Welcome to the HAZBREF webinar!

We will start the webinar with presentations at 10:00

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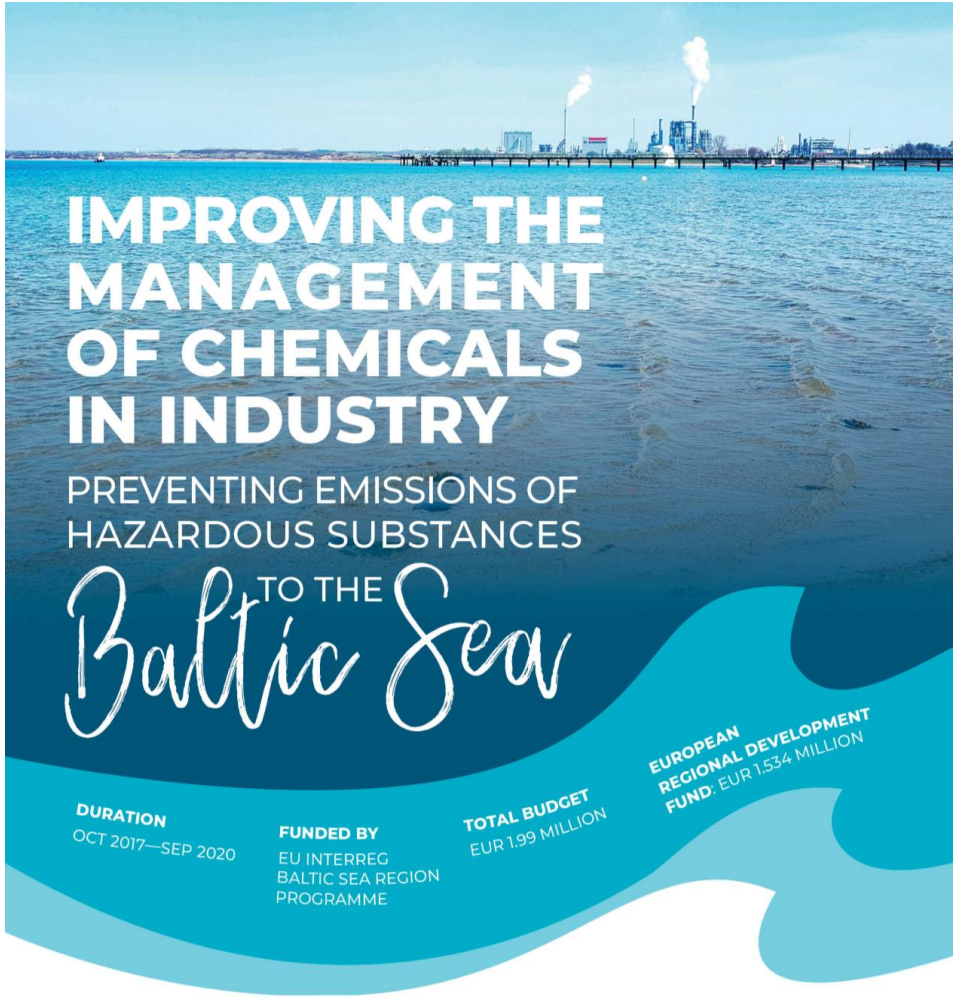

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www.syke.fi/projects/hazbref

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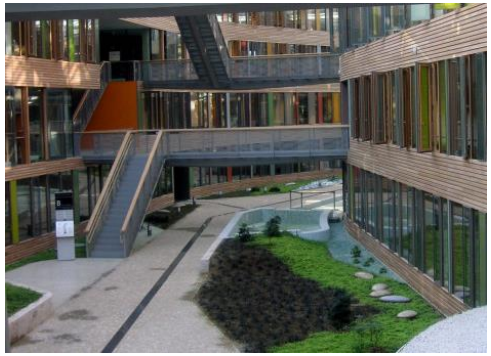
Final HAZBREF webinar

HAZBREF: Hazardous Industrial Chemicals in the IED BREFs

Welcome, introduction to the order of the day and webinar´s house rules

Michael Suhr, German UBA
Webinar, 4 June 2020

EU STRATEGY FOR THE BALTIC SEA REGION FLAGSHIP



Welcome to this HAZBREF webinar!

German UBA
(Environment Agency)

plan → **reality**

Webinar

UNESCO
World Heritage
Bauhaus Dessau

- Aim of the webinar:
  - to present main findings of HAZBREF
  - due to virus outbreak we are not as far as planned, but we have major results ready
  - to hear views from some main stakeholders in particular in the afternoon
  - to offer a platform for stakeholders to give feedback (webinar not really good for that, but written comments on our products will be possible as drafts are issued); for dates and more details refer to Kaj´s next presentation

Agenda of the Final HAZBREF webinar!

HAZBREF recommendations for chemical management in BREFs

09:45	**Webinar opens for participants to join**
10:00	**Welcome, introduction to the order of the day and webinar´s house rules** *Michael Suhr, German Environmental Protection Agency UBA*
10:15	**Introduction to HAZBREF goals** *Project Manager Kaj Forsius, Finnish Environment Institute SYKE*
10:30	**Results from HAZBREF activities** ○ Topic 1: *Approaches to identify relevant substances for BREF reviews, Nannett Aust (UBA)* ○ Topic 2: Recommendations for the management of chemicals in industry. HAZBREF case sectors: Textile industry (TXT), Surface Treatment of Metals and Plastics (STM) and Chemical industry (LVIC concerning fertilisers and POL concerning Polymers production) • *Sectoral guidance reports: Outline, Janusz Krupanek, Institute for Ecology of Industrial Areas IETU* • *Chemical management, BAT and permitting, Timo Jouttijärvi, SYKE, and Sandra Leuthold, UBA* *Questions from the chat after each topic*
11:30	**Break**
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13:00	**Overall Q&A session on HAZBREF results** *Chat and comments from the participants*
13:15	**Lunch break**

Agenda of the Final HAZBREF webinar!

HAZBREF recommendations for chemical management in BREFs

13:45	**Implications of the Zero Pollution Ambition of the European Green Deal for the Industrial Emission Directive (IED) and how the BREF process can contribute to the goals of the European Green Deal** *Ian Hodgson, DG ENV, Industrial emissions team leader* *Questions from chat*
14:05	**REACH – IED, Improvement of chemical management** *Monique Pillet, ECHA, Exposure and Supply Chain Unit* *Questions from chat*
14:25	**Hazardous substances in BREFs - case of the Textiles BREF** *Benoit Zerger, EIPPCB, Member of the The TXT BREF review team* *Questions from chat*
14:45	**Break**
15:00	**How can chemical management be improved in BREFs? How should the goal of the European Green Deal be considered in BREFs?** *Statements of invited stakeholders:* *CEFIC, Stefan Drees* *EEB, Jean Luc Wietor* *Member State representatives* *Questions from chat*
15:45	**Concluding discussion:** *Questions from chat and comments from participants*
16:05-16:15	**Summing up the outcome of the conference, next steps** *Kaj Forsius (SYKE) and Michael Suhr (UBA)*

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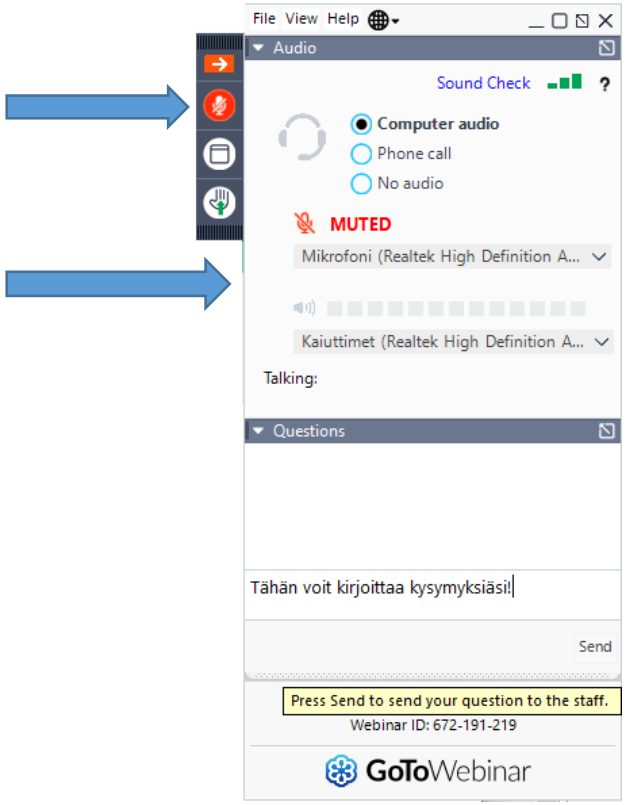

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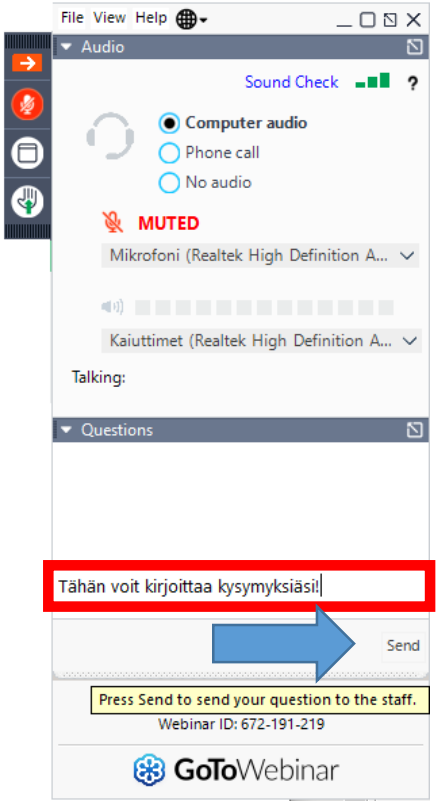

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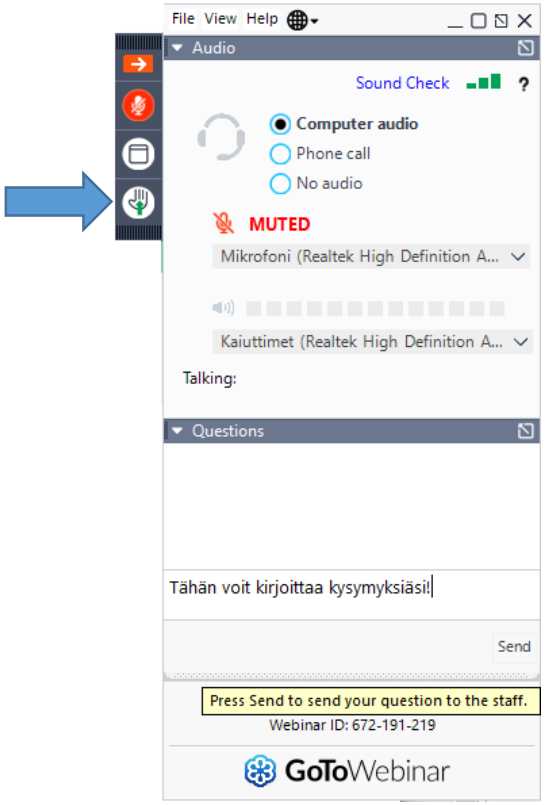

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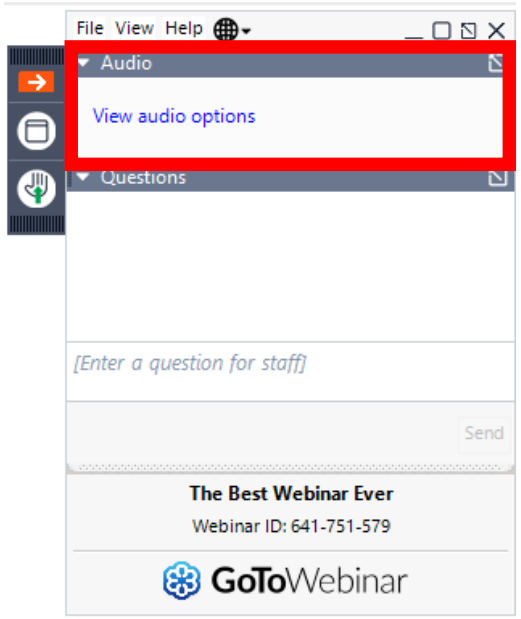

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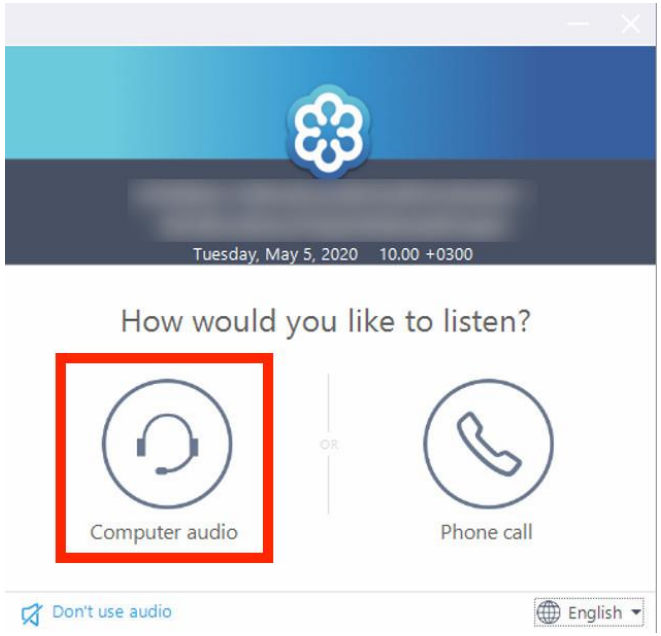

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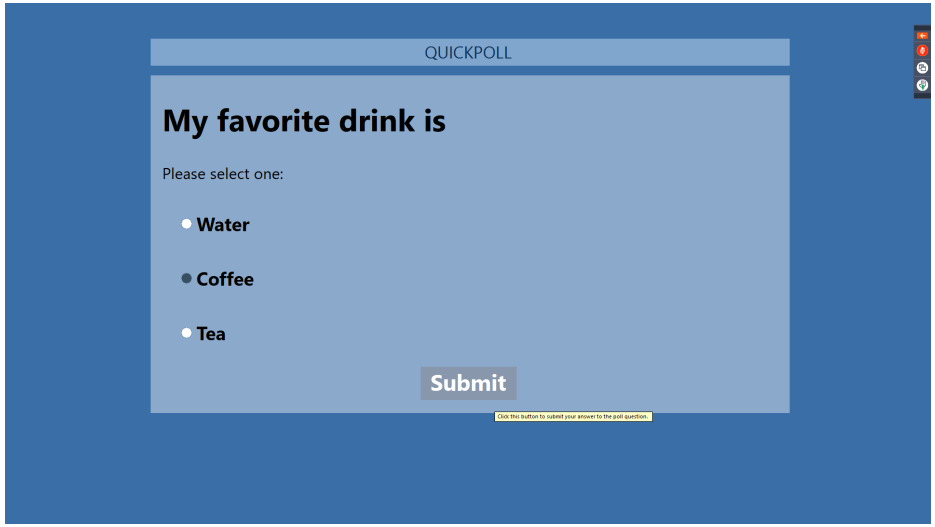
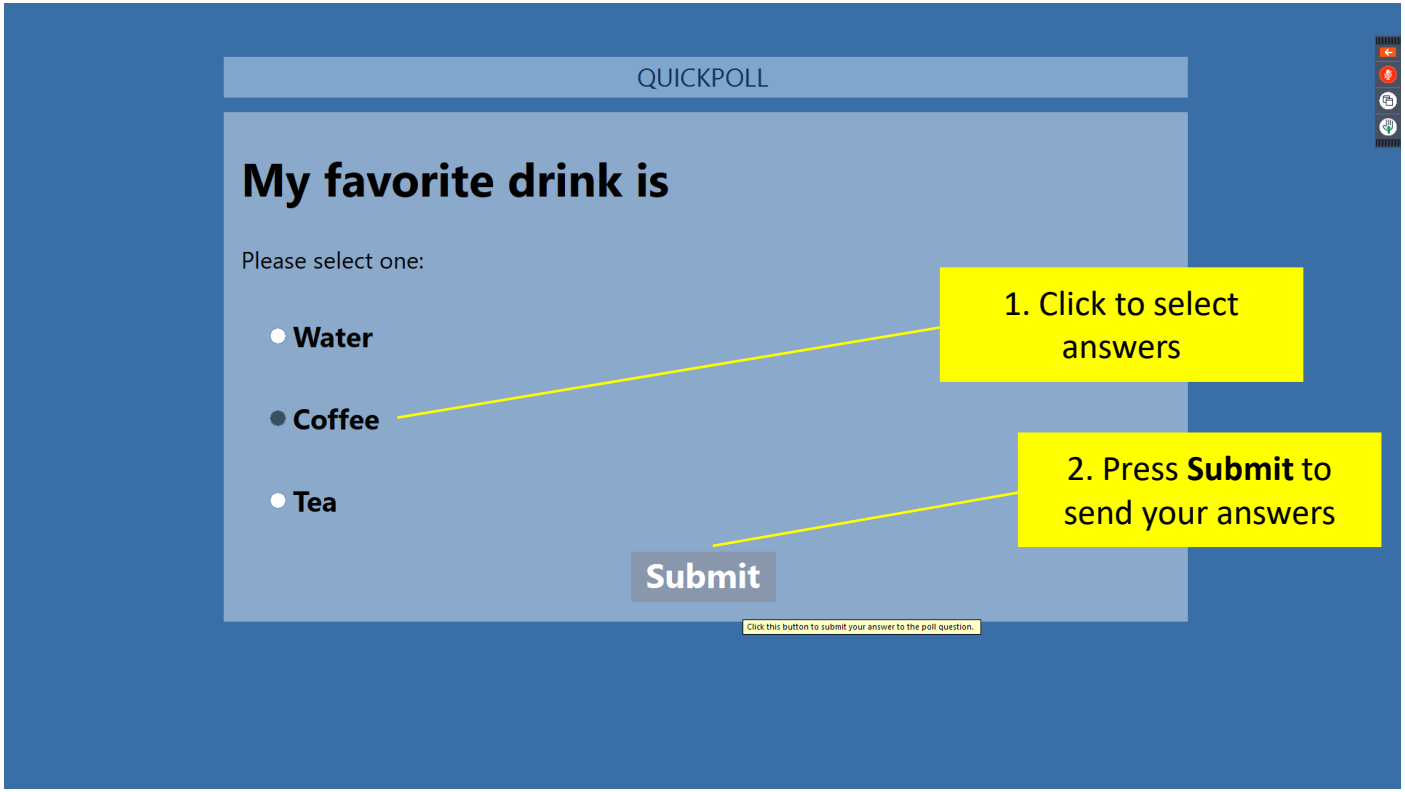
- We may ask you to participate in a quickpoll during the webinar
- Then, the quickpoll will appear on your screen as in the image on the right
- **Note for Windows users**: if you are watching the webinar on full screen, please press ESC to exit the fullscreen mode before answering the quickpoll



How to participate in a quickpoll



Speakers in the morning session

Michael Suhr, UBA,

Kaj Forsius, Syke

Nannett Aust, UBA

Janusz Krupanek, IETU,

Sandra Leuthold, UBA,

Timo Jouttijärvi, SYKE

Helena Dahlbo, SYKE

Topi Turunen,

Karl Kupits, EKU*K*

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Hazardous Industrial Chemicals in the IED BREFs

Kaj Forsius
Project Manager

HAZBREF Final online conference 4th of June 2020

EU STRATEGY FOR THE BALTIC SEA REGION

FLAGSHIP

HAZBREF

Partners in 5 Countries

October 2017 – September 2020 (+4 months?)

Funded by EU Interreg BSR

HAZBREF objectives in short

General objective

- **Improved, systematic consideration of hazardous substances** in the review work of BREFs
- Support for identification and management of hazardous chemicals for both **enforcement authorities** and **installations**
  - **Increased understanding** of links between different chemical regulatory frameworks (IED-REACH-WFD-HELCOM)
  - **Increased knowledge** of hazardous chemicals indicated in REACH and other legislative frameworks with regard to their relevance concerning
    - emissions from different industrial processes
    - options for measures
  - **Identification** of relevant hazardous chemicals, their characteristics, use patterns and potential abatement measures in selected industrial sectors covered by the IED

Specific Objectives for target groups

The results of HAZBREF will contribute to:
Policy level

- **Improved consideration of** chemicals **in BREFs**
- **Clarity of requirements** on chemicals in REACH and IED, link to WFD priority substances

Enforcement authorities/Operator level

- Improved consideration of hazardous chemicals in environmental **permits and supervision** by local authorities
- Support for identification and management of chemicals for **installations**

HAZBREF activities and outputs

WP2 - Identification of target substances

- Instructions how to identify relevant substances in installations
- Report on fate of substances during emission treatment

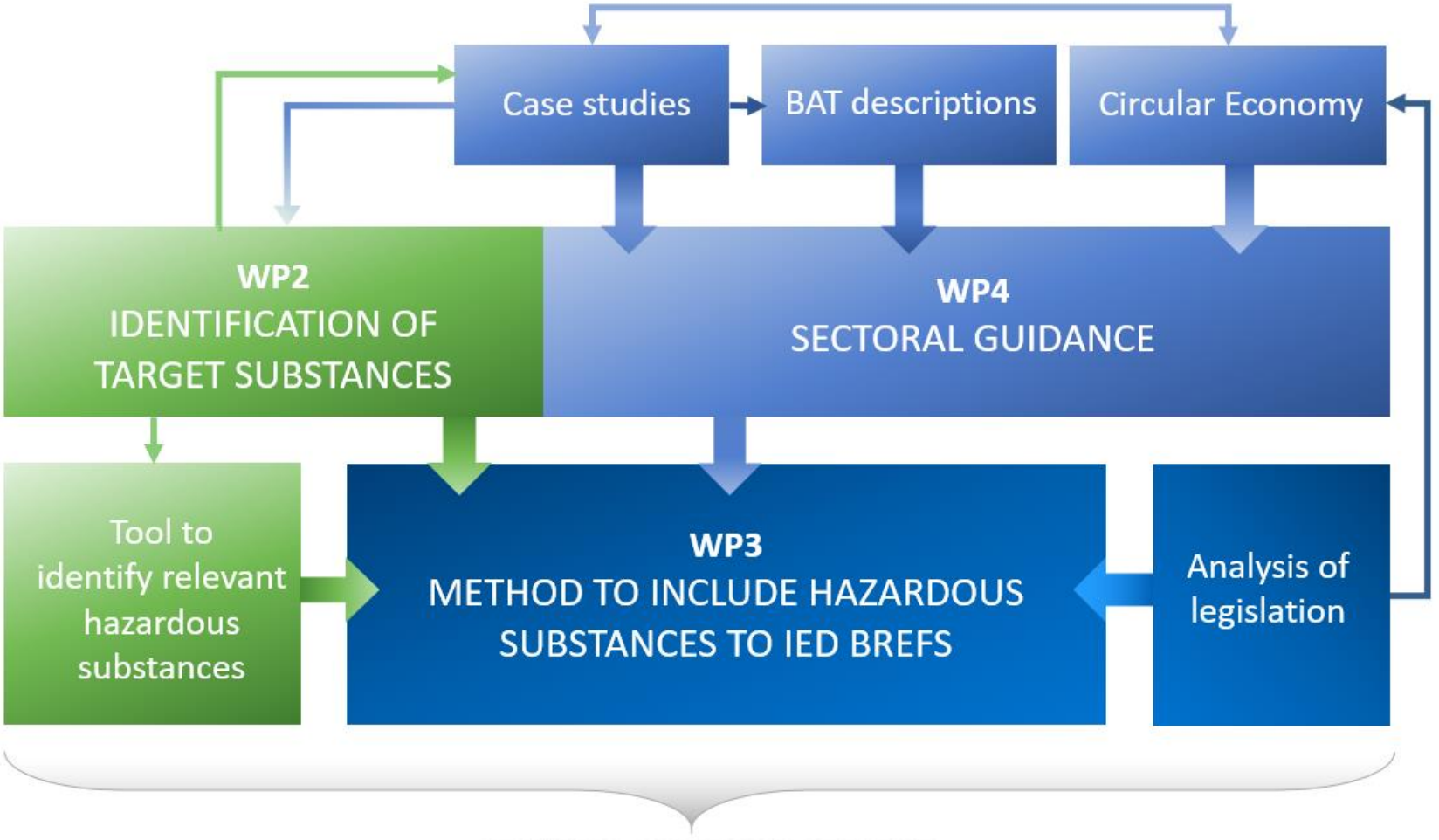
WP3 - Policy improvement

- Analysis of the interfaces between the different pieces of EU-legislations and marine convention
- Recommendation for systematic method to include information of hazardous substances into BREFs

WP4 – Best practices in chemicals management in industry

- Sector guidance for good chemical management practices in industry
- Promoting non-toxic material cycles – challenges and opportunities in the BREF process

HAZBREF interaction



NATUR VÅRDS VERKET
SYKE
EKUK
IETU Instytut Ekologii Terenów Uprzemysłowionych
Umwelt Bundesamt

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Thank You for your attention!

Project Manager:
Kaj.Forsius@ymparisto.fi

www.syke.fi/projects/hazbref

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Topic 1: Approaches to identify relevant substances for BREF review

UBA: Nannett Aust, Stefan Kacan, Jürgen Fischer, Johann F. Moltmann

SYKE: Kaj Forsius, Emmi Vähä, Jukka Mehtonen, Pia Högmander

SWE EPA: Annika Månsson, Henrik Appelgren, Emil Jansson, Claes Debourg

Webinar, 4th June 2020

Umwelt Bundesamt

SYKE

NATUR VÅRDS VERKET

EU STRATEGY FOR THE BALTIC SEA REGION FLAGSHIP

Our guiding questions:

1. What can the Chemicals-Regulation REACH contribute to the identification of relevant target substances for Industrial Emissions Directive?
2. How can knowledge and experiences in the respective IED sectors contribute to the identification of target substances?

>> Better utilisation of existing data to prevent or reduce releases of substances of concern

- Poll

Specification of guiding questions

a) What data / information is existing in the regulations?

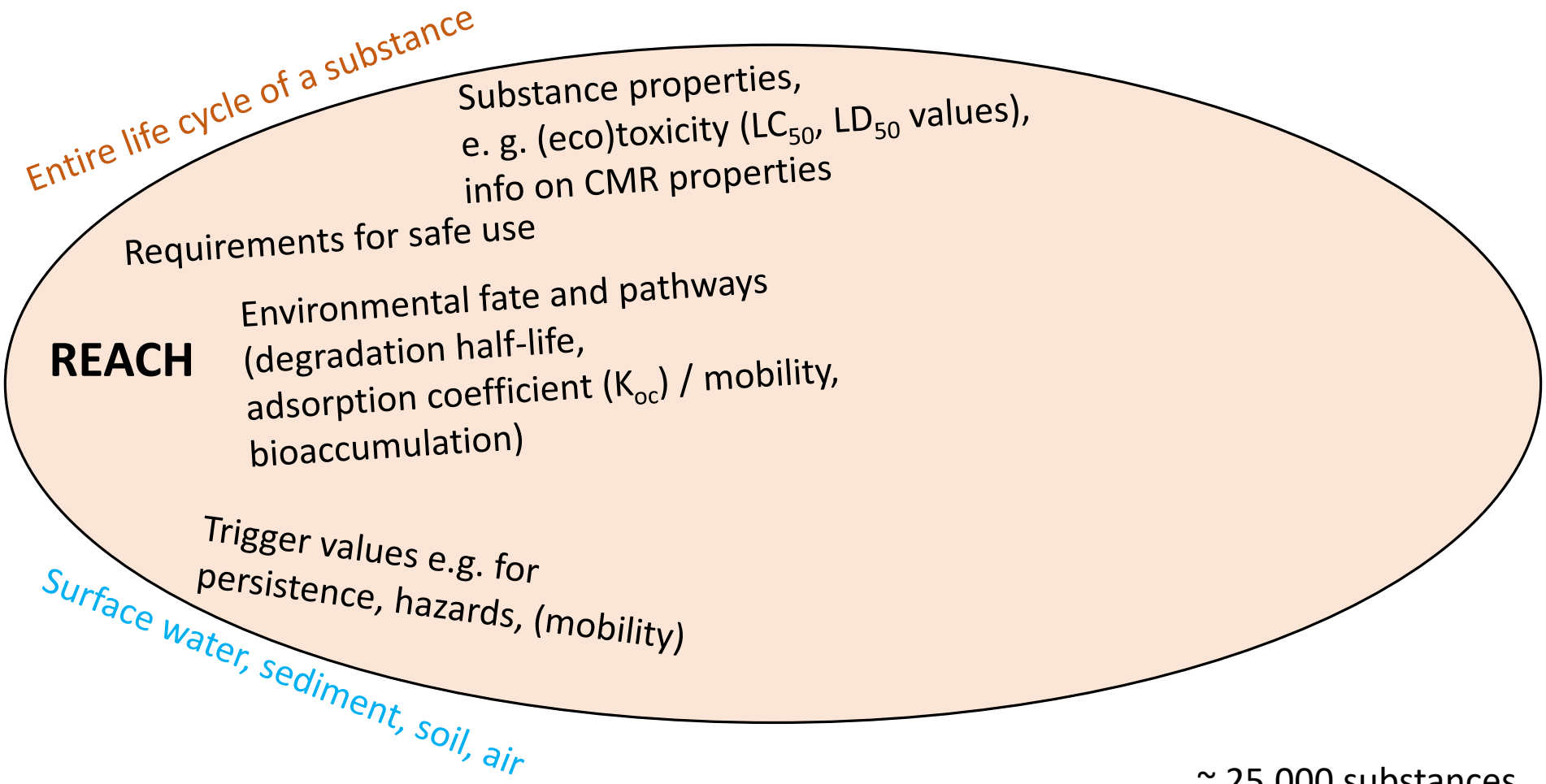
b) What information from regulatory processes is existing?

c) How can substance data and use information be made available to stakeholders?

d) Action by stakeholders: What needs to be done?

1. How can REACH support the identification of substances of concern?

a) What data / information is existing in REACH?



~ 25.000 substances

>> REACH defines condition on safe use applicable to installations

1. How can REACH support the identification of substances of concern?
b) What information from regulatory processes is existing?

Entire life cycle of a substance

REACH

SVHC on candidate list including not binding substitution requirement

SVHC under authorisation process listed in Annex XIV REACH including substitution plan

Substances with restrictions on their uses listed in Annex XVII REACH

PACT: overview of substance-specific activities

Surface water, sediment, soil, air

Candidate list = candidates for authorisation but not listed in Annex XIV REACH yet
SVHC = substance of very high concern,
PACT = Public activities coordination tool

1. How can REACH support the identification of substances of concern?

c) How can substance data / use information be made available?

Approach 1: All substances registered (substance-based approach)

- Individual substances used in the respective industrial sector from the ECHA-Chem Database, access to latest information on substance properties
- Large number of substances, use descriptors not precise enough, uses indicated even though the substance might not be used in that sector >> false positives, User friendly access to ECHA data welcomed

Approach 2: Regulated substances (hazard-based approach)

- Substances which are per se undesired in chemical processes
- Basis are different legislations: REACH, Water Framework Directive, Restricted substances
- Database is again the ECHA Chem database or the SPIN (Substances in Preparation in Nordic Countries) register

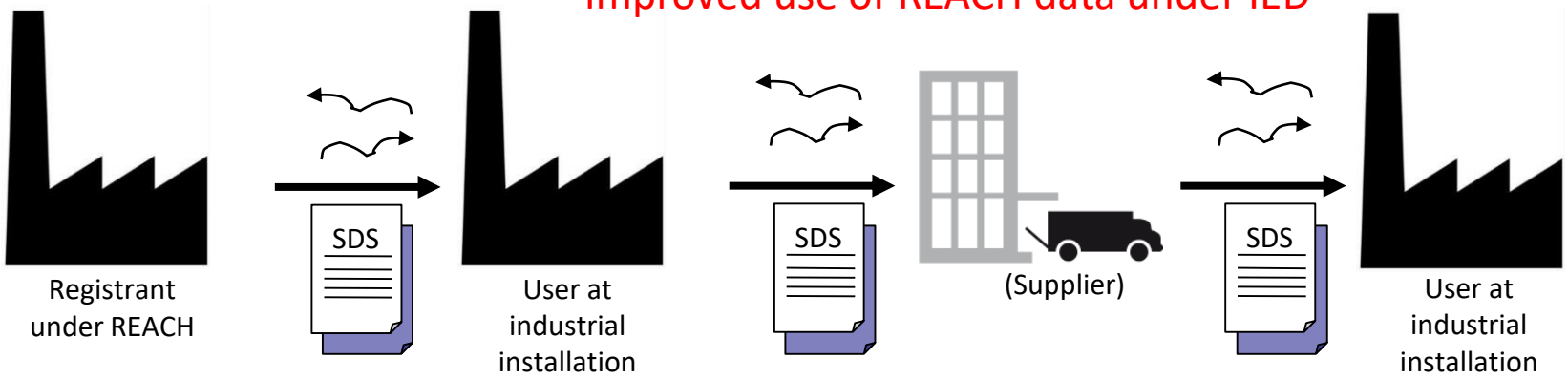
HAZBREF defines substances of concern as:

- Chemicals with a **"high potential to be released"** from waste water treatment
- Chemicals with an **"ecotoxicological or human toxicological concern"**
- Trigger values are taken from the REACH Regulation and CLP-R

1. How can REACH support the identification of substances of concern?

d) Action by stakeholders

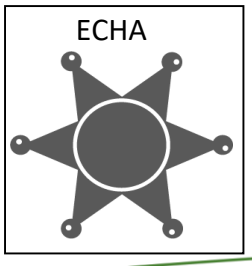
Improved use of REACH data under IED

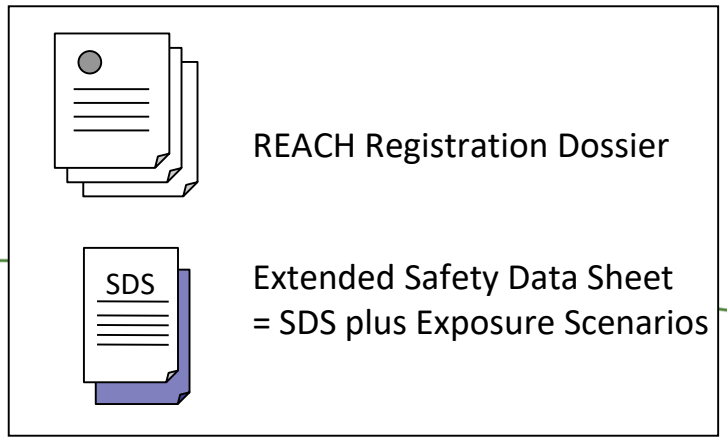


Improve the quality of eSDS

Improved use of use descriptors

Improve the information flow in supply chain





Systematic characterisation of substances or substance groups e.g. with regard to the potential to be released

Figures taken from eREACH

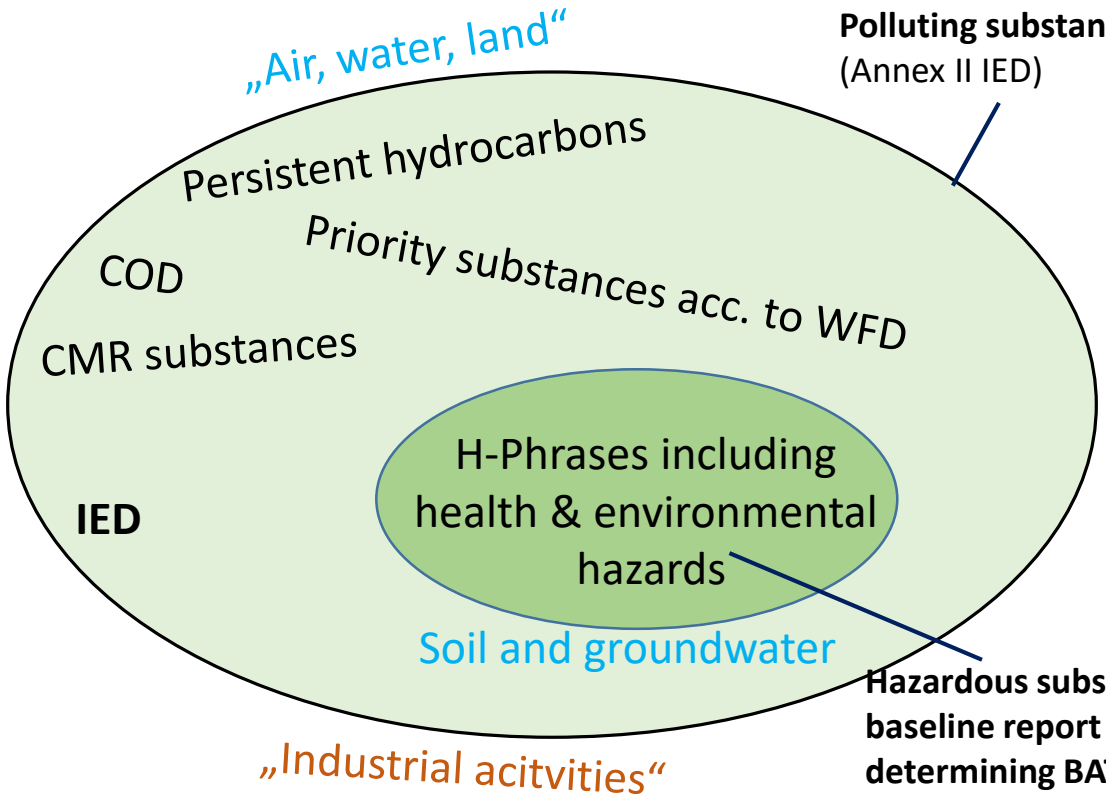
2. How can knowledge and experience in sectors contribute to the identification of target substances?

a) What data / information is existing at installations according to the IED requirements?

- Information on site-specific processes and uses, inventory of chemicals
- Lists of relevant substances by sector associations including technical function, chemical function, chemical group

2. How can knowledge / experience in sectors contribute to identification of target substances?

b) What information from regulation / regulatory processes is existing?



>> There is a clear mandate of the IED

to make sure that operators know the substances they use

and their fate in the environment and act to reduce avoidable pollution

2. What can sector knowledge contribute to the identification of substances?

c) How can data made available and used by stakeholders?

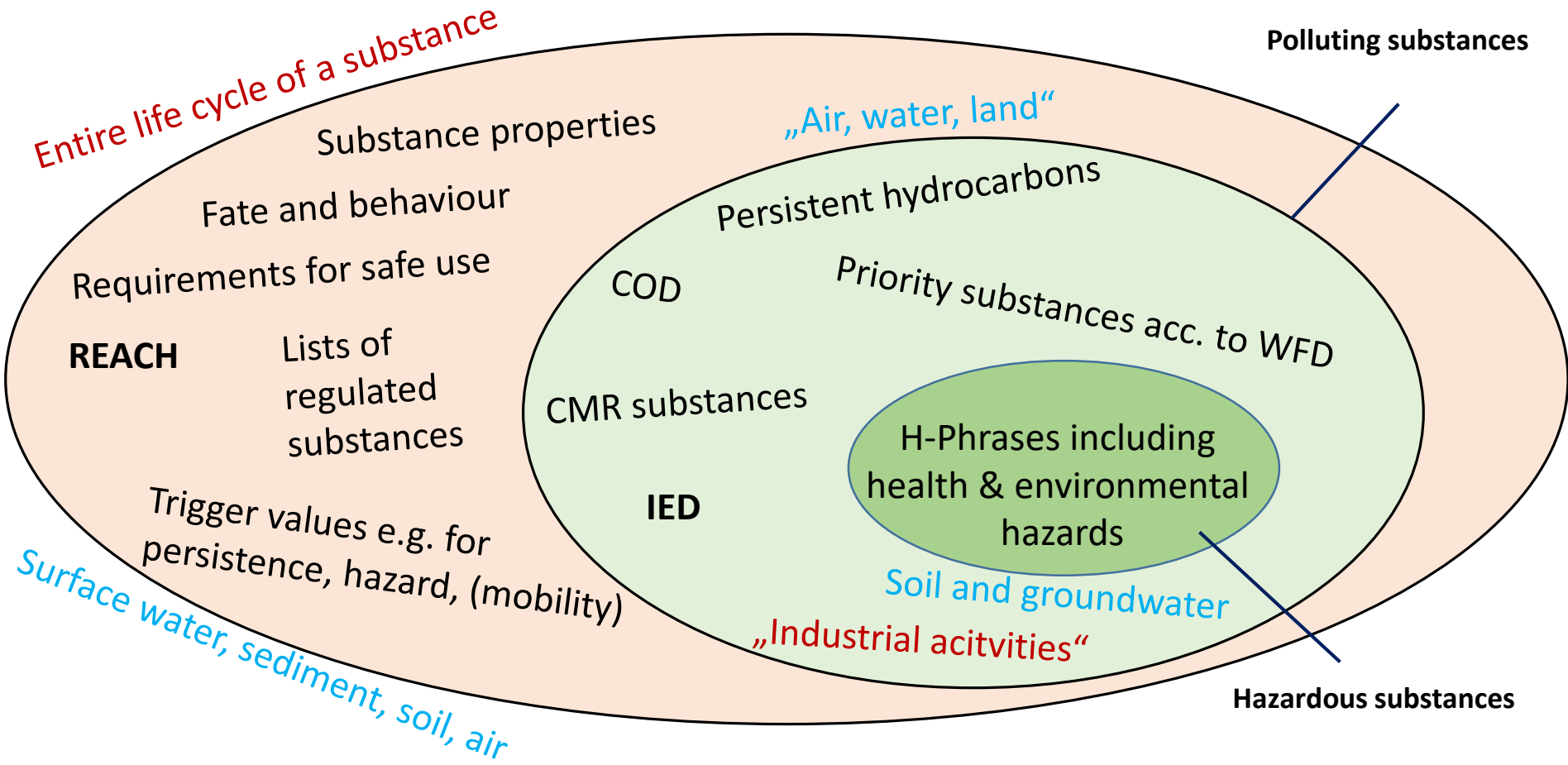
Approach 3: characterization of chemicals used in sector (Use-based approach)

- Lists of substances used in specific industrial sectors >> inventory of substances
- Group substances based on technical function an chemical structure
- Knowledge about products available, knowledge about substances in products lacking

Approach 4: Case studies on installations (reality check >> WP 4)

- lists of chemical products and in some cases individual substances contained in products
- Time consuming, Knowledge on substances contained in products is lacking, difficult to select representative industrial sites representative for whole BREF

Which substances are dealt with in HAZBREF



HAZBREF defines substances of concern…

HAZBREF defines substances of concern as:

- Chemicals with a “high potential to be released” from waste water treatment >> target substances
- Chemicals with an “ecotoxicological or human toxicological concern” >> relevant target substances
- Trigger values are taken from the REACH Regulation and CLP-R

Overview approaches for pre-phase in BREF review

Approach 1: All substances registered (substance-based approach)

- Good starting point for characterisation of a substance for BREF, eSDS (extended SDS) starting point for BAT conclusion elaboration process
  >> use in pre-phase of BREF review

Approach 2: Regulated substances (hazard-based approach)

- Regulated substances per se undesired in industrial processes, PACT substances might be undesired in future >> necessary to reflect in installations

Approach 3: Characterization of chemicals used in sector (Use-based approach)

- Necessary action in installations or sector associations to compile a chemical inventory >> Precondition for responsible use of substances onsite

Approach 4: Case studies (reality check)

- Provide relevant substances used in reality and will be helpful for cross-checking the outcome of the other approaches

This slide is the connection to Michaels' presentation

Conclusions

- A precondition for a sound chemicals management at installations is a complete chemicals inventory
- All stakeholder should optimize the management of regulatory processes by providing and using existing data
- HAZBREF has provided four approaches to optimize the prephase of BREF revisions (“frontloading phase”)

>> integrated use of REACH and IED necessary to reduce releases

Vision:

- Use the same definitions and trigger values for characterising relevant substances in IED REACH WFD /
- Harmonize wording of “hazardous” >> substances of concern
- Reflect all environmental compartments in IED and REACH
- In BREFs, reflect releases to environment during the entire life-cycle

Nannett Aust
Head of Section IV 2.3 Chemicals

German Environment Agency (UBA)
Nannett.Aust@uba.de

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2. What can sector knowledge contribute to the identification of substances?

d) Action by stakeholders – What need to be done

... Awareness raising

What is the remit or scope of the IED with regard to the parameters for evaluating the concerns?

- The IED focuses on technical processes and chemical functions, while the substance information that determines the BATs comes from other regulatory bodies (e.g. REACH).
- REACH sets a risk level for chemicals (= emission/hazard) or defines substances without risk level (SVHC), while the IED with the "best available technology for elimination" (BAT_{elim}) makes the risk acceptable.

Which problem areas have we perceived in the relationship between REACH and IED

- The IED focuses BAT candidates and BREFs on "hazardous" substances, which under REACH, CLP, WFD, etc. only applies to "substances of very high concern" or other priority substances
- Plant operators often do not know the exact composition of the chemical products used, which makes an evaluation based on individual substances or chemical groups difficult

Which problem areas have we perceived in the relationship between REACH and IED?

- The IED focuses on hazardous substances in industrial emissions, while REACH also addresses substances that have an environmental or human toxicological potential in their full life cycle, e.g. at the point of use by downstream user or consumer or during service life.
- Substitution should cover not only substances of concern themselves, but also manufacturing processes that release such substances

2. What can sector knowledge contribute to the identification of substances?

d) Action by stakeholders – What need to be done

… by stakeholders IED

- When it comes to information on chemical products used in the plant, greater transparency is required - primarily an inventory with identification of substances according to REACH >> CAS-No., ….
- More transparency is needed regarding the amount of chemicals used in the installation because different products with the same substance are use in several processes
- In BATs, reduction, minimization or phasing out of emissions is the driver rather than risk reduction or mitigation (cf. the concept of "relevant trace substances"). Invest in understanding concept of REACH in identifying risk for the environment

… with regard to installation operators

- Clarification in identifying substance groups for chemical and technical functions as a prerequisite for substance evaluation (with a focus on textile finishing industry); >> zu awareness raising
- Clarification of the distinction between substances of very high concern or priority hazardous substances and relevant target substances for elimination (from the wastewater stream) >> zu awareness raising

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Topic 2: Recommendations for the management of chemicals in industry

Janusz Krupanek
Sandra Leuthold
Timo Jouttijärvi
Final webinar 4.6.2020

EU STRATEGY FOR THE BALTIC SEA REGION
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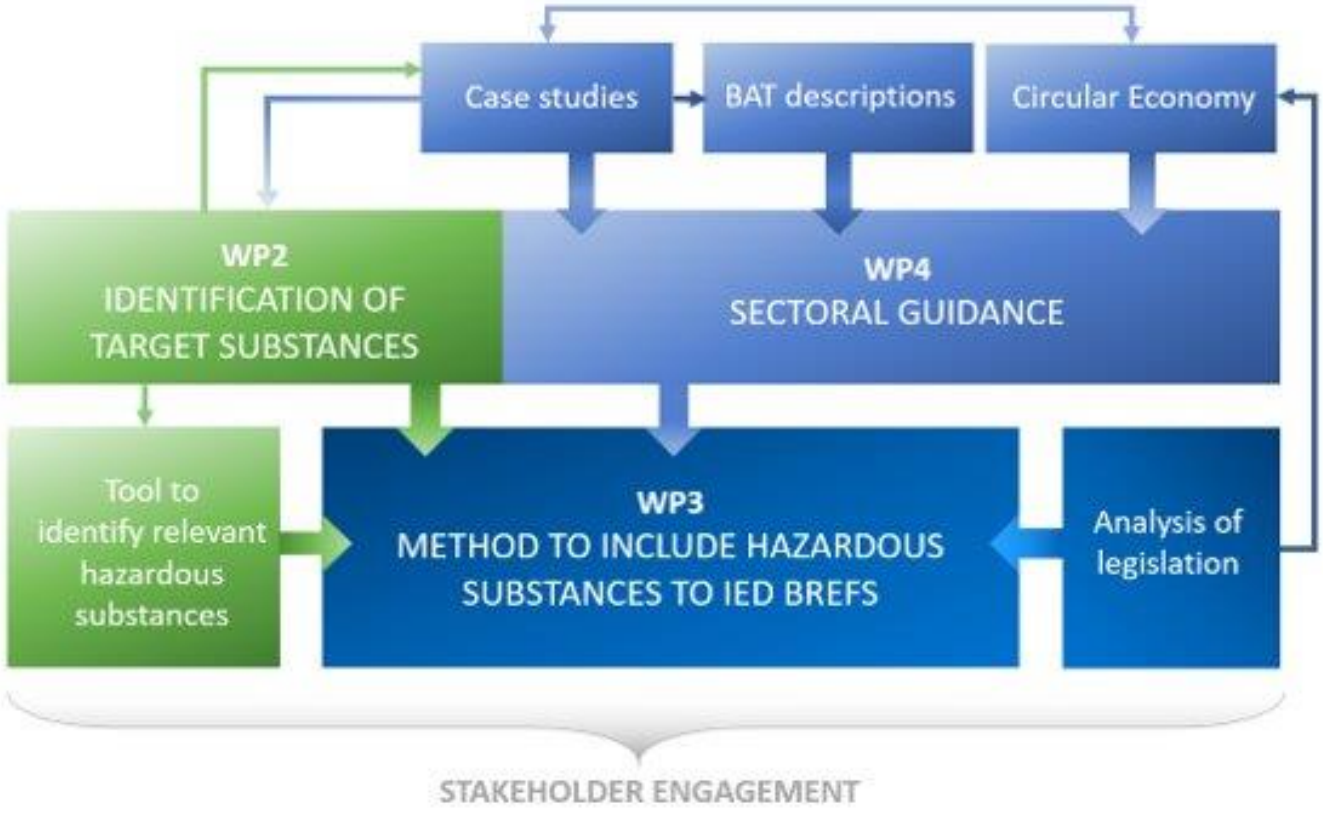
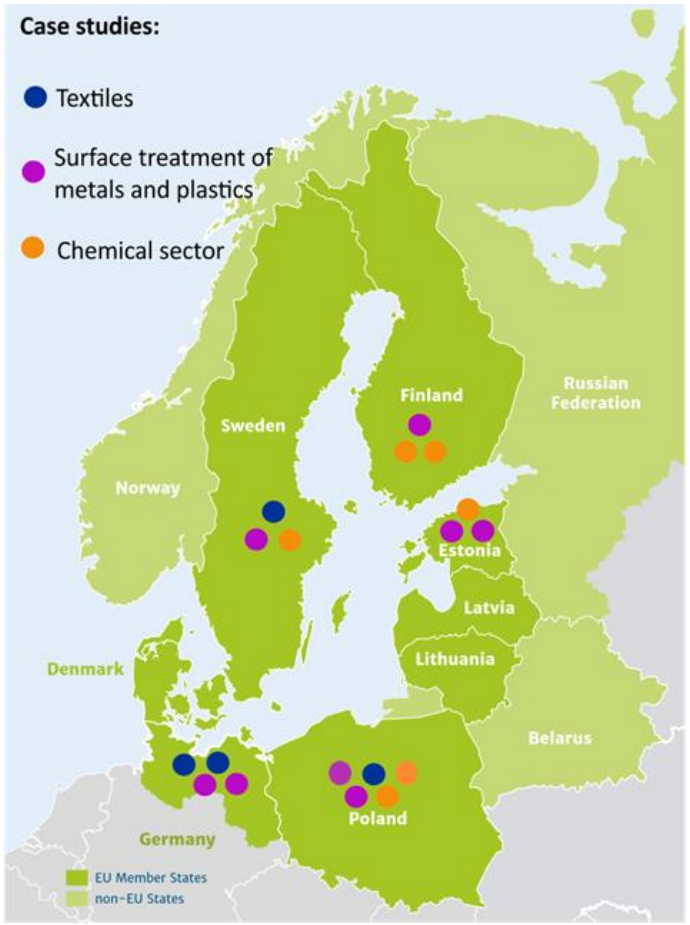
WP4 Best practices in chemicals management in industry



Case studies

- The selected industrial sectors are
  - Surface Treatment of Metals and Plastics
  - Chemical industry: sub-sectors Polymers and Large Volume Inorganic Chemicals (namely fertilizers)
  - Textile Industry
- Overall 18 case studies were conducted
- The main findings will be presented in the sector guidance reports



The purpose of the sector guidance reports

- Describe best practices in chemical management in industry
- Guidance and tools for the industrial operators and authorities to improve chemical management practices in installations.
- Provide input to the upcoming BREF reviews in the case sectors.

HAZBREF BAT proposals

- Five BAT proposals were developed for Textile BREF review process
- One BAT proposal was provided for the Common Waste Gas Treatment in the Chemical Sector (WGC) BREF process
- Proposals for STM and POL/LVIC are still in progress

→ BAT proposals address efficient chemical management

Recommendations for chemical management

- Chemical management system (CMS) adapted to each sector should be part of EMS in all BREFs
- CMS should include chemical inventory, general management practices, checking of safer chemicals and alternative processes
- There are also other specific BATs related to chemical management e.g.
  closed-loop systems or
  extension of lifetime of electrolytes
- Avoid double regulation by focussing on process- and sector-specific techniques

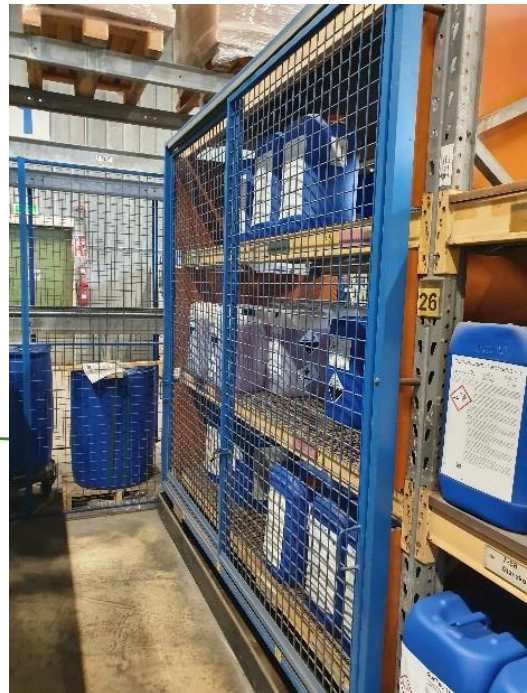


Photo: Aurajoki oy

Chemical Inventory

- BAT conclusion in TXT BREF draft, proposed by HAZBREF project
- Chemical inventory is the basis for further chemical management activities such as proper selection of chemicals, unloading, storage and handling and end-of-pipe techniques
- One database for all chemicals used in the installation
- Provide opportunity to search for individual substances and filter chemical lists

Chemical inventory

Form 1				List of used chemicals sorted according to annual consumption quantities						Name of the textile finishing industry Year:		
	1. Auxiliaries and finishing agents for fibres and yarns											
	1.1 Spinning solution additives				1.5 Lubricants							
	1.2 Spinning additives				1.6 Coning oils, warping and twisting oils							
	1.3 Spinning bath additives				1.7 Conditioning and stabilizing agents							
	1.4 Preparation agents											
No.	Commercial name	Producer	Chemical characterisation General and individual substances if available (see CAS no.)	Known CAS no.	Process, application	Annual consumption [kg/yr]	MSDS date	GHS Hazard	Cont. haz. substances according to SVHC, ZDHC, PBT and vPvB in [weight-%] for indiv. subst.	Ionogenic character	Biolog. degradation/elimination product and invidual substances in [%] and test duration [d] and testing method	spec. COD- value [mg O_2/g]
1												
2												
3												

- Main sources for information are SDS and partly technical instruction sheets with the following challenges:
  - Information regarding the chemical composition of marketed substance-mixture (completeness regarding hazardous substances)
  - Information on impurities is missing
  - Update SDS on a regular basis
  - Communication as chemical suppliers may come from outside the EU
  - Chemical expertise in installations and authorities

Substitution

- Number 2 of Annex III of IED requests the use of less hazardous substances → substitution
- Besides addressing substitution for specific chemicals, also a general BAT on substitution should be included (examples in TXT BREF)
- Information on alternatives should be easily accessible
- Regrettable substitution should be avoided
- The point is not to generate double legislation but to improve implementation of REACH (phase-out of hazardous substances)

Closed-loop process

- One considerable process-integrated method is to apply closed-loop process
- Since the techniques are very process specific, general BATs cannot be derived
- Example from case study: Optimisation of intermediate gas flows in polymer production

Photo: Borealis Polymers Finland

Findings on Permitting Process 1/2

- Permitting processes are very country-specific but based on the requirements set by the IED
- Connection between environmental and chemical legislation is still weak
- Operators have to submit chemical list to the competent authority. Based on this the competent authority can:
  - check chemical products containing hazardous and non-biodegradable substances
  - define specific permit conditions
  - set requirements to substitute certain chemical products or at least to reduce their consumption
  - set requirements concerning the use of abatement techniques

Findings on Permitting Process 2/2

- **Challenge**: access to and expertise on information of hazardous substances
- **Recommendation**: easy access to (extended) SDSs with complete data on environmental fate and behavior
- **Suggestion**: strengthening of chemical expertise among environmental authorities

See also HAZBREF 3.1 draft report Annex 2: Work practice of Member State authorities

Next steps

- Finalisation of sector guidance reports
  - TXT whole report already available for comments, commenting DL 15.6.2020
  - STM & CHEM BAT candidates available for comments until 10.6.2020
  - Comprehensive STM & CHEM guidance reports will be available for comments during the summer

→ Final publications in autumn

HAZBREF

Hazardous industrial chemicals in the IED BREFs

Interreg Baltic Sea Region

EUROPEAN UNION

EUROPEAN REGIONAL DEVELOPMENT FUND

Thank You for your attention!

Janusz Krupanek

j.krupanek@ietu.pl

Sandra Leuthold

sandra.leuthold@uba.de

Timo Jouttijärvi

timo.jouttijarvi@ymparisto.fi

https://www.syke.fi/projects/hazbref

SYKE IETU NATURVÅRDSVERKET SWEDISH ENVIRONMENTAL PROTECTION AGENCY EKUK Umwelt Bundesamt

09:45	**Webinar opens for participants to join**
10:00	**Welcome, introduction to the order of the day and webinar´s house rules** *Michael Suhr, German Environmental Protection Agency UBA*
10:15	**Introduction to HAZBREF goals** *Project Manager Kaj Forsius, Finnish Environment Institute SYKE*
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HAZBREF

Umwelt Bundesamt

HAZBREF

Topic 3: Proposal for a more systematic method to address hazardous substances in the BREF-process

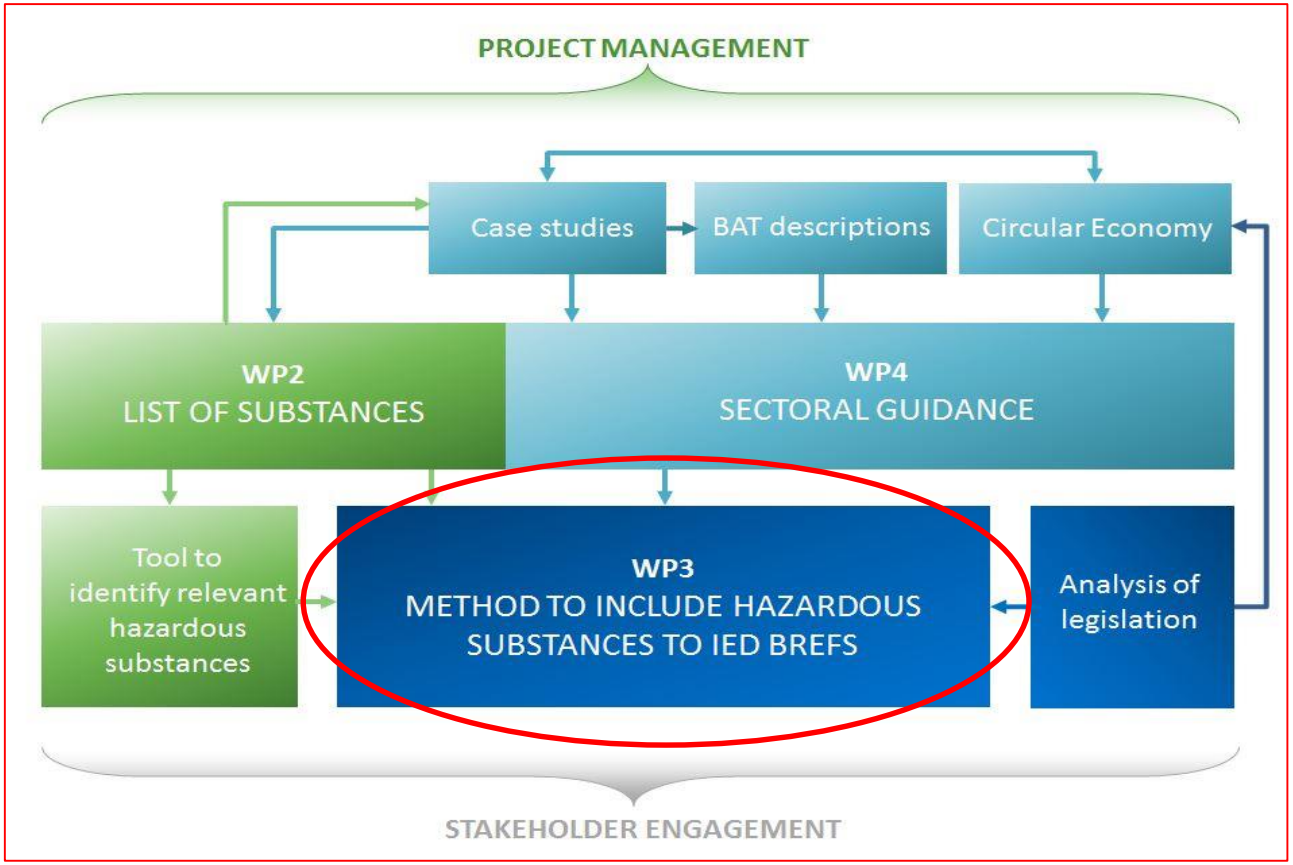
Michael Suhr

Final webinar 4.6.2020

EU STRATEGY FOR THE BALTIC SEA REGION
FLAGSHIP

WP3 Policy improvement

Activity 3.2: Development of method to include information of hazardous substances into BREFs



PROVISIONS OF THE IED OF LESS HAZARDOUS SUBSTANCES

THE KNOWLEDGE OPERATORS SHOULD HAVE AND CONSIDER

Provisions

- **prevent, reduce** and as far as possible **eliminate pollution**
- **intervention at source**
- **'hazardous substances'** means substances as defined in Article 3 of the CLP-Regulation (Art. 3(18) IED)
- **pollution** broader scope including hazardous substances
- **permit applications** shall include description of
  - *the raw and auxiliary materials used*
  - *the nature and quantities of foreseeable emissions from the installation*
  - *the significant effects of the emissions on the environment*
- **basic obligations of the operator** are that (Art. 11 IED)

  (a) all the appropriate **preventive measures are taken against pollution**;

  (b) the **best available techniques** are applied;

  (c) **no significant pollution** is caused;
- **annex II IED: list of polluting substances** including hazardous substances
- **annex III IED: Criteria for determining BAT include..**
  # 2: *the use of less hazardous substances* → substitution principle part of BAT
- operator must know **substances they use, their fate** in the environment, **reduce avoidable pollution**

BAT CONCLUSIONS ELABORATION NOW

Frontloaded identification of KEIs

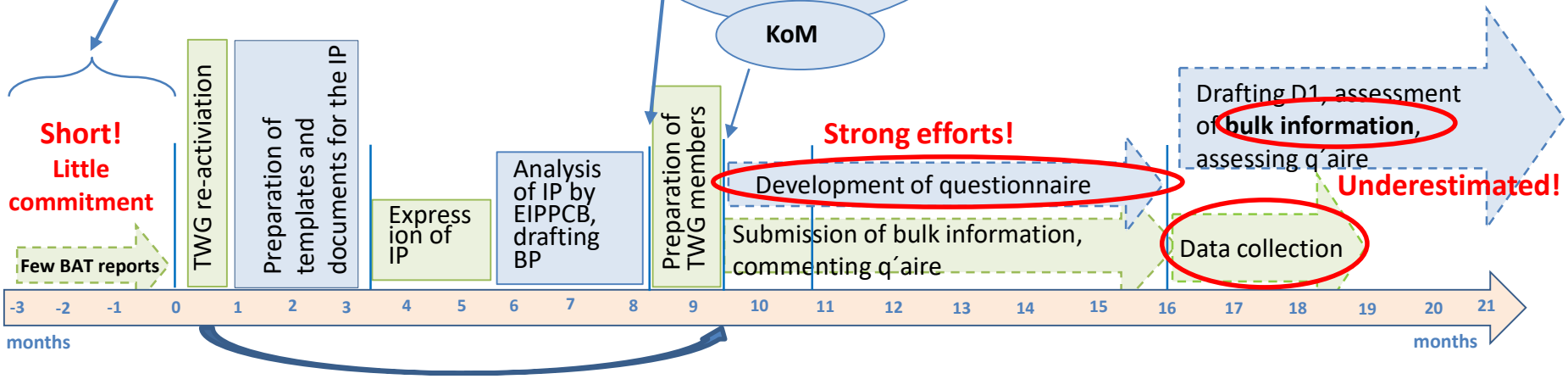
a) KEI identification (4 pilot studies: TXT, SA, SF, CER)

b) Stakeholder reports (rare)

c) KEI assessment by EIPPCB

KoM BP issued: Result of KEI identification circulated to TWG with BP

KoM



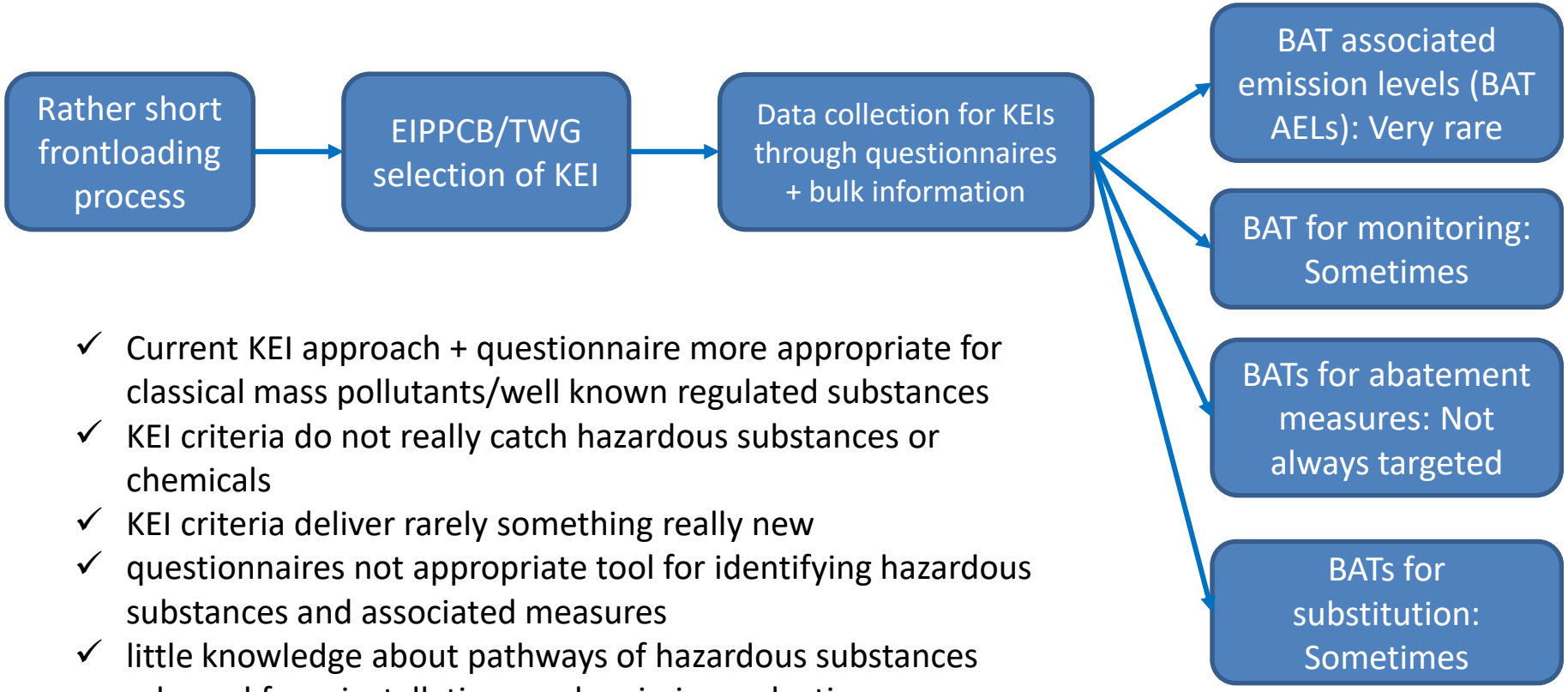
= Role of the TWG = Role of the EIPPCB KoM = Kick-off Meeting BP = Background Paper IP = Initial Position

= Fields for potential action

- BREF PROCESS IS COMPLEX, NOT AN EASY TASK, A LEARNING INSTITUTION
- HAS EVOLVED OVER TIME AND GRADUALLY IMPROVED

TRADITIONAL PATHWAY

KEIs and questionnaire not always deliver satisfying results



- ✓ Current KEI approach + questionnaire more appropriate for classical mass pollutants/well known regulated substances
- ✓ KEI criteria do not really catch hazardous substances or chemicals
- ✓ KEI criteria deliver rarely something really new
- ✓ questionnaires not appropriate tool for identifying hazardous substances and associated measures
- ✓ little knowledge about pathways of hazardous substances released from installations and emission reduction measures

HAZBREF Suggestion:

- Built on existing proven practice but put different emphasis
- Additional systemized work steps brings new data and measures

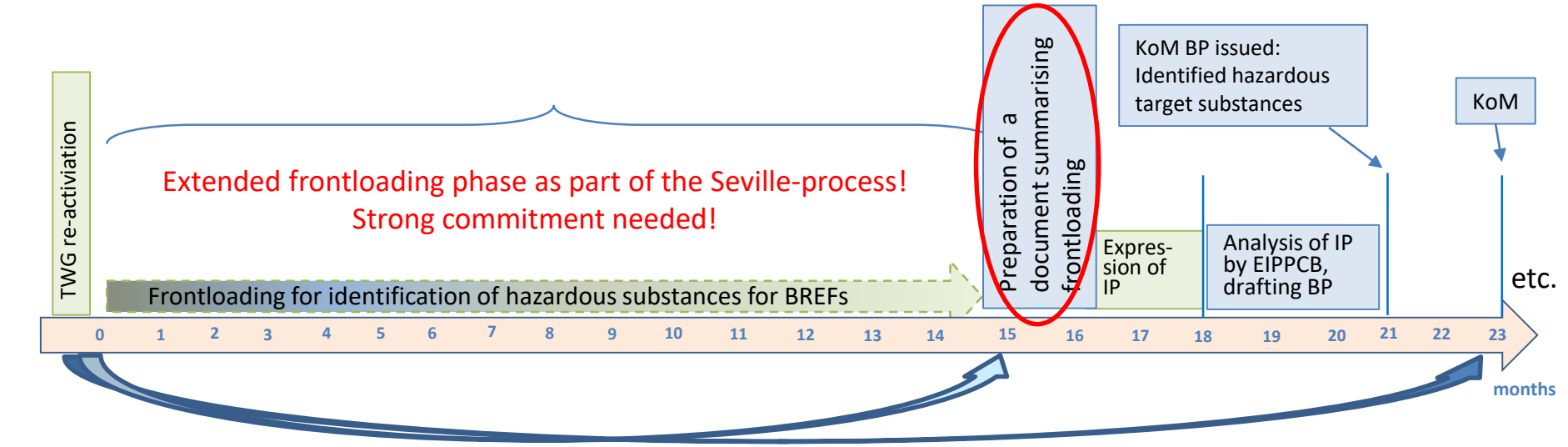
FOR FRONTLOADING, MORE TIME, PROCEDURES, PLANNING, EFFORTS

- **Extended frontloading** key for better BREF/BAT conclusions
- **Reliable time planning** is pre-requisite for organized frontloading of BREF reviews (for at least 4 years work programme)
- TWG members **including suppliers of chemicals** and machinery should be involved in frontloading phase as integral part
- **Restructuring the timeline, different emphasis, some reconsideration**
  - time for extension can partially be taken from the questionnaire development
  - Some classical parameters possibly need less efforts and mainly confirmation
- Others options need to be further explored
- Additional work steps in frontloading phase may **streamline and systematize identifying hazardous substances**
- **Recently released Draft 1 of Textile BREF review** reflects already some of the HAZBREF proposals (annex from “old BREF” already a good basis for the prephase of the review)
- encourage the EIPPCB/TWGs to go on in this spirit

HAZBREF proposal: Systematising identification of hazardous substances

How to operationalise reinforced frontloading?

2.1 Continue KEI studies, add gap analysis and use also accessible data (not only literature)
2.2 Encourage stakeholder BAT-reports related to hazardous/relevant polluting substances
2.3 Screening and filtering of ECHA data base with support of BREF sector-experts
2.4 Conducting case studies (analyses, baseline reports, e-SDS)
2.5 If considered promising, well targeted measurement campaigns (also research projects)
2.6 Assessment of specific reports and studies



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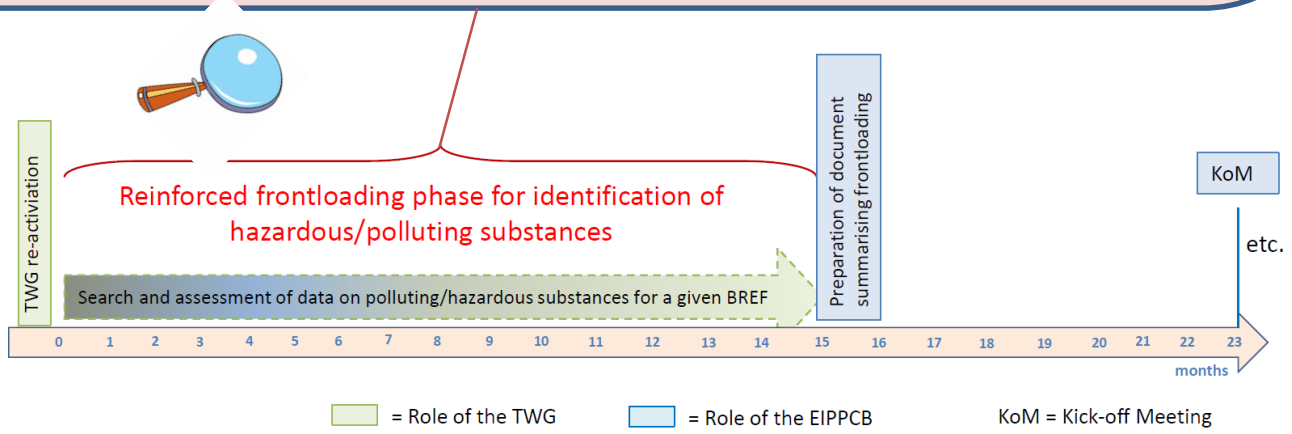
Identification of relevant hazardous substances – more details 1/2

HAZBREF suggestions for the prephase of BREF reviews (1/2):

- Screening of ECHA database and SPIN Register with support of sector experts
- Narrow down the number of relevant chemicals *potentially used* by
  - identifying and listing regulated substances (REACH, WFD, POP regulation)
  - identifying chemicals that are *actually used* in the sector with support of sector associations, chemical and machinery suppliers and MS experts
- Case studies as *reality check* for lists of chemicals
  - useful if advanced sector experts involved and plant operators willing to provide data/chemical lists/inventories and waste water stream inventories
  - representativeness is a challenge since very limited number of processes
  - check illustratively „good permits“ and assess selected baseline reports
- inevitable to include experts from the chemical producers, monitoring experts, industry, authorities (expert judgement)

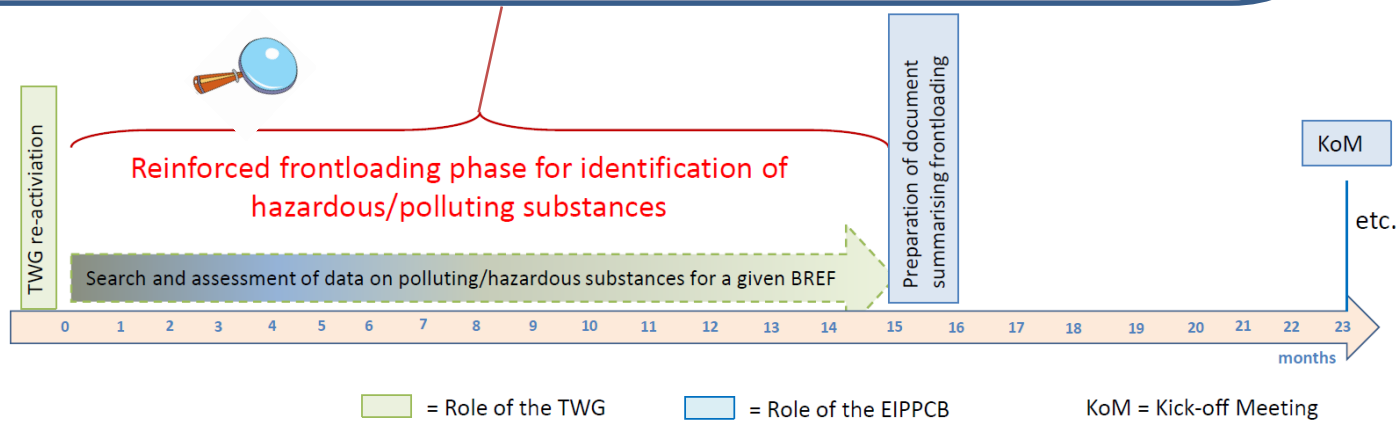


Identification of relevant hazardous substances – more details 2/2

HAZBREF suggestions for the prephase of BREF reviews (2/2):
Assessment of selected baseline reports (*relevant hazardous substances:* CLP)

✓ Three stages relevant for HAZBREF:

- **Stage 1:** identify which hazardous substances are used, produced or released at the installation and produce a list of these hazardous substances
- **Stage 2:** identify which of the hazardous substances from Stage 1 are 'relevant hazardous substances' (substances which, as a result of their hazardousness, mobility, persistence and biodegradability (as well as other characteristics), are capable of contaminating soil or groundwater (carry hazard phrases))
- **Stage 3**: for each *relevant hazardous substance* brought forward from Stage 2, identify the actual possibility for soil or groundwater contamination at the site of the installation, including the probability of releases and their consequences



Workflow proposed by HAZBREF

Not new, encourage EIPPCB/TWG to go on as in Draft 1 of TXT BREF

1. Challenge: Combine substance-specific with installation specific perspective

1

Identification of hazardous substances and BAT-relevant environmental issues

2

Screening of ECHA data base, refined KEI studies, selected case studies, monitoring data, BAT background reports,

2. Fill frontloading phase with life, go through various steps

3. Include chemicals/machinery suppliers in specialised subgroup

3.1

EIPPCB and TWG: identification of hazardous substances

3.2

Subgroup on Chemical Management

4. Use questionnaire as only one of several means

Data collection through questionnaires for a *few hazardous substances*

4.1

+

4.2

Expert judgement

5. Results of information exchange

5.1 Possible BAT associated emission levels, e.g. BAT for bioassays

5.2 Monitoring requirements

5.3 BATs for process-integrated and abatement measures

5.4 BATs for chemical inventory and management system

5.5 BATs for substitution

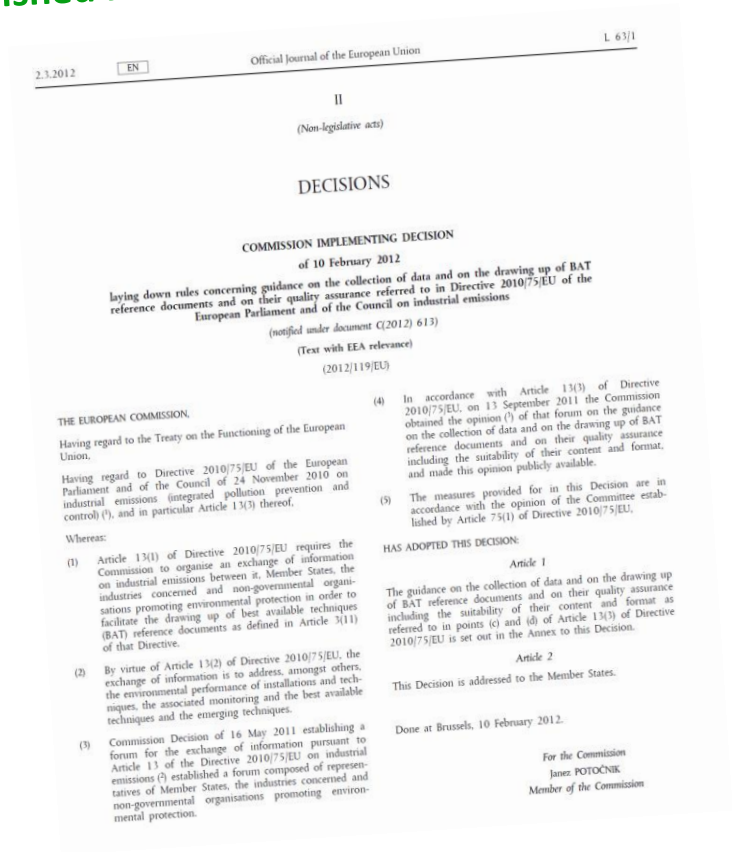
6. Provide supporting tools and guidance for operators

5.6 References/guidance for operators how to identify and select chemical auxiliaries

Consider specific section in new BREFs on the use and behavior of industrial chemicals

SUPPLEMENT RULES OF PROCEDURE OF THE BREF PROCESS
Refine the BREF Guidance 2012/119/EU

Published in 2012, partially outdated/incomplete



2.3.2012 EN Official Journal of the European Union L 63/1

II

(Non-legislative acts)

DECISIONS

COMMISSION IMPLEMENTING DECISION

of 10 February 2012

laying down rules concerning guidance on the collection of data and on the drawing up of BAT reference documents and on their quality assurance referred to in Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions

(notified under document C(2012) 613)

(Text with EEA relevance)

(2012/119/EU)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) [1], and in particular Article 13(3) thereof,

Whereas:

(1) Article 13(1) of Directive 2010/75/EU requires the Commission to organise an exchange of information on industrial emissions between it, Member States, the industries concerned and non-governmental organisations promoting environmental protection in order to facilitate the drawing up of best available techniques (BAT) reference documents as defined in Article 3(11) of that Directive.

(2) By virtue of Article 13(2) of Directive 2010/75/EU, the exchange of information is to address, amongst others, the environmental performance of installations and techniques, the associated monitoring and the best available techniques and the emerging techniques.

(3) Commission Decision of 16 May 2011 establishing a forum for the exchange of information pursuant to Article 13 of the Directive 2010/75/EU on industrial emissions [2] established a forum composed of representatives of Member States, the industries concerned and non-governmental organisations promoting environmental protection.

(4) In accordance with Article 13(3) of Directive 2010/75/EU, on 13 September 2011 the Commission obtained the opinion [3] of that forum on the guidance on the collection of data and on the drawing up of BAT reference documents and on their quality assurance including the suitability of their content and format, and made this opinion publicly available.

(5) The measures provided for in this Decision are in accordance with the opinion of the Committee established by Article 75(1) of Directive 2010/75/EU.

HAS ADOPTED THIS DECISION:

Article 1

The guidance on the collection of data and on the drawing up of BAT reference documents and on their quality assurance including the suitability of their content and format as referred to in points (c) and (d) of Article 13(3) of Directive 2010/75/EU is set out in the Annex to this Decision.

Article 2

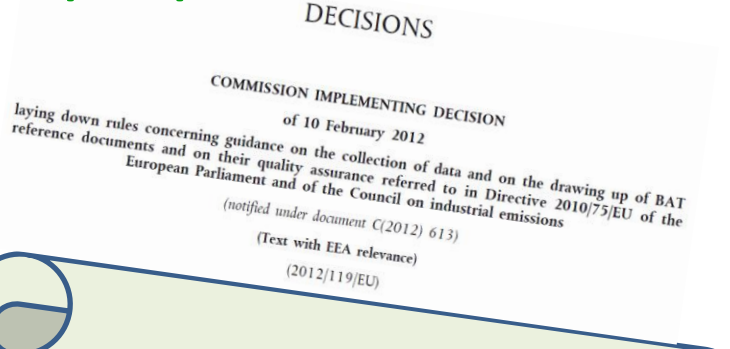
This Decision is addressed to the Member States.

Done at Brussels, 10 February 2012.

For the Commission

Janez POTOČNIK

Member of the Commission



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(Text with EEA relevance)

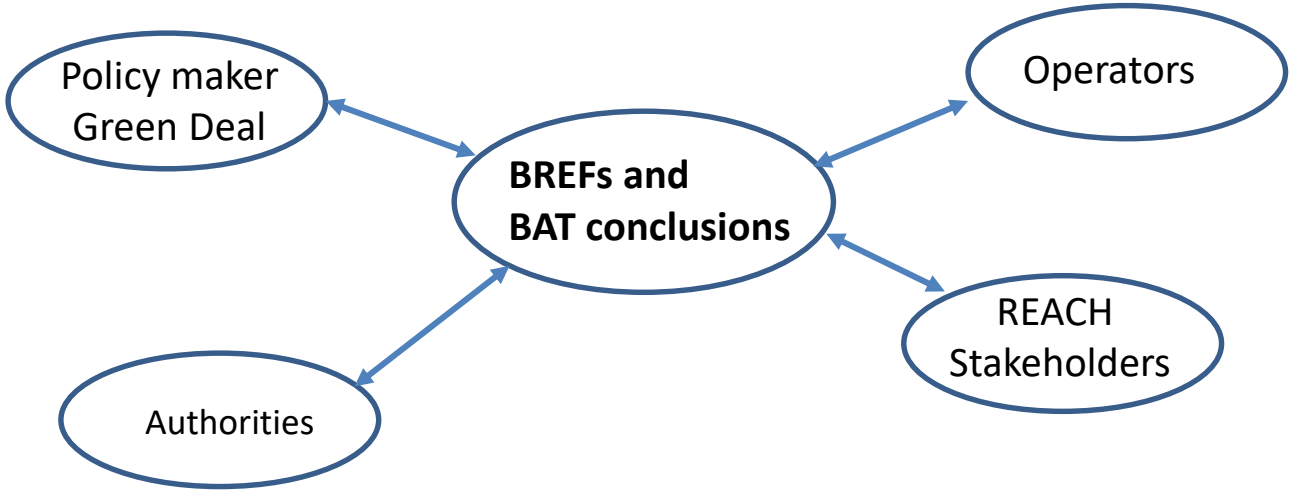
(2012/119/EU)

Reinforced, more organised and formalised frontloading to better identify/consider hazardous/polluting substances in BREFs

1. Complete composition of the TWG
2. Timing for identifying hazardous substances
3. Major steps/working procedures to identify hazardous substances
4. Preliminary determination of hazardous substances
5. Assessment by EIPPCB and TWG and expert subgroup
6. Determination of BAT-relevant hazardous substances/major steps for BREF review
7. Deriving BAT conclusions

HAZBREF Outlook

- refined assessment of industrial chemicals in BREFs as proposed would result in more comprehensive BAT-based measures for chemicals grounded in precautionary principle and provisions of the IED
- not only the rules of procedure for the Seville-process and BAT conclusions may be affected by the proposed amendments
- other stakeholders and regulatory frameworks I Europe and abroad may use results of BREFs that are more complete in terms of use, application and release of chemicals in installations



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HAZBREF

Interreg Baltic Sea Region

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HAZBREF
– Hazardous industrial chemicals in the IED BREFs

Non-toxic material cycles – challenges and opportunities in the BREF process

Helena Dahlbo SYKE
Topi Turunen SYKE

EU STRATEGY FOR THE BALTIC SEA REGION

FLAGSHIP

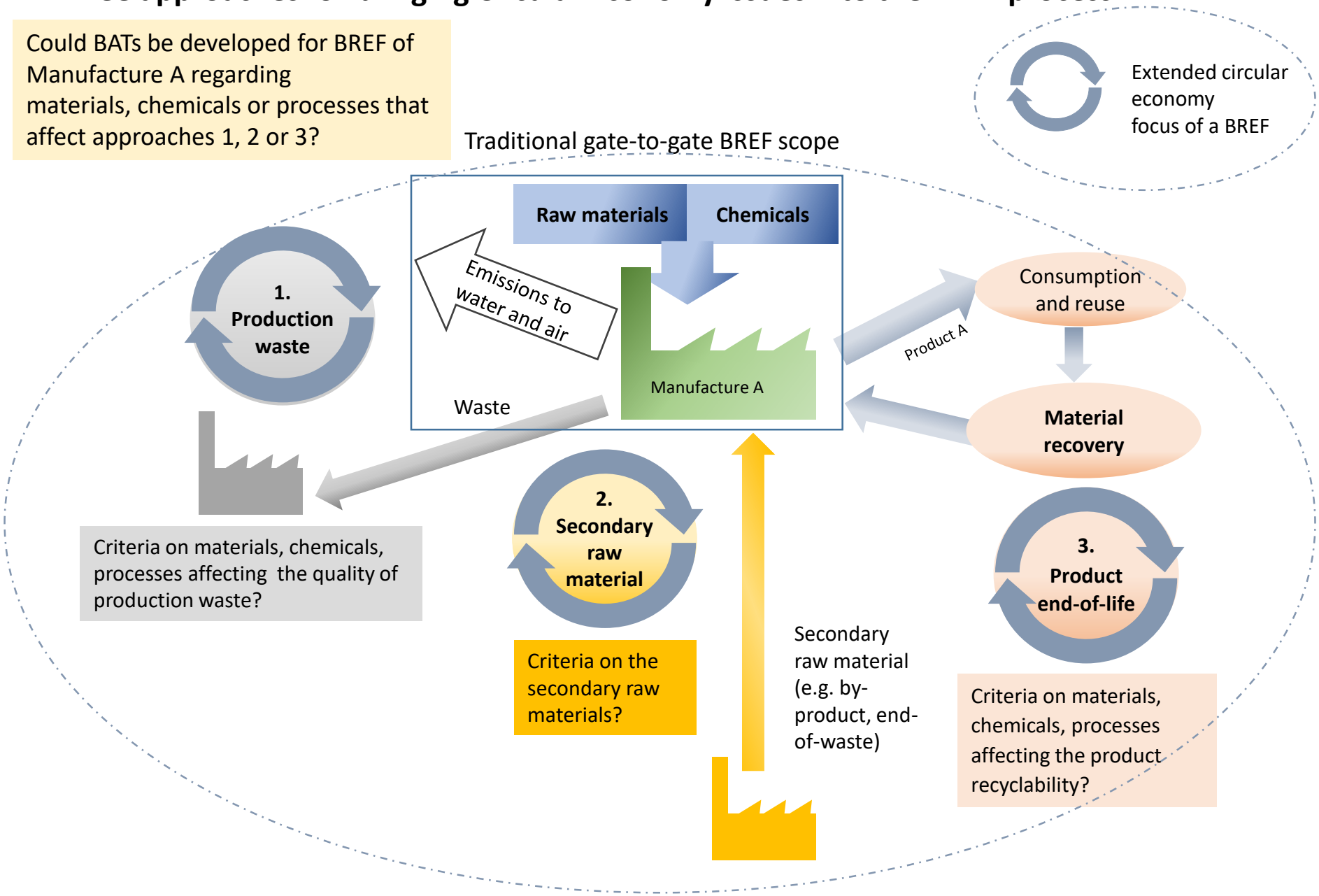
4.6.2020

Circular Economy in the BREF process

- How is CE currently handled in BREF processes?
- What legal possibilities and barriers are there to include CE aspects to BREF process?
- How could/should the CE aspects connected to generation of non-toxic material circles be addressed in BREFs?
- Three approaches
  - Production waste
  - Secondary raw materials
  - Product end-of-life

Three approaches for bringing Circular Economy issues into the BREF process

Could BATs be developed for BREF of Manufacture A regarding materials, chemicals or processes that affect approaches 1, 2 or 3?



Structure of the report

- Introduction
- Regulatory frameworks for material cycles
  - IED and BREF guidance
  - Waste legislation
  - Product legislation
- Case-sectors
  - Chemicals (LVOC/POL, LVIC) – SYKE
  - Surface treatment (STM) – IETU, UBA, KLAB
  - Textiles (TXT) – SWEPA
- Conclusions

Conclusions

General conclusions

- All material cycles are not sustainable
- Implementation of CE requires streamlining of legislative frameworks
- The IED and BREF documents can promote CE objectives only to a limited extent. More can be done to make better use of the current mechanisms
- Traditional installation (gate-to-gate) scope should be changed to life cycle thinking, which requires consideration of the whole supply chain
    - The most important phase of the life cycle differs within sectors: e.g. 80% of the environmental impacts from the textile sector are dependent on product design.

Production waste

- The production waste approach fits well to the current system. However, promotion of non-toxic material cycles requires more attention
- WT BREF and sectoral BREFs could set requirements for waste separation at source and temporal waste storing
- BREF documents already refer to waste hierarchy, but do not set concrete obligations
- As a minimum good practices of CE within the sector should be listed in the BREF documents
  - E.g. surface treatment sector (STM) already reduces waste generation by reusing the technological baths. More ambitious implementation would be to lay down quantitative performance levels, but this would require evidence from operators

Secondary raw materials

- Circulation of waste-based materials between installations or sectors demands a better connection of upstream and downstream processes
- Sectoral BREFs should refrain from making statements that could discourage CE promoting solutions (such as statements favoring the use of virgin materials). Instead examples of successful practices for waste recovery and use of secondary raw materials should be introduced
- Sectoral BREFs should also be used to indicate the most common by-products and their possible further uses in industrial processes

Product end-of-life

- The current scope of BREFs does not provide opportunities to set criteria on the product quality or other properties
- Non-toxic material cycles could be promoted by including chemical inventory BAT in the sectoral BREFs, especially in sectors where hazardous chemicals are used
- Information of the product chemical content should be available throughout the whole supply chain
- ECHAs new SCIP-database (**S**ubstances of **C**oncern **I**n articles, as such or in complex objects (**P**roducts)) could be useful here

Horizontal vs. Sectoral BREF

- Horizontal CE BREF has been suggested for implementing CE objectives (e.g. in the Ricardo study)
- However, sectoral BREFs can better address the sector specific CE challenges and possibilities
- Incorporating concrete CE provisions into horizontal BREFs can be difficult, as it would require provisions that are applicable to multiple industrial activities


Kiitos! Tack! Thank you!
Aitäh! Dzięki! Vielen Dank!