

Use of REACH/CLP information at industrial sites

How can spERCs be used for IED implementation?

ECHA Workshop: „Use of REACH/CLP information at industrial sites”
April 16th/17th 2015: Dirk Jepsen, Ökopol Institut, Hamburg



- ▶ **Conceptual Work REACH - IED**
 - ▶ Exposure Assessment during Waste life stage ECHA
 - ▶ RMM-efficiency for German UBA
 - ▶ spERC assessments ECHA/UBA
 - ▶ REACH info for Ecodesign & Ecolabeling (& visaversa)

- ▶ **Development of BAT notes (BREF documents)**
 - ▶ Direct Participation in the Information exchange on BAT “Sevilla Process” since 1998
 - ▶ E.g. TWG-Members for:
 - Ferros Metall Processing (FMP); Large combustion plants (LCP); Iron and steel (IS); Non -ferrous Metals Industries (NFM); Refining of Mineral Oil and Gas (REF); Surface treatment using organic solvents (STS); Surface Treatment of metals and plastics (STM) ;Waste Incineration (WI); Waste Treatment (WT); Production of Cement & Lime (CLM); Wood-based Panels (WBP); Economic and Cross Media Effects (ECM)
 - ▶ Preparation of national background documents (DE)
 - ▶ Tech. support for IND during data collection and documentation
- ▶ **Practical IED Implementation**
 - ▶ Technical support for Operators, Municipalities and NGO during permitting procedures
 - ▶ Drafting of guidance documents for several industrial sectors
 - ▶ Support and training of MS authorities concerning enforcement
 - ▶ Participation in WG on OECD level
 - ▶ Member of several Standardisation WG DIN/CEN/ISO

Overview

- ▶ What are spERCs?
- ▶ How can spERCs be used for the IED implementation?
- ▶ What challenges have to be overcome?

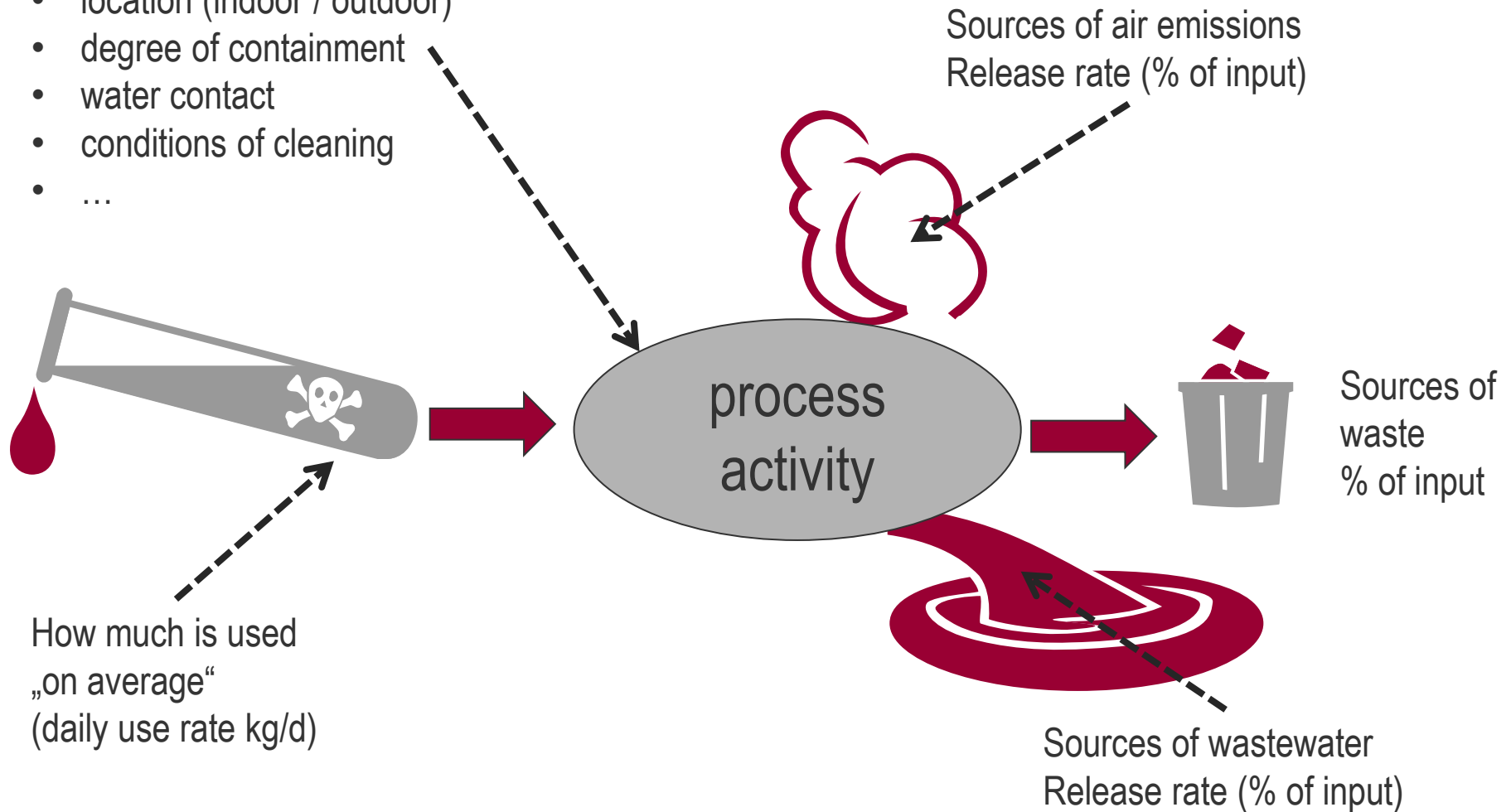
What are spERCs?

- ▶ A **sp**ecific **E**nvironmental **R**elease **C**ategory is:
 - ▶ a structured description of the conditions of an activity / process including risk management measures and waste treatment
 - ▶ focusing on the sources and the extent of emissions with environmental relevance

- ▶ A **sp**ecific **E**nvironmental **R**elease **C**ategory
 - ▶ is a model to estimate the amount of substance emissions
 - ▶ based on quantified parameters for the
 - ▶ use amount of substances
 - ▶ number of emission days and
 - ▶ percentage of the substance input which is emitted
 - ▶ (efficiency of RMMs)S

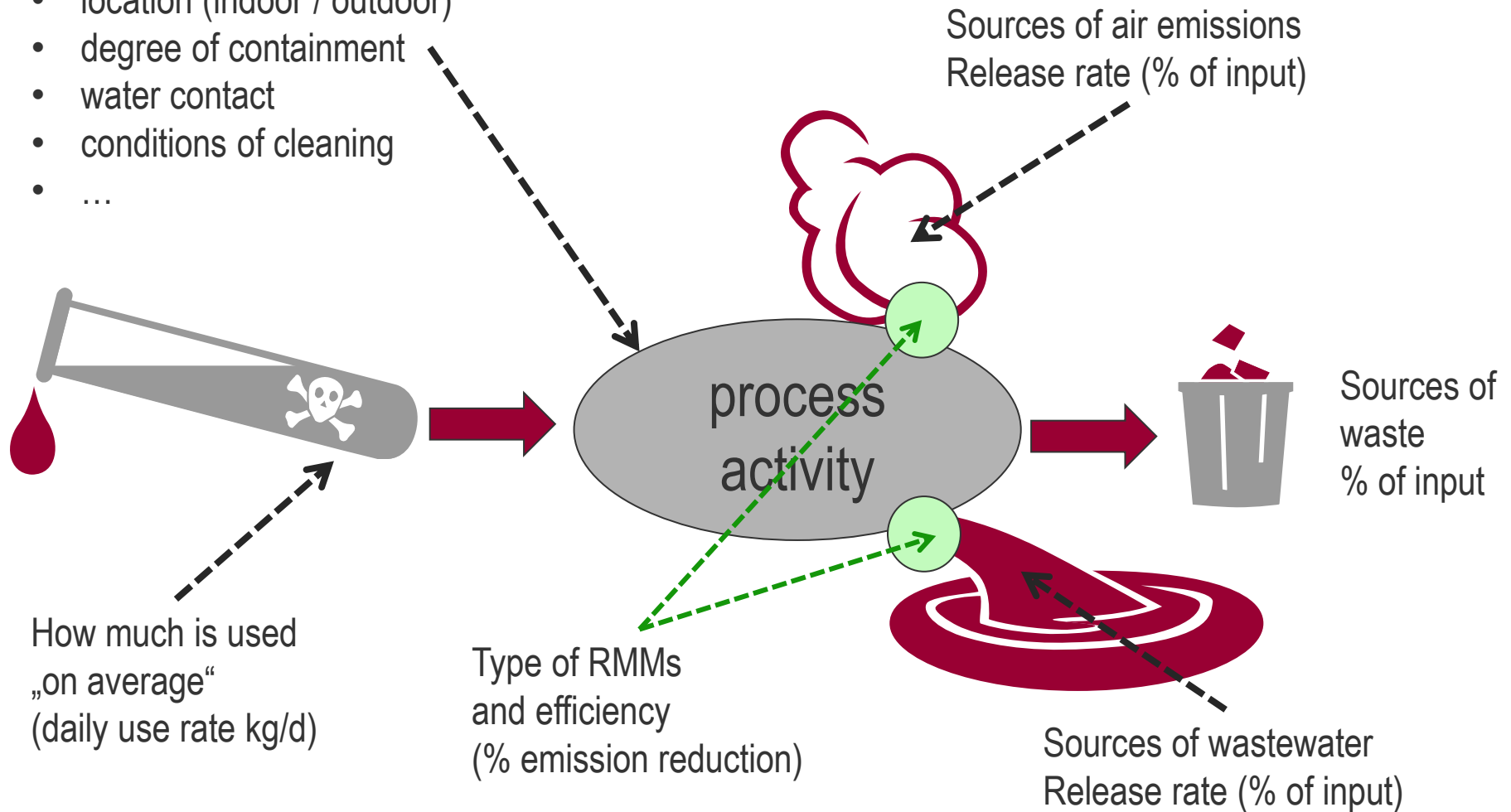
Basic description of what happens

- list of relevant processing steps
- location (indoor / outdoor)
- degree of containment
- water contact
- conditions of cleaning
- ...



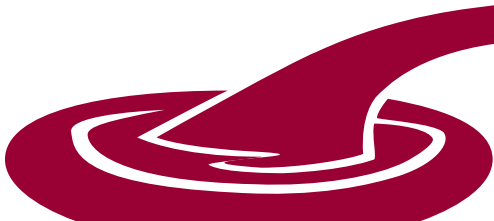
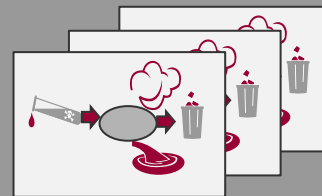
Basic description of what happens

- list of relevant processing steps
- location (indoor / outdoor)
- degree of containment
- water contact
- conditions of cleaning
- ...





Several activities / processes
may be carried out in an
installation →
Several spERCs may apply



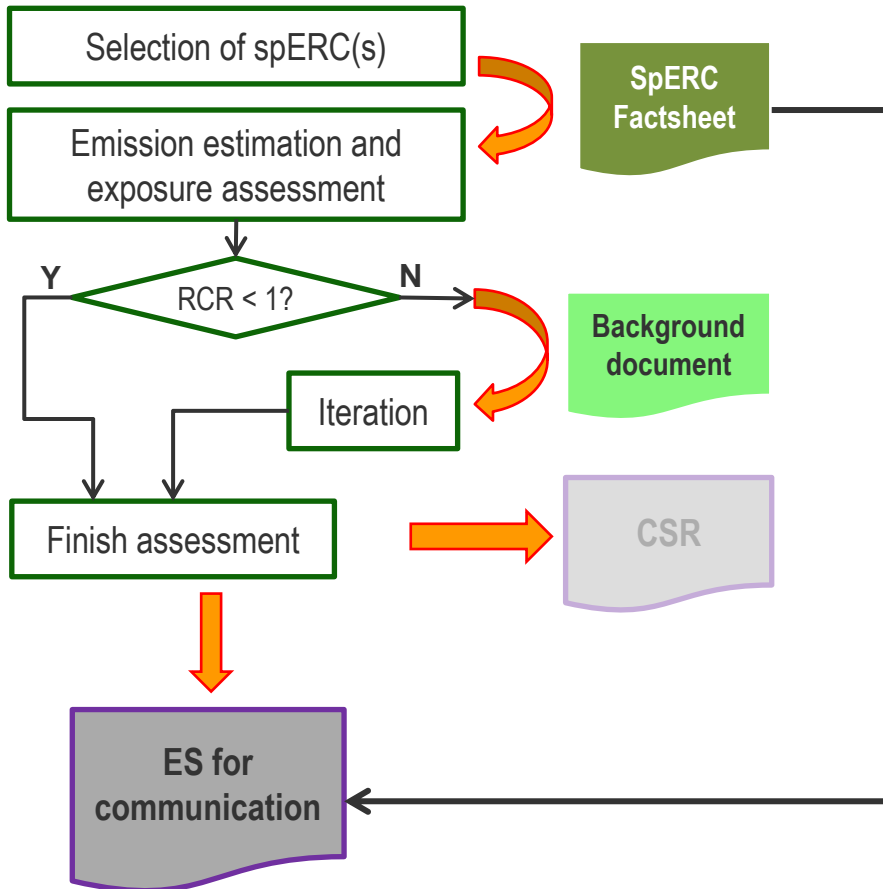
How does a spERCs look like?

- ▶ A **sp**ERC consists of
 - ▶ a factsheet with the core information (brief descriptions and quantified parameters)
 - ▶ a background document, among others explaining
 - ▶ the context of the spERC,
 - ▶ how quantification was derived (justification)
 - ▶ common RMMs for the use (process / activity)

- ▶ Developed by downstream user associations
- ▶ Address the use of substances at the level of mixtures
- ▶ Used by registrants for chemical safety assessment
- ▶ spERC information on conditions of use is communicated with SDS

How spERCs are used under REACH

Registrants

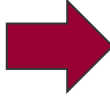
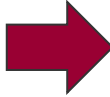


The spERC is not communicated with the SDS but only information DUs need to know to implement the safe conditions of use

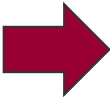
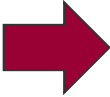
Information on

- What is covered
- Conditions of use (e.g. degree of containment, indoor/outdoor use, water contact)
- RMMs to be applied incl. necessary efficiency

Use of spERCs during – permit application

- ▶ Descriptive part of the spERC
 - ▶ Process and its steps, conditions of use and included RMMs
 - ▶ Emission sources
- ▶ Description of activities
 - ▶ Processes and their steps, conditions of use and RMMs
 - ▶ Emission sources
- ▶ Quantification and modelling character of the spERC
 - ▶ Derivation of emitted amounts and significance of effects (risk assessment by PEC/PNEC comparison) of substances (formulations) intended to be used

Use of spERCs during – granting/checking a permit

- ▶ Descriptive part of the spERC
 - ▶ Process and its steps, conditions of use connected RMMs
 - ▶ “Initial” Emission sources
 - ▶ Quantification and modelling character of the spERC
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- ▶ Check installation description
 - ▶ Completeness and relevance
 - ▶ Plausibility of emission sources, availability / alternatives to RMMs, orientation for monitoring
 - ▶ Prioritise substances for ELV setting
 - ▶ Derive site specific ELVs if necessary
 - ▶ Include additional RMM

(Some of the) challenges to be overcome

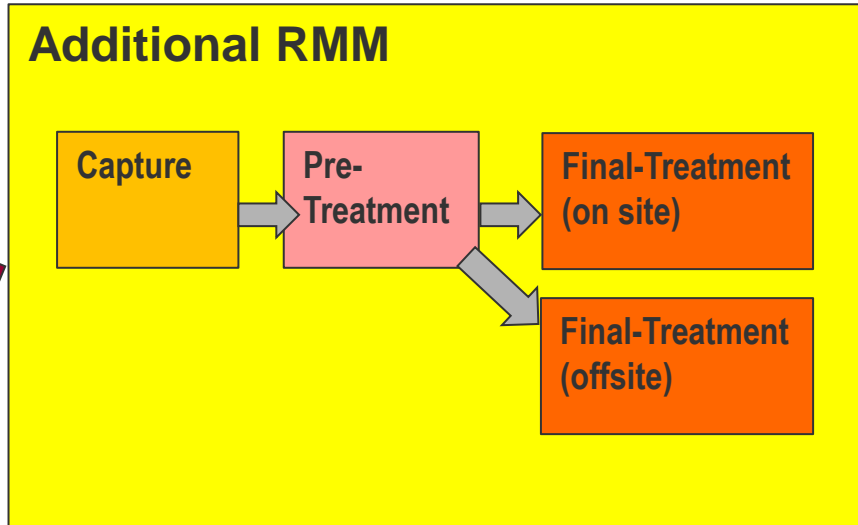
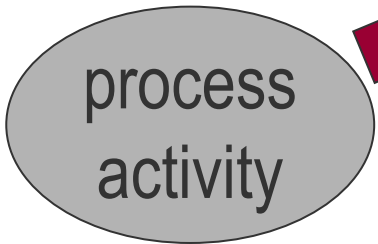
- ▶ spERC describes “normale” state-of-the-art rather than BAT
- ▶ spERC is only a model but whether or not it is applicable depends on the types of substances used in the installation / process
 - ▶ spERCs are usually NOT applicable for SVHC but
 - ▶ can be use for lower risk substances
- ▶ Single (hazardous) substances approach under REACH (amount of substance used/emitted) not (yet) taken up in IED (here mostly sum parameters and concentrations)
- ▶ Use of spERC generates freights to water, air and waste; IED works mainly with concentrations
- ▶ Risks trigger (strictness of) operational conditions and risk management measures – IED derives ELVs more based on technical possibilities – “save use” under REACH is based on environmental effects

Some more challenges to be overcome

- ▶ spERC is „state of the art“ rather than BAT
- ▶ For to check, adapt and modify Emission (model) information and site level meaningful information on the efficiency of additional env. RMM is key.
- ▶ (Nearly) No substance specific efficiency information are available neither under REACH nor IED
- ▶ CEFIC RMM library in current state is too generic for such a purpose => ongoing update but unknown status!?

(Additional) env RMM assessment/description and efficiency

Env release (factor) as described by spERC



Release (factor) with additional env RMM



Process/activity specific



Unspezifisch

Capture efficiency depends on cp-properties of substance (group) , property of emissions stream (mixture), Temperature, geometric situation, handling, ...

Pre-Treatment efficiency depends on cp-properties of substance (group) , (Problematic) property of emissions stream (mixture),

Final Treatment efficiency depends on generic properties of substance group (Problematic) properties of emissions stream