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Interrelation of different frameworks for reduction of hazardous substances

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Kitty Kislenko,
Baltic Environmental Forum Estonia

LIFE+ project "Baltic Actions for reduction of pollution of the Baltic Sea from priority hazardous substances" (BaltActHaz), reference nr. LIFE07 ENV/EE/000122

General regulatory approach

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- EU legislation defines objectives, roles and responsibilities but does not define exactly HOW to reach compliance
- Legislation may define communication and cooperation as well as planning mechanisms and coordinate the implementation across the EU by setting time tables and collecting implementation reports
- The way how to implement legislation, i.e. how to achieve the goals and which instruments to use (e.g. existing or new legislation, economic incentives, information or training) is left “open”

What is our aim?

- To reduce pollution of the Baltic Sea from hazardous substances by controlling emissions to water environment

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- The origin of hazardous substances in aquatic environment are:
  - from discharges to river basins or directly to sea from point and diffuse sources
  - from industrial activities due to occurrence of hazardous substances in raw materials applied during production processes
  - from households due to occurrence of hazardous substances in the consumer products – NOT CONSIDERED IN THE PROJECT
  - from run off from agricultural areas, if the hazardous substances where applied as ingredients in the plant protection products – NOT CONSIDERED IN THE PROJECT
  - from atmospheric deposition – NOT CONSIDERED IN THE PROJECT
- We concentrate to the pollution of surface waters, ground water is not considered in the project

How this is regulated?

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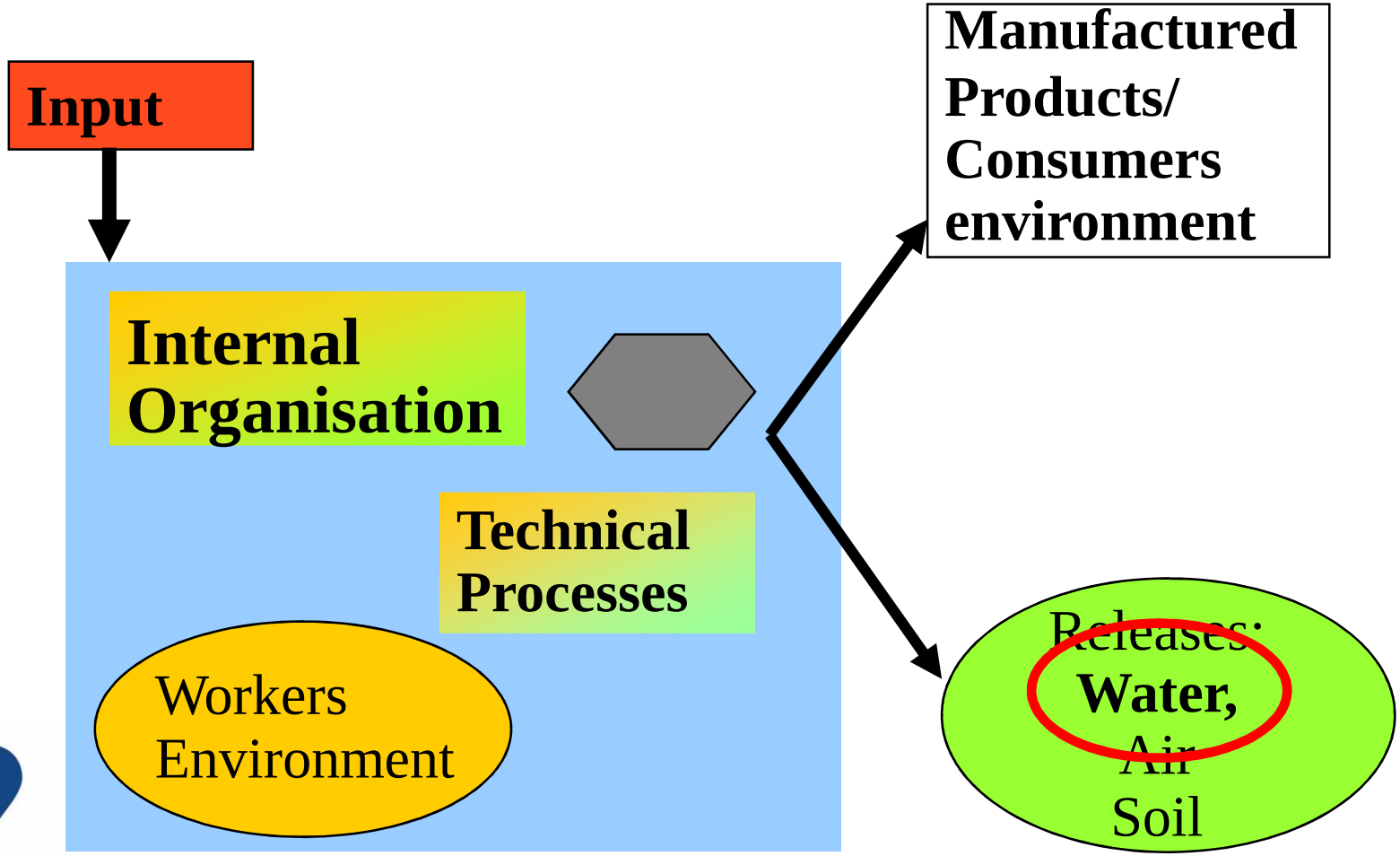
- In EU River basin management is regulated by Water Framework Directive (WFD)
- European Marine Regions will be regulated by Marine Strategy Framework Directive
- Baltic Sea Area is regulated by international HELCOM Convention

The Regulatory Frameworks



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WFD

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- Water Framework Directive (2000/60/EC) regulates the use and protection of European (surface) waters

- Article 16 contains specific provisions with regard to chemical pollution: emissions of priority substances should be reduced as far as possible and that the discharges, emissions and losses of priority hazardous substances should be ceased by 2020

WFD

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- WFD defines
  - lists of the hazardous and priority substances
  - limits for the emissions to the environment - environmental quality standards for the priority and priority hazardous substances (objectives/goals)
  - ecological areas (river basins and river basin districts)
  - instruments to manage them (river basin management plans) - requires development of programmes of measures and reduction programmes
- There is a time plan for implementing specific measures under the WFD, but the objectives and goals as well as necessary measures for a particular river basin district are up to the managing body

WFD – regulatory instruments

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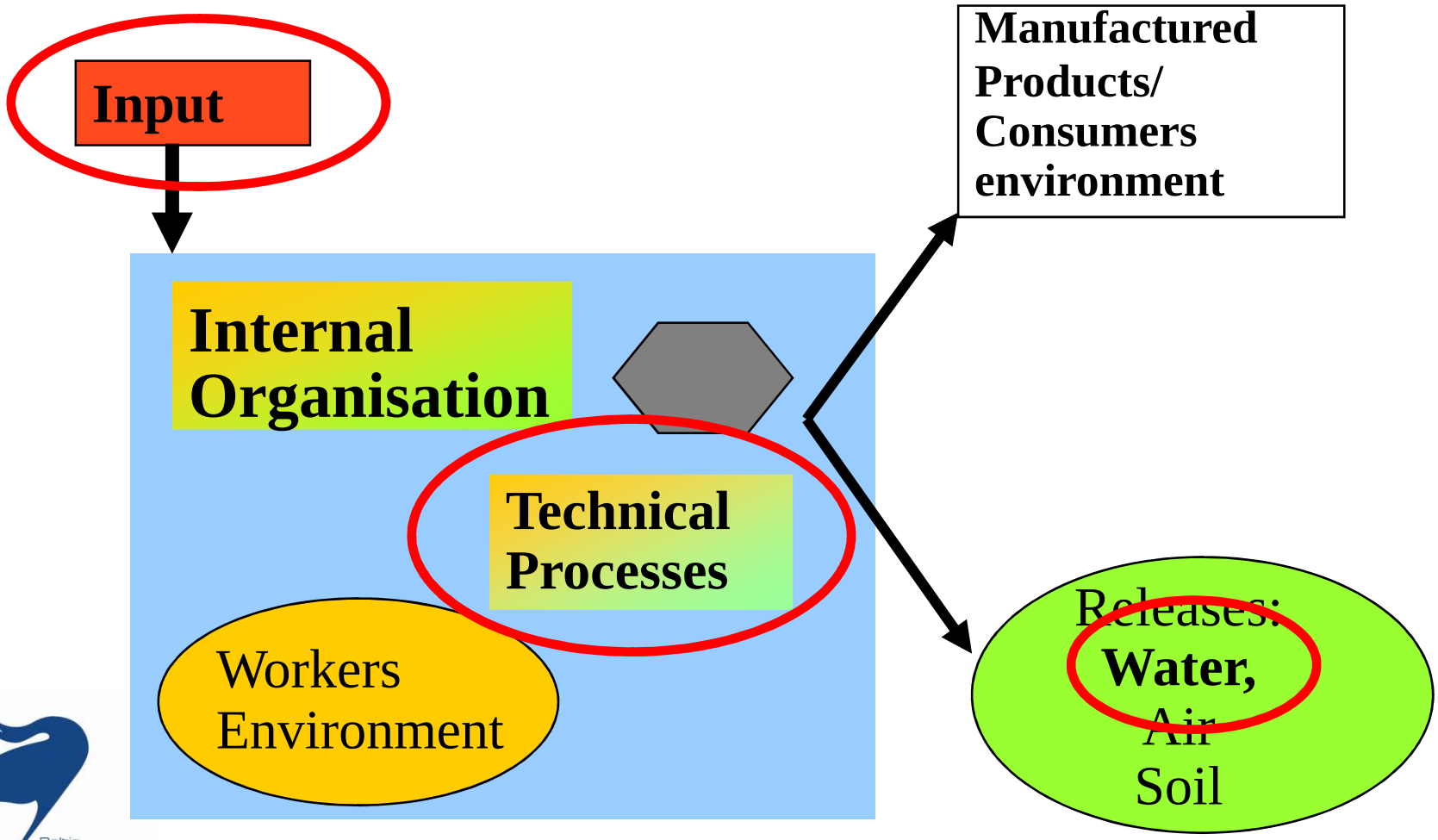
- The aim is to achieve good chemical status of a water body - priority substances and other pollutants need to comply with environmental quality standards
- There are no separate regulatory instruments in the WFD for substances on Annex X, but they are to be included and controlled under other (environmental) legislation → no direct consequences for substances on the list
- The use of instruments to reduce emissions should be enhanced by
  - IPPC directive
  - REACH regulation

The Regulatory Frameworks



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IPPC

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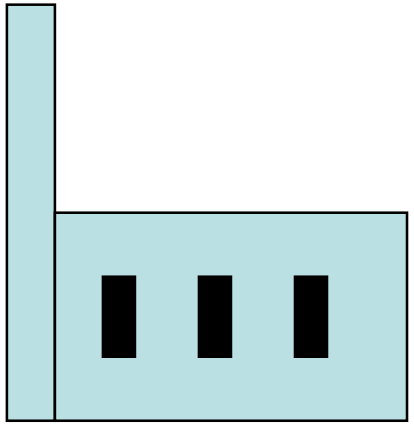
- Integrated Pollution Prevention and Control (96/61/EC) directive (IPPC) aim is to regulate (minimize) polluting activities using permitting system for industrial or other companies in compliance with environmental protection requirements
- All installations covered by *Annex I* of the Directive are required to obtain an **integrated permit** from authorities

Single media permits:
AIR EMISSIONS
WASTE WATER
WASTE



INDUSTRIAL INSTALLATION

IPPC permit focus:
AIR+WATER+WASTE
resources including **chemicals used**
energy, noise, vibration
protection of soil and ground water
unintended events and accidents
self-monitoring

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IPPC

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- Permit shall guarantee the protection of water, air and soil and the management of waste in a way which prevents the transfer of pollution from one medium to another (water, air and soil)
  - requires to identify and list the used hazardous and priority substances when applying for environmental permit
  - requires identify emissions to water from all individual facilities when applying for permit
  - prevent pollution by applying BAT and taking appropriate emission reduction measures (e.g. substitution of hazardous substances, containment, engineering control, etc)
  - to report on the emissions of those substances if the specified thresholds are exceeded

IPPC

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- Considering the chemicals and water pollution a permit shall contain the following information:
  - extent of use and storage conditions of raw materials, chemicals and purifying materials, and the measures which ensure the effective use or the recovery of such resources
  - sources of emissions from the installation
  - quantities of foreseeable emissions from the installation into each medium as well as identification of significant effects of the emissions on the environment
  - proposed technology and other techniques for preventing or reducing emissions from the installation
  - measures planned to monitor emissions into the environment.

IPPC – BREF documents

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- The IPPC permits must be based on the concept of **Best Available Techniques (BAT)**
- BAT Guidelines (BREFs) adopted for 29 separate industrial sectors; 4 “horizontal” BREFs
- In general all BREF reference documents include requirements to substitute hazardous chemicals with less hazardous ones when possible
  - different industry branches have different requirements and suggestions for use of hazardous substances
- All available BAT reference documents http://eippcb.jrc.es/reference/

REACH

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- REACH regulation – Registration, Evaluation and Authorization of Chemicals
- REACH regulation in principle applies to all substances on the EU market
- REACH sets requirements for registration, evaluation, authorization and restriction of substances, as well as communication within industry and between industry and authorities
  - All substances produced/imported into EU must be registered from 1 t/y
  - Substances of very high concern (SVHC) included in Annex XIV of REACH have to be authorized before use
  - Usage of certain substances (Annex XVII) is restricted or prohibited

REACH – regulatory instruments

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- REACH regulates the production and use of substances
- Several regulatory steps exists to regulate the production and use of SVHC:
  - If the registrant finds out, the substance is a PBT/vPvB during his assessment, he has to provide his customer with a safety data sheet (assessment is required if the substance is registered in amounts exceeding 10 t/a)
  - For substances identified as SVHC and included on the candidate list for authorisation have to be supplied with a safety data sheet as well
  - If these “candidate substances” are contained in articles, a notification to the agency and the provision of information to the customer may be required (REACH Article 7)
  - Substances on the candidate list may be selected for inclusion in the Annex for authorisation – substances have to be authorized before their use by the company wanting to use it or by an actor up his supply chain

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Balt Act Haz

Which substances are hazardous?

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- Classification process is used to determine if chemical is hazardous
- All chemicals need to be classified before placing them in the market
- Classification helps to:
  - identify the properties of the chemical that cause risk during normal use (= hazards)
  - arrange them in some order (categories)
- Serves as a basis for further *labelling*

Classification & labelling

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- EU classification and labelling rules are regulated by Directives 67/548/EEC (substances) and 1999/45/EC (preparations)
- The EU classification and labelling Directive defines dangerous substances
- The term "hazardous" does not exist
- A substance is regarded as dangerous if one or more of the criteria for a dangerous property are fulfilled
  - physic-chemical
  - human health
  - environmental dangers

GHS (CLP)

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- The new EU regulation (EC) No 1272/2008 on classification, labelling and packaging of chemical substances and mixtures (CLP Regulation) entered into force on 20 January 2009 – replaces Dangerous Substances Directive (67/548/EEC) and the Dangerous Preparations Directive (1999/45/EC)
- The purpose is to ensure a high level of protection of human health and the environment as well as the free movement of substances, mixtures and articles

GHS (CLP)

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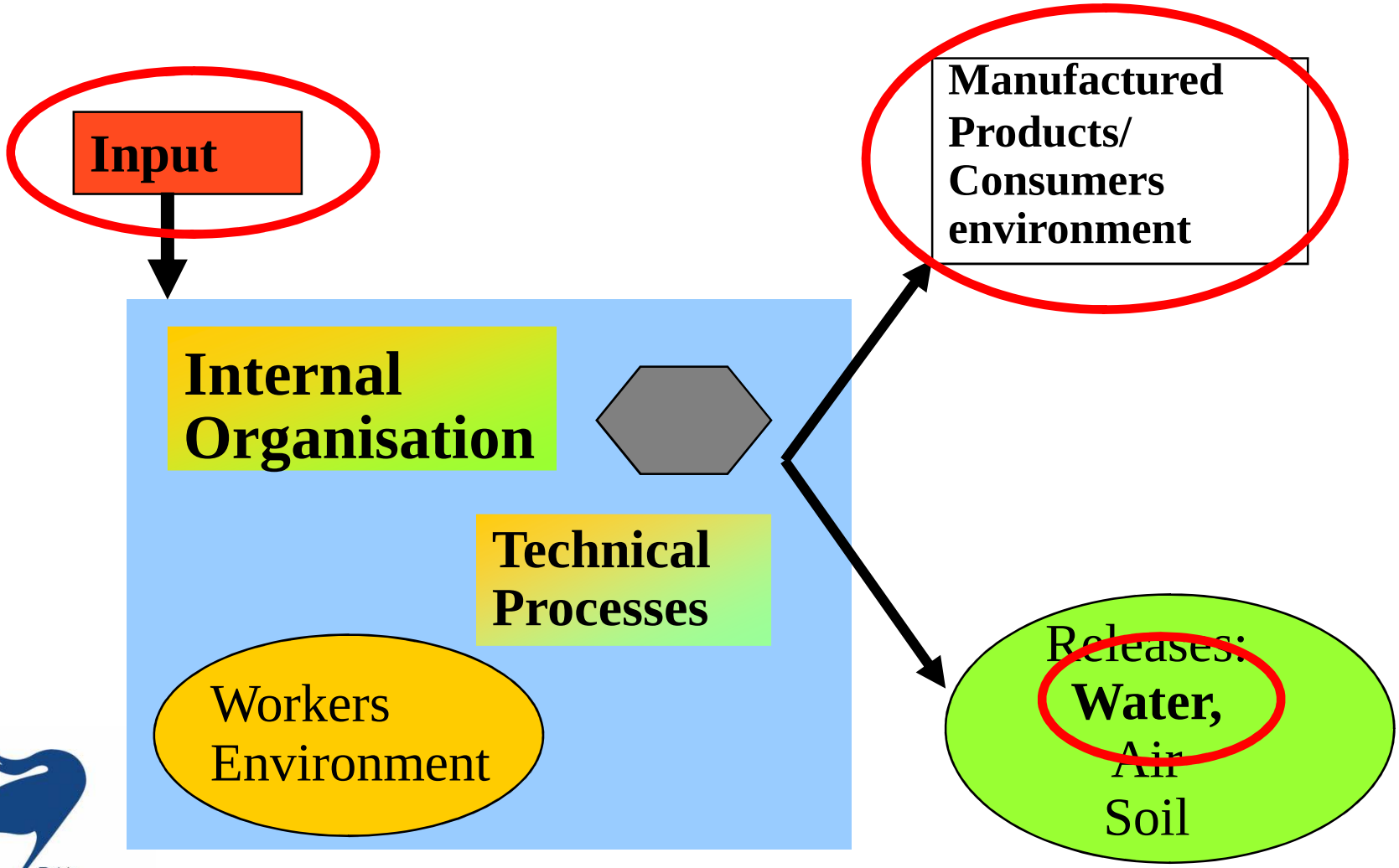
- Applies the terminology, evaluation principles and criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (UN GHS)
- Keeps the scope as close as possible to the existing EU system represented by Directives 67/548/EEC and 1999/45/EC
- Ensures consistency with the legislation on the transport of dangerous goods
- Includes the provisions on the classification & labelling inventory from REACH Regulation
- Defines a transitional period during which companies need to come into line with the new regulation
  - substance classification is 30 November 2010
  - mixture classification is 31 May 2015
- Defines
  - several hazard classes and respective dangerous properties
  - differentiates between different hazard categories within hazard classes by means of cut-off values
  - links the classification to labelling information

The Regulatory Frameworks



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Product related legislation

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- Restricts the use of certain substances in the products
  - ELV: lead, mercury, cadmium, hexavalent Cr
  - WEEE: PCB, Hg, brominated flame retardants, asbestos, CFC, HCFC, HFC, HC, radioactive substances
  - ROHS: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE)
  - Cosmetics
  - Toys
  - Construction materials
- Requires to take certain actions to reduce use of those substances in the products
- Requires to report on measures taken, content of substance in the products

Summary

- WFD defines river basins and instruments to manage them (river basin management plans)
  - development of programmes of measures and reduction programmes including hazardous and priority substances
  - defining limits for the emissions to the environment - environmental quality standards for the priority and priority hazardous substances
- WFD could be implemented and regulated by using
  - IPPC: permitting
  - REACH: registration, authorisation, restrictions
  - Product legislation: restricts the use of certain substances in the products
- Chemicals regulated by REACH/IPPC/product legislation are/should be classified according CLP regulation

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