

Chemical and Environmental legislation: REACH, IPPC, WFD. The interactions beyond 2011



Baltic Actions for Reduction of Pollution of the Baltic Sea from Priority Hazardous Substances
Project LIFE07 ENV/EE/000122 – BaltActHaz

List of abbreviations

BAT	Best Available Techniques
BREF	BAT Reference Document
CA	Competent Authority
CLP	Classification, Labelling and Packaging Regulation
DNEL	Derived no-effect level
DPD	Dangerous Preparations Directive
E-PRTR	European Pollutant Release and Transfer Register
ECHA	European Chemicals Agency
ELV	Emission limit value
EQS	Environmental quality standard
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
IED	Industrial Emissions Directive
IPPC	Integrated Pollution Prevention and Control
MS	Member State
PNEC	Predicted no-effect concentration
POM	Programme of Measures
RBMP	River Basin Management Plan
REACH	Registration, Evaluation, Authorisation and Restriction of Chemical substances
RIPE	REACH Information Portal for Enforcement
SDS	Safety data sheet
SEA	Socio-economic analysis
SVHC	Substances of very high concern
WFD	Water Framework Directive
WWTP	Waste water treatment plant

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INTRODUCTION

This brochure is part of the project “**Baltic Actions for the Reduction of Pollution of the Baltic Sea from Priority Hazardous Substances**” (**BaltActHaz**), which aims to support the Baltic States in the implementation of the EU Water Framework Directive, the IPPC Directive and the coming Marine Directive as well as the new HELCOM Baltic Sea Action Plan with regard to reduction of hazardous substances.

Water Framework Directive 2000/60/EC, IPPC Directive 2008/1/EC (IED 2010/75/EU) and the REACH Regulation 2006/1907/EU are the largest items of EU environmental law. They have presented many challenges to the Baltic States while implementing them and continue to do so. Installations regulated under IPPC may have an impact on the water environment, e.g. through direct or indirect discharges of pollutants, water abstraction, etc. Installations are also required to respect environmental quality standards established by the EU and national law, including those derived under water legislation. REACH is expected to deliver comprehensive information on chemicals, including the ones hazardous to water environment, which could also support the implementation of water legislation. However, the interaction between these sets of obligations is rather complicated.

Therefore this brochure aims to investigate and present how different pieces of legislation, like IPPC and REACH could support the implementation of WFD goals and examine what are the most important interactions between these frameworks as well as what challenges they pose to the competent authorities in the Baltic States and how these might be addressed.

This brochure focuses on the following key issues:

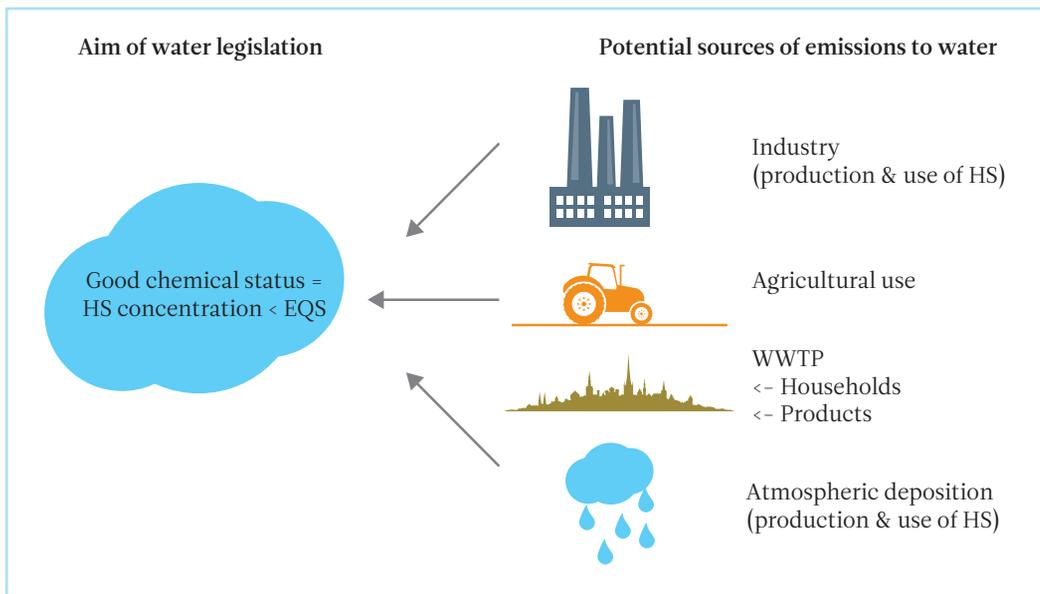
- introduction to the background of different legal frameworks in order to understand their concepts as much as it concerns the management of hazardous substances,
- the main interactions between the chemical and specific environmental legal frameworks,
- recommendations for the authorities how to contribute to better implementation and enforcement of the requirements from WFD, IPPC/IE Directive and REACH regulation in order to ensure that permitting and enforcement activities are in line with the requirements of these different legal frameworks and to contribute to better performance of environmental inspections and enforcement of permits in the Member States.

The brochure is mainly targeted to the **national competent authorities and regional authorities** who are responsible for the implementation and enforcement of the above mentioned policies for the control of hazardous substances, especially permitting authorities issuing permits to the commercial/ industrial entities and monitoring the industrial effluents as well as those setting the reduction measures for the hazardous substances.

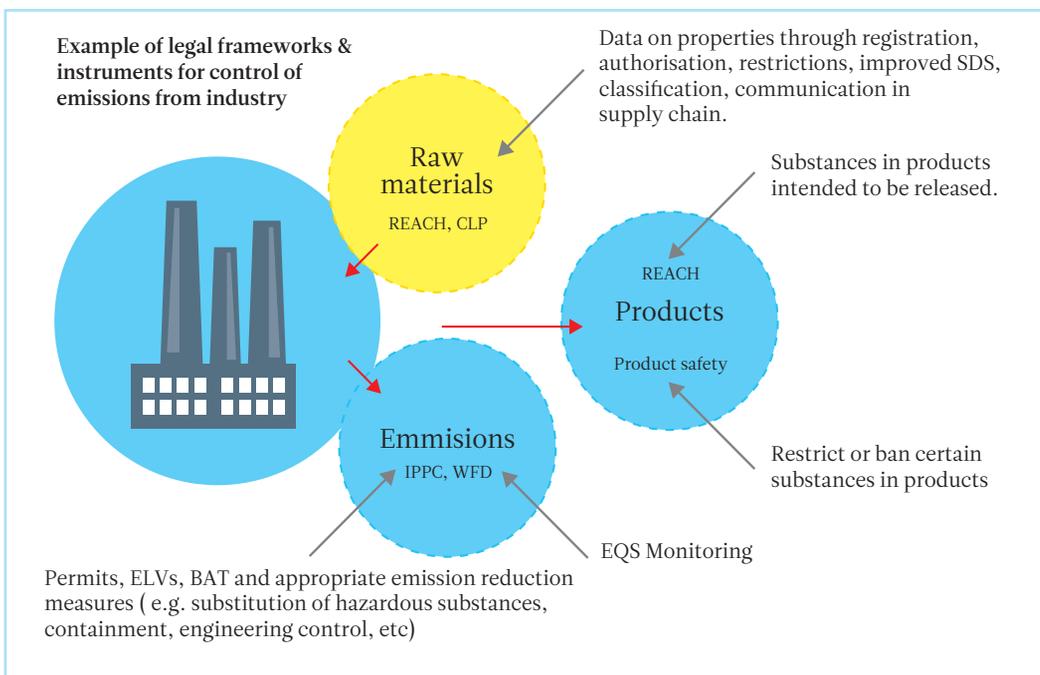
1. LEGAL FRAMEWORKS

Water legislation aims to achieve good quality of surface waters, however it does not talk a lot about the instruments how to do it. Status of water depends a lot from the emissions of hazardous chemicals to water, which are controlled by other pieces of legislation. **Picture 1** and **Picture 2** below illustrate very important legal frameworks – REACH and IPPC and some tools under these frameworks, which support the implementation of the objectives of water legislation.

In order to understand the holistic picture of the interactions between these legal frameworks and how they influence each other and finally the quality of water, at least basic knowledge is needed on every piece of legislation separately. Therefore the brief overview on the most relevant legal frameworks – WFD, REACH & IPPC, is given in the following chapters.



Picture 1. Potential emission sources to water



Picture 2. Legal frameworks and instruments for control & reduction of emissions of hazardous substances.

1.1 WFD & EQS IN BRIEF

Goals

Water Framework Directive – WFD (2000/60/EC) was issued to establish a new, comprehensive regime for the protection of **inland surface waters, transitional waters, coastal waters and groundwater** inter alia through measures against **chemical pollution by priority (hazardous) substances**.

The WFD specifies the following long-term goals for priority substances:

- to prevent deterioration of surface and groundwater;
- to achieve **good chemical status** for surface water and groundwater by **2015** through protection, enhancement and restoration of all surface water and groundwater bodies;
- to progressively **reduce pollution from priority substances and ceasing or phasing out emissions, discharges and losses of priority hazardous substances** to surface waters by **2020**.

Good chemical status is reached for a water body when compliance with all **environmental quality standards (EQS)** for the priority substances and other pollutants listed in the amending **Directive 2008/105/EC on EQS** is achieved. Environmental quality standards (EQS) mean “the concentration of a particular pollutant or group of pollutants in water, sediment or biota which should not be exceeded in order to protect human health and the environment”.

33 substances or group of substances, which have been identified to be of major concern for European waters are on the list of priority substances. Within this list, **13 substances and substance groups** have been identified as **priority hazardous substances**, which are of particular concern and their **discharges, emissions and losses phased out by 2020**. The current list is given below in the **Table 1**. This list is a subject of revision after every 4 years.

Table 1. List of priority substances in the field of water policy (Directive 2008/105/EC)

No	Name of priority substance	Identified as priority hazardous substance	No	Name of priority substance	Identified as priority hazardous substance
1	Alachlor		21	Mercury and its compounds	X
2	Anthracene	X	22	Naphthalene	
3	Atrazine		23	Nickel and its compounds	
4	Benzene		24	Nonylphenols (4-nonylphenol)	X
5	Brominated diphenylether (Pentabromodiphenylether (congener numbers 28, 47, 99, 100, 153 and 154))	X	25	Octylphenols (4-(1,1',3,3'-tetramethylbutyl)-phenol)	
6	Cadmium and its compounds	X	26	Pentachlorobenzene	X
7	Chloroalkanes, C10-13	X	27	Pentachlorophenol	
8	Chlorfenvinphos		28	Polyaromatic hydrocarbons (Benzo(a)pyrene)	X
9	Chlorpyrifos (Chlorpyrifos-ethyl)			(Benzo(b)fluoranthene)	X
10	1,2-Dichloroethane			(Benzo(g,h,i)perylene)	X
11	Dichloromethane			(Benzo(k)fluoranthene)	X
12	Di(2-ethylhexyl)phthalate (DEHP)			(Indeno(1,2,3-cd)pyrene)	X
13	Diuron		29	Simazine	
14	Endosulfan	X	30	Tributyltin compounds (Tributyltin-cation)	X
15	Fluoranthene				X
16	Hexachlorobenzene	X	31	Trichlorobenzenes	
17	Hexachlorobutadiene	X	32	Trichloromethane (chloroform)	
18	Hexachlorocyclohexane	X	33	Trifluralin	
19	Isoproturon				
20	Lead and its compounds				

Key legal instruments/ principles to achieve the goals

WFD contains some important instruments to achieve its goals: River Basin Management Plans (RBMP) with programme of measures (POM), environmental quality standards (EQS) and monitoring ecological or chemical status of surface water.

River basins and River Basin Management Plans

WFD targets a water body **basin** to assure good water quality in the whole water body, as water pollution does not consider any administrative areas.

Main administrative instrument under WFD is the **River Basin Management Plan (RBMP)**, which Member States are required to establish for each river basin district lying entirely within their territory. For international river basin district lying entirely within the Community, Member States shall ensure coordination with the aim to elaborate a single international river basin management plan, if possible. RBMPs must be reviewed by competent authorities on a regular cycle of 6 years. The first RBMP was published in December 2009, setting out actions until 2015.

The RBMP is an instrument to prevent the problems from shifting to a basin scale. In the plan it is described in detail how the objectives set for the river basin will be reached within the required timescale. Each RBMP comprises of several important elements for the management of the river basin:



Picture 3. Overview over the transboundary Daugava and Nemunas river basins.

These basins span the countries of Russia, Latvia, Lithuania, Belarus and Poland, and the rivers drain to the Baltic Sea. Source: http://enrin.grida.no/databasin/index_maps.cfm

Assessment of the status of water body.

This process involves characterisation of the river basin (determining what is meant by 'good ecological status' and identifying current status), revision of the human impact (assessing pressures) which affects the status of the water in the basin, economic analysis of water use, etc.

Programmes of measures (POM).

Each RBMP contains programmes of measures to obtain the goals regarding water quality on a river basin scale. **It is up to the individual Member States to decide under WFD which measures will be used to achieve good water quality.**

Monitoring and review.

Authorities are required to monitor the status of the water bodies and the effects of the programmes of measures. This, therefore, provides an overview of the effectiveness of the measures, which should be the basis for the review and revision of the plan toward achieving the targets.

Environmental quality standards

A strategy to deal with the **pollution of water from chemicals is set out in Article 16 of the Water Framework Directive 2000/60/EC (WFD)**. As a first step, a list of priority substances was adopted (see **Table 1**). The objective is to ensure a high level of protection against risks to or via the aquatic environment arising from these priority substances by setting **European environmental quality standards**. Therefore **Directive 2008/105/EC** sets the environmental quality standards for 41 substances (33 priority substances & 8 additional pollutants) in the water matrix. In addition, Member States have to identify specific pollutants in the River Basins, set national EQS for them and include them in the monitoring programmes. The **chemical monitoring** according to the WFD covers **all surface waters and groundwater** and aims to check the compliance with **European or national environmental quality standards**. The monitoring frequencies given in the WFD are once-a-month for all priority substances discharged in river basins and once-per-three-months for other pollutants discharged in significant quantities into the river basin.

Measures

Although it is up to the individual Member States to decide under WFD which measures are being used to achieve good water quality, there is a non-exhaustive list of such measures provided.

The Directive divides such **measures into ‘basic’ and ‘supplementary’**:

- **Basic measures** include, inter alia, those that are required already under the Community law, e.g. as a baseline Member States have to comply with emission controls, emission limit values and permitting set out in these directives, such as the IPPC Directive, Nitrates Directive etc. As the local environmental conditions (environmental quality standards) must be taken into account, also local regulation can contribute to achieving the goals of WFD. Importantly, the Directive stresses that where a quality objective or quality standard requires stricter conditions than those which would result from the application of existing Community law, more stringent emission controls shall be set accordingly.
- **Supplementary measures** are those measures designed and implemented in addition to the basic measures “to fill in the remaining gaps” with the aim to achieve the objectives.

Compulsory measures for water bodies, which do not meet the environmental objectives include:

- investigation of the causes of the failure (e.g. investigation of sources of pollution);
- reviewing all relevant authorisations and discharge permits;
- reviewing and adjusting monitoring measures as appropriate;
- establishing stricter environmental quality standards for pollutants if necessary.

INFORMATION TOOLKIT - Lithuania

Competent Authority	Environmental Protection Agency of Lithuania http://gamta.lt
List of priority substances	Regulation on wastewater management D1-236 of 2006 (changed 2010 m. gegužēs 18 d. Nr. D1-416)
EQS and ELV	Regulation on wastewater management D1-236 of 2006 (changed 2010 m. gegužēs 18 d. Nr. D1-416)
River basins in Lithuania	http://vanduo.gamta.lt/cms/index
RBMP and POM	
Monitoring programme	
Monitoring results	

INFORMATION TOOLKIT - Latvia

Competent Authority	Latvian Environment, Geology and Meteorology Centre http://www.lvgmc.lv
List of priority substances	Cabinet of Ministers Regulation Nr. 34, 22.01.2002. (Ministru kabineta 2002. gada 22. janvāra noteikumi Nr.34 "Noteikumi par piesārņojošo vielu emisiju ūdenī" ar grozījumiem, kas izdarīti līdz 14.08.2010)
EQS and ELV	Cabinet of Ministers Regulation Nr. 118, 12.03.2002. (Ministru kabineta 2002. gada 12. marta noteikumi Nr. 118 "Noteikumi par virszemes un pazemes ūdeņu kvalitāti" ar grozījumiem, kas izdarīti līdz 30.12.2009)
River basins in Latvia	http://www.meteo.lv/public/29935.html
RBMP and POM	
Monitoring programme	
Monitoring results	

INFORMATION TOOLKIT - Estonia

Competent Authority	Environmental Board of Estonia: http://www.keskkonnaamet.ee/est
List of priority substances	Regulation of Minister of Environment 21.07.2010 nr 32 (Veekeskkonnale ohtlike ainete ja ainerühmade nimistud 1 ja 2 ning prioriteetsete ainete, prioriteetsete ohtlike ainete ja nende ainete rühmade nimekirjad)
EQS	Regulation of Minister of Environment 09.09.2010 nr 49 (Pinnavees ohtlike ainete, sealhulgas prioriteetsete ainete ja prioriteetsete ohtlike ainete ning teatavate muude saasteainete keskkonna kvaliteedi piirväärtused, pinnavees prioriteetsete ainete ja prioriteetsete ohtlike ainete keskkonna kvaliteedi piirväärtuste kohaldamise meetodid)
ELV	Regulation of Government 31.07.2001 nr 269, changed 01.04.2010 (Heitvee veekogusse või pinnasesse juhtimise kord)
River basins in Estonia	http://www.keskkonnaamet.ee/vesikonnad/
RBMP and POM	
Monitoring programme	http://seire.keskkonnainfo.ee/seireveeb/
Monitoring results	

1.2 IPPC & IED IN BRIEF

Goals

The Integrated Pollution Prevention and Control Directive – IPPC (2008/1/EC) requires EU Member States to **regulate emissions to air, soil and water from certain industrial and agricultural installations on a local scale by permitting and enforcement**. IPPC aims at prevention, reduction and elimination of pollution at source.

It **applies only to large industries falling under six categories**: energy, production and processing of metals, minerals, chemicals, waste management and ‘other’. The ‘other’ group includes facilities operating in the areas of pulp and paper production, textile treatment, tanning, food production, and the intensive rearing of poultry and pigs. The total number of such installations across the EU is around 52000.

IPPC also tackles prudent management of natural resources, waste minimization, recovery or minimization of impact at disposal, energy efficiency, accident prevention and limitation. However it was recognized that it is still not sufficient to properly control industrial emissions and that it should be improved to offer the highest level of protection for the environment and human health while simplifying the existing legislation and cutting unnecessary administrative costs. Therefore in November 2005 the European Commission launched a review of the European legislation on industrial emissions, on 17 December 2010 the new **Directive on Industrial Emissions – IED (2010/75/EU)** was published and came into force on 6 January 2011.

The IED makes a significant improvement on the interaction between the existing seven directives, which it will replace:

- Large Combustion Plant Directive (LCPD);
- Integrated Pollution Prevention and Control Directive (IPPC);
- Waste Incineration Directive (WID);
- Solvent Emissions Directive (SED); and
- three existing directives on Titanium dioxide on (i) disposal (78/176/EEC), (ii) monitoring and surveillance (82/883/EEC) and (iii) programmes for the reduction of pollution (92/112/EEC).

IED **tightens ELVs** (installations will have until 2016 to comply with the stricter limits), seeks to **strengthen the concept of BATs** and make their application more consistent between Member States, e.g. a document laying down conclusions on BATs produced at the EU level will be required to be used as a reference for setting permit conditions at Member State level. The IED introduces a number of mechanisms for the Member States to check and enforce compliance with the IED. These relate to monitoring of emissions, reporting and inspections.

Key legal instruments/ principles to achieve the goals

The IPPC/ IE Directives require a combined approach to achieve a high level of environmental protection.

Permits

Each facility covered by the Directive must be made subject to authorization through permitting. A ‘permit’ is defined as a written decision granting authorization to operate all or part of an installation, subject to certain conditions. Each permit contains several important elements related to the emissions to the environment:

- **Best Available Techniques (BATs)** are a key requirement to be reflected in IPPC permits to prevent pollution. Within the definition of BAT, ‘available’ is specified as meaning economically and technically viable, taking into consideration costs and advantages. When determining BAT it is important to take into account the technical characteristics of the installation, its geographical location and local environmental conditions. These factors vary throughout Europe, as the consideration of economic factors in the determination of BAT, so it was experienced that significant differences emerge in the emission limits applied by the Member States. The available BAT reference documents (BREF) provide guidance on BAT for the different sectors controlled under IPPC. They can be found at <http://eippcb.jrc.es/reference/>. BREFs seek to describe the techniques that are considered to be the best available and the emission levels associated with such BAT.
- **Emission limit values (ELVs)** in permits must be set based on the BAT. Furthermore, the IPPC Directive is clear that ELVs in permits must, as a minimum, be compliant with those set out in other EU law. There are a number of such ELVs in EU law (e.g. titanium dioxide, waste incineration, urban waste water treatment, etc.). ELVs in directives establish minimum potential permit conditions, but permits have to establish stricter conditions if these are the conclusions arising from BAT assessment. Also local environmental conditions (environmental quality standards) must be taken into account, i.e. where an EQS (according to WFD) requires stricter conditions than those required by BAT, additional measures are required in permit.

• **Monitoring.** The Directive includes certain requirements aimed to ensure that the system of IPPC is applied and enforced in practice. Member States must ensure that permit conditions are in compliance with the requirements and that operators regularly provide competent authorities with results from monitoring of emissions. **Monitoring and reporting obligations of the operator should be set out in permits.** Monitoring obligations generally include the monitoring of concentrations of specified pollutants emitted from the installation and a range of other aspects which have to be kept in mind when operating an installation (e.g. safety reporting, waste management, etc). In some cases (e.g. for large installations or those of concern), there may also be a requirement to monitor the surrounding environment. IED includes the requirement for periodic monitoring of dangerous substances likely to be on the site and if there may be a risk of soil and groundwater contamination. Additionally operators must provide the authorities necessary access and assistance to enable inspections and other monitoring functions to be carried out.

Reporting on emissions

Data on emissions from IPPC installations has to be reported annually and stored in the European Pollutant Release and Transfer Register (E-PRTR) (<http://prtr.ec.europa.eu/>). This Europe-wide register provides easily accessible key environmental data from industrial facilities. It replaces the previous European Pollutant Emission Register (EPER). The register contains data reported annually by some 28,000 industrial facilities covering 65 economic activities across Europe. For each facility, information is provided concerning the amounts of pollutant releases to air, water and land as well as off-site transfers of waste and pollutants in waste water from a list of 91 key pollutants.

Permit review

The IPPC Directive requires periodic revision of permits. There is no prescription as to how frequently permits should be reviewed, but the Directive highlights a number of circumstances when a permit review (and possible revision) is required. These include issues relating to the installation processes (e.g. there is a change in understanding of what is BAT, new ELVs are introduced in EU law or that improved safety measures are needed) and issues relating to the impact of the installation to the environment (e.g. pollution impacts are significant and require changed ELVs or that there are new obligations, such as EQS, in EU law).

Inspection and enforcement

The IED introduces far more detailed provisions for inspection and enforcement than the IPPC Directive. It requires Member States to produce **inspection plans**. Apart from information on installations, the plan shall include a general assessment of relevant significant environmental issues. Based on the plans, inspection programmes shall be developed, which may target inspections based on a systematic appraisal of environmental risks. The risks shall include, at least, the criterion ‘the potential and actual impacts of the installations concerned on human health and the environment taking into account the levels and types of emissions, the sensitivity of the local environment and the risk of accidents’.

Routine inspection shall be sufficient to examine the full range of relevant environmental effects of the installation and shall be sufficient to determine not only whether permit conditions are complied with, but also whether the permit conditions are effective. This indicates that inspectors should consider why certain permit conditions have been applied and whether they serve the purpose for which they were set (e.g. objectives in the local environment).

INFORMATION TOOLKIT - Lithuania

Competent Authority	Environmental Protection Agency of Lithuania http://gamta.lt
Legislation	Rules on issuing, review and withdraw of IPPC permits (2005 m. birželio 29 d. Nr. D1-330)
BREFs	Summaries in Lithuanian: http://gamta.lt/cms/index?rubricId=70160852-bcfc-4e18-881e-01868bf61a-db
Example permit application: format of permit application and permit	http://gamta.lt/cms/index?rubricId=266d9067-c315-4045-a548-0150f9e9196a
Issued permits	Issued permits are kept in Regional Environmental Protection Departments, which should be contacted to get acquainted with specific permit

INFORMATION TOOLKIT - Latvia

Competent Authority	State Environmental Service of Latvia http://vvd.gov.lv
Legislation	The Law On Pollution (15.03.2001) with amendments until 25.10.2007 Cabinet of Ministers Regulation No 1082 adopted on November 30, 2010 "Procedures by which Polluting Activities of Category A, B and C shall be Declared and Permits for the Performance of Category A and B Polluting Activities shall be Issued"
BREFs	Summary in Latvian: http://www.vpvb.gov.lv/lv/piesarnojums/lptp-vadlinijas
Example permit application: format of permit application and permit	http://www.varam.gov.lv/in_site/tools/download.php?file=files/text/Likumd/piesarnojums//1082_2010.pdf
Issued permits	http://www.vpvb.gov.lv/lv/piesarnojums/a-b-atlaujas

INFORMATION TOOLKIT - Estonia

Competent Authority	Environmental Board of Estonia: http://www.keskkonnaamet.ee/est
Legislation	Integrated Pollution Prevention and Control Act (consolidated text Dec 2006)
BREFs	Summaries in Estonian: http://www.ippc.envir.ee/english/bat.htm
Example permit application: format of permit application and permit	http://www.ippc.envir.ee/english/guidelines.htm
Issued permits	Information system about the issued permits: http://klis.envir.ee/klis

1.3 REACH & CLP IN BRIEF

Goals

REACH stands for the Registration, Evaluation, Authorization and Restriction of Chemicals. The REACH Regulation No. 1907/2006 came into force on June 1, 2007 and leads to a fundamental reform of European Chemical legislation.

The main aims of REACH are to ensure a **high level of protection of human health and the environment from the risks that can be posed by chemicals**, the promotion of alternative test methods, free circulation of substances on the internal market and enhancing competitiveness and innovation. REACH makes industry responsible for assessing and managing the risks posed by chemicals and for providing appropriate safety information for the users of chemicals. In parallel, the European Union can take additional measures on highly dangerous substances, where there is a need for complementing action at EU level.

CLP is the Regulation on classification, labelling and packaging of substances and mixtures. It entered into force on 20 January 2009. This Regulation aligns previous EU legislation on classification, labelling and packaging of chemicals to the GHS (Globally Harmonised System of Classification and Labelling of Chemicals).

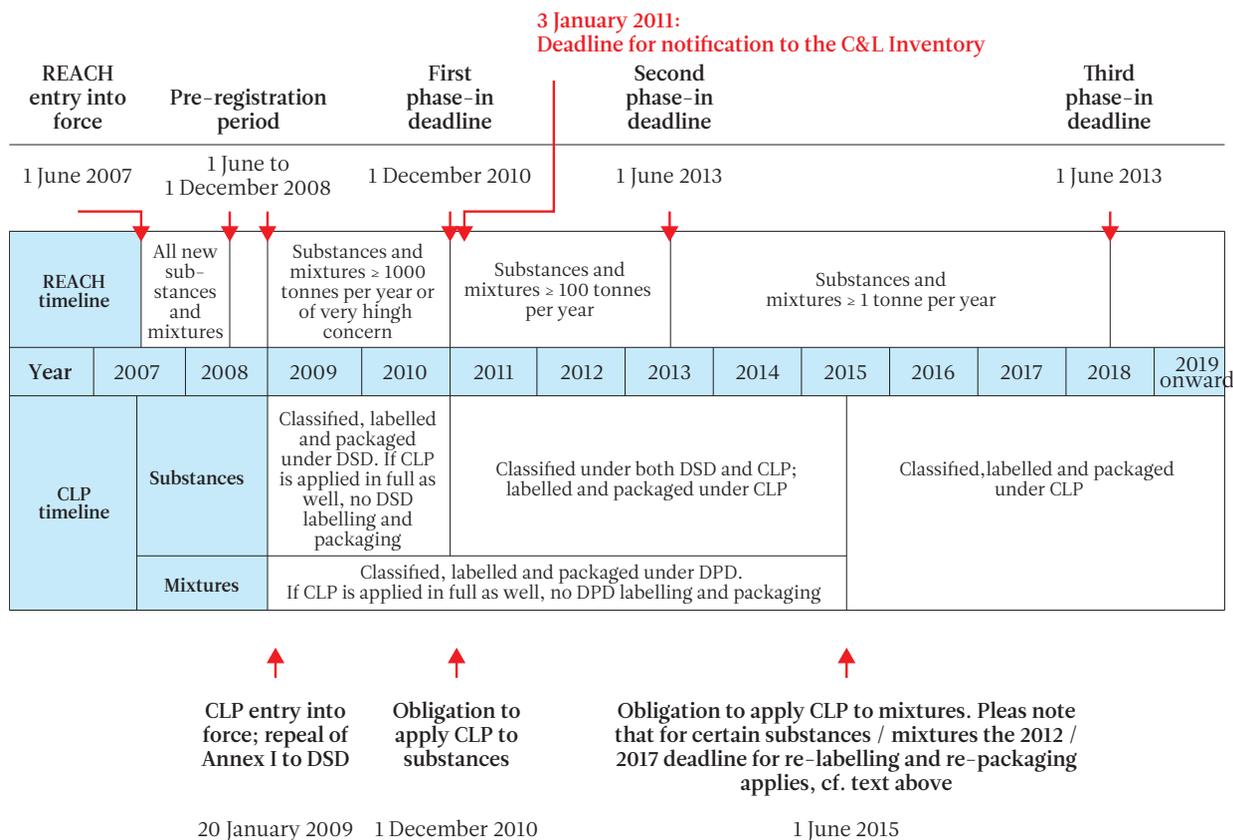
Its main objectives are to facilitate international trade in chemicals and to **maintain the existing level of protection of human health and environment**. Classification and labelling is the system to identify hazardous chemicals and to inform users about these hazards through standard symbols, phrases on the packaging labels and through safety data sheets (SDS).

According to the Regulation, the deadline for substance classification according to the new rules was 1 December 2010. For mixtures, the deadline will be 1 June 2015. The CLP Regulation will ultimately replace the current rules on classification, labelling and packaging of substances (Directive 67/548/EEC) and preparations (Directive 1999/45/EC) after this transitional period.

CLP itself does not set information requirements (except for determining physical properties). The information requirements are laid down in REACH. Once dangerous properties are identified and the substance or mixture is classified accordingly, manufacturers, importers, downstream users and distributors of substances or mixtures, as well as producers and importers of certain specific articles should communicate the identified hazards of these substances or mixtures to other actors in the supply chain.

The hazard of a substance or mixture is the potential for that substance or mixture to cause harm. It depends on the intrinsic properties of the substance or mixture. In this connection hazard evaluation is the process through which information about the intrinsic properties of a substance or mixture is assessed to determine their potential to cause harm. In cases where the nature and severity of an identified hazard meets the classification criteria, hazard classification is the assignment of a standardised description of this hazard of a substance or a mixture causing harm to human health or the environment.

Hazard labelling allows to communicate the hazard (classification) to the user of a substance or mixture, to alert the user of the presence of a hazard and the need to avoid exposures and the resulting risks. CLP also sets general packaging standards, in order to ensure the safe supply of hazardous substances and mixtures.



Picture 4. REACH & CLP implementation timeline. Source: ECHA

Key legal instruments/ principles to achieve the goals

REACH lays down several essential instruments to achieve the goals set by legislation.

Registration

The aim of the registration is to establish a transparent, predictable and balanced framework within which the industry takes responsibility for the safety of their products. The industry is required to collect sufficient information and to use this information to determine appropriate risk management measures to be implemented by manufacturers and importers and recommend the appropriate measures for downstream users.

Manufacturers and importers of substances have a general obligation to submit a registration dossier to the European Chemicals Agency (ECHA) for each substance manufactured or imported in quantities of 1 tonne or more per year per company (legal entity).

The registration deadline depends on the quantity and properties of chemicals.

Registration deadline for substances <ul style="list-style-type: none"> • in quantities of 1000 tonnes/year and above • carcinogens, mutagens and substances toxic to reproduction (CMR category 1 and 2) above 1 tonne/year • substances classified as very toxic to aquatic organisms (R50/53) above 100 tonnes/year • deadline for substances 	30 November 2010
Registration deadline for substances in quantities of 100 to 1000 tonnes/year	31 May 2013
Registration deadline for substances in quantities of 1 to 100 tonne/year	31 May 2018

REACH will necessitate the registration of around 30,000 chemical substances in the EU over a period of 11 years. This obligation applies to substances as such and in mixtures. A special registration regime applies for substances in articles (e.g. manufactured goods such as cars, textiles, electronic chips).

In the future, REACH registration will be considered as a precondition for manufacturing, placing on the market and using all chemicals within the European Union. **Failure to register means that the substance cannot be manufactured or imported.**

The registration dossier contains information that enables the safe use of a substance. In practice it means:

- Manufacturers and importers must obtain information on the substances they manufacture or import and use this information to assess the risks arising from the use of these substances and ensure that these risks are properly managed.
- Such information on the **properties, uses and on the classification of a substance as well as guidance on safe use** is laid down in the technical dossier submitted to ECHA.
- For substances in quantities of 10 tonne or more also **chemical safety report** must be submitted. It includes a human health assessment, physicochemical hazard assessment, **environmental hazard assessment and an assessment of whether the substance is persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).**
- ECHA is required to undertake a completeness check of each registration dossier but this will not include an assessment of the quality or adequacy of the data or justifications submitted.

Information on chemical properties of registered substances is directly accessible via eChemPortal <http://www.echemportal.org/>. It provides free public access to information on properties of chemicals, such as physical and chemical properties, ecotoxicity, environmental fate and behaviour, toxicity. The website allow simultaneous search options for reports and datasets by chemical name and number and by chemical property.

Information flow in the supply chain – Safety Data Sheet

REACH requires that not only manufacturers and importers but also their customers have the information they need to use chemicals safely. The primary tool for information transfer is the well-established and familiar **safety data sheet (SDS) for all hazardous chemicals. SDS is the main information source in the company based on which risks to human health and environment are estimated.** It is expected that during registration new information on the hazardous properties of substances and information that challenges the quality of risk management measures will be derived.

Where chemical safety assessments are performed according to the registration requirements, relevant **exposure scenarios** need to be annexed to the safety data sheet and have thus to be passed down the supply chain. Exposure scenario covers identified uses of the chemical and describes the specific conditions how that chemical should be used.

Evaluation

REACH provides three different evaluation processes, namely the compliance check, the examination of testing proposals (these two are called dossier evaluation) and the substance evaluation.

- The **evaluation of dossiers** consists of checking registration dossiers and checking testing proposals. The purpose of checking a registration dossier for compliance is to ensure that the legal requirements of REACH are fulfilled and that the quality of the submitted dossiers is sufficient.
- The **substance evaluation** process aims to eliminate any grounds for considering if a substance poses a risk to human health or the environment. Evaluation will be performed for prioritized substances where prioritization is made risk-based, for example, based on hazard information, for instance structural similarity of the substance with known substances of concern or with substances which are persistent and liable to bioaccumulate, suggesting that the substance or one or more of its transformation products has properties of concern or is persistent and liable to bioaccumulate etc. ECHA will compile a draft Community rolling action plan, which covers a period of three years and specifies the substances to be evaluated each year.

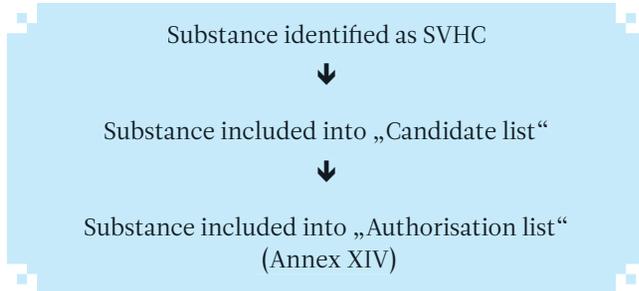
Authorisation

The aim of authorisation is to ensure that the risks from **substances of very high concern (SVHC) are properly controlled, replaced by suitable alternatives or risks are reduced by appropriate technologies, or justified by socio-economic grounds,** having taken into account the available information on alternative substances or processes (substitutes).

SVHC are identified based on the following properties:

- CMR substances, cat 1 and 2;
- **PBT and vPvB substances** – Persistent, bioaccumulative and toxic substances and very persistent and very bioaccumulative substances in accordance with criteria in Annex XIII of REACH;
- Substances of equivalent concern with scientific evidence of probable serious effects, such as having **endocrine disrupting properties** or which do not fulfil the criteria in Annex XIII but which are identified as causing serious and **irreversible effects to humans or the environment.**

Substances may be identified as SVHCs by ECHA's Member State Committee based on a proposal prepared by a Member State or a proposal prepared by ECHA on request of the Commission. ECHA decides whether to include these substances into the so-called "Candidate List" of substances for possible inclusion into the Authorisation List (Annex XIV of REACH). The European Commission takes the final decision whether to include a substance in the Authorisation List or not.



Substances on the Authorisation List cannot be placed on the market or used after the so-called "sunset date", which is set in Annex XIV. Unless specific exceptions apply, these substances may be placed on the market only if an authorisation has been granted for a specific use, or the use has been exempted from authorisation.

The current Candidate list for authorisation contains 46 substances or substance groups (updated on 15/12/2010) and is available on the ECHA website: http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp

Among those substances 10 have PBT or vPvB properties and even more have reprotoxic properties, for example, Bis(tributyltin)oxide (TBTO), Bis (2-ethylhexyl)phthalate (DEHP), Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins), 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene), which are of particular concern under water legislation.

Six substances of very high concern will be banned within the next three to five years unless an authorisation has been granted to individual companies for their use (see Table 2). These substances are carcinogenic, toxic for reproduction or persist in the environment and accumulate in living organisms. Operators wishing to sell or use these substances will need to demonstrate that the required safety measures have been taken to adequately control the risks, or that the benefits for the economy and society outweigh the risks. Authorisation List is available on ECHA website: http://echa.europa.eu/reach/authorisation_under_reach/authorisation_list_en.asp

Restrictions

Substances under restrictions are substances, which cause unacceptable risks to human health or the environment in all European Union countries, therefore also control measures need to be implemented in the whole European Union. Restrictions can mean a total ban of the manufacture of a certain substance or just restrictions for certain uses. Substances, which have certain restrictions, are listed in Annex XVII of the REACH regulation.

Table 2. Six substances of very high concern to be banned within next three to five years unless an authorisation is granted

Substance	Intrinsic properties	Sunset date*
5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene)	vPvB	21 August 2014
4,4'-Diaminodiphenylmethane (MDA)	Carcinogenic (category 1B)	21 August 2014
Hexabromocyclododecane (HBCDD)	PBT	21 August 2015
Bis(2-ethylhexyl) phthalate (DEHP)	Toxic for reproduction (category 1B)	21 February 2015
Benzyl butyl phthalate (BBP)	Toxic for reproduction (category 1B)	21 February 2015
Dibutyl phthalate (DBP)	Toxic for reproduction (category 1B)	21 February 2015

* date after which substance cannot be placed on the market or used.

INFORMATION TOOLKIT

Competent Authorities	European Chemicals Agency ECHA http://echa.europa.eu/ Estonia: Health Board of Estonia: http://www.terviseamet.ee/ Latvia: Latvian Environment, Geology and Meteorology Centre http://www.lvgmc.lv Lithuania: Environmental Protection Agency of Lithuania http://gamta.lt
Registered substances	http://apps.echa.europa.eu/registered/registered-sub.aspx
Information on chemical properties of registered substances	http://www.echemportal.org/
Candidate list for authorisation	http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp
Authorisation list	http://echa.europa.eu/reach/authorisation_under_reach/authorisation_list_en.asp
Existing restrictions	http://echa.europa.eu/reach/restriction/existing_restriction_en.asp

2. INTERACTIONS OF LEGAL FRAMEWORKS

It is easy to imagine the ‘path’ of chemical in the real life: first, it is produced in some factory, then used by other professional or private users, during this use some emissions of that chemical are released, and finally it appears in the environment, e.g. water body, where it can degrade or persist for long time, accumulate in organisms or get transported long distances etc.

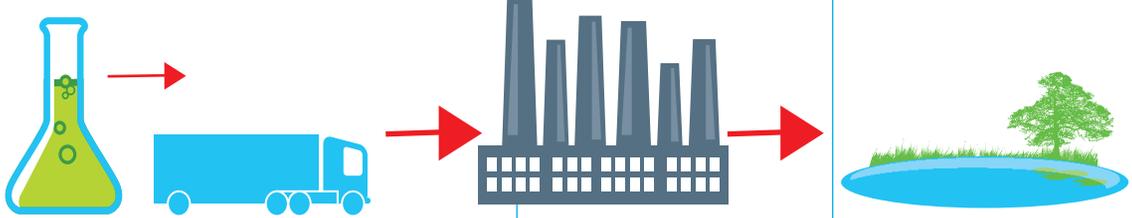
In order to manage this chemical safely without causing harm to human health and environment throughout this entire ‘path’, it should be well regulated and controlled. However on the legal level this interface is not anymore so simple and

clear. Each steps along this ‘path’ are controlled by different pieces of legislation, having different aim, scope, approach, target group (see the table below). These pieces of legislation also have different approaches used for the prioritization of chemicals, precaution measures, risk assessment and risk management, monitoring etc.

However, there are also many interactions among those legislations, which are described below.

	REACH	IPPC & IED	WFD & EQS
AIM	<ul style="list-style-type: none"> • High level of protection of human health and environment • Free circulation of substances in internal market • Enhanced competitiveness and innovation 	<ul style="list-style-type: none"> • High level of protection of the environment taken as a whole • Integrated pollution prevention and control • Measures to prevent or reduce emissions to air, water and land, including waste management measures 	<ul style="list-style-type: none"> • Maintain and improve quality of aquatic environment (inland surface waters, transitional waters, coastal waters and groundwater) • Reduce or cease/phase out emissions, discharges and losses of priority substances
SCOPE	<ul style="list-style-type: none"> • Manufacture, placing on the market or use of substances on their own, in preparations or in articles 	<ul style="list-style-type: none"> • Industrial installations with significant pollution potential 	<ul style="list-style-type: none"> • Water chemical status in river basins
APPROACH	<ul style="list-style-type: none"> • Focuses on substances • Industry provides information on hazard, exposures and control of risks during registration • Sets actions for substances of highest concern • Industry applies for authorization 	<ul style="list-style-type: none"> • Focuses on techniques to prevent/control emissions (BAT) • Industry applies for site-specific permit 	<ul style="list-style-type: none"> • Focuses on prioritized substances (33 priority substances, which includes 13 priority hazardous substances) • Establishes EQS for prioritized substances and for 8 other prioritized polluting substances
TARGET GROUP	<ul style="list-style-type: none"> • Manufacturers, importers and downstream users of substances • Producers and importers of articles containing substances 	<ul style="list-style-type: none"> • Manufacturing industry and agro-industry 	<ul style="list-style-type: none"> • All point and diffuse sources of prioritized substances
LEVEL OF HARMONISATION	<ul style="list-style-type: none"> • Registration, restrictions, authorization applies throughout the EU 	<ul style="list-style-type: none"> • When granting permit a CA has a possibility to deviate from BAT in justified cases 	<ul style="list-style-type: none"> • EQS for prioritized substances applies throughout the EU but for other pollutants EQS are set on national or river basin level • At national or river basin level Member States are allowed to establish more stricter EQS for prioritized substances

Furthermore, different legal acts have different instruments and different timetables to achieve the goals. This is illustrated in the scheme below with an example of a concrete substance – Di(2-ethylhexyl) phthalate (DEHP) (CAS No: 117-81-7).

Di(2-ethylhexyl) phthalate (DEHP) (CAS No: 117-81-7)		
REACH & CLP	IPPC & IED	WFD & EQS
Information on chemicals, restrictions on use 	Use of chemicals & control of chemicals emissions to water through permit	Good chemical status (concentration of prioritized chemicals <eqs) by 12/2015 
Registration: no use without pre-registration/registration Classification: Repr. Cat. 2; R60-61 (May impair fertility; May cause harm to the unborn child) Authorisation: no use after 21 Febr 2015 (due to the toxicity to reproduction) Restrictions: no use as substances or in mixtures in concentrations greater than 0,1 % by weight of the plasticised material, in toys and childcare articles.	Not specifically listed in BREFs	Emissions to be reduced by 2020 AA-EQS for waters – 1,3 µg/l Monitoring in the surface water: once-a-month

2.1 KEY INTERACTIONS WFD – IPPC

The WFD and the IPPC Directive are complementary. Permitting and enforcement will become more and more important to ensure the realisation of WFD objectives for water quality. The objectives and processes of WFD may affect the operational and monitoring conditions which have been applied in permits and enhance enforcement and permit review. The decisions made to implement the IPPC are also critical in a number of aspects when implementing the WFD, e.g. the nature of programmes of measures, monitoring, inventories, etc. The key interactions are described below.

Inventory of discharges, emissions and losses of priority substances and assessment of pressures

WFD and its daughter directive 2008/105/EC require inventory of discharges, emissions and losses of priority substances and assessment of the pressures and impacts to water body. Emissions from IPPC installations may impact water bodies and influence achieving their good status.

It is important to note that there is a variety of ways how the activity of installations may affect water status:

- direct discharges into water (e.g. hazardous substances, nutrients, organic matter, heat);
- diffuse pollution (e.g. from land spreading activities of generated sludge);
- emissions to air which may deposit into water;
- impacts on water bodies from accidents;
- waste generation.

Therefore information on discharges of hazardous substances provides important data for the assessment of the status of the water body when developing RBMP.

EQS & ELV

IPPC supports implementation of WFD by requiring that permits do not lead to breaches of established environmental quality standards for water body (EQS can be established either on EU level or national or river basin level). IPPC process must ensure that these standards are complied with by defining proper obligations (ELV) on installations in permits, which influence the status of the water body and support to achieve water quality objectives.

Monitoring and information

Both directives have their monitoring obligations, however integrating these would bring obvious added value for the successful implementation of both directives. The IPPC Directive establishes operators' obligations for monitoring the emissions and first of all aims at confirming that ELVs are complied with. It may also include monitoring of the surrounding environment to ensure that there is no unacceptable impact. Monitoring is important to ensure that discharges remain within the determined limits that have been set to meet the obligations of the WFD. Information on emissions is also important specifically for meeting the obligations under the EQS Directive for an inventory of emissions and for determining mixing zones. WFD sets out a range of monitoring obligations – surveillance, operational and investigative monitoring. WFD has very wide monitoring obligations, to examine pressures on water and trends in various matrices, i.e. water, sediment and/or biota. It is possible that these analyses could identify additional substances that should be subject to operational monitoring and surveillance, but which are not specified in the permit conditions. This requires close cooperation between authorities to share information to support the implementation of the relevant legislation.

Programmes of measures

It is up to the individual Member States to decide under WFD which measures will be used to achieve good water status. On the other hand controlling emissions from installations covered under IPPC Directive is important to achieve good water quality and is considered as an essential basic measure. Furthermore, IPPC also requires in certain cases that emission reduction plans are defined in permit. It seems important that these tools under WFD and IPPC are synchronized to each other.

Inspection and enforcement

Proper inspection and enforcement of IPPC requirements would highly contribute to reaching the water objectives. IED brings it even more forward. There is a new obligation that will require inspectorates not only to consider whether permits are complied with, but also to examine impacts on the local environment, providing a greater link to examine relationships between IPPC installations and water objectives. A broad inspection plan should include information on pressures from RBMPs, as should inspection programmes. Therefore where the RBMPs identify concerns over pressures the IED competent authorities should be informed about it.

2.2 KEY INTERACTIONS REACH – WFD

REACH provides massive opportunities for the enforcement of the WFD. Authorities dealing with the obligations of the WFD can benefit from the risk management measures recommended under REACH, although the information cannot be used directly. For example for the WFD competent authorities can use information generated under REACH for point source permits or they can benefit from CSR (Chemical Safety Report) where information about the appropriate type of technology to protect water bodies and the possible achievable level of emissions is indicated. If a substance in question is subject to authorization this should lead to restrictions in water permits, e.g. limited period and only for a specific (authorized) use.

Key interactions between REACH and WFD are described in more details below.

Restrictions and authorisation

REACH is a crucially important regulation to reduce the placing on the market (and use) of certain toxic and otherwise harmful substances either through requiring their substitution or restricting their use in inappropriate processes and uses through restriction and authorization procedures. The Regulation requires assessment of individual substances according to objective criteria and assesses their appropriate use. Ensuring that toxic substances are used appropriately is important to control their concentration levels in the environment. However, this assessment is not undertaken with respect to the particular objectives of specific locations, such as an individual water body. Some substances addressed are included in the EQS Directive and, therefore, reduction in use will assist in achieving the EQS and help achievement of good chemical status for surface and groundwater's under the WFD. The objectives of the Water Directives are, therefore, directly supported by the implementation of REACH. Thus restriction and authorization under REACH can be used as a control measure to fulfil the objectives of WFD related to priority substances.

And vice versa, monitoring data generated by WFD can indicate specific concerns and that certain substance need even stricter restrictions or should undergo the authorization procedure. Furthermore, if the EQS of WFD are not met for a certain substance, authorization granted for the use of the substance in the relevant river basin may be reviewed.

Identification of SVHC

One criteria for the identification of a substance as SVHC under REACH is being hazardous to the environment, e.g. PBT, vPvB, toxic to reproduction or having similar concern as an endocrine disrupter. The inclusion of priority substances into the list of WFD Annex X is also based on a similar approach, although WFD does not specify concrete criteria. Furthermore the list of priority substances under WFD is revised every 4 years. Therefore the information generated on SVHC under REACH could be well used for the identification of new priority substances under WFD. The information generated during substance evaluation process on intrinsic properties and exposure on the EU level (aggregated tonnages, data on fate, monitoring data) could also assist with the identification of new priority substances.

On another hand data from WFD monitoring can support SVHC prioritization or substance evaluation procedures under REACH.

Information

It is also important to note that the progressive implementation of REACH will result in the generation of significant amounts of information on the hazardousness of individual substances, which may be a threat to the aquatic environment. Such information will assist water specialists to improve their understanding of the pressures on water bodies (e.g. in revising RBMPs) and in interpreting the relationship between IPPC installation activities and water objectives. This information may, for example, allow authorities to develop specific EQS for substances, which can then guide the development of measures.

There are specific links between PNEC (which already exist for some substances, but in future will be generated for a much higher number of substances due to REACH) and environmental quality standards developed for WFD. Exceeding the PNEC limits may automatically indicate the presence of “significant” pollution and may indicate that point source pollution reduction measures are needed. However, primarily, in the framework of REACH PNECs are the reference points for the registrant as well as for downstream users in order to decide whether the use of a substance is safe. For the sectoral environmental law they can become an important source for substance-related information indicating whether there is a need for additional risk reduction measures. However PNECs derived during the REACH registration procedure should only be used as “indicative” because REACH does not require scientific proof for this.

2.3 KEY INTERACTIONS REACH – IPPC

IPPC operators need to consider the environmental and safety implications of the operation of their installations. Operators may be manufacturers and/or downstream users of substances covered by REACH. Therefore, they are required to consider the safety of the use of their substances and to apply appropriate risk management measures. For this they need to have correct information about the substances which they use.

Information generated under REACH

An application for the permit must include descriptions of raw and auxiliary materials, nature and quantities of predictable emissions, proposed technology or other techniques to prevent and reduce emissions and measures planned to monitor emissions. If in the relevant BREFs it is not mentioned that emissions of the certain chemical need to be reduced, expert knowledge is needed to assess where the chemical is likely to be emitted in significant quantities. SDS may provide useful information on the nature and concentration of substances contained in raw materials, this helps to determine estimated emissions. They may also provide useful information on emission control measures in operational conditions. Information in CSR/SDS, in particular ES, could be used to complement the information in permits.

Information from BREFs and permits

BREFs can support REACH procedures (evaluation, authorization) with the information on substances used in certain sectors, emissions, applied techniques or available alternatives. Furthermore information from permits could be used as a complementary source for registration data.

3. RECOMMENDATIONS ON FIRST ACTIONS

As described in the previous chapters, all three sectors – IPPC, WFD and REACH are very complex and have many interactions and many differences. Their implementation and enforcement involves many institutions from different levels (EU, national, regional) having different clearly described duties. Therefore the implementation of those frameworks brings many challenges to both, to the authorities as well as to the industry and requires a good understanding of the principles of all these frameworks and even better cooperation and information exchange between the authorities and different stakeholders. Efficient protection of the environment is only possible when the industry, WWTPs, permitting, controlling and monitoring are involved!

This chapter brings some ideas how these three frameworks could be implemented in the most efficient way, what information is important to communicate and what could in long term be the first steps to achieve it.

3.1 HOW TO ACCESS AND USE INFORMATION GENERATED BY REACH?

The information generated by REACH through registration is gathered at the EU level – ECHA. Part of this information is accessible only for the MS authorities, other is public. See the table below for the information, which could be relevant for environmental authorities.

Examples on how REACH information could be useful:

- when issuing a permit to check what a company manufactures/imports, in which quantities for which uses and thus build a more complete picture of the company’s activities;
- to search for companies that deal with chemicals in a specific area;
- to search for manufacturers/importers of specific substance that is of environmental concern, for example based on results from environmental monitoring;
- to find extensive information on the properties of specific substance(s), e.g. PNECs;
- to check if companies comply with REACH/CLP submission obligations;
- to check if the information submitted corresponds with the situation on site;
- to check if the contents of the Safety Data Sheets are in line with the information in the registration dossiers;
- to check how the substance is used (it should be according to the intended uses indicated in the registration);
- to check if authorisation is applied for specific substances of concern etc.

However, as not all data is publically available, those opportunities may mainly be true for large competent authorities and not directly to regional authorities. Therefore competent authorities for REACH in each Member State should have a specific helpdesk in order to support all kind of authorities with screened data and offering limited access to that data.

Type of information	Access	Link	Information included
Registered substances	public	http://apps.echa.europa.eu/registered/registered-sub.aspx	EC/CAS No, substance name, type of registration, availability of dossier
Information on chemical properties of registered substances	public	http://apps.echa.europa.eu/registered/registered-sub.aspx http://www.echemportal.org/	Classification and labelling of the substance, properties (physical chemical properties, ecotoxicity, environmental fate and behaviour, toxicity), the result of each toxicological and ecotoxicological study, any derived no-effect level (DNEL) or predicted no-effect concentration (PNEC), the guidance on safe use, analytical methods if requested in accordance with annexes IX or X of REACH which make it possible to detect a hazardous substance when discharged into the environment as well as to determine the direct exposure of humans
Candidate list for authorisation	public	http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp	EC/CAS No, substance name, reason for inclusion, supporting documentation on substance

Type of information	Access	Link	Information included
Authorisation list	public	http://echa.europa.eu/reach/authorisation_under_reach/authorisation_list_en.asp	EC/CAS No, substance name, latest application date for authorization, sunset date
Existing restrictions	public	http://echa.europa.eu/reach/restriction/existing_restriction_en.asp	EC/CAS No, substance name, conditions of restrictions
Key information for enforcement	MS CA	RIPE – REACH Information Portal for Enforcement. MS CA should be approached with request for the specific data.	Company information (address, contact details & persons, sites), general information on submission (tonnage, date, reference number etc.), substance identification information (not composition), identified uses & uses advised against, full classification information (CLP and DPD), full labelling information, safety information (first aid, fire fighting, accidental release, handling, exposure control, stability and reactivity), disposal considerations, physical and chemical properties (key values), toxicological properties (key values), ecotoxicological properties (key values), some exposure information (routes)
Classification and labelling inventory	public	http://echa.europa.eu/clp/c_1_inventory_en.asp (to be available in mid of 2011)	Basic classification and labelling information on notified and registered substances received from manufacturers and importers. It will also contain the list of harmonised classifications (Table 3.1 of Annex VI to CLP).

3.2 HOW TO MAKE A PERMIT “WFD PROOF”?

Currently most of the permits issued focus on being “IPPC proof”, i.e. compliant with the IPPC Directive. However it is important to ensure that permit is robust with regard to the legal obligations in general, as from holistic legal and environmental point of view it is unacceptable if installation gets a permit for the operation although it breaches some other legal requirements.

In order to make a permit “WFD proof”, i.e. compliant with the requirements of the WFD/EQS Directives, it is necessary to know whether the installation may impact surface or groundwater. A minimum requirement for a permit to be “WFD proof”:

- there is no demonstrable impact to surface and groundwater,
- the impact to surface water and groundwater does not affect the EQS set out in the WFD/EQS Directives.

Effectively, also other conditions in the permit need to be consistent, for example, measures set out in the RBMPs, monitoring obligations.

Therefore when issuing a permit the specialist should take such **minimum steps**:

- get information from water specialists on the specific pollutants important for the individual water body;
- consult with water specialists whether particular installation, types of discharges, individual pollutants, water use etc. have a potential to influence the good status of the water body and what are the appropriate measures to address in permit conditions;

- get information from water specialists on any concerns over individual EQS (water, sediments or biota) in relevant water body, i.e. if any breaches of EQS exist in that water body.

Ideally water specialists should be proactive in communicating this, but if this is not the case, permitting authorities should seek out this information. Based on this information a decision should be taken by the permitting authority. If the application of BAT is not sufficient to meet the EQS, additional measures shall be required. Depending upon the issue, this may require techniques stricter than BAT or some additional measure that addresses the pressure on the water environment. Also for already issued permits, where objectives are not being met WFD stipulates a permit review.

The issue of interaction is more complicated if there is more than one source of pollution, for example, a pollutant causing a breach in EQS. Firstly, it is important to understand the relative contribution of the sources to the breach in EQS. If the different sources are regulated under IPPC, then the IPPC regulator may need to decide which installation needs to adopt which additional measures and address the fact that costs may not be evenly shared by different operators. However, if one source is not regulated under IPPC, then this adds to the local regulatory complexity, although it ought to be addressed in the programme of measures under the WFD.

Furthermore supervision and inspection authorities should ensure not only that specific permit conditions are complied with (basic inspection), but also examine if the predicted consequences for EQS are being met. Results of inspections should be communicated to permitting authorities (for potential permit review) and water managers (e.g. for review of mixing zones).

3.3 HOW TO MAKE A PERMIT “REACH PROOF”?

The minimum point to consider when issuing a permit to make it REACH regulation compliant is to respect the control measures already recommended by REACH framework:

- according REACH only **pre-registered** and/or **registered** substances can be used in the installation, furthermore the installation should follow the **restrictions on use** of chemicals according to REACH, therefore before issuing a permit it would be important to consult with a REACH enforcing authority about the situation in the installation and/or ask to check if the installation is in compliance with REACH;
- authorities giving permits should be aware of the influence from **authorization** procedure under REACH:
 - permits granted for the activities with substances of very high concern (SVHC) which are included in the “Candidate list for authorization” are recommended to be time limited (e.g. issued for 1-2 years) and then to be reviewed according to the authorization scheme of a substance, see next point;
 - if a substance appears in the authorisation list and an installation uses this substance, it should lead to restrictions in permit, i.e. time limited (permit can be issued only until “sunset date”) or use specific (after “sunset date” this substance can be used in installation only if use is exempted or authorized).

3.4 HOW TO GET MOST FROM MONITORING DATA?

Both IPPC and WFD/EQS include requirements for monitoring of a process, discharges, water quality, biota, etc. In some cases the monitoring requirements are precise – IPPC operators should monitor for substances for which they have permit conditions; under the EQS Directive there should be monitoring for substances known to be of concern; under WFD more general monitoring of the water bodies is requested etc.

Of course, the type and frequency of monitoring under one regime may, or may not, be suitable for use within the monitoring/analytical processes of another regime. Therefore, care has to be taken to indicate that monitoring results can be integrated between regimes. The challenge for competent authorities is, therefore, to ensure that monitoring information is made readily available across environmental management regimes and that it is in a form that can be used to maximize the value of each.

Therefore permitting and water authorities should discuss and exchange the information on monitoring procedures and results:

- monitoring of IPPC installations would provide important information on the pressures on water bodies and water specialists should seek access to the results of such monitoring;
- where there is concern over the activity of an IPPC installation, the water specialists could discuss with the IPPC permitting authority the possibility for the installation operator to fund and undertake monitoring on the local environment to investigate impacts of the installation;
- where there is concern over the breaching EQS, operators/permitting authorities need to determine where monitoring information, modelling analysis, etc., is available to examine the relationship between installation activity and an EQS and where additional analysis needs to be developed/undertaken;
- in examining the results of monitoring, water managers should be ready to communicate with IPPC enforcement authorities any cases where the outputs of an IPPC installation are having an unexpected consequence for water bodies; this may be due to non-compliant behaviour (which requires inspection) or due to unforeseen behaviour of pollutants, etc., which might require a re-examination of operations and permit conditions.

3.5 HOW TO INITIATE REVISION OR NEW CONTROL MEASURES FOR HAZARDOUS SUBSTANCES UNDER REACH?

As described above REACH provides important mechanisms for the control of hazardous substances of concern for the environment. These are restrictions and authorization. Water authorities should consult national CA for REACH if they assume that there could be a potential way to tackle the challenges to improve water quality.

Restrictions

Restrictions are possible for any substance with unacceptable risk where community-wide action is needed. There are substances under water legislation, which may pose risk that water objectives will not be met in many river basins due to their wide spread use in the consumer goods and associated emissions released during their use, e.g. phthalates, brominated flame retardants etc. In this case further stricter restrictions under REACH could be initiated by the Member States or the European Commission.

Following steps should be taken to undergo the restriction procedure:

- registry of intentions: MS notifies of an intention to prepare an Annex XV restriction report to ECHA,
- Annex XV report (hazard, risk, alternatives, justification, SEA, stakeholder consultation),
- conformity check,
- consultation of interested parties,
- opinions survey,
- EC takes a decision.

Authorisation

Authorisation is possible only for SVHC. Substances included in Annex XIV are subjected to authorisation, i.e. continued use of a substance included in Annex XIV requires that after the sunset date the use is authorised. Authorisations are granted for specific uses of a substance only.

A downstream user may use a substance if an authorisation is granted to an actor up his supply chain for that use. If water quality standards for certain pollutant in the river basin are not met even when all other possible measures have been already applied, water authorities can either initiate an authorisation or a revision of already given authorisations.

Following steps should be taken to undergo the restriction procedure:

- registry of intentions: MS notifies of an intention to prepare an Annex XV dossier,
- Annex XV dossier (hazard, risk, alternatives, justification, SEA, stakeholder consultation),
- consultation of interested parties,
- inclusion in the candidate list (EC/ECHA),
- ECHA prepares recommendations for Annex XIV,
- inclusion in Annex XIV by the decision of EC.

After the substance is included into the authorisation list and a company wants to apply for authorisation, it should prepare authorisation application, which includes chemicals safety report, analysis of alternatives, substitution plan, socio-economic analysis. Authorisation is granted only if risk is adequately controlled, socio-economic benefits outweigh the risks and no technically and economically viable alternatives are available. Authorisation is given for the limited time and should be reviewed considering whether circumstances of the original authorisation have changed and new information regarding the effects from the substances to human health or the environment have changed (new information about properties, risks, alternatives) or quality standards are not met according IPPC, WFD etc.

Available for download
www.baltacthaz.bef.ee

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