MANAGEMENT OF INDUSTRIAL WWT

WP2 ADDRESSING THE STATE OF THE ART: MANAGEMENT AND TREATAMENT OF INDUSTRIAL WWTs in the BSR

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RTU
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Project BEST – Better Efficiency for Industrial Sewage Treatment
#R054 BEST

Water Research Laboratory

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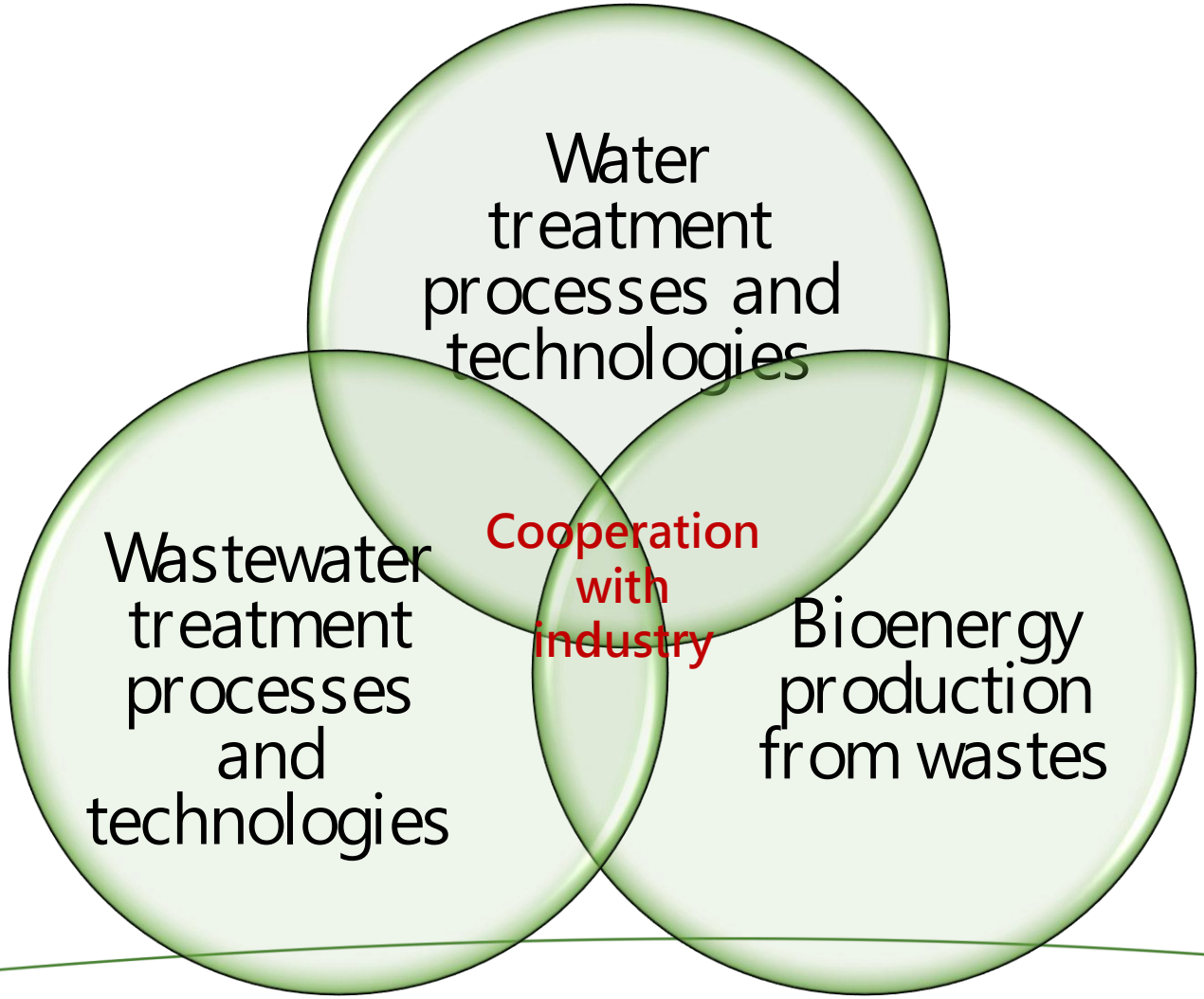
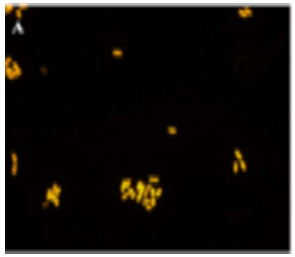
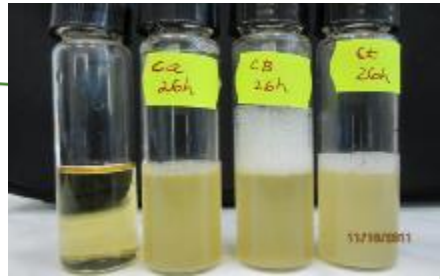
WRL Main Research Directions



WRL Experience





BEST - Better efficiency for sewage treatment

WP2 ADDRESSING THE STATE OF THE ART: MANAGEMENT AND TREATAMENT OF INDUSTRIAL WWTs in the BSR **(Leader RTU, involved all)**

Assessing the current situation: Management and treatment of industrial waste waters in BSR – the goal is to evaluate "baseline" for:

1. main problematic pollutants discharged from different industrial sources;
2. compare legislation and directives in project partner countries,
3. review of currently used technologies and model of cooperation between industry and key stakeholders.

The aim of this work is to determine which kind of changes and resources would be needed to improve management of industrial effluents.

Result of the WP2

Feasibility report for identified solutions for management of industrial effluents to reduce nutrient removal:

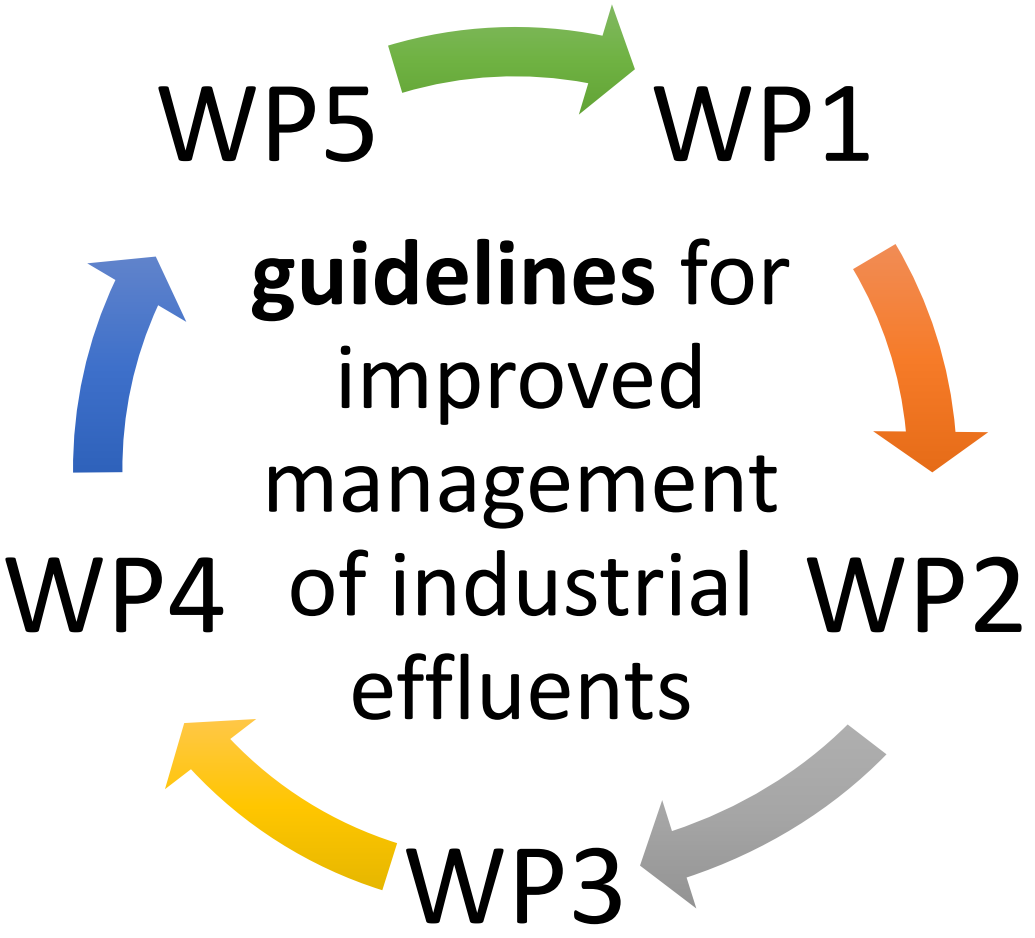
(i) overall description of existing solutions for nutrient and hazardous substances (HS - leader TUT) removal;

(ii) main pollutants in BEST project partner countries;

(iii) comparison of legalisation in different countries and management schemes.

WP 5
(involved all)

INTRODUCING NEW GUIDELINES FOR MANAGING THE TREATMENT OF INDUSTRIAL EFFLUENTS

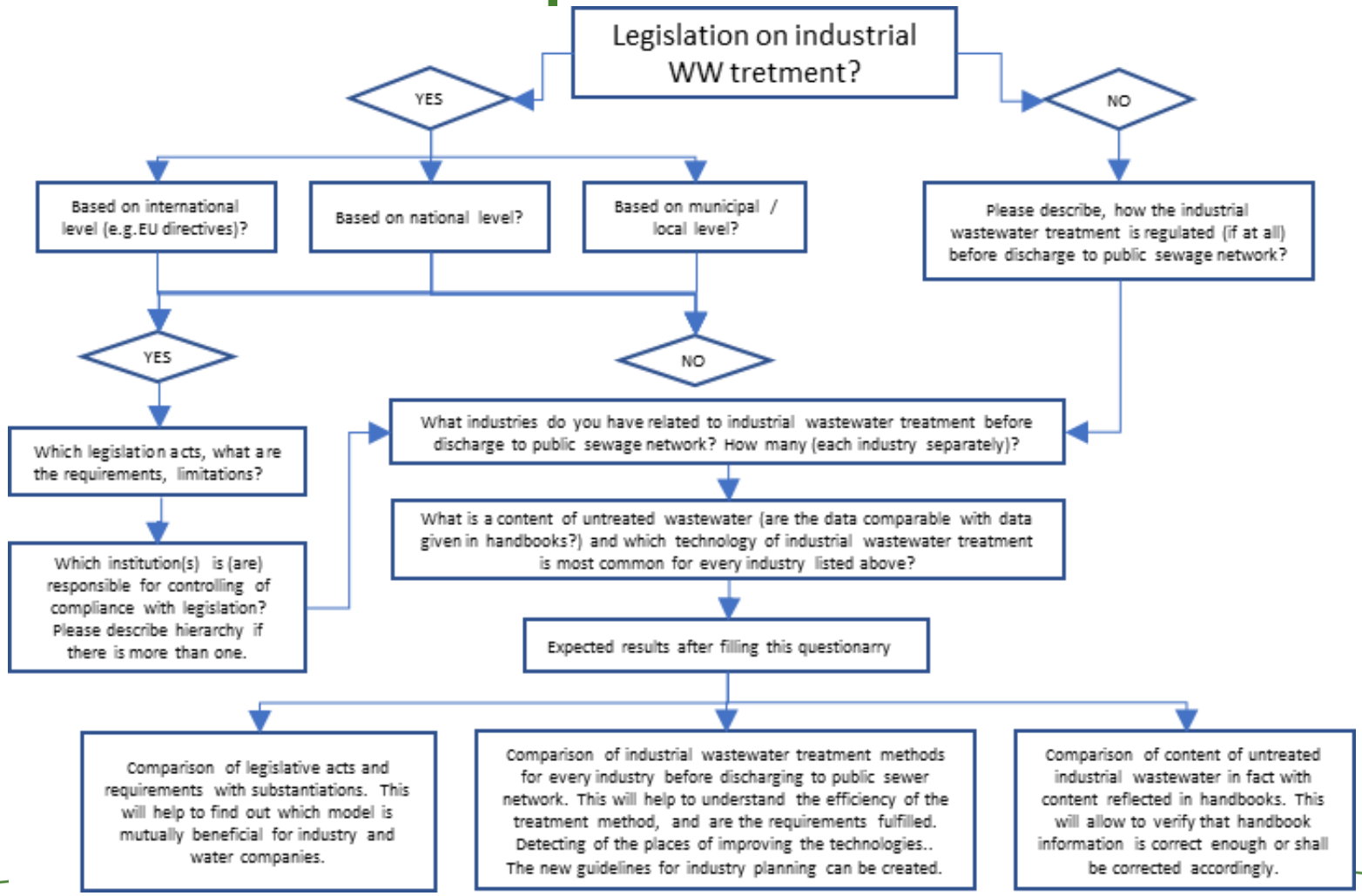


Planned activities

Collection of information from partners through the questionnaire:

1. main pollutants,
2. existing technologies,
3. existing management schemes,
4. comparison of legalisation or directives.

Structure of the questionnaire



Structure of the questionnaire

IMPORTANT: questionnaire shall be filled by one main partner per country to ensure the quality of the data!

Info

7 questions

Nr.	Title	Answer
1.1	Name, Surname	
1.2	Organization	
1.3	Position	
1.4	Type of organisation	
1.5	Country	
1.6	Adress	
1.7	Date	

Sandis:
Fill in the infromation

Legislation

38 questions

Nr.	Level 1	Level 2	Level 3	Question	Yes/No/NA
2.1		The existing legislation	International	Is there a legislation at all that regulates industrial wastewater treatment before discharge to public sewage network?	
2.1.1				If answer on previous question is YES, please describe the legislative acts based on international level (e.g.EU directives, international agreements e.t.c.), (draw a structure with refferences).	
2.2				Is there any international regulations implemented for industrial wastewater treatment and discharge to public sewage network?	
2.2.1				If answer on previous question is YES, please describe what are the parameters (incl.nutrients, biogenic prameters (N, P compounds), hazardous substances and concentrations regulated by international legislation.	
2.3				Does the implemented legislation fulfill the expectations and needs?	
2.3.1				If answer on previous question is NO, please describe what is missing?	
2.4			National	Is there a national legislation that regulates industrial wastewater treatment before discharge to public sewage network?	
2.5				Is the industrial wastewater pollution regulated by national legislation befor discharge to public sewage network?	
2.5.1				If answer on previous question is YES, please describe what are the parameters (incl.nutrients, biogenic prameters (N, P compounds), hazardous substances and concentrations regulated by national legislation?	
2.6				Is there any penalty and fine system rulated by national legislation?	
2.6.1				If answer on previous question is YES, please describe	
2.7				Are the public water utilities obligated to receive the industrial wastewater if it is situated in urban area?	
2.8				Is there any regulations about data submition and collection on industrial wastewater treatment before discharge to public sewage network?	
2.8.1				If answer on previous question is YES, please describe where to find the data.	

Sandis:
Choose from the list

Sandis:
Give a short description

Technology (overview)

17 questions

Nr.	Question	Description	Yes/No/NA
3.	Is the industry present in area/country?		
3.1	Food	All establishments manufacturing or processing foods and beverages for human consumption, and certain related products, such as manufactured ice, chewing gum, vegetable and animal fats and oils.	
3.2	Feed	Establishments manufacturing feeds for animals and fowls (corn, rye, palm oil, etc.)	
3.3	Complex organic chemicals industry	All establishments producing basic chemicals, and establishments manufacturing products by predominantly chemical processes.	
3.4	Electric power plants	XXX	
3.5	Metal industry	All establishments engaged in smelting and refining ferrous and nonferrous metals from ore, pig, or scrap; in rolling, drawing, and alloying metals; in manufacturing castings and other basic metal products; production of coke; fabricating ferrous and nonferrous metal products, such as metal cans, tinware, handtools, cutlery, general hardware, nonelectric heating apparatus, fabricated structural metal products, metal forgings, metal stampings, and a variety of metal and wire products not elsewhere classified.	
3.6	Mines and quarries	All establishments engaged in manufacturing flat glass and other glass products, cement, structural clay products, pottery, concrete and gypsum products, cut stone, abrasive and asbestos products, and other products from materials taken principally from the earth in the form of stone, clay, and sand.	
3.7	Nuclear and radio-chemicals industry	XXX	
3.8	Pulp and paper industry	All establishments primarily engaged in the manufacture of pulps from wood and other cellulose fibers, and from rags; the manufacture of paper and paperboard; and the manufacture of paper and paperboard into converted products, such as paper bags and paper boxes. Also included are establishments primarily engaged in manufacturing bags of plastics film and sheet.	
3.9	Industrial and Commercial Machinery Industry	All establishments engaged in manufacturing industrial and commercial machinery and equipment and computers. This includes machines powered by built-in or detachable motors, with the exception of electrical household appliances. This includes power-driven handtools, but does not include other	

Sandis:
If YES then fills the detailed information in next woorkbook

Technology (detailed)

21 question per industry

3.1. Food industry						
Nr.	Question	Option	Answer			
3.1.1	What are the most typical products of industry	1				
3.1.2	What is the most common pre-treatment technology for selected type of products?					
3.1.3	What are the most typical products of industry	2				
3.1.4	What is the most common pre-treatment technology for selected type of products?					
3.1.5	What are the most typical products of industry	3				
3.1.6	What is the most common pre-treatment technology for selected type of products?					
3.1.7	What is the total number of outflows from					pcs.
3.1.8	Have there been any incidents reported to industrial wastewater treatment?					pcs.
3.1.9	How many outflows are pre-treated?					pcs.
3.1.10	solutions?					pcs.
3.1.11	What is the total outflow from industry?			m3/day		m3/year
3.1.12	What is the biggest outflow from one site?			m3/day		m3/year
3.1.13	What is the parameters of effluent from industry?		Average contamination	Units	Total contamination	Units
3.1.13.1	COD			mg/l		kg/year
3.1.13.2	BOD			mg/l		kg/year
3.1.13.3	SS			mg/l		kg/year
3.1.13.4	pH			mg/l		kg/year
3.1.13.5	Other (if monitored or regulated)			mg/l		kg/year
3.1.13.6	Other (if monitored or regulated)			mg/l		kg/year
3.1.13.7	Other (if monitored or regulated)			mg/l		kg/year
3.1.14	What is the amount of sludge produced?			t/day		t/year

Sandis Dejus:
Choose from the list

Sandis Dejus:
Puts the value

Sandis:
Fill in if there is inforamation, if more needed, additional row can be added

Legislation – Latvian structure regulating industrial wastewater treatment

No.1: LAW

- On Local Governments
- Law on Water Management Services
- On Regulators of Public Utilities
- On Pollution
- Water Management Law

No.2: CABINET REGULATIONS

- Regulations Regarding the Provision and Use of Public Water Management Services
- Regulations Regarding Discharge of Polluting Substances into Water
- Regulations Regarding the Quality of Surface Waters and Groundwater
- Procedure 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
- Regulation Regarding a Permit for the Use of Water Resources

No.3: MUNICIPAL RELATED PROVISIONS

Discussion

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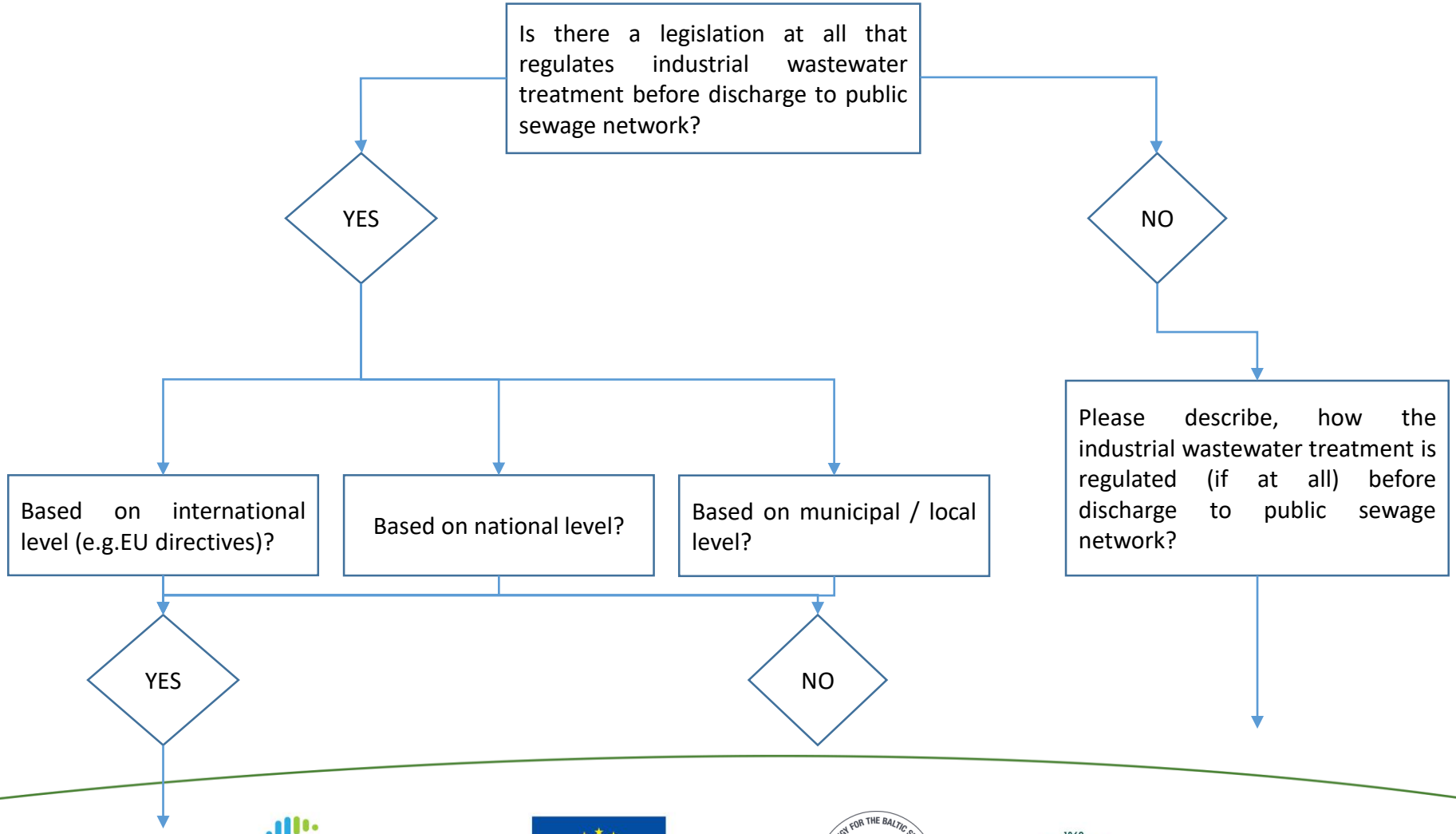
Structure of the questionnaire



Structure of the questionnaire

Please describe which legislation acts (references), what are the requirements, limitations?

Which institution is responsible for controlling of compliance with legislation? Please describe hierarchy if there is more than one.

What industries do you have related to industrial wastewater treatment before discharge to public sewage network? How many (each industry separately)?

What is a content of untreated industrial wastewater (are the data comparable with data given in handbooks?) and which technology of industrial wastewater treatment is most common / advantageous (operational costs) for every industry listed above?

Expected results after filling this questionnaire.

Structure of the questionnaire

Comparison of legislative acts and requirements with substantiations. This will help to find out which model is mutually beneficial for industry and water companies.

Comparison of content of untreated industrial wastewater in fact with content reflected in handbooks. This will allow to verify that handbook information is correct enough or shall be corrected accordingly.

Comparison of industrial wastewater treatment methods for every industry before discharging to public sewer network. This will help to understand the efficiency of the treatment method, and are the requirements fulfilled. Detecting of the places of improving the technologies.. The new guidelines for industry planning can be created.

IMPORTANT: questionnaire shall be filled by one main partner per country to ensure the quality of the data!