



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Implementation of the Urban Waste Water Treatment Directive and permitting practices in Finland

Ari Kangas
The Ministry of the Environment, Finland

Project BEST – Better Efficiency for Industrial
Sewage Treatment
Workshop on Hazardous substances
21.11.2018, Toila, Estonia



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Urban Waste Water Treatment Directive, UWWTD

COUNCIL DIRECTIVE
of 21 May 1991
concerning urban waste water treatment
(91/271/EEC)



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Urban Waste Water Treatment Directive, UWWTD

Article 1

This Directive concerns the collection, treatment and discharge of urban waste water and the treatment and discharge of waste water from certain industrial sectors.



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Urban Waste Water Treatment Directive, UWWTD

Article 2

For the purpose of this Directive :

1. 'urban waste water' means domestic waste water or the mixture of domestic waste water with industrial waste water and/or run-off rain water ;
3. 'industrial waste water' means any waste water which is discharged from premises used for carrying on any trade or industry, other than domestic waste water and run-off rain water ;



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Urban Waste Water Treatment Directive, UWWTD

Article 11

1. Member States shall ensure that, before 31 December 1993, the discharge of industrial waste water into collecting systems and urban waste water treatment plants is subject to prior regulations and/or specific authorizations by the competent authority or appropriate body.
2. Regulations and/or specific authorization shall satisfy the requirements of Annex I C. These requirements may be amended in accordance with the procedure laid down in Article 18.
3. Regulations and specific authorization shall be reviewed and if necessary adapted at regular intervals.



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Urban Waste Water Treatment Directive, UWWTD

C. Industrial waste water

Industrial waste water entering collecting systems and urban waste water treatment plants shall be subject to such pre-treatment as is required in order to :

- protect the health of staff working in collecting systems and treatment plants,
- ensure that collecting systems, waste water treatment plants and associated equipment are not damaged,
- ensure that the operation of the waste water treatment plant and the treatment of sludge are not impeded,
- ensure that discharges from the treatment plants do not adversely affect the environment, or prevent receiving water from complying with other Community Directives,
- ensure that sludge can be disposed of safely in an environmentally acceptable manner.



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Urban Waste Water Treatment Directive, UWWTD

Article 13

1. Member States shall ensure that by 31 December 2000 biodegradable industrial waste water from plants belonging to the industrial sectors listed in Annex III which does not enter urban waste water treatment plants before discharge to receiving waters shall before discharge respect conditions established in prior regulations and/or specific authorization by the competent authority or appropriate body, in respect of all discharges from plants representing 4 000 p.e. or more.
2. By 31 December 1993 the competent authority or appropriate body in each Member State shall set requirements appropriate to the nature of the industry concerned for the discharge of such waste water.
3. The Commission shall carry out a comparison of the Member States' requirements by 31 December 1994. It shall publish the results in a report and if necessary make an appropriate proposal.



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Urban Waste Water Treatment Directive, UWWTD

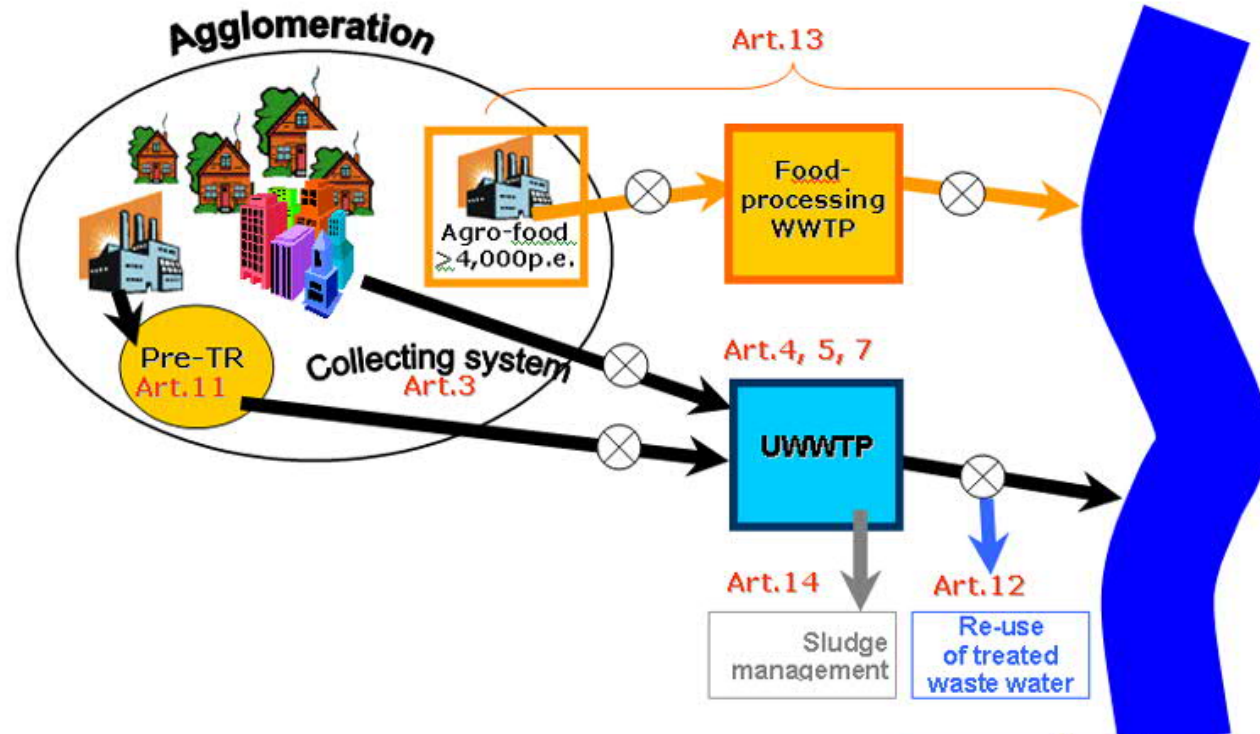
ANNEX III

INDUSTRIAL SECTORS

1. Milk-processing
2. Manufacture of fruit and vegetable products
3. Manufacture and bottling of soft drinks
4. Potato-processing
5. Meat industry
6. Breweries
7. Production of alcohol and alcoholic beverages
8. Manufacture of animal feed from plant products
9. Manufacture of gelatine and of glue from hides, skin and bones
10. Malt-houses
11. Fish-processing industry



Urban Waste Water Treatment Directive, UWWTD



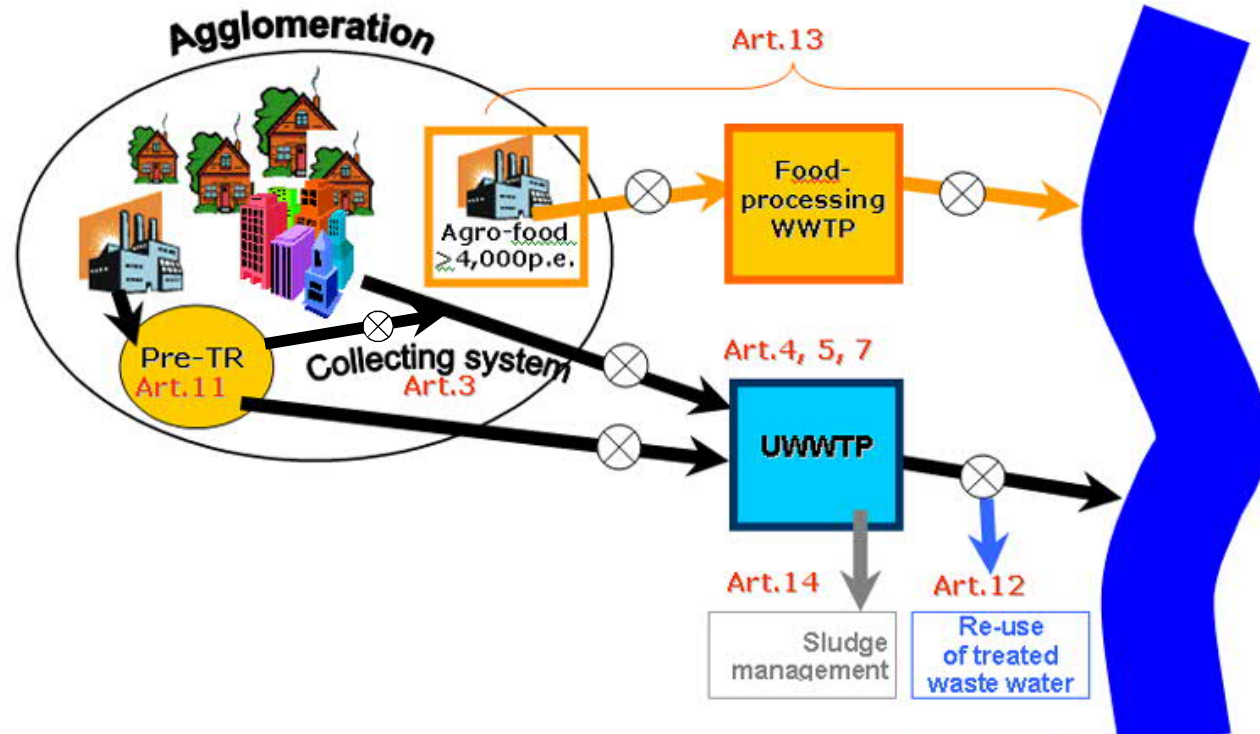
Legend:

- Pre-TR = pre-treatment
- Agro-food = food-processing industries
- UWWTP = urban waste water treatment plant
- Agro-food >4000p.e. = food-processing industry
- Art. 3, 4, 5, 7, 11, 12, 13, 14 = articles of the Directive 91/271/EEC

Receiving areas:
 sensitive area, catchment of
 sensitive area, normal area,
 less sensitive area



Urban Waste Water Treatment Directive, UWWTD



Legend:

Pre-TR	= pre-treatment
Agro-food	= food-processing industries
UWWTP	= urban waste water treatment plant
Agro-food >4000p.e.	= food-processing industry
Art. 3, 4, 5, 7, 11, 12, 13, 14	= articles of the Directive 91/271/EEC

Receiving areas:
sensitive area, catchment of
sensitive area, normal area,
less sensitive area



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Urban Waste Water Treatment Directive, UWWTD

- ...**any waste water** which is discharged from premises used for carrying on **any trade or industry**
- ...the discharge of industrial waste water into collecting systems and urban waste water treatment plants is subject to
 - **prior regulations**
 - and/or
 - **specific authorizations**
 - by the competent authority or appropriate body
- Regulations and specific authorization shall be reviewed and, if necessary, adapted at **regular intervals**



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Urban Waste Water Treatment Directive, UWWTD

Regulations and/or specific **authorization** shall satisfy the requirements of Annex I C

- **Protect the health** of staff working in collection systems and treatment plants
- Ensure that collection systems, waste water treatment plants and associated equipment **are not damaged**
- Ensure that the operation of the waste water treatment plant and the treatment of sludge **are not impeded**
- Ensure that discharges from the treatment plants **do not adversely affect** the environment, or **prevent receiving water** from complying with other Community Directive
- Ensure that sludge can be disposed of safely in an **environmentally acceptable** manner



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Environmental permits in Finland

- Based on the Environmental Protection Act
- An environmental permit is needed for activities causing adverse effects on human health and environment
(Notifications and registration of activities)
- Permits are drafted case by case
- Conditions (for example effluent limits) are defined in the permits
- People concerned and interest groups involved have broad right to participate in the permitting process
- Permit regulations must be based on the best available technology (BAT) or best environmental practices (BEP)
- Permits include monitoring and reporting requirements



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Environmental permits in Finland

Different authorities

Regional State Administrative Agencies (AVI) / 6 Centres

- Environmental permits

Centres for Economic Development, Transport and the Environment (ELY) / 15 Centres

- Environment and natural resources
- Supervision of permit compliance

Local municipal authorities

- Individual municipalities / joint authorities
- Environmental permits
- Supervision of permit compliance



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

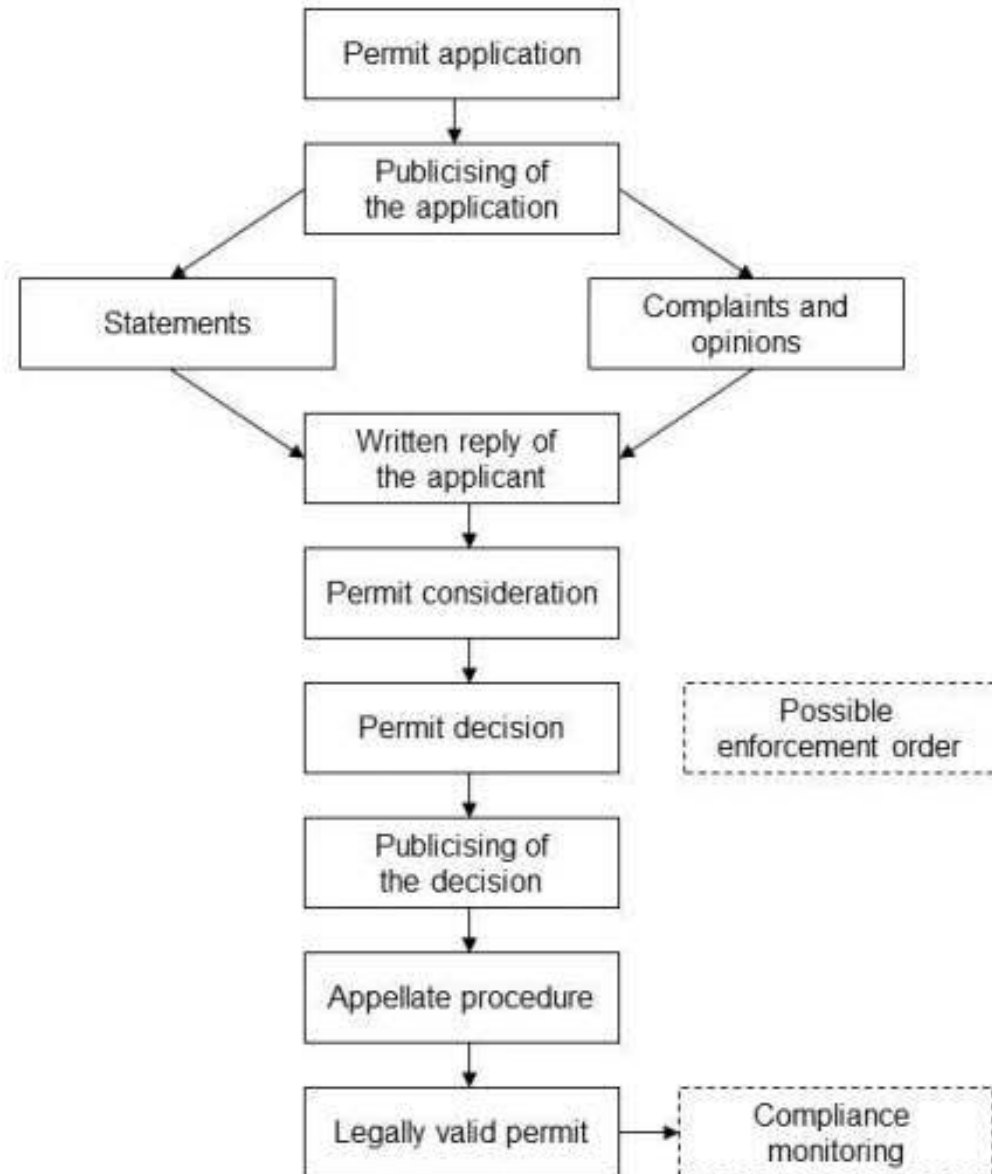
Environmental permits in Finland

- Regional State Administrative Agencies grant environmental permits for large and for those industrial installations which have the most severe environmental impacts (like stated in the IE directive)
- Local municipal authorities grant environmental permits for minor activities
- Centres for Economic Development, Transport and the Environment as well as municipal environmental protection authorities supervise compliance of permits so that CEDTE's supervise larger plants and installations permitted by Regional State Administrative Agencies



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Environmental permits in Finland





Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Environmental permits in Finland

- A list of activities subject to a permit in the annex of the Environment Protection Act (527/2014)
- Comprehensive list of activities
- Discharge of waste water to municipal waste water treatment plant is not a criteria
- Permits are amended when circumstances change substantially

Environment Protection Act (527/2014)

7 § Duty to limit and to prevent the pollution of the environment

An operator has to limit the emissions to the environment and the discharges to the sewer to a minimum

67 § The provisions governing waste water discharges to the sewer

If industrial wastewater is discharged to municipal waste water treatment plant, necessary regulations on the appropriate pretreatment of the waste water shall be issued in the environmental permit in order to prevent the pollution of the environment and to ensure the performance of the waste water treatment plant



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Environmental permits in Finland

- Environmental Protection Decree (713/2014)

15 § Content of the decision section of the permit decision

The decision section of the permit decision shall contain:

- 3) the limit values and provision governing discharges of substances and compounds referred to in annex 1, if the amounts of discharges of such substances or compounds pose a risk of pollution of the environment or causes harm to the operation of sewage utility;



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Environmental permits in Finland

- Environmental Protection Decree (713/2014)

41 § General requirements on discharges into a sewer of waste water utility

Industrial waste water and other waste water containing pollutants that are entering collecting systems and urban waste water treatment plants shall be subject to appropriate pre-treatment as is required in order to :

- 1) ensure that discharges from the treatment plants do not adversely affect the environment, and prevent receiving water from complying with other provisions,
- 2) ensure that sludge can be disposed of safely in an environmentally acceptable manner.
- 3) protect the health of staff working in collecting systems and treatment plants;
- 4) ensure that the operation of the waste water treatment plant and the treatment of sludge are not impeded,
- 5) ensure that collecting systems, waste water treatment plants and associated equipment are not damaged,

Waste water utility may refuse to connect such activity and refuse to receive waste water referred in subsection 1, if the provisions set in subsection 1 are not complied with



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Environmental permits in Finland

- Environmental Protection Decree (713/2014)

42 § Environmental permit instructions on discharges into a sewer of a waste water utility

If industrial or other waste water that is discharged to municipal waste water treatment plant contain substances or compounds referred to in annex 1, necessary limit values and other provision governing discharges shall be issued in the environmental permit in order to ensure the appropriate pre-treatment and monitoring of the discharge. During the processing of application the permit authorities shall give waste water utility an opportunity to be heard



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Environmental permits in Finland

- Environmental Protection Decree (713/2014)

Annex 1

The most important pollutants in setting limit values for emissions and discharges

Discharges into waters

- 1) organic halogen compounds and substances which could form such compounds in an aquatic environment;
- 2) organophosphorous compounds;
- 3) organic tin compounds;
- 4) substances and products which have been demonstrated to have carcinogenic, mutagenic or teratogenic properties;
- 5) stable hydrocarbons and permanent or bioaccumulative toxic organic substances;
- 6) cyanides and fluorides;
- 7) metals and metallic compounds;
- 8) arsenic and its compounds;
- 9) biocides and plant protection products;
- 10) suspended substances;
- 11) substances which cause eutrophication, and in particular nitrates and phosphates;
- 12) substances with a harmful impact on oxygen balance.



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Environmental permits in Finland

Connecting to the network of a water utility and management of water services
(Water Services Act, 119/2001)

10 § Connecting a property to the network of a water utility

Notwithstanding the provisions of subsection 1, a water utility may refuse to connect to the water main or wastewater sewer a property if its water consumption or quality or quantity of wastewater conducted from the property to the wastewater sewer would interfere with the operations of the water utility or its ability to satisfactorily manage the water services of other properties.



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Environmental permits in Finland

Connecting to the network of a water utility and management of water services
(Water Services Act, 119/2001)

10 § Connecting a property to the network of a water utility

Notwithstanding the provisions of subsection 1, a water utility **may refuse to connect** to the water main or wastewater sewer a property if its water consumption or **quality or quantity of wastewater** conducted from the property to the wastewater sewer would interfere with the operations of the water utility or its ability to satisfactorily manage the water services of other properties.

Preconditions for granting a permit (Environment Protection Act, 527/2014)

In the statements during the processing of application waste water utilities typically propose equal limit values and equal monitoring as set as preconditions in the industrial waste water agreements



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Environmental permits in Finland

Compliance monitoring of permits entails

- Approval of monitoring plans
- Inspections ensuring that
 - Operations conform to those described in the permit
 - Permit conditions have been fulfilled
 - Permit conditions are being complied with
- Review of annual and periodic reports in accordance with permit or monitoring plan
- Communication prompted by reports, complaints or notifications
- Further measures when emission limit values are exceeded
- The CEDTE and the local authority work closely together

- Joint monitoring and inspection with the CEDTE and the waste water utility



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Environmental permits in Finland

Authorities' means to put matters right

- Negotiations
- Request
- Order
 - Usually intensified by conditional imposition of a fine
- Suspending operations
 - Only if there is a direct harm to health or some other immediate major pollution of the environment
 - Only if the harm cannot be eliminated or sufficiently reduced otherwise
 - Very seldom used
- Report of an offence to the police



Ympäristöministeriö
Miljöministeriet
Ministry of the Environment

Thank you!
