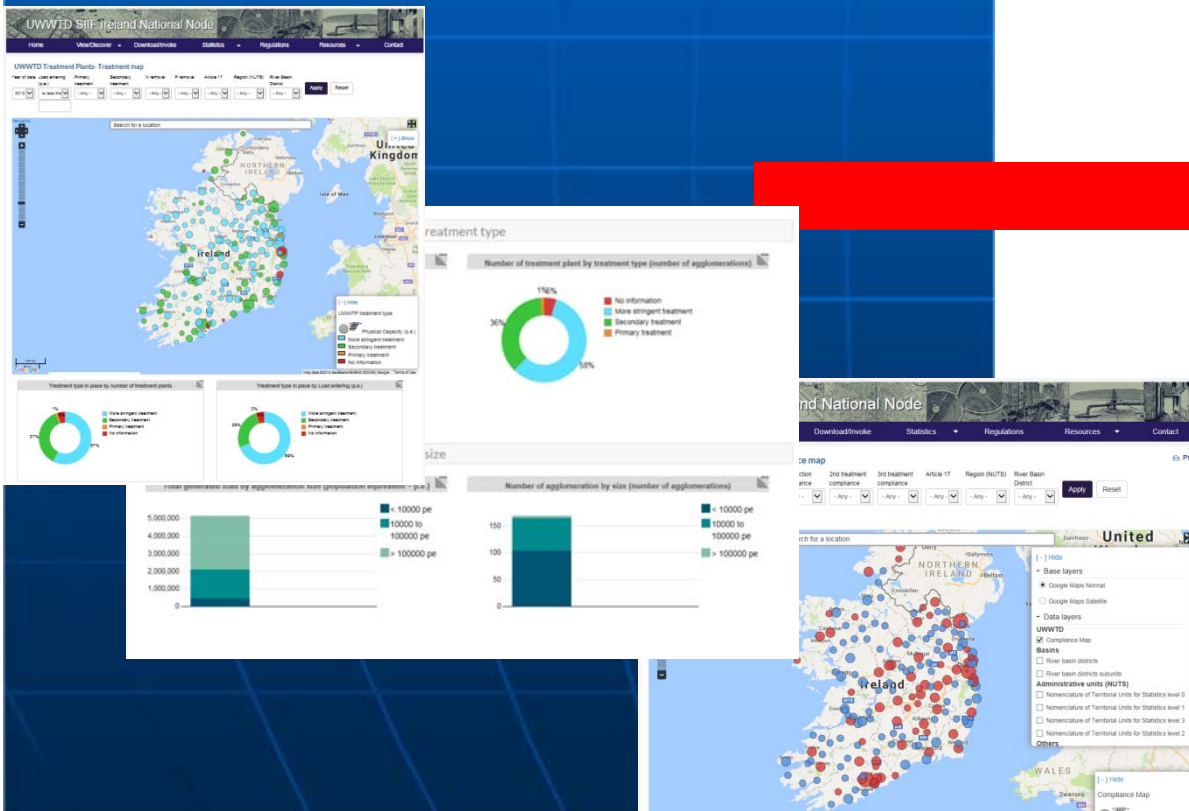




INSPIRE: a backbone for water community in the future?

Part I: The INSPIRE Urban Waste water website functionalities



Benoît Fribourg-blanc
Office International de l'Eau



Urban Waste Water Treatment Directive:

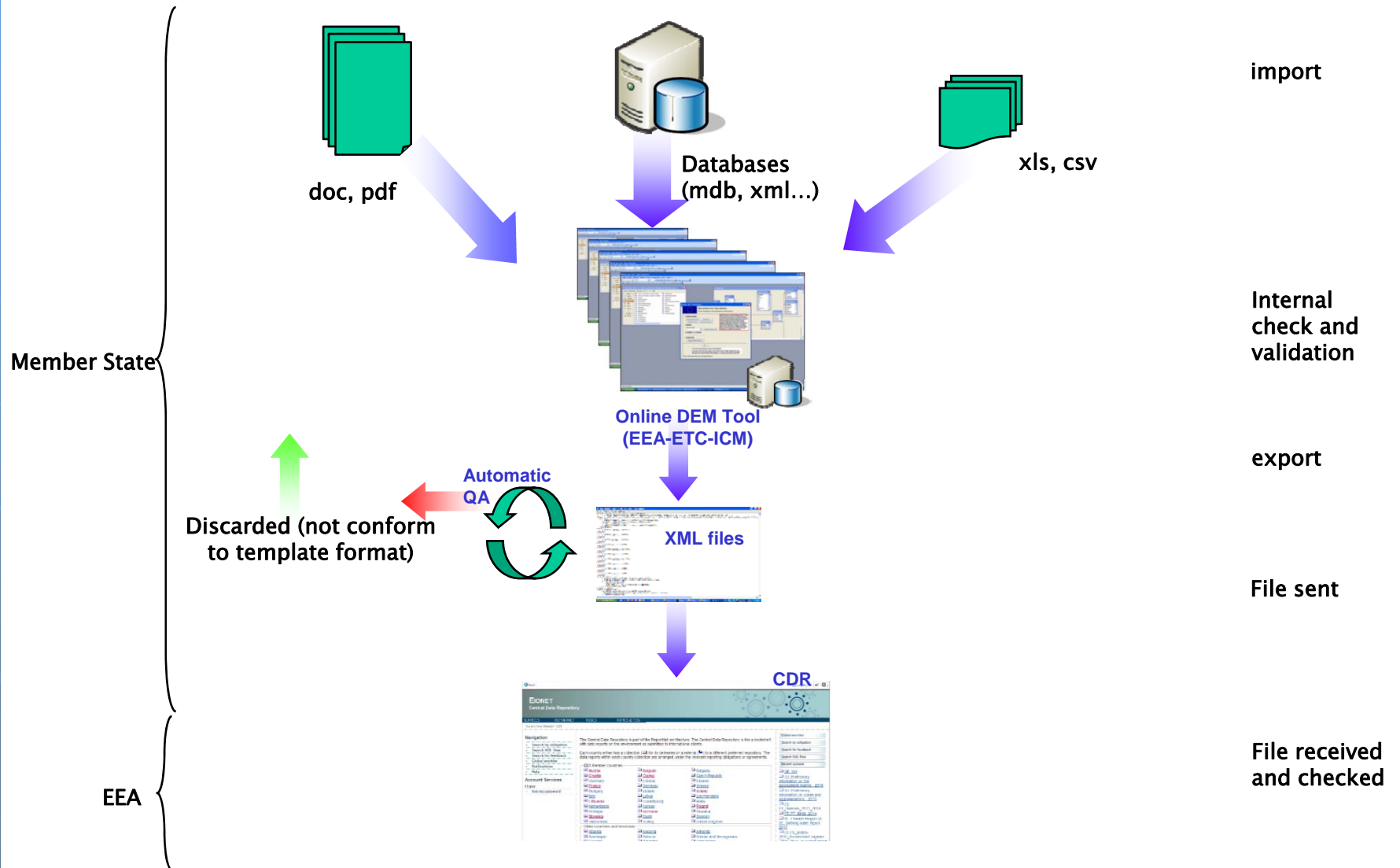
the core elements

- o Directive 91/271/EEC (UWWTD) requires
 - o 3 types of reporting
 - o Article 15 compliance assessment: detailed situation using 4 components
 - o *agglomeration,*
 - o *treatment plant,*
 - o *discharge point,*
 - o *and receiving area*
 - o Article 16: summary national situation report
 - o Article 17: implementation programme
 - o Reporting data every two years since 1998
- o A data collection process progressively implemented
- o Identified as test case for implementation of SIIF concept

Implementing UWWTD: the reporting

- A complete EU based data collection chain with:
 - Common **EU data model** on urban waste water with [reporting guidelines](#) not totally INSPIRE compliant (deadline 2020) but **easily adjustable**
 - **Reporting tools** managed by EEA to check the reporting format and the quality of data ([UWWTD webtool](#))
 - Common public **reporting platform** at EEA level where to find all the XML reported datasets ([EIONET/reportnet](#))

UWWTD data collection: a set of steps



What is the UWWTD-SIIF: framework

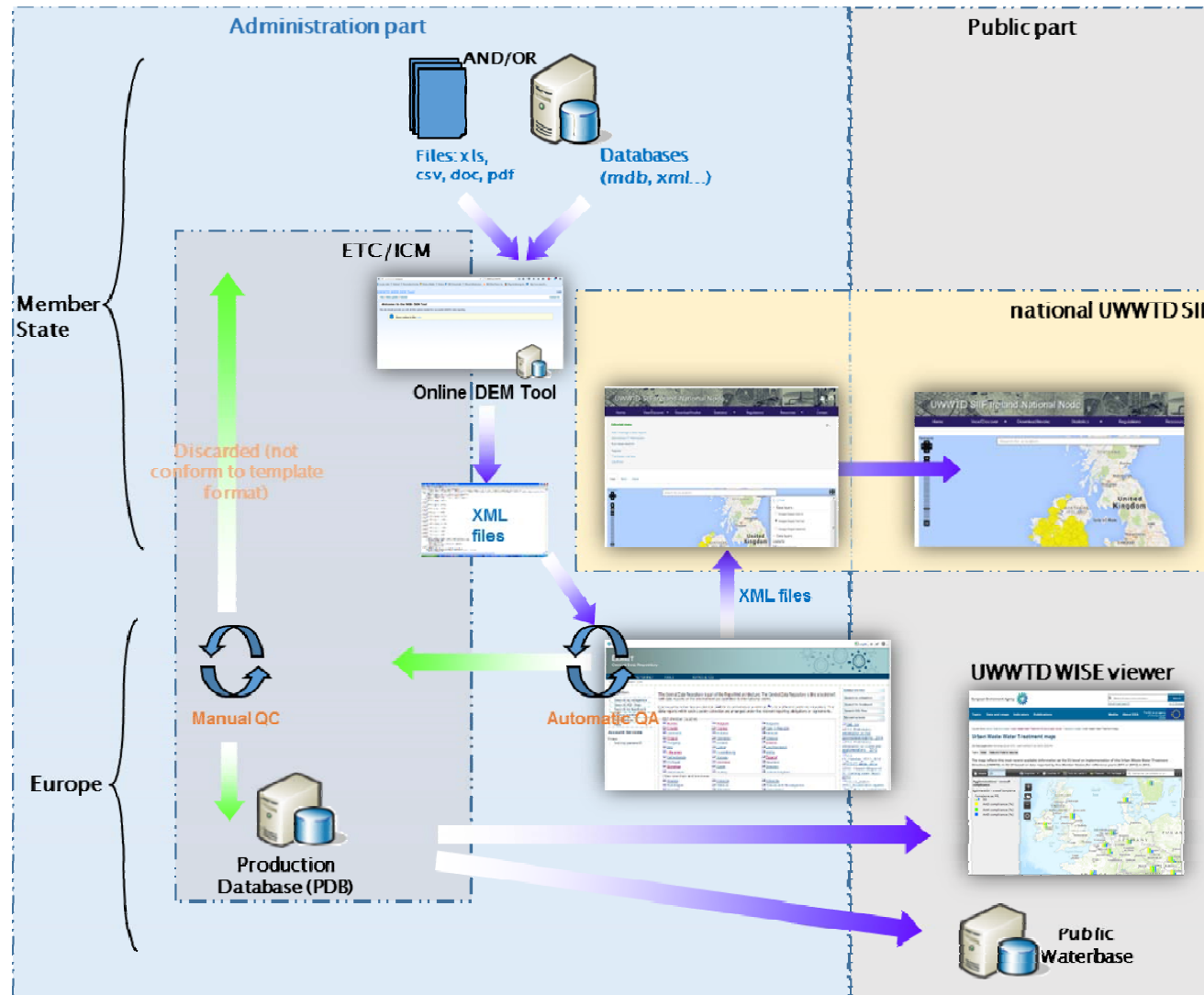
The **UWWTD-SIIF platform** is a tool to use national validated dataset

- It is not a collection tool
- It is not a reporting tool
- It is not fully Inspire compliant tool because
 - data schema absent
 - Not all webservice are fully implemented
 - Metadata not available for all datasets
 - WFS is in simple feature format (pragmatic)
- It is provided for free, as support for MS, not mandatory
- It will evolve in the future with contributions from users

The **UWWTD-SIIF platform** can be used for many different purposes (see plenary I presentation):

- Visualisation of data collected and reported,
- Assess the MS/local situation as regards UWWTD implementation,
- Check, identify errors, and correct data,
- Download sub sets of data,
- ...

Where is the UWWTD-SIIF in EU system

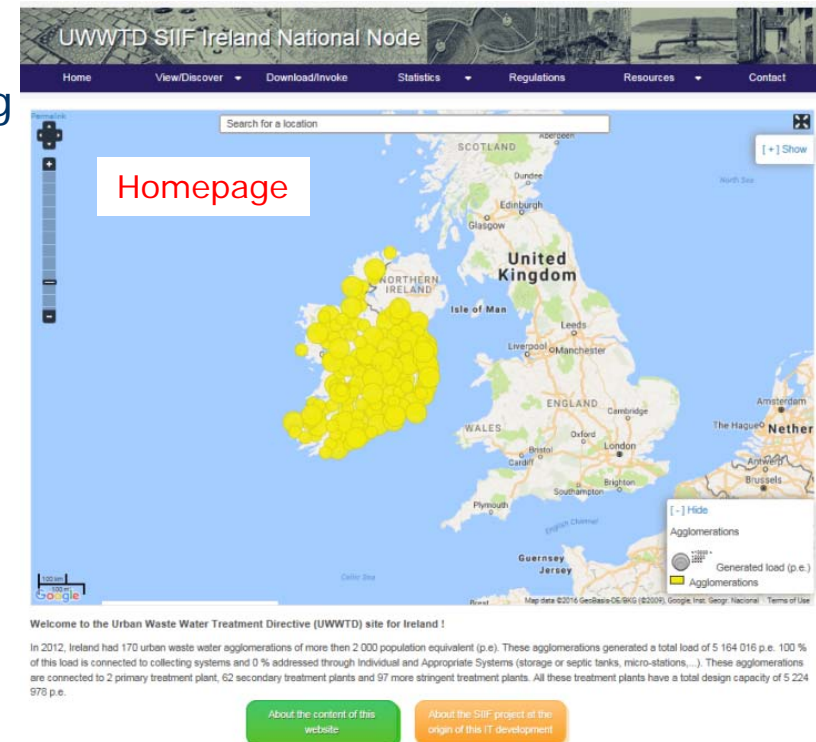


UWWTD-SIIF: planned future (2016-2017)

- a) Some candidate countries will implement on their server
- b) The platform will be used for assessment of the latest reporting
 - One platform per MS
 - A EU platform to gather some summary information
 - Interlinkage via webservices
- c) Inspire validated schemas will be made available (implemented in SIIF?)
- d) Extension to other environmental domains (Drinking water, bathing water...)

UWWTD SIIF: What is it?

- In close collaboration with **Commission** and **pilot Member States**
- A national **generic open source** waste water **website**
 - Inspire compatible,
 - Disseminating datasets, including data not relevant for Inspire (Art17)
 - Showing and using the data,
 - Tool free to be reused,
 - including many functionalities,
 - with maps, graphs, tables
 - with individual fiches...



1. Generic website: uwwtd.oieau.fr

2. webtool and documentation for developers:
<https://github.com/OIEau/uwwtd>

Implement Article 11 of INSPIRE Directive

UWWTD SIIF Ireland National Node

Home

View/Discover

Download/Invoke

Statistics

Regulations

Resources

Contact

Discover: Metadata

Vector database of the UWWTD. Agglomerations was compiled by the national authorities from the spatial data submission reported by local authorities in the framework of implementation of Directive 91/271/EEC

downloadsAndResources

- Urban Waste Water Treatment Directive; Agglomerations / Ireland
- UWWTD UWWTD_recette_Ireland_Agglomeration (MetadatalURL)
- Agglomerations (LegendURL)

associatedResources

- UWWTD SIIF visualization service

About this resource

INSPIRE themes

Categories

Keywords

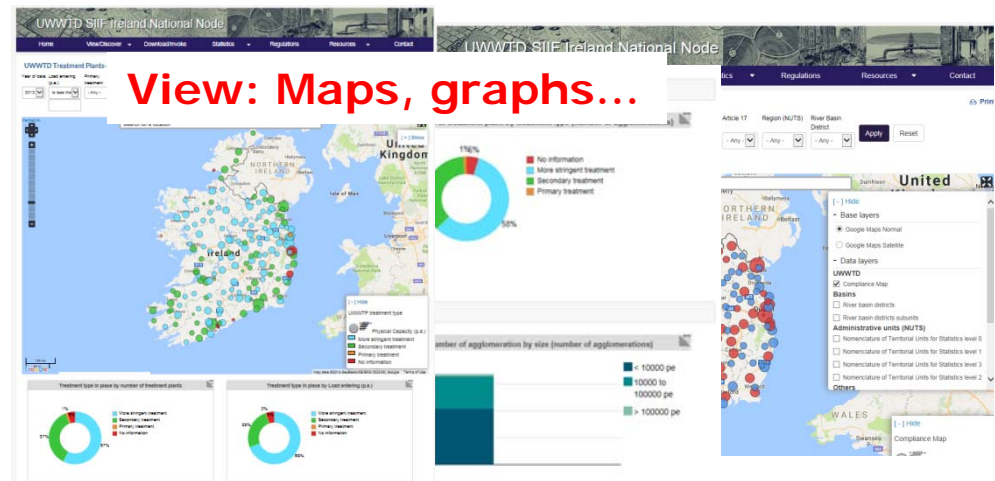
- Production and industrial facilities
- collective wastewater treatment
- waste water discharge



View: Maps, graphs...

UWWTD SIIF Ireland National Node

UWWTD Treatment Plants



number of agglomeration by size (number of agglomerations)

- < 10000 pe
- 10000 to 100000 pe
- > 100000 pe

Download/invoke

Webservice

DescribeFeatureType
: description of the information layers, name and type of fields.

GetFeature:
access to data in GML format

Agglomeration

[Agglomeration](#)

[Agglomeration](#)

Treatment plant

[Download](#)
[UrbanWasteWaterTreatmentPlant](#)

[UrbanWasteWaterTreatmentPlant](#)

Discharge point

[DischargePoint](#)

[DischargePoint](#)

Receiving area

[ReceivingArea](#)


[ReceivingArea](#)

→ Urban waste water data can be now reused everywhere

A Fiche for each geographical object

- 4 geographical objects: Agglomeration, Treatment plant, Discharge Point, Receiving area
- An information fiche with map, data, scheme, graph, links...

Map



UWWTP: Siaulių nuotekų valykla Identifier: LT-AG-004-WWTP-01 Status: Active Reporting year: 2011
Region (NUTS) Code: LT00 - Region (NUTS) Name: Lietuva

Compliance timeline

2011

Compliant Not compliant Not relevant No information ?

Description

Description 2011

Load entering UWWTP (p.e.): 110 000
Physical Capacity (p.e.): 102 000
Waste water treated (m³/y): 6 900 000

Treatment performance :

- BOD5: Pass
- COD: Pass
- TSS: Pass
- Total nitrogen: Pass
- Total phosphorus: Pass
- Other: Pass

Load and concentration per parameter :			
	Incoming	Discharged	Rate
BOD	2434 t/year	34.75 t/year	98.6%
	273.48 mg/l	3.9 mg/l	
COD		325.3 t/year	
		36.55 mg/l	
Nitrogen	623 t/year	134.23 t/year	78.5%
	70 mg/l	15.08 mg/l	
Phosphorus	56.55 t/year	1.79 t/year	96.8%
	6.35 mg/l	0.2 mg/l	

* Concentration calculated using the annual load and the annual volume of wastewater treated.

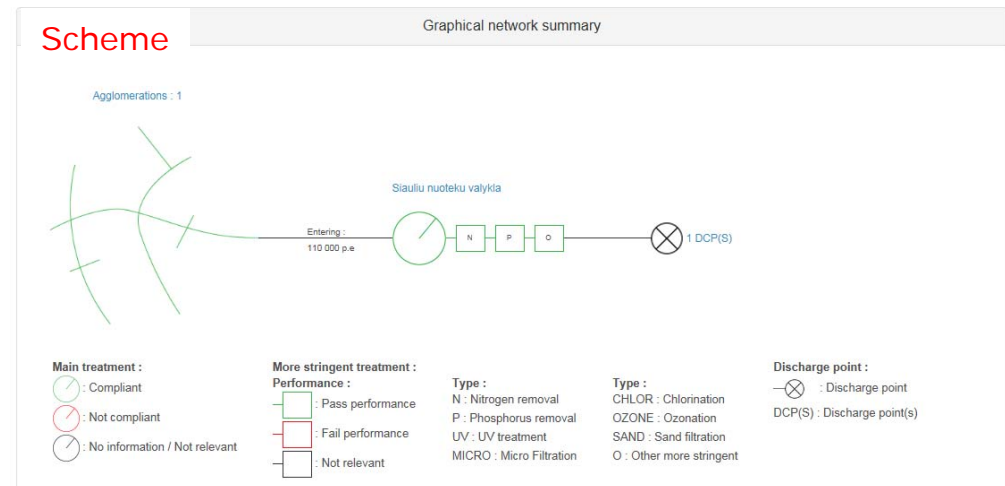
Compliance: **Compliant**

Treatment type in place: More stringent treatment

Treatment required:
More stringent treatment: Nitrogen and Phosphorus

Treatment met: Yes

Performance met: Yes



Easy possibility to **link other websites** to these webpages:

http://www.uwwtd.oieau.fr/agglomeration/ieag_469

http://www.uwwtd.oieau.fr/treatment-plant/ietp_818

Information about future UWWT projects

Article 17 of the Directive requests such information (programme of implementation)



Map viewer of agglomerations with projects

Forward looking aspect
<p>Identified reason(s) for non compliance: 1) All agglomeration load not collected and delivered for treatment</p> <p>Measure(s) foreseen to reach compliance with Article 3 (collecting systems and IAS): Network and pumping station upgrades.</p> <p>Date or expected date for completion of preparatory measures for the collecting system or IAS (planning, design, procurement, c: 01 November 2015</p> <p>Start date or expected start date for works on the collecting systems or IAS: 01 February 2016</p> <p>Expected date of completion of the collecting system or IAS works: 01 May 2017</p> <p>Forecast investment cost for the collecting system or IAS (as in the national plan): 11700000.00</p> <p>Name of EU fund planned to be used to complete the collecting system or IAS (if any): -</p> <p>Any relevant comment on collecting system or IAS: Upgrade of network to be implemented via two contracts, 2A and 2B.</p>

deadlines

cost

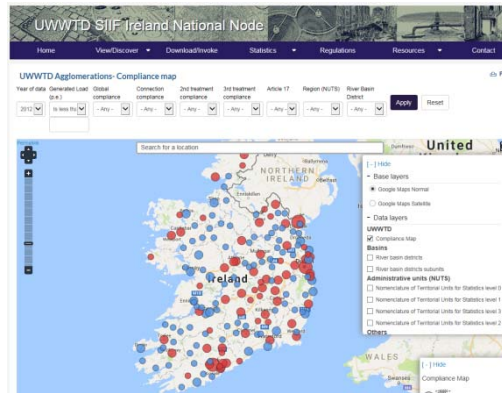
Transformation services:

Focused on compliance and reporting improvement

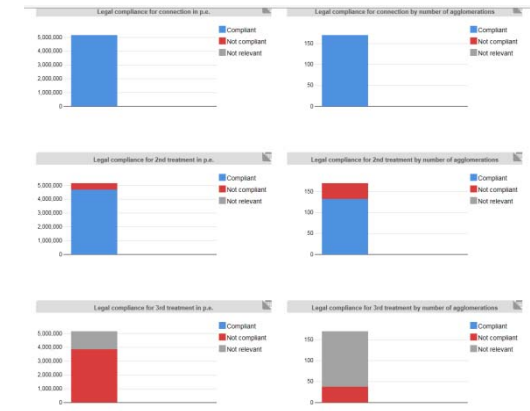
Calculation and visualisation of compliance (11 algorithms) for the reporting exercise.

Name	Identifier Code	Generated Load (p.a.)	Total UWWTP capacity (p.a.)	Region (NUTS)	RBD	Global compliance	Connection compliance	2nd treatment compliance	3rd treatment compliance	Article 17
Ringend	IEAG_144	2362329	1640000	IE021 Dublin	IEEA Eastern	Not Compliant	Compliant	Compliant	Not Compliant	No
Cork city	IEAG_63	284696	413000	IE025 South-Western (IRL)	IESW South Western	Not Compliant	Compliant	Compliant	Not Compliant	Yes
Dundalk	IEAG_298	179000	179000	IE011 Border	GBNIENB Neagh Bann	Not Compliant	Compliant	Compliant	Not Compliant	No
Limerick City and	IEAG_771	130000	130000	IE023 Mid-West	IEGBNISH Shannon	Compliant	Compliant	Compliant	Not relevant	No
Drogheda	IEAG_299	101000	101000	IE011 Border	IEEA Eastern	Compliant	Compliant	Compliant	Not relevant	No
Mutton Island WWTW	IEAG_162	91600	91600	IE013 West	IEWE Western	Compliant	Compliant	Compliant	Not relevant	No
Osborneown	IEAG_200	96408	80000	IE022 Mid-East	IEEA Eastern	Not Compliant	Compliant	Compliant	Not Compliant	Yes
Killybegs	IEAG_119	81382		IE011 Border	GBNIENW North Western	Not Compliant	Compliant	Not Compliant	Not Compliant	No
Leixlip	IEAG_201	79677	80000	IE022 Mid-East	IEEA Eastern	Not Compliant	Compliant	Compliant	Not Compliant	No

Lists



Maps



Graphs

Agglomeration info				UWWTP info												
id	name	status	generated load	address through slud	whether collecting system	number of	id	name	capacity	status	treatment	monitoring	monitoring	monitoring	monitoring	number of
id	name	status	generated load	address through slud	whether collecting system	number of	id	name	capacity	status	treatment	results	results	results	results	number of
AGGL_0229008	Burton	inactive	8000	1,7	10	0	9910	AGGL_0229008	3,000	inactive	1999	1999	not relevant	not relevant	1	4759
AGGL_0230821	Beeghtland	active	2,000	0,0	0	0	9910	AGGL_0230821	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_0231457	Schwansee	active	2,000	0,0	0	0	9910	AGGL_0231457	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229390	Walden	active	2,000	0,0	0	0	9910	AGGL_023229390	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229392	Paludat	active	2,000	0,0	0	0	9910	AGGL_023229392	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229393	Neuchâtel	active	2,000	1,7	34	0	9910	AGGL_023229393	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229394	Offenhausen	active	2,000	1,7	34	0	9910	AGGL_023229394	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229395	Stade bei Hildesheim	active	2,000	0,0	0	0	9910	AGGL_023229395	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229396	Overing Pines	active	2,000	0,0	0	0	9910	AGGL_023229396	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229397	Widewater	active	2,000	0,0	0	0	9910	AGGL_023229397	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229398	Walden	active	2,000	0,0	0	0	9910	AGGL_023229398	2,000	active	1999	1999	not relevant	not relevant	1	4759
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AGGL_023229407	Walden	active	2,000	0,0	0	0	9910	AGGL_023229407	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229408	Walden	active	2,000	0,0	0	0	9910	AGGL_023229408	2,000	active	1999	1999	not relevant	not relevant	1	4759
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AGGL_023229414	Walden	active	2,000	0,0	0	0	9910	AGGL_023229414	2,000	active	1999	1999	not relevant	not relevant	1	4759
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AGGL_023229427	Walden	active	2,000	0,0	0	0	9910	AGGL_023229427	2,000	active	1999	1999	not relevant	not relevant	1	4759
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AGGL_023229429	Walden	active	2,000	0,0	0	0	9910	AGGL_023229429	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229430	Walden	active	2,000	0,0	0	0	9910	AGGL_023229430	2,000	active	1999	1999	not relevant	not relevant	1	4759
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AGGL_023229433	Walden	active	2,000	0,0	0	0	9910	AGGL_023229433	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229434	Walden	active	2,000	0,0	0	0	9910	AGGL_023229434	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229435	Walden	active	2,000	0,0	0	0	9910	AGGL_023229435	2,000	active	1999	1999	not relevant	not relevant	1	4759
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AGGL_023229442	Walden	active	2,000	0,0	0	0	9910	AGGL_023229442	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229443	Walden	active	2,000	0,0	0	0	9910	AGGL_023229443	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229444	Walden	active	2,000	0,0	0	0	9910	AGGL_023229444	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229445	Walden	active	2,000	0,0	0	0	9910	AGGL_023229445	2,000	active	1999	1999	not relevant	not relevant	1	4759
AGGL_023229446	Walden	active	2,000	0,0	0	0	9									

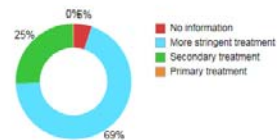
Transformation services:

Focused on end user needs

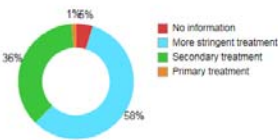
- generate automatically aggregated statistics
- calculate new parameters useful to waste water expert

Waste water treatment plant : Load entering by treatment type

Total load entering by treatment type (population equivalent - p.e.)



Number of treatment plant by treatment type (number of agglomerations)



Agglomeration : generated load by agglomeration size

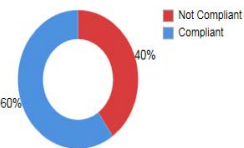
Total generated load by agglomeration size (population equivalent - p.e.)



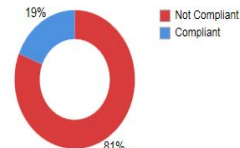
Number of agglomeration by size (number of agglomerations)



Global compliance by number of agglomeration (>2000 pe)



Global compliance by Generated load (p.e.)



Load and concentration per parameter :

	Incoming	Discharged	Rate
BOD	6067 t/year	42 t/year	99.3%
	755.07 mg/l	5.23 mg/l	
COD	14246 t/year	535.94 t/year	96.2%
	1772.99 mg/l	66.7 mg/l	
Nitrogen	676 t/year	65.53 t/year	90.3%
	84.13 mg/l	8.16 mg/l	
Phosphorus	143 t/year	4.56 t/year	96.8%
	17.8 mg/l	0.57 mg/l	

* Concentration calculated using the annual load and the annual volume of wastewater treated.

Quick tour on the platforms

2 cases presented

- o **1: use the tool as dissemination tool and a daily help to all kind of users,**
- o **2: use the tool as an help to reporting exercise**

o **The country platforms**

- o IE <http://uwwtd.oieau.fr/>
- o SI <http://uwwtd.oieau.fr/slovenia/>
- o HR <http://uwwtd.oieau.fr/croatia/>
- o LT <http://uwwtd.oieau.fr/lithuania/>
- o CY <http://uwwtd.oieau.fr/cyprus/>
- o RO <http://uwwtd.oieau.fr/romania/>
- o PL <http://uwwtd.oieau.fr/poland/>

o **The toolbox dissemination**

- o <https://github.com/OIEau/uwwtd>

Under contract for



Thanks for your attention

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Office
International
de l'Eau