

Sustainability in commercial laundering processes

Module 1
Usage of water

Chapter 6 a
Waste water requirements

- **Directives, laws, ordinances and other regulations**
(terms and definitions)
 - EC level (directives, ordinances)
 - National law
 - Local level (municipal regulations)

- **Requirements for laundries**
 - general
 - direct and indirect discharge

After finishing this chapter, you will

- know the different levels of laws, ordinances and directives
- know and be able to point out the consequences for laundries
- know what direct discharge and indirect discharge is and be able to explain the difference

- **EC (European level)**
- **Countries (national level)**
- **Cities, communes/local authorities (regional level)**
- **Organisations
(regional level, e.g. associations)**

EU / EC (European level)

Water protection directive

- Hazardous substances, priority substances
 - AOX, fluorine, heavy metals → limiting emission
 - Outline law/law providing guideline → implementing on national level

EU / EC (European level)

- **IPPC directive**
 - Integrated pollution prevention and control
 - Comprehensive orientation (water, soil, **and** air)
 - Bulletins with „**best available technologies**“

- **Water framework directive**
 - Reference to all waters
 - Determination of achievement and derivation of „good conditions“ including timetable

Countries level

The different national sets of limiting values have been developed without any official coordination, since demands for wastewater discharged to a treatment plant were considered as a local affair in EU

- ⇒ Different limiting values for wastewater discharge all over EU

e.g. Germany:

- **Wasserhaushaltsgesetz**
 - „water protection starts at production“
 - „avoid and minimise take priority over treatment“
 - definition of „state-of-the-art“, definition of substances hazardous to water)
- **Abwasserabgabengesetz**
 - definition of assessable parameters
 - definition of „contaminant units“, eg. COD = 50 kg, P = 3 kg, Hg = 20 g)
definition of threshold values (concentration **and** annual amount)
possibility of reduction **and** increase of charges)
- **Abwasserverordnung**
 - discharge requirements: general **and** sectoral,
 - laundries: „Anhang 55“
 - definition of analysis and measurement procedures

Regional level (cities, local authorities, organisations)

- ⇒ Permissions for discharge
 - ⇒ Limiting parameters for waste water to be obtained
 - ⇒ Discharge charges
 - ⇒ Discharge control by public authorities
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- ⇒ Important: contact between “effluent producer” and authorities

Municipal waste water regulations

- Precise, concrete requirements (collection, treatment, discharge)
- Protection
 - personnel, treatment plant, sewer system, sludge
- Definition of certain industrial sectors



Regulations control:

- **Responsibility**

- **abandon of risks and hazards**

- **Liability**

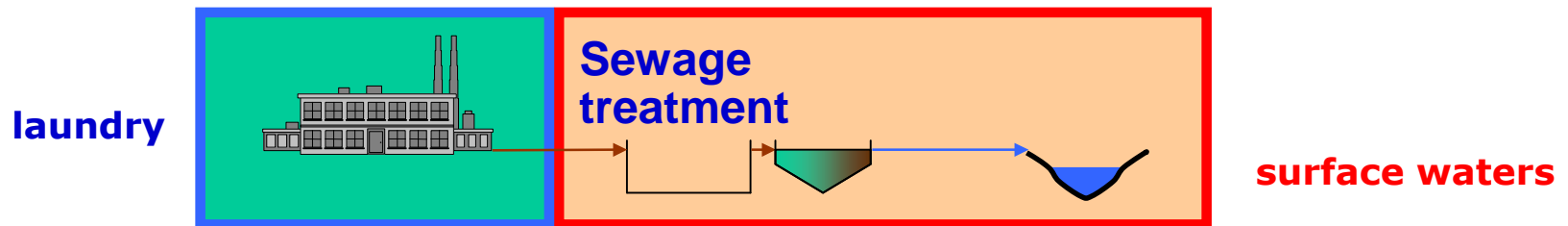
- **Duty of danger defence**
- (owner of factory or real estate **and** corporate engagement, waste producer)

Law – requirements for laundries

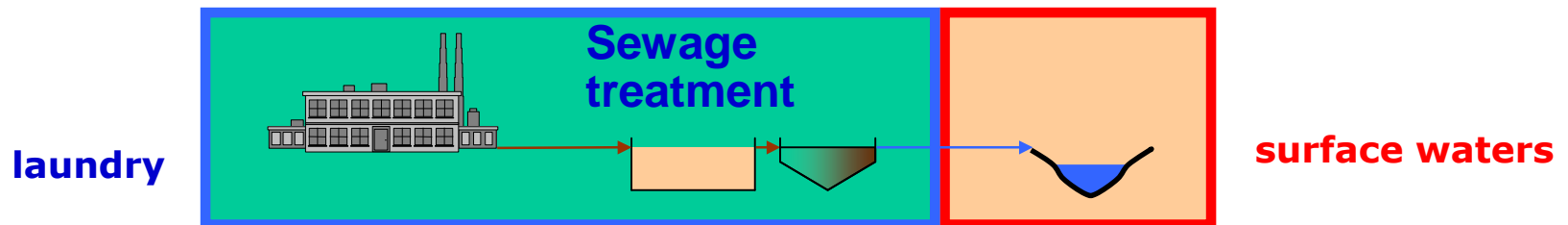


Leonardo da Vinci

- Indirect discharge
via municipal sewage treatment plant into surface waters



- Direct discharge
via own treatment plant into surface waters



Law – requirements for laundries

Indirect/direct discharge

Indirect discharge

- licence necessary
- special limiting parameters for hazardous substances
- regulations on discharge parameters, limits and charges
- laundry not responsible for treatment
- pre-treatment of wastewater could be required
- direct by legal restrictions, e.g. **in Germany: Anhang 55**
- indirect due to unrealistic limit values

Law – requirements for laundries

Indirect/direct discharge

Direct discharge

- special license necessary
- duty of self-checking
- responsibility for treatment
- stronger regulations and limits