Sludge from septic tanks or activated sludge systems should not be dumped into water bodies or close to them. 	No (Nat)	LV: Existing practices to some extent (e.g. transporting individual sewage to municipal WWT systems). Overall, the sludge management is carried out according to the existing national Regulations. No special actions are taken (or planned at the moment) in relation to the Recom. (=> Not accounted in BAU.)
HELCOM BSAP: Recom. on introducing economic incentives	Economic incentives	<u>Investigating</u> and, when appropriate, <u>introducing feasible and effective economic instruments</u> as a possible complement to existing regulations to further reduce air pollution from shipping, and taking into consideration the attached “Guidelines” when introducing economic incentives schemes to reduce emissions from ships.	No(Nat)	Introducing instruments is decided nationally.
HELCOM BSAP: Recom. on practices for small-scale combustion	Public information	<u>Suppliers should be made aware of environmentally sound practices</u> for combustion appliances < 50 kW and should be involved in the <u>promotion of BEP for households</u> .	No(Nat)	Concrete M. are taken nationally.
Blueprint	Public funding	Use Structural & Cohesion Funds & EIB loans to support Natural Water Retention Measures (2014-2021).	No(Nat)	LV: No specific plans for this. (=> Not accounted in BAU.)
	Emission standards in Permits	Ensure that <u>industrial emissions permits</u> provide for Emission Limit Values that are in line with BAT and take into account relevant water objectives (Industrial Emissions Directive) (as of 2016).	No(Nat)	LV: Concrete requirements/M. are set by individual permits (for each operator). Thus the actual requirements/M. are set nationally.
	Information and education	Support awareness-raising tools on water consumption (e.g. voluntary labelling & certification schemes).	No(Nat)	Concrete M. are taken nationally. LV: No concrete plans for this identified. (=> Not accounted in BAU.)

Name of a PF	Name of requirements/ actions / measures	Brief description of requirements/actions/measures	Clarity on M.*	Comments
IED	Measures (by operators)	<p>MS shall take the necessary measures to provide that <u>installations (carrying out activities listed in Annex I) are operated in accordance with the following principles:</u></p> <p>(i) all the appropriate preventive measures are taken against pollution; (ii) the BAT are applied; (iii) no significant pollution is caused; (iv) the generation of waste is prevented; (v) where waste is generated, it is prepared for re-use, recycled, recovered or, where that is technically and economically impossible, it is disposed of while avoiding or reducing any impact on the environment; (vi) energy is used efficiently; (vii) the necessary measures are taken to prevent accidents/limit their consequences; (viii) the necessary measures are taken upon definitive cessation of activities to avoid any risk of pollution and return the site of operation to the satisfactory state.</p>	No(Nat)	Actual actions/measures are taken nationally (by operators).
	Delivery of waste	<p>The operator of the waste (co)incineration plant <u>shall take all necessary precautions</u> concerning the delivery and reception of waste in order to prevent or to limit as far as practicable the pollution of air, soil, surface water and groundwater as well as other negative effects on the environment, odours and noise, and direct risks to human health.</p>	No(Nat)	Actual actions/measures are taken nationally (by operators).
	Controlling	<p>MS shall set up a system of <u>environmental inspections of installations</u> addressing the examination of the full range of relevant environmental effects from the installations concerned.</p> <p>MS shall ensure that all installations are covered by an <u>environmental inspection plan</u> at national, regional or local level and shall ensure that this plan is regularly reviewed and, where appropriate, updated.</p>	No(Nat)	Actual actions/measures are taken nationally.
WFD	Recovery of costs for water services	<p>MS <u>shall take account of the principle of recovery of the costs of water services</u>, incl. environmental and resource costs, having regard to the conducted economic analysis and in <u>accordance in particular with the "polluter pays" principle</u>. MS shall ensure:</p> <ul style="list-style-type: none"> - that water-pricing policies provide adequate incentives for users to use water resources efficiently, - an adequate contribution of the different water uses, disaggregated into at least industry, households and agriculture, to the recovery of the costs of water services. 	No(Nat)	Concrete actions/measures are decided/set nationally.

Table 3.12. Assessment of clarity on measures (M.) to be taken – examples of anticipated measures (from various PFs) that are not sufficiently known to be included in the BAU.

* “No(Ant)” means that concrete actions/measures are unknown currently. “No(Nat)” means that only general requirements/directions of actions are specified by a PF, but concrete actions/measures to be taken depend on countries.

Name of a PF	Name of requirements/ actions / measures	Brief description of requirements/actions/measures	Clarity on M.	Comments
HELCOM BSAP: Recom. on municipal WWT	Revision	Re-evaluating the “Recommendation” and reconsidering it in 2015 taking into account new developments on national or international and EU level for MS.	No(Ant) No(Nat)	Possible additional M. after re-evaluation unknown.
HELCOM BSAP	Banning or restricting specific substances	<ul style="list-style-type: none"> • <u>Banning</u> the use, production and marketing (by 2010) of endosulfan, pentaBDE, octaBDE. • Starting (by 2008) to work for strict <u>restrictions</u> on the <u>use of PFOS, NP/NPEs, SCCPs</u>. 	No(Ant)	LV: Implementation according to the "Priority Substances Directive". Additional future restrictions unknown.
	National programs/plans	Developing and submitting for HELCOM’s assessment national programmes (by 2010) for evaluating the effectiveness of the programmes at a HELCOM Ministerial Meeting in 2013 and whether additional measures are needed.	No(Ant) No(Nat)	Possible additional M. (after evaluation) unknown.
HELCOM BSAP: BWM Conventions "Road map"	Cooperation	Cooperating with OSPAR on any other relevant topics for the benefit of both regions and as necessary for harmonised implementation of the BWM Convention.	No(Ant)	Future M. unknown.
Blueprint	CAP cross-compliance requirements and direct payments	<ol style="list-style-type: none"> 1. Add WFD requirements to <u>cross-compliance under CAP</u> (as soon as the conditions in the Commission proposal are fulfilled (i.e. at the earliest in 2014). 2. Green CAP pillar I to support Natural Water Retention Measures (through ecological focus areas) (as of 2014). 	No(Ant)	The M. unknown currently. The CAP 2014-2020 needs to be checked for time of preparing the PoM.
	Vulnerable zones	<u>Extend nitrate vulnerable zones and reinforcing action programmes</u> (Nitrates Directive).	No(Ant) No(Nat)	LV: It is not known if NVZ would be extended.
	Re-use of water	Propose (regulatory) instrument on <u>standards for water re-use</u> (by Commission by 2015).	No(Ant)	The instrument is not known yet.
BD Strategy	CAP cross-compliance requirements	The Commission will propose to improve and simplify the "Good Agricultural and Environmental Conditions" cross-compliance standards and consider including the WFD within the scope of cross-compliance once the WFD has been implemented and the operational obligations for farmers have been identified in order to improve the state of aquatic ecosystems in rural areas.	No(Ant)	Concrete M. unknown to be it possible to account them in the BAU. Needs to be checked for time of preparing the PoM.
	Instruments (for "no net loss of BD and ecosystem services")	The Commission will carry out further work with a view to proposing by 2015 <u>an initiative</u> to ensure there is no net loss of ecosystems and their services (e.g. through compensation or offsetting schemes).	No(Ant)	
WFD	Measures ("Supplementary" measures)	Supplementary measures' included in the PoM (when necessary) may include measures provided in the part B of Annex VI (a non-exclusive list).	No(Ant) No(Nat)	Additional "supplementary" measures for the 2nd cycle may be expected, but unknown currently.

Name of a PF	Name of requirements/ actions / measures	Brief description of requirements/actions/measures	Clarity on M.	Comments
IED	National plans: Transitional plan	During the period from 1 January 2016 to 30 June 2020, <u>MS may draw up and implement a transitional national plan covering combustion plants</u> which were granted the first permit before November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation by November 2003. Combustion plants covered by the plan <u>may be exempted from compliance with the emission limit values</u> .	No(Ant) No(Nat)	Decision on the M. is not known, might be unknown also for time of preparing the PoM.

3.4.4 Relevant obstacles hindering implementation of measures

Identification of obstacles for implementing measures aimed to support more reliable assessment of certainty of their implementation and assessment of implementation effectiveness of the “existing” policies.

Analysis of the potential obstacles involved **national scale analysis**, which was done based on own expert knowledge and consultations with specialists from institutions that are responsible for the implementation of specific PFs (various national institutions depending on a PF). It was done for Latvia and some analysis (on selected PFs) was carried out also for Estonia.

Due to limitations of the study the consultations could not be conducted for all PFs and measures. It was done as far as possible, in particular concerning the PFs and measures where relevant information was missing on their implementation status and/or where information/knowledge indicated possible obstacles hindering the implementation. In Latvia it was done for around 40 % of all measures included in the “inventory”. In around 15 % out of these cases significant obstacles were identified that hinder implementation or cause high uncertainty in implementation of the measures. In majority of these cases the obstacles relate to financing constraints.

The next table provides examples on the measures (from various PFs) where relevant obstacles were identified hindering their implementation.

Table. 3.13. Examples on measures (from various PFs) where obstacles were identified hindering their implementation – results concerning Latvia.

Name of a PF	Name of requirements / actions / measures	Brief description of requirements/actions/measures	Obstacles - concerning Latvia
HELCOM BSAP: BWM Conventions "Road map"	Ratification of BWM Convention	<u>Ratifying the BWM Convention</u> as soon as possible, but in all cases not later than 2013.	Not ratified yet. The implementation of the Convention will be costly (e.g. for concerned public institutions), thus the discussions on its ratification are difficult.
HELCOM BSAP: BWM Conventions "Road map"	Baseline surveys in ports	Conducting (by the end of 2008) <u>baseline surveys</u> of prevailing environmental conditions in <u>major ports</u> and outlining the <u>major long-distance high risk voyages</u> in order to gather data necessary to conduct and/or evaluate and consult risk assessments.	Lack of funding. Implementation (both - internationally and nationally) depends on whether there are projects (funding!) for conducting such surveys.
WFD	Measures ("Supplementary" measures)	'Supplementary measures' included in the PoM (when necessary) may include measures provided in the part B of Annex VI (a non-exclusive list).	Low enforcement, various reasons depending on measures (lack of funding, voluntary status, lack of acceptance).
WFD	Recovery of costs for water services	MS shall take account of the <u>principle of recovery of the costs of water services</u> , incl. environmental and resource costs, having regard to the conducted economic analysis and in <u>accordance in particular with the "polluter pays" principle</u> . MS shall ensure (by 2010): - that water-pricing policies provide adequate incentives for users to use water resources efficiently, - an adequate contribution of the different water uses, disaggregated into at least industry, households and agriculture, to the recovery of the costs of water services.	Not fully implemented. Socioeconomic reasons (e.g. affordability) constrain implementation of the cost-recovery and PPP.
Priority Substances Directive	Emission inventory	MS shall establish an <u>inventory</u> , incl. maps, if available, of <u>emissions, discharges and losses</u> of all priority substances and pollutants listed in Annex I for each river basin district (RBD) or part of a RBD lying within their territory.	Should be established till the end 2013. But could continue also after because of lack of funding and availability of the experts (two the most important factors).
REACH Regulation	Controlling	MS shall maintain a <u>system of official controls and other activities</u> as appropriate to the circumstances.	The national Law on Chemical Substances sets controlling institutions. But the capacity of inspectors is not adequate - there is both lack of inspectors and they are not trained sufficiently.
Nitrates Directive	National programs/plans	MS shall establish action programmes in respect of designated vulnerable zones. Action programmes shall be implemented within 4 years of their establishment and shall consist of the measures listed in Annex III and <u>measures which MS have prescribed in the code(s) of GAP</u> .	Some M. are still not fully implemented. Lack of funding (e.g. for building manure storage facilities).

Name of a PF	Name of requirements / actions / measures	Brief description of requirements/actions/measures	Obstacles - concerning Latvia
UWWTD	WW collecting systems (urban)	MS shall ensure that <u>all agglomerations are provided with collecting systems for urban WW</u> : i) by December 1998: for those with a p.e. > 10 000 if urban WW are discharged into 'sensitive area', ii) by December 2000: for those with a p.e. > 15 000, iii) by December 2005: for those with a p.e. 2 000 - 15 000. <u>Final deadline of transitional period for MS which joined the EU in 2004</u> is December 2009 for Lithuania, December 2010 for Estonia and December 2015 for Latvia and Poland. Size categories can be country specific.	Lack of funding. Even after providing agglomerations with collecting systems, there are still households not connected to these systems.

3.4.5 Summary assessment on uncertainty about measures and/or their implementation

To assess the overall uncertainty about measures and/or their implementation the assessment categories for each characteristic (described in the previous chapters) were linked to uncertainty levels as shown in the next table. For instance, the uncertainty level is “low” when a measure has “mandatory” legal status, it is specified directly by a (international) PF, it is put in place and there are no obstacles for its implementation. But the uncertainty level is “high” if a measure has “voluntary” legal status, timing for its implementation lies in the future, it is not yet specified (only general requirement/direction of actions is known) and significant obstacles are expected (nationally) for its implementation.

Table 3.14. Link between the used assessment categories of a measure’s characteristics and uncertainty levels for assessing uncertainty about measures and/or their implementation.

* Assessment categories for each characteristic are explained in the previous chapters.

** This category relates to uncertainty about measures (it is high when measures are not sufficiently known to be taken in the BAU).

Analysed CHARACTERISTICS of measures* affecting uncertainty	UNCERTAINTY levels		
	LOW	MODERATE	HIGH
1. Legal status	Mandatory	Agreed	Voluntary
2. Implementation status	Existing – put in place	Existing – on-going, Both	Anticipated (also “NK”, “?”)
3. Clarity on measures to be taken	Yes	No(Nat), Both	No(Ant)**
4. Relevant obstacles hindering the implementation	No	Possible	Yes

The **summary assessment on uncertainty** for each measure is based on its individual assessments of each characteristic and their link to uncertainty levels as shown in the table above. The individual assessments of a measure can have categories linked to different uncertainty levels (e.g. “Low” for legal status (when “Mandatory” status), “Moderate” for implementations status (when, for instance, “On-going” implementation) and clarity on measures etc. The summary assessment is aggregation of these various categories-uncertainty levels (based on expert judgement). A 5-category scale is used

for the aggregated summary assessment.²² Such summary assessment was developed for each analysed measure concerning Latvia²³ (an illustration on the assessment for measures addressing introduction of non-indigenous species is provided in the next section).

If there is no clarity on a measure to be taken (only general requirement/direction of actions is known) the uncertainty about that measure is high, because usually it is not sufficiently specified to assess its effect to be it accounted in the BAU. Such measures are not proposed for including in the BAU, in particular, if uncertainty levels concerning other implementation characteristics of these measures are also high.

Other cases when measures are not proposed for including in the BAU relate to high uncertainty in measures' implementation. For instance, when legal status of a measure is "agreed", implementation is little likely (the categories of implementation status "-“and “NK”), what is actually implemented is set/decided nationally and relevant obstacles are expected for its implementation.

The summary assessments can also support analysis of implementation effectiveness of the “existing” policies. The measures with “moderate” and “high” uncertainty assessments indicate implementation gaps in the “existing” policies.

The assessment results may also indicate opportunities for improvements in the “other” policies for reaching the MSFD environmental targets. It should be noted that the assessment results were used to link the measures with the categories of measures specified by the “CIS Recommendations’ Document on PoM” (see the information box 1.3 in the section 1 for description of these categories).²⁴ The results show that at least 10 % of the analysed measures could not be classified as “existing measures” (the categories 1a or 1b) – those that are to be considered in the BAU. These measures may indicate opportunities for additional (2a) measures.

²² The uncertainty can be “Low”, “Low-Moderate”, “Moderate”, “Moderate-High” or “High”.

²³ If these assessments want to be used for development of the national PoM, it is recommended to discuss/validate the results with stakeholders (from the various policies’ fields).

²⁴ This was done concerning Latvia, since implementation characteristics of measures are country-specific.

4 Illustration for Latvia – evaluation of the ‘baseline policies’ addressing introduction of non-indigenous species

The analysis of policy frameworks (PFs) and measures aimed:

- 1) To identify policies and measures that should be and could be accounted in the BAU (for analysis of the “policy gap” between the BAU state and GES). Important issues to be answered here were whether the concrete measures are known that their effect can be assessed and taken into account in the BAU and whether there is sufficient certainty in the measures’ implementation (in the BAU timeframe).
- 2) To identify gaps in implementation of the “existing” policies and opportunities for improvements in the “other” policies (potential for measures of the category 2a).

For these aims the implementation effectiveness of the “existing” policies was analysed based on the assessment of uncertainty about measures and/or their implementation (according to the evaluation approach as described in the previous sections).

The illustration is related to the pressure “introduction of non-indigenous species (NIS) and microbial pathogens”. It is linked to the Descriptor D2 on non-indigenous species.

The policies and measures are analysed in connection with economic activities causing the pressure²⁵ – shipping and marine aquaculture are relevant for the given pressure. It should be noted that there is no marine aquaculture farms in the Latvian marine waters currently. However development of this economic activity may be expected in the future (accounted in the BAU).

4.1 Policy frameworks included in the analysis

Policy frameworks (PFs) identified as part of the policy appraisal²⁶ addressing the given pressure are listed in the table below. It needs to be noted that the measures are not analysed for those PFs that are implemented via other (more "operational") PFs, for which the measures are analysed, to avoid double-counting of the same measures.

²⁵ For other pressures also type of source (direct/riverine/atmospheric) and nature of the pressure/pollution (systematic/accidental spills) can be relevant and is taken into account in the analysis. These aspects are less relevant concerning the given pressure. The type of source is “direct” always (no riverine or atmospheric inputs). The nature of the pressure is mainly “systematic” for shipping and can be both (also accidental spill) for aquaculture, but there are no policies that would address specially one of these (the policy frameworks commonly address both “systematic” and “accidental” introductions).

²⁶ Reflects situation to May of 2013.

Table 4.1. A list of (international) policy frameworks (PFs) addressing pressure of non-indigenous species and microbial pathogens included in the analysis.

* Since the PF is implemented via other (more "operational") PFs, measures are analysed for these other PFs only to avoid double-counting of the same measures.

Name of PF	Is the analysis of measures conducted
Habitats Directive , 92/43/EEC, Directive on the Conservation of natural habitats and of wild fauna and flora	Yes
Reg. on alien species in aquaculture , 708/2007, Regulation concerning use of alien and locally absent species in aquaculture	Yes
HELCOM BSAP , the Baltic Sea Action Plan	Yes
HELCOM BSAP: BWM Conventions "Road map" , Road map towards harmonised implementation and ratification of the 2004 International Convention for Control and Management of Ships' Ballast Water and Sediments	Yes
BD Strategy , EU Biodiversity Strategy 2020	Yes
CBD , Convention on Biological Diversity	No*
Bern Convention , Convention on the Conservation of European Wildlife and Natural Habitats	No*
BWM Convention , International Convention for the Control and Management of Ships Ballast Water and Sediments	No Convention is not ratified yet in Latvia
Helsinki Convention , Convention on the Protection of the Marine Environment of the Baltic Sea Area	No*
UNCLOS , United Nations Convention on the Law of the Sea	No*
Plan for BD , Strategic Plan for biodiversity 2011-2020	No*
IMP , EU Integrated Maritime Policy	No*
EUSBSR , EU Strategy for the Baltic Sea Region	No*
Strategy on IAS , EU Strategy on invasive alien species	No Strategy is not approved yet

The Directive (92/43/EEC) and Regulation (708/2007) are transposed in the national legislation by various **national regulations** for nature protection. In relation to the introduction of non-indigenous species the following regulation can be noted in particular – the Regulation of the Cabinet of Ministers N^o 1165 (from 21.12.2010.) *“Procedure for Issuing Permits to Obtain Individuals of Non-game Species, Introduce Wild Species Uncharacteristic to Nature in Latvia and Reintroduce Populations of Species”*²⁷. Additional policies on the national level are national regulations concerning

²⁷ „Kārtība, kādā izsniedz atļaujas nemedijamo sugu indivīdu iegūšanai, ievieš Latvijas dabai neraksturīgas savvaļas sugas (introdukcija) un atjauno sugu populāciju dabā (reintrodukcija).”

Environmental Impact Assessment prior to new activities. These regulations would concern also (new) marine aquaculture farms.

4.2 Assessment of policy frameworks and measures to be taken in the BAU

According to the used approach the measures' part of the inventory includes all relevant requirements, actions, measures prescribed by a PF. They all are called here as "measures" for simplicity. All these "measures" were assessed with the approach as described in the chapter 3.4. The "measures" were analysed from the perspectives of such **relevant characteristics** as (i) their legal status, (ii) implementation status, (iii) clarity on "measures" to be taken and (iv) relevant obstacles for their implementation.

These characteristics were analysed from the national perspective. The **national scale analysis** was done based on own expert knowledge, but also consultations were conducted with specialists from institutions that are responsible for implementation of specific PFs (various national institutions depending on a PF). Specialists were consulted concerning implementation status of "measures" and difficulties and possible obstacles for the implementation. Due to limitations of the study the consultations could not be conducted for all PFs and "measures". It was done as far as possible, in particular concerning the PFs and "measures" where relevant information was missing on their implementation status and/or where information/knowledge indicated possible obstacles hindering the implementation.

In relation to the given pressure, the "measures" were analysed for the following PFs – Habitats Directive, Regulation on alien species in aquaculture, HELCOM BSAP, HELCOM BSAP: BWM Convention "Road map" and EU Biodiversity Strategy. All these PFs can be classified as "existing", thus should be taken into account in the BAU. However, the assessments of characteristics of "measures" were used for assessing **uncertainty about "measures" and/or their implementation**. This formed basis for classifying "measures" by categories according to the "CIS Recommendations Document on PoM".²⁸ According to the commonly agreed approach the measures of categories 1a and 1b are then included in the BAU.

The results of assessing the "measures" are provided in the next table. The following **assessment categories** are used:

[1] Type of sources (of the pressure): **Direct; Riverine; Atmospheric**. Nature of the pressure (introduction of NIS): **Systematic; Accidental spills; Both**.

[2] General type of "measures":

"Reg" Regulatory and administrative "measures";

"Ec" Economic instruments;

"In" Information, institutional capacity building and awareness rising "measures", incl. concerning requirements on public information and consultation;

"T/T" Technical/technological measures;

"Rch" Research measures;

²⁸ "MSFD CIS Recommendations document "Programmes of measures under MSFD: Recommendations for establishment / implementation and related reporting". See the information box 1.3 in the section 1 for description of the categories.

“Various” Where various types of “measures” are joined as one record in the inventory (incl. “measures” of the previous types);

“Nat” Where “measures” are set/decided nationally;

“Not known yet” Where specific “measures” are not set/specified yet, only general agreement on taking actions.

[3] Legal status of “measures”: **“M”** mandatory; **“Ag”** agreed; **“V”** voluntary; **“NK”** when “measures” are not specified yet (only agreement on general requirements/action); **“?”** could not be assessed.

[4] Implementation status of “measures”:

“Existing” The “measure” is “put in place” or implementation is on-going;

“Anticipated” Implementation is anticipated (e.g. in cases of “next implementation cycle” of existing PF; if the PF considers specific (incl. future) implementation time period; if the PF is adopted but its implementation timing is not started yet);

“Both” Includes cases where a PF has implementation cycles or specific (incl. future) implementation time period and there is evidence that, besides the existing “measures”, new (additional) “measures” may be set in its next cycle (till 2020).

“NK” Implementation according to the existing (national, other EU) regulations, uncertainty in implementation of the “measure”;

“?” Implementation status could not be assessed;

[5] Assessment categories for clarity on measures to be taken:

“Yes” (“measures” are specified directly by a PF);

“No(Ant)” when “measures” are unknown currently but will be specified in the future (still in the BAU timeframe);

“No(Nat)” when “measures” actually taken depend on countries;

[6] Categories for assessing uncertainty about “measures” and/or their implementation: **High; High-Moderate; Moderate; Moderate-Low; Low**. These categories are specified for each measure based on expert judgement taking into account individual assessments of each relevant characteristic and their link to uncertainty levels (as described in the chapter 3.4.5).

[7] Categories (according to the “CIS Recommendations Document on PoM”): **1a; 1b; 2a; 2b** (see the information box 1.3 in the section 1 for the description), or **“NA”** where the category could not be specified.

Table 4.2. Assessment of measures (M.) addressing introduction of non-indigenous species to be taken in the BAU (assessment for LATVIA).

Type of source, Nature of pressure ^[1]	Economic Activity causing the pressure	Name of requirements/ actions / measures	Brief description of requirements/actions/measures	General type ^[2]	Legal status ^[3]	Implementation Status ^[4]	Clarity on M. to be taken ^[5]	Uncertainty about M. and/or their implementation ^[6]	Category according to "CIS Rec. Doc. on PoM" ^[7]	Relevant obstacles ("-" means that obstacles were not analysed as part of the study.)
Habitats Directive, 92/43/EEC, Directive on the Conservation of natural habitats and of wild fauna and flora										
Direct, Systematic introductions	Shipping, Aquaculture	Regulation of introduction of NIS	MS shall ensure that the <u>deliberate introduction</u> into the wild of any species which is not native to their territory is <u>regulated</u> so as not to prejudice natural habitats within their natural range or the wild native fauna and flora and, <u>if they consider it necessary, prohibit such introduction.</u>	Reg	M	E	No(Nat)	Low	1a	(Significant obstacles were not identified.)
Direct, Systematic introductions	Shipping, Aquaculture	Information and education	MS shall promote <u>education</u> and <u>general information</u> on the need to protect species of wild fauna and flora and to conserve their habitats and natural habitats.	In	Ag	E	No(Nat)	Moderate	1a	-
Direct, Systematic introductions	Shipping, Aquaculture	Reporting (to EC)	Every 6 years from the date of expiry of the period laid down in Art.23, MS shall draw up a <u>report</u> on the implementation of the measures taken under the Directive.	Reg	M	E	Yes	Low	1a	-
Direct, Systematic introductions	Shipping, Aquaculture	Research	MS and the Commission shall encourage necessary <u>research and scientific work</u> having regard to the objectives set out in the Directive. They shall exchange information for purposes of proper coordination of research carried out at MS and at Community level.	Rch	Ag	E	No(Nat)	Moderate	1a	- (Insufficient funding.)
Reg. on alien species in aquaculture, 708/2007, Regulation concerning use of alien and locally absent species in aquaculture										
Direct, Both	Aquaculture	Measures (appropriate measures nationally)	MS shall <u>ensure that all appropriate measures are taken to avoid adverse effects</u> to BD.	Nat	?	?	No(Nat)	Moderate-Low (?)	NA	Specific M. (besides the included below) were not identified. If further national scale analysis identifies such M. and shows "Mandatory" legal status and (at least) "Existing - On-going" implementation status of these M., the uncertainty can be seen as "Moderate-Low".

Type of source, Nature of pressure ^[1]	Sector	Name of requirements/ actions / measures	Brief description of requirements/actions/measures	General type ^[2]	Legal status ^[3]	Implementation Status ^[4]	Are M. specified by the PF ^[5]	Uncertainty about M. and/or their implementation ^[6]	Category according to "CIS Rec. Doc. For PoM" ^[7]	Relevant obstacles ("-" means not checked as part of the study)
Direct, Both	Aquaculture	Permit issuing	Aquaculture operators intending to undertake the introduction of an alien species or the translocation of a locally absent species shall obtain a <u>permit</u> from the competent authority of the receiving MS.	Reg	M	E	Yes	Low	1a	-
Direct, Both	Aquaculture	Quarantine	<u>Quarantine</u> has to be applied for the release of aquatic organisms into 'open aquaculture facilities' in the case of 'non-routine introductions'. It is a process by which aquatic organisms and any of their associated organisms can be maintained in complete isolation from the surrounding environment.	Reg	M	E	Yes	Low	1a	- (It is recommended to check actual situation nationally with the status of M. as part of the BAU work for the national PoM.)
Direct, Both	Aquaculture	Pilot release	<u>Pilot release</u> has to be applied before the release of the aquatic organisms into 'open aquaculture systems' in the specific cases. It is the introduction of alien species or translocation of locally absent species on a limited scale to assess ecological interaction with native species and habitats in order to test the risk assessment assumptions.	Reg	M	E	Yes	Low	1a	
Direct, Both	Aquaculture	Contingency plans	For all 'non-routine introductions' and pilot releases, the applicant shall draw up a <u>contingency plan</u> for the approval of the competent authority.	Reg	M	E	Yes	Low	1a	
Direct, Both	Aquaculture	Environmental risks assessment	In the case of 'non-routine movements', an <u>environmental risk assessment shall be carried out</u> .	Reg	M	E	Yes	Low	1a	
Direct, Both	Aquaculture	Notification requirement (transboundary)	Where the potential or known environmental effects of a proposed movement of an organism are liable to affect neighbouring MS, the <u>CA shall notify the MS or States concerned and the Commission</u> of its intention to grant a permit by sending a draft decision, accompanied by an explanatory memorandum and a summary of the environmental risk assessment.	Reg	M	E	Yes	Low	1a	

Type of source, Nature of pressure ^[1]	Sector	Name of requirements/ actions / measures	Brief description of requirements/actions/measures	General type ^[2]	Legal status ^[3]	Implementation Status ^[4]	Are M. specified by the PF ^[5]	Uncertainty about M. and/or their implementation ^[6]	Category according to "CIS Rec. Doc. For PoM" ^[7]	Relevant obstacles ("-" means not checked as part of the study)
Direct, Both	Aquaculture	Monitoring	Alien species shall be <u>monitored</u> after their release into 'open aquaculture facilities' for a period of two years or a full generation cycle.	Reg	M	E	Yes	Low	1a	- (It is recommended to check actual situation nationally.)
Direct, Both	Aquaculture	Obligation to keep information	MS shall keep a <u>register of introductions and translocations</u> containing a historical record of all applications made and the associated documentation gathered before the issue of a permit and during the monitoring period.	Reg	M	E	Yes	Low	1a	-
HELCOM BSAP, the Baltic Sea Action Plan										
Direct, Systematic introductions	Shipping	Adopting BWM Road map	<u>Adopting</u> "the road map towards ratification and harmonised implementation of the 2004 BWM Convention". See description of measures under HELCOM BSAP: BWM Conventions "Road map".	Reg	Ag	E ("Road map" is adopted. But the ratification is in process.)	Yes	Moderate	1a and 1b/2a	The implementation of the Convention will be costly (e.g. for concerned public institutions), thus the discussion on its ratification is difficult.
HELCOM BSAP: BWM Convention's "Road map", Road map towards harmonised implementation and ratification of the 2004 International Convention for Control and Management of Ships' Ballast Water and Sediments										
Direct, Systematic introductions	Shipping	Ratification of BWM Convention	<u>Ratifying the BWM Convention</u> as soon as possible, but in all cases not later than 2013.	Reg	Ag	A (Not ratified yet.)	Yes	Moderate-High (Uncertainty in implement.)	1b or possible 2a	The implementation of the Convention will be costly (e.g. for concerned public institutions), thus the discussion on its ratification is difficult.
Direct, Systematic introductions	Shipping	List of NIS	Requesting HELCOM HABITAT and HELCOM MONAS to <u>compile</u> (by the end of 2008) a HELCOM list of NIS, cryptogenic and/or harmful native species in the BS, incl. available information on characteristics, distribution, abundance and ecological impact, and keeping the list updated as new knowledge becomes available.	In	Ag	E	Yes	Low	1a	(Significant obstacles were not identified.)

Type of source, Nature of pressure ^[1]	Economic Activity causing the pressure	Name of requirements/ actions/ measures	Brief description of requirements/actions/measures	General type ^[2]	Legal status ^[3]	Implementation Status ^[4]	Are M. specified by the PF ^[5]	Uncertainty about M. and/or their implementation ^[6]	Category according to "CIS Rec. Doc. For PoM" ^[7]	Relevant obstacles ("-" means not checked as part of the study)
Direct, Systematic introductions	Shipping	Cooperation	Establishing <u>co-operation</u> with other relevant regions for <u>continuous exchange of information on NIS</u> , cryptogenic and harmful native species in other aquatic environments, incl. high risk invaders, and making this information available for risk assessments.	In	Ag	E (or Both?)	No(Nat)	Moderate	1a and/or 1b	There is no regular system/"platform" for cooperation. Only the database of NIS (see the measure "List of NIS"). Irregular activities take place as part of projects/expert discussions/ workshops. No permanent system for cooperation with other regions.
Direct, Systematic introductions	Shipping	List of HELCOM Target Species	<u>Selecting and agreeing</u> (by the end of 2008) on the <u>HELCOM Target Species</u> , i.e. species that may impair or damage the environment, human health, property or resources, relevant for risk assessments (based on the HELCOM list and available information on potentially harmful and invasive species in other aquatic ecosystems).	Rch	Ag	E (Implemented partly.*)	Yes	Moderate	1b	* The work is on-going. However there is no officially agreed list for the time being at HELCOM level (nor nationally in Latvia).
Direct, Systematic introductions	Shipping	Baseline surveys in ports	Conducting (by the end of 2008) <u>baseline surveys</u> of prevailing environmental conditions in <u>major ports</u> and outlining the <u>major long-distance high risk voyages</u> in order to gather data necessary to conduct and/or evaluate and consult risk assessments.	Rch	Ag	E (Implemented partly)	Yes	Moderate-High (Due to obstacles.)	1b	Insufficient funding. Implementation (both - internationally and nationally) depends on whether there are projects (funding!) for conducting such surveys.
Direct, Systematic introductions	Shipping	Criteria for risk assessment	Specifying and agreeing (not later than 2009) on <u>criteria to distinguish between "unacceptable high" and "acceptable low" risk scenarios for regional voyages</u> , i.e. voyages within the BS region, taking into account data gathered during developing "HELCOM list of non-indigenous, cryptogenic and/or harmful native species" and "List of HELCOM Target Species" and information obtained from exchange with other relevant regions and baseline surveying.	Reg	Ag	NK (Uncertainty in implement.)	Yes	Moderate-High (Due to obstacles.)	1b or possible 2a	Insufficient funding. Implementation (both - internationally and nationally) depends on whether there are projects (funding!) for conducting necessary studies.

Type of source, Nature of pressure ^[1]	Economic Activity causing the pressure	Name of requirements/ actions/ measures	Brief description of requirements/actions/measures	General type ^[2]	Legal status ^[3]	Implementation Status ^[4]	Are M. specified by the PF ^[5]	Uncertainty about M. and/or their implementation ^[6]	Category according to "CIS Rec. Doc. For PoM" ^[7]	Relevant obstacles ("-" means not checked as part of the study)
Direct, Systematic introductions	Shipping	Ballast water exchange roles	<ul style="list-style-type: none"> Joining the OSPAR initiative to request vessels transiting the Atlantic or entering the NE-Atlantic from routes passing the W-African Coast <u>to conduct on a voluntary basis BW exchange before arriving</u> at the OSPAR area or passing through this area and heading to the BS. Undertaking a similar initiative for vessels leaving the Baltic and transiting through the OSPAR region to other destinations so the BW would not be exchanged until the vessel was 200 nm off the coast of NW-Europe in waters > 200 m deep. 	Reg	V	E	Yes	Moderate (Due to the voluntary legal status.)	1a	(Significant obstacles were not identified.)
Direct, Systematic introductions	Shipping	Cooperation	Cooperating with OSPAR on any other relevant topics for the benefit of both regions and as necessary for harmonised implementation of the BWM Convention.	Not known yet	NK	A	No(Ant)	High (M. not known.*)	possible 2a	- (* M. are not known to be accounted in the BAU.
Direct, Systematic introductions	Shipping	Monitoring	<u>Adjusting/extending</u> (by 2010) the HELCOM monitoring programmes to obtain reliable data on NIS in the BS, incl. port areas, in order to gather the necessary data to conduct and/or evaluate and consult risk assessments.	Reg	Ag	NK (Uncertainty in implement.)	No(Nat)	Moderate-High (Due to obstacles.)	possible 2a	Lack of national funding for monitoring.
Direct, Systematic introductions	Shipping	Information system	Cooperating in order to establish (by 2010, but in all cases not later than 2013) the <u>regional information system</u> for the relevant data obtained during port surveys, monitoring and risk assessments.	In	Ag	NK (Uncertainty in implement.)	Yes	Moderate-High (Due to obstacles.)	possible 2a	Possible obstacles: To reach agreement on specific issues (in relation to content of the system) by all parties; Countries' commitments on national funding to gather and provide national information regularly.
Direct, Systematic introductions	Shipping	Port reception facilities	Providing (by 2010, but in all cases before the latest target ratification date which is 2013) <u>adequate reception facilities for sediments</u> in ports and terminals where cleaning and repair of ballast tanks occurs.	T/T	Ag	A (Convention is not ratified yet.)	Yes	Moderate-High (?) (Uncertainty in implement.)	possible 2a	-

Type of source, Nature of pressure ^[1]	Economic Activity causing the pressure	Name of requirements/ actions/ measures	Brief description of requirements/actions/measures	General type ^[2]	Legal status ^[3]	Implementation Status ^[4]	Are M. specified by the PF ^[5]	Uncertainty about M. and/or their implementation ^[6]	Category according to "CIS Rec. Doc. For PoM" ^[7]	Relevant obstacles ("-" means not checked as part of the study)
Direct, Systematic introductions	Shipping	Navigation Telex System (NAVTEX)	<u>Linking</u> (by 2010) the port surveys and <u>monitoring</u> to NAVTEX or the equivalent, whereby ships can be alerted not to take up BW during outbreaks of harmful species and other high risk conditions.	Various	Ag	A?	Yes	Moderate-High (?) (Uncertainty in implement.)	NA	- (It is recommended to check nationally actual implementation situation as part of the BAU work for the national PoM.)
BD Strategy, EU Biodiversity Strategy 2020										
Direct, Both	Shipping, Aquaculture	National programs/plans	The Commission will improve the effectiveness of EU funding for global BD, inter alia, by supporting natural capital assessments in recipient countries and the development and/or updating of National Biodiversity Strategies and Action Plans. [According to the Strategic Plan for BD 2011-2020, the National plans have to be developed by 2015.]	Reg	Ag	Both	No(Nat)	Moderate	1a and 1b	(Significant obstacles were not identified.)
Direct, Both	Shipping, Aquaculture	Instrument for IAS policy	The Commission will fill policy gaps in combating IAS by developing a dedicated <u>legislative instrument</u> by 2012. [Not developed yet in 2013.]	Reg	Ag	A*	No(Ant)*	High (M. not known.)*	possible 2a*	* The instrument could be proposed/adopted (1b/1a) with measures known for time of developing the PoM (needs to be checked).

The results show that majority of the “measures” belong to the categories 1a and/or 1b thus should be accounted in the BAU. Although there is considerable implementation uncertainty for many of these measures (in particular, for “measures” of the “*HELCOM BSAP: BWM Convention’s “Road map”*”).

In two cases the category could not be specified and further more detailed analysis (nationally) can be recommended as part of the BAU work for developing the national PoM.

As can be seen, there are cases of possible category 2a “measures” (around 20 % of the assessed “measures”) – mainly under the “*HELCOM BWM Convention’s “Road map”*”.

4.3 Assessment of implementation effectiveness of the ‘baseline policies’

The assessment results indicate gaps in the implementation of “existing” policies and opportunities for improvements in these “other” policies.

The results indicate the following overall **gaps in implementation** of the “existing” policies:

- Considerable uncertainty in implementation of the “**measures” addressing the pressure from shipping.**
- Considerable uncertainty in implementation of most “**research”** and many “**informational” measures** (although it concerns also part of “regulatory” measures). Although such measures could be seen without direct effect in terms of reducing pressure/improving the state, they are necessary to ensure implementation effectiveness of policies. Thus their significance for reaching environmental targets should be evaluated and, where relevant, the implementation improved.

Opportunities for improvements as part of these “other” policies:

- Ratification of the BWM Convention and implementation of the required measures.
- Supporting development of the new legislative instrument for IAS (under the “*BD Strategy*”) and implementing the required measures.
- Improving implementation of relevant research, informational and regulatory measures that are needed to support implementation of “technical” measures and to ensure reaching environmental targets.

5 Recommendations in light of harmonising the national approaches on policies to be included in the BAU for the MSFD program of measures (PoM)

The MSFD requires including in the PoM existing and forthcoming policies and their measures with an impact on the marine environment and assessing their contribution for achieving GES. These policies are considered as part of the “business-as-usual” scenario (BAU). Where a gap between the BAU state and GES is expected, additional (“new”) measures need to be included in the PoM for closing the gap.

Comparison of the countries’ “Initial Assessment” results indicated considerable differences in the national approaches for the BAU development and its results.²⁹ The comparative analysis and discussions among specialists from the project’s countries suggested that common general principles for the BAU development could be followed to improve their coherence. Identifying policies to be included in the BAU was noted among the most relevant issues for harmonisation of the national BAU approaches. For the recommendations to be developed as part of GES-REG WP5 it was proposed:

- 1) to develop a list of environmental policy frameworks that could be considered (commonly) in the BAU for the national MSFD PoM (called as ‘baseline policies’ in this study) and
- 2) to develop principles for identifying policy frameworks and measures to be considered in the BAU for the PoM.

General aim of the study was to serve information for developing these recommendations. The methodological approach included appraisal of the existing and forthcoming policies with an impact on the marine (Baltic Sea) environment and assessment of implementation effectiveness of these policies. More than 60 international policy frameworks and their prescribed measures addressing the most important pressures on the Baltic Sea environment were evaluated as part of the study. To support the analysis the information and assessments were collected in a (Excel) database – “inventory” of the ‘baseline policies’ and measures, which is seen as useful tool to support the countries’ work on the BAU development for the MSFD PoM. The developed recommendations are discussed further in this section.

5.1 A list of (international) policy frameworks recommended for the analysis as part of the BAU for the PoM

The list of policy frameworks (PFs), which are recommended for the analysis as part of the BAU for the PoM, is presented in the table 3.1 of the chapter 3.1. Overall, all the PFs analysed in the study are recommended to be considered (with few exceptions, which are discussed latter). However, the following issues need to be noted concerning the recommended list:

- The list includes PFs for the analysed pressures (nutrient pollution, contamination with hazardous substances, introduction of NIS). These are seen among the most relevant

²⁹ Results can be found in the project’s report *Pakalniute K., Muraško A. (2012) Comparative analysis of the BAU development results in the national “Initial Assessments” of the project’s countries. Study Report. AKTiVS Ltd.*

pressures – causing environmental problems in the Baltic Sea and having the largest lists of ‘baseline policies’. Similar approach of evaluation of PFs and their measures as used in this study can be recommended overall also for selecting relevant PFs addressing other pressures.

- Due to the international coordination context, the list includes international PFs. Additional national policies (not related to implementation of the international PFs) are not covered.³⁰ Such national policies need to be appraised as part of the national work for PoM.
- It can be concluded overall that the recommended list is complete (for the analysed pressures, from the international policies’ perspective)³¹, but it reflects situation for time of finishing the “inventory” (May of 2013). Further developments need to be considered for time of preparing the PoM. For instance, if new regulatory PFs (e.g. the planned new legislative instrument for IAS) are developed and adopted, if new Conventions (e.g. the “*BWM Convention*”) enter into force.
- There are few PFs in the list where it needs to be seen nationally whether they should/could be accounted in the BAU for PoM. These are:
 - “*BWM Convention*” – it was not yet in force due to insufficient national ratifications, it was ratified only in Sweden from the project’s countries. For instance, the national scale analysis for Latvia suggested that there is no sufficient certainty for assuming its ratification that it could be accounted in the BAU. But it could be seen differently, for instance, in Sweden (where it is ratified).
 - “*HNS Convention*” – it was not yet in force due to insufficient national ratifications, it was not ratified in the project’s countries. The analysis suggests that there seems to be no sufficient certainty for assuming its ratification that it could be accounted in the BAU.
 - “*London Convention*” – it is in force, it is ratified in Sweden and Finland but was not ratified in Latvia and Estonia. For instance, for Latvia there is no sufficient certainty for considering it in the BAU, but it could be seen differently in Finland and/or Sweden.
- It is useful to consider hierarchy and links between the policy frameworks. It is characteristic that some (types of) PFs are implemented via other (more “operational”) PFs, and that the former might be seen insufficiently concrete for specifying measures that could be accounted in the BAU. The recommended list covers all PFs (both groups), but the results include information on the hierarchy and links³² and the evaluation of measures is performed for the latter group only. It allows avoiding possible double-counting of the same measures in the BAU, but at the same time keeping all relevant PFs in the list (which one could see as relevant for/related to analysed pressures/environmental problems).

³⁰ Distinction should be made between the measures of national policies that are implemented in relation to the international PFs (these are covered by the list), and the measures of national policies that are set nationally without relation to/in addition to the international policies (these need to be looked in addition as part of the national work for the PoM).

³¹ No additional relevant PFs were identified during process of implementing the study, including various discussions with specialists from the project’s countries and national consultations.

³² They are specified in the schematic overviews of the included PFs (see the figures 3.1-3.4 provided in the chapter 3.1) as well as in the “inventory” for each PF.

Results of the study show that various policy frameworks have different implementation extents, and the policy frameworks with on-going implementation (almost half in the list if taking the assessment for Latvia) can include measures with different implementation statuses (e.g. implemented fully, implemented partly, anticipated – not started). Further implementation of the “existing” policies (measures of the category 1b) can bring further improvements in the marine environment and, thus, can reduce the “policy gap” to be closed by “new” measures. Hence reliable assessment of implementation extent of the “existing policies” is important to distinguish between the measures of category 1a and 1b (the latter could bring further improvements), and this can be achieved if the analysis is performed on the measures’ level. Such analysis is important in particular for the countries like Latvia (with longer “transition periods” for implementation of some of the “old” policy frameworks and considerable financing constrains), where the measures of category 1b might compose larger share in the measures of “existing” policies (comparing to, for instance, Sweden). Results also show considerable implementation differences among the countries stressing importance of the national scale analysis for reliable assessment on what can be accounted in the BAU. These aspects are discussed in the next chapter among the recommended principles for identifying BAU policies and measures for the PoM.

5.2 Recommended principles for identifying BAU policies and measures for the PoM

Identifying policies and measures to be considered in the BAU for the PoM would require in practice:

- 1) Identifying relevant policy frameworks (the recommended list aims to support this work);
- 2) Evaluating these PFs to distinguish:
 - Between measures of the categories 1a and 1b. Both are “existing measures” according to the CIS classification³³, but the latter could bring further improvements in the marine environment and these improvements should be taken into account for the “policy gap” analysis (to avoid adding unnecessary “new” measures). This requires **analysis of implementation status** of measures of these policies.
 - Between anticipated measures of existing and forthcoming policies (the category 1b) and “new measures” (the category 2a). The study shows that this distinction is not always straightforward, and the approach applied in this study addresses it by **assessing uncertainty about measures and/or their implementation**.

Due to different implementation extents of various PFs (including measures with different implementation statuses), the analysis of implementation requires **evaluating the policies on the measures’ level**. Analysis on the PFs’ level would be too rough and would not provide reliable assessment on the measures’ implementation.

Although these are common policies, relevant characteristics of their implementation differ among the countries, thus **appropriate analysis on the national scale** is important. Such analysis is demonstrated as part of the study on the example of Latvia, where these characteristics are

³³ MSFD CIS Recommendations document “*Programmes of measures under MSFD: Recommendations for establishment / implementation and related reporting*”. See the information box 1.3 in the section 1 of this report for description of the categories.

analysed to **assess implementation status of measures** and **uncertainty about measures and/or their implementation**.

The study demonstrates that there are implementation's characteristics of PFs and measures, such as legal status and implementation status, relevant obstacles to their implementation, that determine whether measures are sufficiently known and whether there is sufficient certainty in their implementation (in the BAU timeframe) that their effect can be accounted in the BAU for the "policy gap" assessment. This is important in relation to anticipated measures of existing policies and measures of forthcoming policies. If there is no clarity on a measure to be taken (for instance, only general requirement/direction of actions is known) the uncertainty about the measure is seen as high – usually it is not sufficiently specified to assess its effect to be it accounted in the BAU. Such measures are not proposed for including in the BAU, in particular, if assessments for other implementation characteristics of these measures indicate considerable uncertainty in their implementation. Other cases when measures are not proposed for including in the BAU relate to high uncertainty in measures' implementation. For instance, when legal status of a measure is "agreed" (or "voluntary"), there is no current clear plan (evidences) for its implementation, what is actually implemented is set nationally and relevant obstacles are expected for its implementation.

The assessment of uncertainty about measures and/or their implementation can also support analysis of **implementation effectiveness of the "existing" policies** and indicating significant implementation gaps (e.g. the measures with "moderate" and "high" uncertainty assessments indicate implementation gaps in the "existing" policies). It may also indicate **opportunities for improvements in the "other" policies** for reaching the MSFD environmental targets. The results of the study show that at least 10 % of measures of the analysed PFs could not be classified as "existing measures" (belonging to the categories 1a and 1b, which are considered for the BAU).³⁴ These measures may indicate opportunities for "new" (2a) measures.

³⁴ The assessment concerning Latvia, this can be country specific.

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Annex 1: Brief general information on the policy frameworks covered by the study

*AFS Convention*³⁵

During the '60s the chemical industry developed efficacious anti-fouling paints using metallic compounds, in particular the organotin compounds - tributyltin (TBT) and triphenyltin (TPT). These surface coatings are designed to prevent the attachment of algae, molluscs and other organisms. These chemicals are highly toxic for sealife (larvae, mussels, oysters and fish).

Global regulations on TBT in antifouling paints used on sea-going ships were not developed until 2001. **The International Convention on the Control of Harmful Anti-fouling Systems on Ships** aims at reducing the amount of toxic chemicals in the marine environment. The Convention bans the application or re-application of organotin compounds that act as biocides in anti-fouling systems (e.g., TBT and TPT). Following a proposal by any Party to the Convention, it can be amended to include other substances used in antifouling systems that have adverse effects in the environment or on human health.

The AFS Convention has been transposed into Community legislation by **Regulation (EC) N° 782/2003 on the prohibition of organotin compounds (TBT) on ships**.

*Basel Convention*³⁶

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal is the most comprehensive global environmental treaty on hazardous and other wastes.

The cross-border transport of hazardous wastes seized the public's attention in the '80s. The misadventures of "toxic ships" such as the Katrin B and the Pelicano, sailing from port to port trying to offload their poisonous cargoes made the front-page headlines around the world. These tragic incidents were motivated in good part by tighter environmental regulations in industrialized countries.

As the costs of waste disposal skyrocketed, "toxic traders" searching for cheaper solutions started shipping hazardous wastes to Africa, Eastern Europe and other regions. Once on shore, these waste shipments were dumped indiscriminately, spilled accidentally or managed improperly, causing severe health problems and poisoning the land, water and air.

To combat these practices, **the Basel Convention** was negotiated under the auspices of the United Nations Environment Programme.

First, the Basel Convention regulates the transboundary movements of hazardous and other wastes applying the "Prior Informed Consent" procedure (shipments made without consent are illegal). Shipments to and from non-Parties are illegal unless there is a special agreement. Each Party is required to introduce appropriate national or domestic legislation to prevent and punish illegal traffic in hazardous and other wastes.

³⁵ <http://www.helcom.fi/stc/files/Publications/Proceedings/bsep120B.pdf>, <http://www.helcom.fi/stc/files/Publications/Proceedings/bsep116B.pdf>, <http://www.speciation.net/News/TBT-from-antifouling-paint-is-still-endangering-marine-life-says-WWF-~/2006/10/11/2445.html>

³⁶ http://www.basel.int/Portals/4/Basel%20Convention/docs/convention/bc_glance.pdf

Second, the Convention obliges its Parties to ensure that hazardous and other wastes are managed and disposed of in an environmentally sound manner.

The Basel Convention has been transposed into EU legislation by **Regulation (EC) N° 1013/2006 on shipments of waste**.

*BD Strategy*³⁷

In March 2010, EU leaders recognised that the 2010 EU biodiversity target would not be met despite some major successes, such as establishing Natura 2000. They therefore endorsed the long-term vision and ambitious headline target proposed by the Commission in its Communication 'Options for an EU vision and target for biodiversity beyond 2010':

1. **2050 vision:** By 2050, European Union biodiversity and the ecosystem services it provides — its natural capital — are protected, valued and appropriately restored for biodiversity's intrinsic value and for their essential contribution to human wellbeing and economic prosperity, and so that catastrophic changes caused by the loss of biodiversity are avoided.

2. **2020 headline target:** Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss.

In 2011 the European Commission adopted an ambitious new strategy to halt the loss of biodiversity and ecosystem services in the EU by 2020 – **EU Biodiversity Strategy to 2020**. The strategy is aimed at reversing biodiversity loss and speeding up the EU's transition towards a resource efficient and green economy. It is an integral part of the Europe 2020 Strategy, and in particular the resource efficient Europe flagship initiative.

The 10th Conference of the Parties (CoP10) to the Convention on Biological Diversity (CBD), held in Nagoya in 2010, led to the adoption of a global Strategic Plan for biodiversity 2011-2020, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation (ABS Protocol), and a strategy to mobilise resources for global biodiversity.

The EU 2020 biodiversity strategy responds to both mandates, setting the EU on the right track to meet its own biodiversity objectives and its global commitments.

The Strategy contains six main targets (and 20 actions) to help Europe reach its goal:

- Full implementation of EU nature legislation to protect biodiversity,
- Better protection for ecosystems, and more use of green infrastructure,
- More sustainable agriculture and forestry,
- Better management of fish stocks,
- Tighter controls on invasive alien species,
- A bigger EU contribution to averting global biodiversity loss.

³⁷ <http://ec.europa.eu/environment/nature/biodiversity/comm2006/2020.htm>,
[http://ec.europa.eu/environment/nature/biodiversity/comm2006/pdf/2020/1_EN_ACT_part1_v7\[1\].pdf](http://ec.europa.eu/environment/nature/biodiversity/comm2006/pdf/2020/1_EN_ACT_part1_v7[1].pdf)

*Bern Convention*³⁸

The Convention on the Conservation of European Wildlife and Natural Habitats is a binding international legal instrument in the field of nature conservation, which covers most of the natural heritage of the European continent and extends to some States of Africa. Its aims are to conserve wild flora and fauna and their natural habitats and to promote European co-operation in that field. The Convention places a particular importance on the need to protect endangered natural habitats and endangered vulnerable species, including migratory species.

The Bern Convention has been transposed into EU legislation by both **Habitats Directive (92/43/EEC)** and **Birds Directive (2009/147/EC, the codified version of Directive 79/409/EEC as amended)**, which provide a common framework for the conservation of wildlife and habitats within the EU and are the key EU legal instruments for maintaining the biodiversity of the MS.

*Blueprint*³⁹

The WFD established the objective to achieve good status by 2015. The EEA State of Water report and the Commission assessment of the MSs' RBMPs developed under the WFD concur that this objective is likely to be achieved in slightly over half (53 %) of EU waters. Major additional action is therefore needed to preserve and improve EU waters.

Therefore, the Commission proposed the **EU strategy on the use of water resources - Blueprint to Safeguard Europe's Water Resources**. Its long-term aim is to ensure the sustainability of all activities that impact on water, thereby securing the availability of good-quality water for sustainable and equitable water use. This goal is already enshrined in the WFD in various ways. The Blueprint will help us achieve the goal by identifying obstacles and ways to overcome them.

The Blueprint outlines actions that concentrate on better implementation of current water legislation, integration of water policy objectives into other policies, and filling the gaps in particular as regards water quantity and efficiency.

Key themes emphasised by the strategy are: improving land use, addressing water pollution, increasing water efficiency and resilience, and improving governance by those involved in managing water resources. It sets agenda for EU actions and will help to achieve the WFD goal by identifying obstacles and ways to overcome them.

The Blueprint's time horizon is closely related to the EU's 2020 Strategy and, in particular, to the 2011 Resource Efficiency Roadmap, of which the Blueprint is the water milestone. However, the analysis underpinning the Blueprint covers a longer time span, up to 2050, and is expected to drive EU water policy over the long term.

³⁸ http://www.coe.int/t/dg4/cultureheritage/nature/bern/default_en.asp, <http://eur-lex.europa.eu/Notice.do?mode=dbl&lang=en&ihmlang=en&lng1=en,lv&lng2=bg,cs,da,de,el,en,es,et,fi,fr,hu,it,lt,lv,mt,nl,pl,pt,ro,sk,sl,sv,&val=688842:cs>

³⁹ http://ec.europa.eu/environment/water/blueprint/index_en.htm, http://ec.europa.eu/environment/water/blueprint/pdf/COM-2012-673final_EN_ACT-cov.pdf, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0673:FIN:EN:PDF>

*BWM Convention*⁴⁰

The introduction of non-native species to an ecosystem is one of the major causes of decreased biodiversity. Many alien species are transferred into marine ecosystems through the ballast water transported during commercial shipping operations.

The 2004 International Convention for Control and Management of Ships' Ballast Water and Sediments under IMO will be the global instrument to regulate the management, treatment and release of ballast water once it enters into force.

The Convention's aim is to prevent, minimise and ultimately eliminate the transfer of harmful aquatic organisms and pathogens via shipping, through the control and management of ships' ballast water and sediments.

The BWM Convention will enter into force 12 months after ratification by 30 States, representing 35 % of world merchant shipping tonnage. As at 6 March 2013, 36 countries have ratified the Convention, representing 29 % of the world merchant fleet tonnage. From the Baltic Sea countries only Denmark, Russia and Sweden have ratified the Convention.

*CAP*⁴¹

The Common Agricultural Policy is one of the most controversial EU policies aiming to protect agriculture throughout the EU by controlling prices and levels of production and by subsidising the rural lifestyle in order to safeguard the countryside.

It ensures that adequate European food production goes hand in hand with economically viable rural communities and action on environmental challenges such as climate change, water management, bioenergy and biodiversity. EU policy aims to enable producers of all forms of food to:

- produce sufficient quantities of safe, high-quality food for European consumers,
- make a full contribution to diversified economic development in rural areas,
- meet very high standards of environmental care and animal welfare.

Since its creation, the CAP has always been adapted to respond to the challenges of its time. On October 2011 the Commission presented a set of legal proposals designed to make the CAP **a more effective policy for a more competitive and sustainable agriculture and vibrant rural areas**. Following a debate in the European Parliament and the Council, the approval of the different regulations and implementing acts is expected by the end of 2013, with a view to having the CAP reform in place as from January 2014.

*CBD*⁴²

The Convention on Biological Diversity is a comprehensive, binding agreement covering the use and conservation of biodiversity. It requires countries to develop and implement strategies for

⁴⁰ <http://www.imo.org/About/Conventions/StatusOfConventions/Pages/Default.aspx>,
<http://www.helcom.fi/stc/files/Publications/Proceedings/bsep116B.pdf>,
<http://www.helcom.fi/stc/files/Publications/Proceedings/bsep123.pdf>, <http://marinebio.org/oceans/alien-species.asp>

⁴¹ http://europa.eu/pol/agr/index_en.htm, http://ec.europa.eu/agriculture/cap-post-2013/index_en.htm,
[http://europa.eu/rapid/press-release MEMO-13-30_en.htm](http://europa.eu/rapid/press-release_MEMO-13-30_en.htm)

⁴² <http://www.unep.ch/regionalseas/legal/cbd.htm>, <http://www.cbd.int/intro/default.shtml>

sustainable use and protection of biodiversity, and provides a forum for continuing international dialogue on biodiversity-related issues through the annual conferences of the parties (COPs).

The Convention has **3 main objectives**: (1) The conservation of biological diversity, (2) The sustainable use of the components of biological diversity and (3) The fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

CLC⁴³

The 1969 International Convention on Civil Liability for Oil Pollution Damage, renewed in 1992, is an international maritime treaty that was adopted to ensure that adequate compensation would be available where oil pollution damage was caused by maritime casualties involving oil tankers (i.e. ships that carry oil as cargo).

The Convention places the liability for such damage on the owner of the ship from which the polluting oil escaped or was discharged. Subject to a number of specific exceptions, this liability is strict; it is the duty of the owner to prove in each case that any of the exceptions should in fact operate. However, except where the owner has been guilty of actual fault, they may limit liability in respect of any one incident.

The Convention also requires ships covered by it to maintain insurance or other financial security in sums equivalent to the owner's total liability for one incident.

CLP Regulation⁴⁴

The Regulation 1272/ 2008 on classification, labelling and packaging of substances and mixtures aligns existing EU legislation to the United Nations Globally Harmonised System (GHS). This Regulation contributes to the GHS aim that the same hazards will be described and labelled in the same way all around the world. By using internationally agreed classification criteria and labelling elements, it is expected to facilitate trade and to contribute towards global efforts to protect humans and the environment from hazardous effects of chemicals. This Regulation complements the REACH Regulation on the registration, evaluation, authorisation and restriction of chemicals.

The CLP Regulation, after a transitional period, replaces the current rules on classification, labelling and packaging of substances (Directive 67/548/EEC) – from 1 December 2010 - and mixtures (Directive 1999/45/EC) – from 1 June 2015.

COLREG⁴⁵

The 1972 Convention on the International Regulations for Preventing Collisions at Sea was designed to update and replace the Collision Regulations of 1960 which were adopted at the same time as the 1960 SOLAS Convention.

⁴³ [http://www.imo.org/About/Conventions/listofconventions/pages/international-convention-on-civil-liability-for-oil-pollution-damage-\(clc\).aspx](http://www.imo.org/About/Conventions/listofconventions/pages/international-convention-on-civil-liability-for-oil-pollution-damage-(clc).aspx)

⁴⁴ <http://ec.europa.eu/enterprise/sectors/chemicals/documents/classification/>

⁴⁵ <http://www.imo.org/About/Conventions/listofconventions/pages/colreg.aspx>

One of the most important innovations in the 1972 COLREGs was the recognition given to traffic separation schemes - Rule 10 gives guidance in determining safe speed, the risk of collision and the conduct of vessels operating in or near traffic separation schemes.

The first such traffic separation scheme was established in the Dover Strait in 1967. It was operated on a voluntary basis at first but in 1971 the IMO Assembly adopted a resolution stating that that observance of all traffic separation schemes be made mandatory - and the COLREGs make this obligation clear.

*Directive on liability*⁴⁶

Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage establishes a framework for environmental liability based on the 'polluter pays' principle, with a view to preventing and remedying environmental damage.

The principle of liability applies to environmental damage and imminent threat of damage resulting from occupational activities, where it is possible to establish a causal link between the damage and the activity in question. The Directive therefore distinguishes between two complementary situations, each one governed by a different liability scheme: occupational activities specifically mentioned in the Directive and other occupational activities.

Under the terms of the Directive, **environmental damage** is defined as:

- direct or indirect damage to the aquatic environment covered by Community water management legislation (i.e. WFD);
- direct or indirect damage to species and natural habitats protected at Community level by the Habitats Directive and Birds Directive;
- direct or indirect contamination of the land which creates a significant risk to human health.

*Geneva Convention, including Protocols (on POPs, Heavy Metals and Gothenburg protocol)*⁴⁷

The 1979 Geneva Convention on Long-range Trans-boundary Air Pollution addresses some of the major environmental problems of the UNECE region through scientific collaboration and policy negotiation. The Convention is extended by eight protocols that identify specific measures to be taken by Parties to cut their emissions of air pollutants. Parties are required to develop policies and strategies to combat the discharge of air pollutants through exchanges of information, consultation, research and monitoring.

The Convention is one of the central means for protecting our environment. It has, over the years, served as a bridge between different political systems and as a factor of stability in years of political change. It has substantially contributed to the development of international environmental law and has created the essential framework for controlling and reducing the damage to human health and the environment caused by trans-boundary air pollution. It is a successful example of what can be achieved through intergovernmental cooperation.

⁴⁶ http://europa.eu/legislation_summaries/enterprise/interaction_with_other_policies/l28120_en.htm

⁴⁷ http://www.unece.org/env/lrtap/lrtap_h1.html, <http://www.unece.org/env/lrtap/welcome.html>, http://www.unece.org/env/lrtap/status/lrtap_s.html

The 1999 Protocol to Abate Acidification, Eutrophication and Ground-level Ozone sets emission ceilings for four pollutants: sulphur, NO_x, VOCs and ammonia. The Protocol also sets tight limit values for specific emission sources and requires BAT to be used to keep emissions down. The Protocol was amended in 2012 to include national emission reduction commitments to be achieved in 2020 and beyond. Several of the Protocol's technical annexes were revised with updated sets of emission limit values for both key stationary sources and mobile sources, as well as with emission ceilings for fine PM.

The 1998 Protocol on Persistent Organic Pollutants (POPs) focuses on a list of 16 substances that have been singled out according to agreed risk criteria. The substances comprise 11 pesticides, 2 industrial chemicals and 3 by-products/contaminants. The ultimate objective is to eliminate any discharges, emissions and losses of POPs. In 2009 the Protocol was amended to include 7 new substances; also other obligations were revised.

The 1998 Protocol on Heavy Metals targets three particularly harmful metals: cadmium, lead and mercury. According to one of the basic obligations, Parties will have to reduce their emissions for these metals below their levels in 1990 (or an alternative year between 1985 and 1995). The Protocol aims to cut emissions from industrial sources, combustion processes and waste incineration. It lays down stringent limit values for emissions from stationary sources and suggests BAT for these sources, etc. The Protocol was amended in 2012, to adopt more stringent controls of heavy metals emissions and introduce flexibilities to facilitate accession of new Parties, notably countries in Eastern Europe, the Caucasus and Central Asia.

Habitats Directive⁴⁸

To implement the Bern Convention in Europe, the European Community has adopted the **Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora**. Among other things the Directive provide for the establishment of a European network of protected areas (Natura 2000).

The Directive (Art.22) requires that in implementing its provisions, MS shall ensure that the deliberate introduction into the wild of any species which is not native to their territory is regulated so as not to prejudice natural habitats within their natural range or the wild native fauna and flora and, if they consider it necessary, prohibit such introduction.

HELCOM BSAP and HELCOM Recommendations⁴⁹

The HELCOM **Baltic Sea Action Plan** is an ambitious programme to restore the good ecological status of the Baltic marine environment by 2021. The plan is based on a clear set of 'ecological objectives' defined to reflect a jointly agreed vision of "a healthy marine environment, with diverse biological components functioning in balance, resulting in a good ecological status and supporting a wide range of sustainable human activities".

The cross-sectoral plan identifies the specific actions (around 110 in total) needed to achieve agreed targets within a specified timeframe for the main environmental priorities: combating

⁴⁸ <http://incc.defra.gov.uk/page-1364>, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992L0043:EN:HTML>

⁴⁹ <http://helcom.fi/baltic-sea-action-plan> and <http://helcom.fi/baltic-sea-action-plan/action-plan/> (BSAP), <http://helcom.fi/helcom-at-work/recommendations/> (Recommendations), <http://helcom.fi/helcom-at-work/ministerial-declarations/> (Ministerial Declarations).

eutrophication, curbing inputs of hazardous substances, ensuring maritime safety and response capacity to accidents at sea, and halting habitat destruction and the on-going decline in biodiversity.

The action plan distinguishes between measures that can be implemented at regional or national level, and measures that can only be implemented at EU level (e.g. CFP, CAP, controls over the marketing and use of chemicals) or globally (e.g. the shipping controls defined by the IMO).

The four main segments of the BSAP, detailing goals, objectives, and actions:

1. Towards a BS unaffected by eutrophication,
2. Towards a BS undisturbed by hazardous substances,
3. Towards a BS with environmentally friendly maritime activities,
4. Towards favourable conservations status of BS biodiversity.

A list of HELCOM Recommendations and other documents agreed with the BSAP (related to the pressures analysed in this study):

- 28E/4 Amendments to Annex III “Criteria and measures concerning the prevention of pollution from land-based sources” of the 1992 Helsinki Convention.
- 28E/5 Municipal wastewater treatment.
- 28E/6 On-site wastewater treatment of single family homes, small businesses and settlements up to 300 person equivalents (p.e.).
- 28E/7 Measures aimed at the substitution of polyphosphates (phosphorus) in detergents.
- 28E/8 Environmentally friendly practices for the reduction and prevention of emissions of dioxins and other hazardous substances from small-scale combustion.
- 28E/10 Application of the no-special-fee system to ship-generated wastes and marine litter caught in fishing nets in the Baltic Sea area.
- 28E/11 Further measures to improve the safety of navigation in ice conditions in the Baltic Sea.
- 28E/12 Strengthening of sub-regional co-operation in response field.
- 28E/13 Introducing economic incentives as a complement to existing regulations to reduce emissions from ships.
- 28E/14 Development of harmonised principles for quantifying diffuse losses throughout the Baltic sea catchment area.
- Road map towards harmonised implementation and ratification of the 2004 International Convention for Control and Management of Ships’ Ballast Water and Sediments.
- Action Plan for the protection of the environment from offshore platforms.

Adopted documents – HELCOM Recommendations by the 2010 HELCOM Moscow Ministerial Declaration:

- HELCOM Recommendation 31E/1 “Implementing HELCOM’s objective for hazardous substances”.
- HELCOM Recommendation 31E/2 “Batteries and accumulators and waste batteries and accumulators containing mercury, cadmium or lead”.
- HELCOM Recommendation 31E/3 “Cadmium in fertilizers”.
- HELCOM Recommendation 31E/4 “Proper handling of waste/landfilling”.

Adopted/endorsed documents by the 2013 HELCOM Copenhagen Declaration:

- HELCOM Recommendation 34E/2 "Further testing and developing the concept of pro-active route planning as well as other e-navigation solutions to enhance safety of navigation and protection of the marine environment in the Baltic Sea Region".
- HELCOM Recommendation 34E/3 "Amendments to Annex VII 'Response to Pollution Accidents' of the 1992 Helsinki Convention, concerning response on the shore".
- HELCOM Recommendation 34E/4 "Airborne surveillance with remote sensing equipment in the Baltic Sea Area".
- HELCOM Response Manual Volume III "Response to Pollution Incidents on the shore".
- Joint HELCOM/OSPAR Guidelines on the granting of exemptions under the International Convention for the Control and Management of Ships' Ballast Water and Sediments, Regulation A-4.
- HELCOM Interim Guidance on technical and operational aspects of delivery of sewage by passenger ships to port reception facilities.
- Revised Palette of measures for reducing phosphorus and nitrogen losses from agriculture.
- Palette of measures on cost-effective management options to reduce discharges, emissions, and losses of hazardous substances.

Helsinki Convention⁵⁰

In 1974, for the first time ever, all the sources of pollution around an entire Baltic Sea were made subject to a single convention – **Convention on the Protection of the Marine Environment of the Baltic Sea Area**, signed then by seven Baltic coastal states.

In the light of political changes, and developments in international environmental and maritime law, a new convention was signed in 1992 by all the states bordering the Baltic Sea, and the European Community. The Convention covers the whole of the BS area, incl. inland waters as well as the water of the sea itself and the sea-bed. Measures are also taken in the whole catchment area of the BS to reduce land-based pollution.

The governing body of the Convention is the **Helsinki Commission** - Baltic Marine Environment Protection Commission - also known as HELCOM. The present Contracting Parties to HELCOM are Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia, Sweden and European Community.

HNS Convention⁵¹

The 1996 International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea aims to ensure adequate, prompt and effective compensation for damage to persons and property, costs of clean up and reinstatement measures and economic losses resulting from the maritime transport of hazardous and noxious substances.

⁵⁰ http://www.helcom.fi/Convention/en_GB/convention/

⁵¹ <http://www.hnsconvention.org/Pages/TheConvention.aspx>

The HNS Convention was adopted by an International Conference organised by the IMO and is based on the highly successful model of the Civil Liability and Fund Conventions which cover pollution damage caused by spills of persistent oil from tankers. As with the original oil pollution compensation regime, the HNS Convention will establish a two-tier system for compensation to be paid in the event of accidents at sea, in this case, involving hazardous and noxious substances, such as chemicals.

IED⁵²

Directive 2010/75/EU on industrial emissions brings together IPPC Directive (2008/1/EC) and six other directives (incl., among others, also Directive 2001/80/EC on the limitation of emissions of certain pollutants from large combustion plants and Directive 2000/76/EC on waste incineration) in a single directive on industrial emissions.

This Directive shall cover industrial activities with a major pollution potential (defined in Annex I, incl. energy industries, production and processing of metals, mineral industry, chemical industry, waste management, rearing of animals, etc.).

IMP and EUSBSR⁵³

The **Integrated Maritime Policy** seeks to provide a more coherent approach to maritime issues, with increased coordination between different policy areas. It focuses on issues that do not fall under a single sector-based policy e.g. "blue growth" (economic growth based on different maritime sectors) and issues that require the coordination of different sectors and actors e.g. marine knowledge.

Specifically it covers the following cross-cutting policies: (1) Blue growth, (2) Marine data and knowledge, (3) Maritime spatial planning, (4) Integrated maritime surveillance and (5) Sea basin strategies (EU Strategy for the Baltic Sea Region, EUSBSR).

In its **action plan**, IMP sets as a task, among other, implementing and **further developing maritime policies, strategies and cross-cutting policymaking tools**.

EU Strategy for the Baltic Sea Region (EUSBSR) aims to make the Baltic Sea region an environmentally sustainable, prosperous, accessible, attractive, secure and safe region. It includes **15 priority areas** to save the sea, connect the region and increase prosperity – each implemented through flagship projects, by clearly identified targets and indicators, as well as several cross-cutting horizontal actions. The Strategy helps to mobilise all relevant EU funding and policies and coordinate the actions of the EU, EU countries, regions, pan-Baltic organisations, financing institutions and non-governmental bodies to promote a more balanced development of the Baltic Sea Region.

15 priority areas include, among others, also nutrient inputs to the sea (1. priority area), natural zones and biodiversity (2. priority area), hazardous substances (3. priority area), clean shipping (4. priority area), agriculture, forestry and fisheries (9. priority area) and maritime accident response capacity (14. priority area).

⁵² http://europa.eu/legislation_summaries/environment/waste_management/ev0027_en.htm

⁵³ http://ec.europa.eu/maritimeaffairs/policy/index_en.htm,
http://ec.europa.eu/regional_policy/cooperate/baltic/index_en.cfm, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0575:FIN:EN:PDF>

*Intervention Convention*⁵⁴

The 1967 Torrey Canyon disaster when the oil spilled from the tanker severely damaged coastal and marine environment and wildlife of the coastal State signalled a need to empower coastal State to take necessary measures to protect itself from pollution incidents outside this State's territory, i.e. on the high seas. In doing so, it was also deemed necessary to protect the legitimate interests of ship-owners, cargo owners and the flag States and the principle of the freedom of the high seas. The new Convention was drafted within the framework of the IMO and adopted at the international conference in Brussels, Belgium in 1969.

As a result **the 1969 International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties** is an international maritime convention affirming the right of a coastal State to take such measures on the high seas as may be necessary to prevent, mitigate or eliminate grave and imminent danger to their coastline or related interests from pollution or threat of pollution of the sea by oil, following upon a maritime casualty or acts related to such a casualty.

In 1973 the Protocol relating to Intervention on the High Seas in Cases of Marine Pollution by Substances other than Oil was adopted extending the provision of the 1969 Convention to other hazardous substances.

*IPPC*⁵⁵

Directive 2008/1/EC concerning integrated pollution prevention and control requires industrial and agricultural activities with a high pollution potential to have a permit. This permit can only be issued if certain environmental conditions are met, so that the companies themselves bear responsibility for preventing and reducing any pollution they may cause.

Integrated pollution prevention and control concerns new or existing industrial and agricultural activities with a high pollution potential, (defined in Annex I, incl. energy industries, production and processing of metals, mineral industry, chemical industry, waste management, livestock farming, etc.).

Directive will be replaced by IED (Directive 2010/75/EU on industrial emissions) from January 2014.

*Large combustion plants directive*⁵⁶

Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants aims to reduce emissions of acidifying pollutants, particles, and ozone precursors. Control of emissions from large combustion plants - those whose rated thermal input is equal to or greater than 50 MW - plays an important role in the EU's efforts to combat acidification, eutrophication and ground-level ozone as part of the overall strategy to reduce air pollution.

⁵⁴ <http://www.imo.org/About/Conventions/listofconventions/pages/international-convention-relating-to-intervention-on-the-high-seas-in-cases-of-oil-pollution-casualties.aspx>

⁵⁵ http://europa.eu/legislation_summaries/environment/waste_management/l28045_en.htm

⁵⁶ <http://ec.europa.eu/environment/air/pollutants/stationary/lcp/legislation.htm>

*London Convention*⁵⁷

The 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter is one of the first global conventions to protect the marine environment from human activities. Its objective is to promote the effective control of all sources of marine pollution and to take all practicable steps to prevent pollution of the sea **by dumping of wastes and other matter**.

In 1996, the "London Protocol" was agreed to further modernize the Convention and, eventually, replace it. Under the Protocol all dumping is prohibited, except for possibly acceptable wastes on the so-called "reverse list".

*MARPOL 73/78, including its Annexes I-VI*⁵⁸

The 1973 International Convention for the Prevention of Pollution from Ships, as modified by the Protocol of 1978 relating thereto (**MARPOL 73/78**), is the main international convention covering prevention of pollution of the marine environment by ships and is the major environmental regulatory tool used by the IMO. The Convention includes regulations aimed at preventing and minimizing pollution from ships - both accidental pollution and that from routine operations - and currently includes six technical annexes. Special Areas with strict controls on operational discharges are included in most Annexes.

Annex I "Regulations for the prevention of pollution by oil" covers prevention of pollution by oil from operational measures as well as from accidental discharges.

Annex II "Regulations for the control of pollution by noxious liquid substances in bulk" details the discharge criteria and measures for the control of pollution by noxious liquid substances carried in bulk; some 250 substances were evaluated and included in the list appended to the Convention; the discharge of their residues is allowed only to reception facilities until certain concentrations and conditions are complied with.

Annex III "Prevention of pollution by harmful substances carried by sea in packaged form" contains general requirements for the issuing of detailed standards on packing, marking, labelling, documentation, stowage, quantity limitations, exceptions and notifications.

Annex IV "Prevention of pollution by sewage from ships" contains requirements to control pollution of the sea by sewage; the discharge of sewage into the sea is prohibited. In 2011, IMO adopted the most recent amendments to MARPOL Annex IV which entered into force on January 2013. The amendments introduce the Baltic Sea as a special area and add new discharge requirements for passenger ships while in a special area.

Annex V "Prevention of pollution by garbage from ships" deals with different types of garbage and specifies the distances from land and the manner in which they may be disposed of. In July 2011, IMO adopted extensive amendments to Annex V which entered into force on January 2013. The revised Annex V prohibits the discharge of all garbage into the sea, except as provided otherwise, under specific circumstances.

⁵⁷ <http://www.imo.org/OurWork/Environment/SpecialProgrammesAndInitiatives/Pages/London-Convention-and-Protocol.aspx>

⁵⁸ [http://www.imo.org/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-\(MARPOL\).aspx](http://www.imo.org/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx), <http://www.imo.org/MediaCentre/pressbriefings/pages/01-marpol-eedi.aspx>

Annex VI “Prevention of air pollution from ships” sets limits on sulphur oxide and nitrogen oxide emissions from ship exhausts and prohibits deliberate emissions of ozone depleting substances; designated emission control areas set more stringent standards for SO_x, NO_x and PM.

NECD-II⁵⁹

The first **National Emission Ceilings Directive** (Directive 2001/81/EC) set pollutant-specific emission ceilings for each MS to be met by 2010. It covered the pollutants SO₂, NO_x, VOCs and NH₃ responsible for acidification, eutrophication, and the formation of ground-level ozone and required MS to draw up **national programmes** in order to demonstrate how they were going to meet their national emission ceilings.

In 2012 only 15 of the EU’s 27 MS expected to comply with their emission limits for all four air pollutants set by the NECD. In most cases it is the **emission ceiling for NO_x** that poses the greatest problem, with 12 countries expected to miss their ceilings (incl., Denmark, Germany, Finland and Sweden, although DK and FI - by a very small margin only). However, the overall NO_x emissions for 2010 for the EU’s 27 MS combined are approximately at the same level as the aggregated national ceilings for 2010.

It is expected that the current review of EU air pollution policy will among other things lead to a revised NECD setting **stricter emission ceilings for 2025 or 2030** in order to further improve protection of health and the environment. For the first time, ceilings for emissions of PM_{2.5} will be introduced. Until such new legislation is in place, however, the **current NECD remains in force** and requires countries to keep their emissions below the current national ceilings in years to come.

A process of review and revision of the NECD started around 2003. Since then the Commission has repeatedly postponed the adoption and publication of a revision proposal. In 2010, Environment Commissioner Janez Potocnik suggested that the revision may be further delayed until 2013, and this was confirmed in 2011 when the Commission released a policy paper on the review of EU air pollution policies, which among others stated that a proposal for a revised NECD is to be **presented in 2013, at the latest**.

Nitrates Directive⁶⁰

Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources aims to protect waters in Europe by preventing nitrates from agricultural sources from polluting groundwater and surface waters by encouraging the use of good agricultural practices and through a number of measures incumbent on MS. These measures concern monitoring surface waters and groundwater, designating vulnerable zones, introducing codes of good agricultural practice, adopting action programmes, and evaluating the actions implemented.

The Directive is an integral part of the WFD and is one of the key instruments for protecting water against agricultural pressures.

⁵⁹ <http://www.airclim.org/directive-national-emission-ceilings-nec>, http://ec.europa.eu/environment/air/pollutants/rev_nec_dir.htm, <http://www.airclim.org/acidnews/2012/AN1-12/twelve-countries-exceed-nec-directive-limits>

⁶⁰ http://europa.eu/legislation_summaries/environment/water_protection_management/l28013_en.htm

OPRC⁶¹

The 1990 International Convention on Oil Pollution Preparedness, Response and Co-operation is an international maritime convention establishing measures for dealing with marine oil pollution incidents nationally and in co-operation with other countries. OPRC Convention was drafted within the framework of the IMO. In 2000 a Protocol to the Convention relating to hazardous and noxious substances was adopted.

In accordance with this Convention and its Annex, States-parties to the Convention undertake, individually or jointly, to take all appropriate measures to prepare for and respond to oil pollution incidents.

OPRC prescribes that each State-party must establish a national system to promptly and effectively respond to oil pollution incidents, incl. establishing a competent national authority and a national contingency plan designed to respond to oil disasters and sets out the requirements for pollution emergency plans that vessels, offshore drilling units, production platforms, and onshore facilities must have. The application of OPRC extends to floating and fixed structures engaged in exploration, production, loading and unloading of oil.

The convention sets out specific and detailed provisions dealing with the prevention of marine pollution from offshore installations and, in the absence of a specific convention dealing with offshore installations, OPRC is regarded as probably the most important international legal instrument that regulates pollution of the marine environment from offshore oil and gas activities.

Plan for BD⁶²

The 10th meeting of the Conference of the parties (COPs) under CBD, held on October 2010, in Nagoya, Aichi Prefecture, Japan, adopted a **revised and updated Strategic Plan for Biodiversity**, incl. the Aichi Biodiversity Targets, for the 2011-2020 period (decision X/2). This new plan is overarching framework on biodiversity, not only for the biodiversity-related conventions, but for the entire UN system.

The meeting of the COPs agreed to translate this overarching international framework into national biodiversity strategies and action plans within 2 years. Additionally, the meeting decided that the fifth national reports, due by March 2014, should focus on the implementation of the 2011-2020 Strategic Plan and progress achieved towards the Aichi Biodiversity Targets (decision X/10).

Aichi Biodiversity Targets are divided under **5 Strategic goals (A-E)**:

- A:** Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society,
- B:** Reduce the direct pressures on biodiversity and promote sustainable use,
- C:** To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity,
- D:** Enhance the benefits to all from biodiversity and ecosystem services,

⁶¹ [http://www.imo.org/About/Conventions/ListOfConventions/Pages/International-Convention-on-Oil-Pollution-Preparedness,-Response-and-Co-operation-\(OPRC\).aspx](http://www.imo.org/About/Conventions/ListOfConventions/Pages/International-Convention-on-Oil-Pollution-Preparedness,-Response-and-Co-operation-(OPRC).aspx),
<https://maritimejournal.murdoch.edu.au/index.php/maritimejournal/article/view/179>

⁶² <http://www.cbd.int/sp/default.shtml>, <http://www.cbd.int/sp/targets>

E: Enhance implementation through participatory planning, knowledge management and capacity building.

POPs Regulation⁶³

The Regulation (EC) No 850/2004 on POPs complements earlier Community legislation on POPs and aligns it with the provisions of the international agreements on POPs. To a certain extent the Regulation goes further than the international agreements emphasising the aim to eliminate the production and use of the internationally recognised POPs.

The Regulation specifically concerns the production, placing on the market, use, discharge and elimination of substances which are banned or restricted under the Stockholm Convention on POPs or the Geneva Convention's Protocol on POPs. It seeks to establish, at European level, requirements for effective implementation of these two international agreements.

Furthermore, MS must set up emission inventories for unintentionally produced POPs, monitoring and information exchange mechanisms and **national implementation plans** - to show the concrete action that will be taken against the POPs.

Port reception facilities directive⁶⁴

Directive 2000/59/EC on port reception facilities for ship-generated waste and cargo residues aims to reduce discharges of ship-generated waste and cargo residues into the sea, especially illegal discharges, by improving the availability and use of port reception facilities in all EU ports. The Directive applies to all ships, incl. fishing vessels and recreational craft, irrespective of their flag.

The Directive brings international requirements (MARPOL 73/78) into EU law and provides for additional obligations and mechanisms, especially the obligation on ports to develop and implement waste reception and handling plans, and the obligation on ships to deliver their waste at each port call within the EU.

However, in contrast to the MARPOL 73/78, which regulates discharges by ships at sea, the Directive focuses on ship operations in EU ports. It addresses in detail the legal, financial and practical responsibilities of the different operators involved in delivery of ship-generated waste and cargo residues.

The Commission is currently reviewing the directive with a view to achieving the objective of 'zero discharges at sea' from ships calling at EU ports, a key objective to further reduce ship-borne debris. **A new legislative proposal is planned for 2013.**

Priority substances Directive⁶⁵

The Directive on Environmental Quality Standards (2008/105/EC), is Daughter Directive of the WFD. It lays down environmental quality standards (EQS) for priority substances and certain other

⁶³ http://ec.europa.eu/environment/pops/index_en.htm

⁶⁴ http://europa.eu/legislation_summaries/environment/waste_management/l24199_en.htm,
http://ec.europa.eu/environment/marine/pdf/SWD_2012_365.pdf

⁶⁵ http://ec.europa.eu/environment/water/water-dangersub/pri_substances.htm,
<http://www.defra.gov.uk/environment/quality/water/legislation/water-framework-directive/>

pollutants as provided for in the WFD, with the aim of achieving good surface water chemical status. The Directive replaces initial list of 33 priority substances set out in the WFD.

As required by the WFD and EQSD, the Commission subsequently reviewed the list and in 2012 it put forward a **legislative proposal for Directive amending the WFD and the EQSD** as regards priority substances. It includes a revised list of priority substances, and provisions to improve the functioning of the legislation.

The main features of the proposal are:

- 15 additional priority substances, 6 of them designated as priority hazardous substances;
- stricter EQS for 4 existing priority substances and slightly revised EQS for 3 others;
- the designation of 2 existing priority substances as priority hazardous substances;
- the introduction of biota standards for several substances;
- provisions to improve the efficiency of monitoring and the clarity of reporting with regard to certain substances behaving as ubiquitous persistent, bioaccumulative and toxic (PBT) substances;
- a provision for a watch-list mechanism designed to allow targeted EU-wide monitoring of substances of possible concern to support the prioritisation process in future reviews of the priority substances list.

As a rule, MS must meet environmental quality standards for new Priority Substances by 2021 (the deadline of the 2nd RBMP). Longer timelines are possible in specific cases if the conditions for exemptions set out in the WFD are applicable.

REACH Regulation⁶⁶

The Regulation (EC) 1907/2006 concerning the **Registration, Evaluation, Authorisation and Restriction of Chemical** substances aims to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances. At the same time, REACH aims to enhance innovation and competitiveness of the EU chemicals industry.

The REACH places greater responsibility on industry to manage the risks from chemicals and to provide safety information on the substances.

One of the main reasons for developing and adopting the REACH Regulation was that a large number of substances have been manufactured and placed on the market in Europe for many years, sometimes in very high amounts, and yet there is insufficient information on the hazards that they pose to human health and the environment. There is a need to fill these information gaps to ensure that industry is able to assess hazards and risks of the substances, and to identify and implement the risk management measures to protect humans and the environment.

⁶⁶ http://ec.europa.eu/environment/chemicals/reach/reach_intro.htm

Recreational craft directive⁶⁷

Recreational craft marketed in the EU must comply with harmonised technical safety and environmental requirements and meet a number of administrative obligations defined by **Directive 94/25/EC on the approximation of the laws, regulations and administrative provisions of the Member States relating to recreational craft**, as amended in 2003 (by Directive 2003/44/EC). These safety and environmental requirements address the design and construction of the craft, and set limit values for their exhaust and noise emissions.

The Directive defines recreational craft as boats of any type, regardless of their means of propulsion, with 2.5 to 24m hull lengths. It provides for a number of exceptions (e.g. racing craft, as well as for canoes, kayaks, gondolas and pedalos) and derogations concerning the application of these requirements (e.g. for craft self-built by their end user).

The design and construction requirements of the Directive cover structural integrity, handling characteristics and installation. For this purpose, four design categories (ocean, offshore, inshore, sheltered waters) have been established.

Exhaust and noise emission limits were introduced by **Directive 2003/44/EC**, with a view to contributing to the protection of the environment and well-being and health of citizens. Exhaust emission limits (for carbon monoxide, hydrocarbons, nitrogen oxides and particulates) are specified depending on whether the boat is propelled by a two-stroke or four-stroke petrol engine or by a diesel engine.

Regulation on alien species in aquaculture⁶⁸

The European Community, as a party to the CBD, has adopted **Regulation (EC) No 708/2007 concerning use of alien and locally absent species in aquaculture** in order to prevent and control the introduction of alien and associated species in aquaculture, prevent their spread and facilitate their eradication. The Regulation aims to create a framework governing aquacultural practices in order to ensure adequate protection of the aquatic environment from the risks associated with the use of non-native species and locally absent species in aquaculture.

The Regulation applies to movements of alien species (introductions) or locally absent species (translocations) for their use in aquaculture in the EU, covers all aquatic species (incl. any part that might survive and reproduce) and applies to all types of aquacultural installation. MS must take all appropriate measures to avoid adverse effects on biodiversity resulting from the movement of aquatic organisms for aquaculture purposes and from the spreading of those organisms.

Regulation on detergents 648/2004⁶⁹

The Regulation (EC) No 648/2004 on detergents has replaced various earlier legislative measures. It requires that surfactants used in detergents meet stringent biodegradation criteria. This is important for the protection of the environment since most detergents and cleaning products are released down the drain and treated in WW treatment plants. The regulation also calls for specific product

⁶⁷ <http://ec.europa.eu/enterprise/sectors/maritime/documents/recreational-craft/>

⁶⁸ http://www.registro-asa.it/icr_index.php?action=introduzione&op=introduzione&lang=en,
http://europa.eu/legislation_summaries/environment/nature_and_biodiversity/l28179_en.htm

⁶⁹ http://europa.eu/legislation_summaries/environment/water_protection_management/l32025_en.htm

information to be made available on the packaging and via the Internet, for example, the presence of small levels of allergenic ingredients.

This Regulation has been extended to restrict the use of phosphate in laundry consumer products in all EU countries as of 2013, to be followed in the future (2017) by restrictions on phosphate in automatic dishwashing tablets (**Regulation EU No. 259/2012**).

Regulation on organotin compounds⁷⁰

The AFS Convention has been transposed into EU legislation through **Regulation (EC) No 782/2003 on the prohibition of organotin compounds on ships**. According to the Regulation, organotin compounds which act as biocides in anti-fouling systems are no longer allowed to be applied on ships flying the flag of a MS as from July 2003. As from January 2008, EU ships and other ships visiting EU ports are obliged either not to bear anti-fouling systems containing such compounds, or to bear a coating that forms a barrier to such compounds leaching from underlying non-compliant antifouling system.

Regulation on plant protection products⁷¹

Regulation (EC) No 1107/2009 concerning the placing of plant protection products on the market (repealing Directives 79/117/EEC and 91/414/EEC) lays down rules for the authorisation of plant protection products in commercial form and for their placing on the market, use and control within the Community. This Regulation increases the level of health and environmental protection, contributes to better protection of agricultural production, and enlarges and consolidates the internal market for plant protection products.

The Regulation confirms the importance that the European Commission places on a higher level of health and environmental protection, whilst seeking to harmonise the placing of plant protection products on the market. Furthermore, it aims to improve agricultural production.

Regulation on waste shipments⁷²

Regulation (EC) No 1013/2006 on shipments of waste aims at strengthening, simplifying and specifying the procedures for controlling waste shipments to improve environmental protection. It thus reduces the risk of waste shipments not being controlled. It also seeks to include into Community legislation the provisions of the Basel Convention as well as the revision of the Decision on the control of transboundary movements of wastes destined for recovery operations, adopted by the OECD in 2001.

The Regulation concerns almost all types of waste shipped. Only radioactive waste and a few other types of waste do not fall within its application, insofar as they are subject to separate control regimes.

⁷⁰ <http://www.emsa.europa.eu/main/anti-fouling-systems/overview.html>

⁷¹ http://europa.eu/legislation_summaries/food_safety/plant_health_checks/sa0016_en.htm

⁷² http://ec.europa.eu/environment/water/blueprint/index_en.htm,
http://ec.europa.eu/environment/water/blueprint/pdf/COM-2012-673final_EN_ACT-cov.pdf

Seafarers training directive⁷³

Directive 2008/106/EC on the minimum level of training of seafarers sets out the rules on training and the standards of competence to be met by seafarers who are candidates for the issue or revalidation of certificates that allow them to perform the functions for which the relevant certificate of proficiency is issued.

For certain categories of vessel, such as tankers and ro-ro passenger ships, the Directive lays down special training provisions (required for this type of vessel). It sets out the mandatory minimum requirements concerning the training and qualifications of seafarers serving on board these specific categories of vessel. The Directive also lays down rules on education and training in management of emergency situations, fire-fighting and the provision of medical aid, and for crew members responsible for catering services.

Seveso directive-II⁷⁴

In Europe, the Seveso accident in 1976 prompted the adoption of legislation aimed at the prevention and control of such accidents. The resulting Seveso directive now applies to around 10 000 industrial establishments where dangerous substances are used or stored in large quantities, mainly in the chemicals, petrochemicals, storage, and metal refining sectors.

In 1996 **Directive 96/82/EC on the control of major-accident hazards**, the so-called Seveso II Directive, was adopted and replaced the original Seveso Directive. Seveso II included a revision and extension of the scope; the introduction of new requirements relating to safety management systems; emergency planning and land-use planning; and a reinforcement of the provisions on inspections to be carried out by MS.

Further adaptation of the provisions on major accidents occurred on July 2012 with publication of a replacement directive - 2012/18/EU (**Seveso III**), which will replace Seveso II from June 2015.

Sewage sludge directive⁷⁵

The purpose of the **Directive 86/278/EEC on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture** is to regulate the use of sewage sludge in agriculture in such a way as to prevent harmful effects on soil, vegetation, animals and man, thereby encouraging the correct use of such sewage sludge.

The Directive lays down limit values for concentrations of heavy metals in the soil, in sludge and for the maximum annual quantities of heavy metals which may be introduced into the soil. The MS must take the measures necessary to ensure that these limit values are not exceeded through the use of sludge.

⁷³ <http://www.support-project.eu/supportknowledge/defaultinfo.aspx?topicid=139&infoid=180&index=5>

⁷⁴ <http://ec.europa.eu/environment/seveso/index.htm>

⁷⁵ <http://rod.eionet.europa.eu/instruments/514>

*Ship-source pollution directive*⁷⁶

Directive 2005/35/EC on ship-source pollution and on the introduction of penalties, including criminal penalties, for pollution offences transposes into EU legislation the standards introduced by MARPOL 73/78 relating to the prohibition of polluting discharges into the sea, and specifies the sanctions to be imposed. Ship-source polluting discharges relate to discharges of substances covered by Annexes I (oil) and II (noxious liquid substances in bulk) to MARPOL 73/78.

The Directive requires MS to consider discharges of polluting substances from ships in all sea areas, incl. the high seas, as a criminal offence if they are committed with intent, recklessly or by serious negligence. Minor discharges are infringements, but shall not automatically be considered as criminal offences, except where their repetition leads to deterioration in the quality of the water, including in the case of repeated discharges.

The Directive provides for co-operation between port State authorities, which should make it possible for proceedings to be initiated in the next port of call. Furthermore, it aims at enhancing co-operation among MS to detect illegal discharges and develop methods to identify a discharge as originating from a particular ship.

*SOLAS*⁷⁷

The 1974 International Convention for the Safety of Life at Sea is an international maritime safety treaty. The Convention in its successive forms is generally regarded as the most important of all international treaties concerning the safety of merchant ships.

The first version was adopted in 1914, in response to the Titanic disaster, the second in 1929, the third in 1948, and the fourth in 1960. The 1974 version includes the tacit acceptance procedure - which provides that an amendment shall enter into force on a specified date unless, before that date, objections to the amendment are received from an agreed number of Parties.

As a result the 1974 Convention has been updated and amended on numerous occasions.

*STCW*⁷⁸

The 1978 International Convention on Standards of Training, Certification and Watchkeeping for Seafarers sets qualification standards for masters, officers and watch personnel on seagoing merchant ships.

The Convention was the first to establish basic requirements on training, certification and watchkeeping for seafarers on an international level. Previously the standards of training, certification and watchkeeping of officers and ratings were established by individual governments, usually without reference to practices in other countries. As a result standards and procedures varied widely, even though shipping is the most international of all industries.

⁷⁶ http://ec.europa.eu/environment/marine/pdf/SWD_2012_365.pdf

⁷⁷ [http://www.imo.org/About/Conventions/listofconventions/pages/international-convention-for-the-safety-of-life-at-sea-\(solas\)-1974.aspx](http://www.imo.org/About/Conventions/listofconventions/pages/international-convention-for-the-safety-of-life-at-sea-(solas)-1974.aspx)

⁷⁸ <http://www.imo.org/About/Conventions/ListOfConventions/Pages/International-Convention-on-Standards-of-Training,-Certification-and-Watchkeeping-for-Seafarers-%28STCW%29.aspx>

The Convention prescribes minimum standards relating to training, certification and watchkeeping for seafarers which countries are obliged to meet or exceed.

*Stockholm Convention*⁷⁹

The two main global agreements on hazardous substances are **the Stockholm Convention on POPs** and the **Genevas Convention's Protocol on POPs**.

The Stockholm Convention on POPs forms a framework, based on the precautionary principle, which seeks to guarantee the safe elimination of these substances, which are harmful to human health and the environment, as well as reductions in their production and use.

The objective of the Convention is to protect human health and the environment from persistent organic pollutants and it requires contracting parties to take measures to eliminate or reduce the release of POPs into the environment.

The Convention basically covers 12 priority POPs (produced intentionally or unintentionally, incl. also dioxins), although the eventual long-term objective is to cover other substances. It defines the substances in question, and also defines the rules governing the production, importing and exporting of those substances.

*Strategy on IAS*⁸⁰

While some EU instruments are dealing with the other major causes of biodiversity loss - namely habitat change, climate change, overexploitation and pollution – there is currently no comprehensive instrument at EU level to tackle invasive alien species. Responding to this gap, the Commission has adopted a Communication by the Commission: "**Towards an EU Strategy on Invasive Species**" (2008).

In 2011, the **EU biodiversity strategy to 2020** was launched, including the target: "by 2020, IAS and their pathways are identified and prioritised, priority species are controlled or eradicated, and pathways are managed to prevent the introduction and establishment of new IAS" and "an action aiming at filling policy gaps in combating IAS by developing a dedicated legislative instrument by 2012".

Currently the Commission is preparing a **dedicated legislative instrument on IAS**. In preparation of this instrument the Commission is now seeking views on the more specific choices to be made when establishing this instrument.

*UNCLOS*⁸¹

The 1982 United Nations Convention on the Law of the Sea is an international treaty that provides a regulatory framework for the use of the world's seas and oceans, *inter alia*, to ensure the conservation and equitable usage of resources and the marine environment and to ensure the

⁷⁹ <http://www.helcom.fi/stc/files/Publications/Proceedings/bsep120B.pdf>,
http://europa.eu/legislation_summaries/environment/air_pollution/l21279_en.htm

⁸⁰ http://ec.europa.eu/environment/consultations/invasive_alliens.htm

⁸¹ http://www.pca-cpa.org/showpage.asp?pag_id=1288

protection and preservation of the living resources of the sea. UNCLOS also addresses such other matters as sovereignty, rights of usage in maritime zones, and navigational rights.

Within this framework, a number of actions have been taken in various international organisations.

UWWTD⁸²

Directive 91/271/EEC concerning urban waste water treatment concerns the collection, treatment and discharge of urban WW and the treatment and discharge of WW from certain industrial sectors. Its aim is to protect the environment from any adverse effects caused by the discharge of such waters.

Industrial WW entering collecting systems and the disposal of WW and sludge from urban WW treatment plants are subject to regulations and/or specific authorisation by the competent authorities.

The Directive establishes a timetable, which MS must adhere to, for the provision of collection and treatment systems for urban WW in agglomerations corresponding to the categories laid down in the Directive.

Implementation deadlines for MS which joined the EU on 2004 and 2006 (Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia, Slovakia, Bulgaria and Rumania) shall be in accordance with the transitional periods indicated in the Accession Treaties and the Directive deadlines (if not mentioned in the Treaties), obliging the new MS to comply with the Directive by 2010 to 2015.

Waste incineration directive

Directive 2000/76/EC on the incineration of waste relates to standards and methodologies required by Europe for the practice and technology of incineration. The aim of this Directive is to minimise the impact of negative environmental effects on the environment and human health resulting from emissions to air, soil, surface and ground water from the incineration and co-incineration of waste. The requirements of the Directive have been developed to reflect the ability of modern incineration plants to achieve high standards of emission control more effectively.

WFD⁸³

Directive 2000/60/EC establishing a framework for Community action in the field of water policy has a number of objectives, such as preventing and reducing pollution, promoting sustainable water usage, environmental protection, improving aquatic ecosystems and mitigating the effects of floods and droughts. Its ultimate objective is to **achieve “good ecological and chemical status”** for all Community waters by 2015.

In 2009, nine years after the Directive entered into force, management plans were produced for each river basin district, taking account of the results of the analyses and studies carried out. These plans cover the period 2009-2015. They shall be revised in 2015 and then every 6 years thereafter.

⁸² http://europa.eu/legislation_summaries/environment/water_protection_management/l28008_en.htm,
http://ec.europa.eu/environment/water/water-urbanwaste/legislation/pdf/transitional_periods_eu10_eu2.pdf

⁸³ http://europa.eu/legislation_summaries/environment/water_protection_management/l28002b_en.htm

The management plans must be implemented from 2012. They aim to:

- prevent deterioration, enhance and restore bodies of surface water, achieve good chemical and ecological status of such water by 2015 at the latest and to reduce pollution from discharges and emissions of hazardous substances;
- protect, enhance and restore the status of all bodies of groundwater, prevent the pollution and deterioration of groundwater, and ensure a balance between groundwater abstraction and replenishment;
- preserve protected areas.