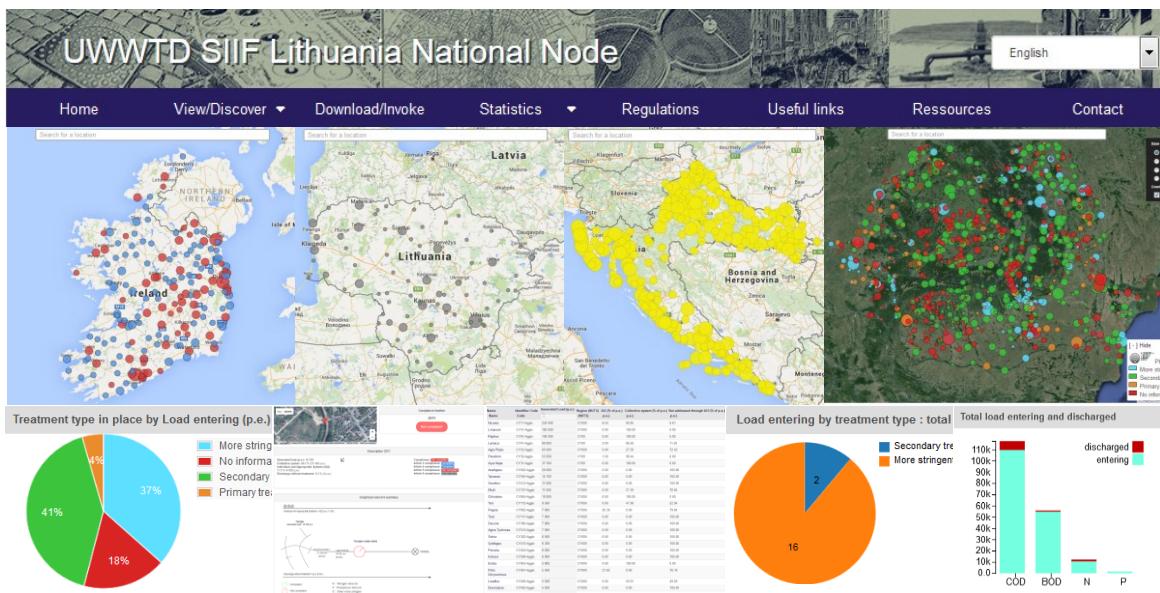




The UWWTD-SIIF platform: functionalities of the waste water open source generic website

Version 1 – September 2016



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Summary

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Introduction

In 2012, the “**SIIF**” concept (**Structured Implementation and Information Framework**), was introduced for the first time in a communication called “[Improving the delivery of benefits from EU environment measures](#)”. To demonstrate the added value of this concept before generalizing its application to all Directives, this communication suggested to apply it to the [Directive 91/271/EEC of 21 May 1991](#) concerning **urban waste-water treatment**.

Since 2012, the European Commission carries out a pilot program for the implementation of the “SIIF” concept to the Urban Waste-Water Treatment (UWWT) Directive, so as to speed up the availability of information for decision makers and for the general public, through the creation of a UWWT SIIF platform.

International Office for Water has developed this UWWT SIIF platform, an open source package allowing to install a national website dedicated to urban waste water data.

These data have to be reported by European Member States to European authorities as required by the UWWT Directive and the datasets are based on a common European data model.

The platform uses these national datasets as core source of data and allows producing maps, graphs and summary statistics. It is organised around INSPIRE services requested under Article 11 of the INSPIRE Directive. The platform contains also automatic features that go beyond INSPIRE requirements: compliance calculations, graphic viewing, individual sheets for each agglomeration, waste water treatment plant, discharge point, and receiving area, a facilitated access to dataset including via web services and various print and export functions. It has been successfully tested at national level by some pilot countries such as Romania or Cyprus.

Urban waste water generic website currently in place

- [UWWT GitHub platform](#) -
- Ireland - [UWWT SIIF Ireland : visit website](#) [EN]
- Cyprus - [UWWT SIIF Cyprus : visit website](#) [EN]
- Lithuania - [UWWT SIIF Lithuania : visit website](#) [EN]
- Slovenia - [UWWT SIIF Slovenia : visit website](#) [EN]
- Croatia - [UWWT SIIF Croatia : visit website](#) [EN]
- Romania - [UWWT SIIF Romania : visit website](#) [EN]
- Poland - [UWWT SIIF Poland : visit website](#) [EN]

By the beginning of 2017 all European MS are expected to be covered by this approach with access to all urban waste water reporting.

By developing this approach, the DG Environment has been proactive towards all Member States allowing them to comply easier with the requirements the [INSPIRE](#) and [public access to environmental information](#) directives

This document presents the different functionalities of this website that already disseminate information at EU level.



It does not present the management part of the website that are already presented in the guidance available on the Github platform. The management part of the website allows to:

- import the databases,
- provide qualification of the database,
- translate the website into another language
- provide feedback concerning the reporting analysis

It does not present the algorithms that are included to calculate the compliance and that are also available in the Github platform. The website contains lots of transformation services that allow the multiplicity of dissemination and use of the reporting information.



O A website built to be reused by other policies

The framework of the website and the way it is presented has been done on purpose to be potentially reused for the development of other websites related to other policies

0.A - The Menu of the website

The menu is neutral and has nothing particular to do with urban waste water. It includes an 'Home', "View/Discover", 'Download/Invoke', 'Statistics', 'Regulations', 'resources' and 'contact' webpages



The [welcome page](#), Home includes a mapviewer that gives access to all the geographical layers and the legend of each of them. It is possible to click on and off on each layer in order to make them appear or disappear. Below the map there is a short automatically generated text that gives a synthesis of the urban waste water country situation

Search button
that zooms
directly on the
municipality
searched

Fullscreen button

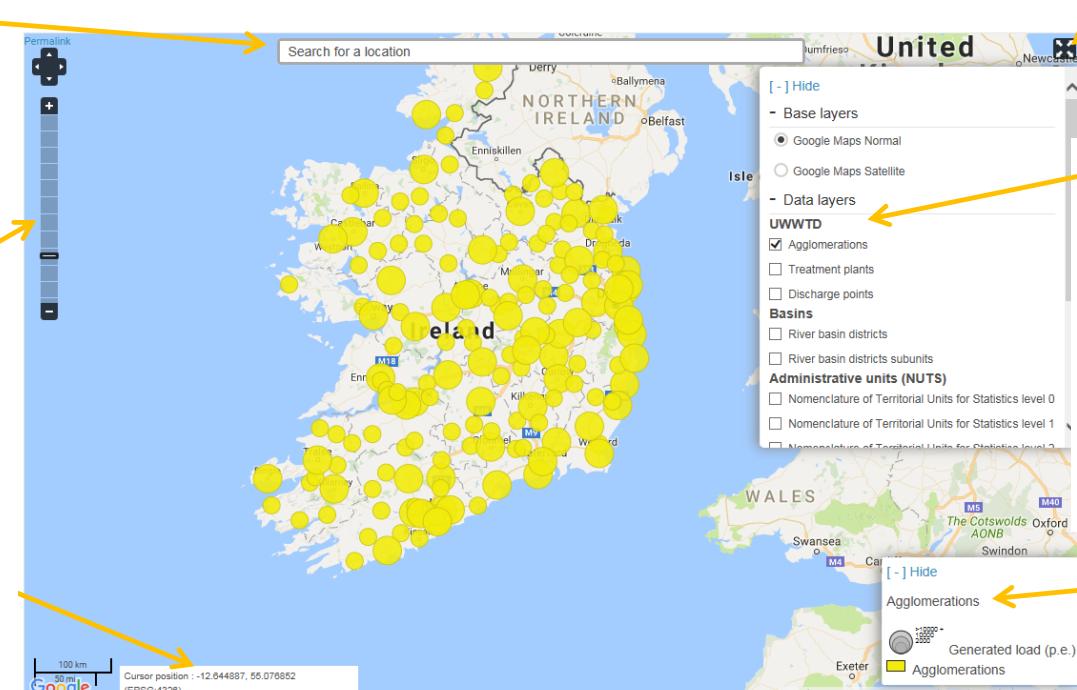
Possibility
to zoom in
and out

Layers menu that
allows selection of the
layers. See Chapter
II.B to have more
description on the
different layers.

Possibility to hide the
window when clicking
on the top left hide
button

Cursor position
that helps to find
coordinates of an
object

Legend of the layer(s)
displayed. Possibility
to hide the window
when clicking on the
top left hide button



Welcome to the Urban Waste Water Treatment Directive (UWWTD) site for Ireland !

In 2012, Ireland had 170 urban waste water agglomerations of more than 2 000 population equivalent (p.e.). These agglomerations generated a total load of 5 164 016 p.e. 100 of this load is connected to collecting systems and 0 % addressed through Individual and Appropriate Systems (storage or septic tanks, micro-stations,...). These agglomerations are connected to 2 primary treatment plant, 62 secondary treatment plants and 97 more stringent treatment plants. All these treatment plants have a total design capacity of 5 978 p.e.

About the content of this
website

About the SIIF project at the
origin of this IT development

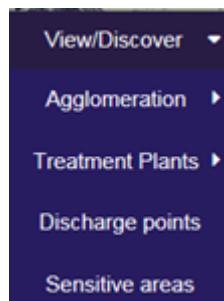
Explanation on the
origin of the project



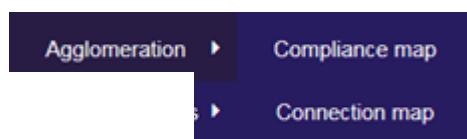
Explanation about the
content of the website

Synthesis Paragraph
automatically
generated with the
last update of the
data base

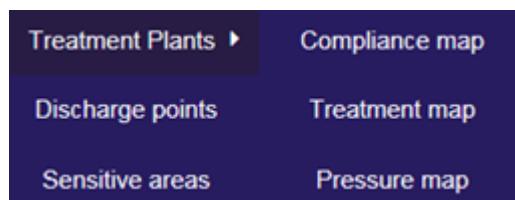
The [view/discover menu](#) gives access to submenu related to the urban waste water objects through mapviewers and lists.



As regards the Agglomerations there is a sub-sub-menu one related to the compliance and the other related to the destination of the urban waste water load generated (collecting system, individual system or direct discharge)



As regards the treatment plants there is also a sub-sub-menu related to the compliance, the treatment in place and the pressure generated



The content of this sub-menus is explained in the chapter II.

The [download/invoke](#) menu gives access to the data used in this website, the metadata and the Inspire services.

Data related to the urban waste objects can be downloaded under different format (Xml, CSV, shp and Kml)

Title	Coverage	Files available
Full UWWTD reported data	Country	xml
Agglomerations	Country	xml , csv , shp , kml
Urban Waste Water Treatment plants	Country	xml , csv , shp , kml
Discharge points	Country	xml , csv , shp , kml
Sensitive areas	Country	xml , csv , shp , kml



For the metadata and INSPIRE services see chapter I.

This [download/Invoke menu](#) gives also explanation how to link other websites to this website. Each object in the website is referenced by a hyperlink that contains the ID code of the object and the same root before. When knowing this ID code it is very easy to generate hyperlink to this website and the specific object.

How to make references to this website?

All the items description page (agglomeration, treatment plant, discharge point and sensitive areas) can be accessed directly, and then referenced on other websites.

This can be done by using the following URL pattern:

[http://uwwtid.oeau.fr/\[country\]/\[name of the element\]/\[ID of the element\]](http://uwwtid.oeau.fr/[country]/[name of the element]/[ID of the element])

For instance:

- /agglomeration/IEAG_200
- /treatment-plant/IETP_896
- /discharge-point/IEDP_425_01

If you want to reference to a specific year, you simply need to add the year in the URL as follows:

[http://uwwtid.oeau.fr/\[country\]/\[name of the element\]/\[ID of the element\]/\[year\]](http://uwwtid.oeau.fr/[country]/[name of the element]/[ID of the element]/[year])

For instance:

- /agglomeration/IEAG_200/2012
- /treatment-plant/IETP_896/2012

The [statistic menu](#)

There is two sub-menu related to statistics one related to [statistics automatically created](#) when each dataset is downloaded in the website and the other one that allows to [create its own statistics](#). (for more information see the chapters IV.A and B)



The [regulations menu](#) provides a very important content in a website related to a policy that gives access to the related regulation. At this stage European urban waste water regulation is only available but when MS are going to use the website they are going to include also their national regulation.

Regulations

European legislation

- Directive 91/271/EC original version
- Directive 98/15/EEC amending Directive 91/271/EEC
- Directive 91/271/EEC Consolidated version
- Deadlines of transitional periods for new Member States-EU-12
- Deadlines of transitional periods for Croatia
- Commission Implementing Decision 2014/431/EU of 26 June 2014 concerning formats for reporting on the national programmes for the implementation of Council Directive 91/271/EEC
- Commission Implementing Decision 2014/431/EEC excel templates (EIONET)
- Directive establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) 2007/2/EC
- Directive on public access to environmental information 2003/4/EC

European Guidance

- Terms and Definitions of the Urban Waste Water Treatment Directive

National regulations



The [resources menu](#) includes three sub-menus: one that provides links to information related to this policy, one that explains the concept that is behind the website and the last one that explain how to install the website on a national server.



As regards the [Useful links sub-menu](#) it is where you can find [hyperlinks related to the DG Environment website](#) related to the urban waste water policy and specifically where the European urban waste water directive reports are located.

[Useful links](#)

European Commission - Directorate General Environment

- DGENV website : http://ec.europa.eu/environment/water/water-urbanwaste/index_en.html
- Implementation reports http://ec.europa.eu/environment/water/water-urbanwaste/implementation/implementationreports_en.htm

Where you can find [hyperlinks related to the European Environmental Agency](#) and specifically how the reporting is organised with access to the datamodel and guidance and how it is displayed at this level (database and dataviewer)

European Environment Agency

Reporting Obligation Database (ROD):

- UWWT Directive fiche <http://rod.eionet.europa.eu/instruments/543>
- National Implementation Programme for UWWT Directive - Article 17 <http://rod.eionet.europa.eu/obligations/524>
- UWWT Directive - Article 16 - Situation report <http://rod.eionet.europa.eu/obligations/387>
- UWWT Directive - Article 15 - implementation <http://rod.eionet.europa.eu/obligations/613>

Access to data and visualisation

- European Waterbase UWWT <http://www.eea.europa.eu/data-and-maps/data/waterbase-uwwtd-urban-waste-water-treatment-directive>
- UWWT EU data viewer <http://www.eea.europa.eu/data-and-maps/uwwtd/interactive-maps/urban-waste-water-treatment-maps>

It provides also information on the way to use European funds and loans in order to finance the urban waste water infrastructure

European funds and loans

- DG Regio : http://ec.europa.eu/regional_policy/
- Funding LIFE projects : <http://ec.europa.eu/environment/life/funding/life.htm>
- Water life project : <http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=home.getProjects&themeID=75>
- European Investment Bank : <http://www.eib.org/projects/sectors/water-and-waste-water-management/index.htm?lang=en>



It gives also access to the other existing SIIF platforms and national websites concerning urban waste water.

SIIF European and national platform

- Generic open-source platform: <http://uwwtd.oeau.fr/>
- Croatia: <http://uwwtd.oeau.fr/croatia/>
- Cyprus: <http://uwwtd.oeau.fr/cyprus/>
- Lithuania : <http://uwwtd.oeau.fr/lithuania/>
- Poland: <http://uwwtd.oeau.fr/poland/>
- Romania: <http://uwwtd.oeau.fr/romania/>
- Slovenia: <http://uwwtd.oeau.fr/slovenia/>

Other national data viewers

- French urban waste water website: <http://assainissement.developpement-durable.gouv.fr/>
- Greek urban waste water website: <http://astikalmata.ypeka.gr/Services/Pages/Browse.aspx>
- Luxembourg water geoportal: <http://eau.geoportail.lu/>

And finally there is also the possibility to have access to other websites related to good practices

Good practices

- Natural Water Retention Measures: <http://nwrn.eu/>

The overall objectives is to facilitate the reporting process and to ease the access to the available information in order to implement better the directive.

The last topic in the menu is a [contact menu](#) that provides to opportunity to send a message to a person that is either in charge of the website either in charge of the policy. This is not compulsory to include such a menu specifically if you have nobody available to answer to potential questions raised. The experience in France with their urban national waste water website shows that there is not a lot of questions raised when you open this opportunity to the website users.

Your name *

Your e-mail address *

Subject *

Message *



- o *O.B - An open source website that can be already installed at national level*

The process is transparent and available in a [Github platform](#). The last version of the software and its code is available included the guidance that explain how to install and use it.

No description or website provided.

bbondier	Lot of fixes	Latest commit 4831c55 9 minutes ago
uwwtw website	Lot of fixes	9 minutes ago
README.md	readme update	5 months ago
UWWTD-SIIF-Toolbox-2015-Administration-guide-vf.pdf	add new documentation files	5 months ago
UWWTD-SIIF-Toolbox-2015-installation-guide-Windows-vf.pdf	add new documentation files	5 months ago
UWWTD-SIIF-Toolbox-2015-installation-guide-vf.pdf	add new documentation files	5 months ago

This is also a working platform where all issues related to the website are tracked.

The maintenance and update of the system is included in a new Commission contract related to the urban waste water reporting. A new version will be updated beginning 2017 and will remain operational at least till July 2018.

The objective of this project was also to open opportunities to other developers or institutions to reuse part of the codes for other developments.



I Inspire services (Article 11)

Implementing INSPIRE on environmental domains is generally done step by step, starting with identifying datasets and cataloguing, then implementing web services and finally focussing on data model conformity. Currently the UWWTD data collection has identified all the thematic domain information needed for assessing implementation of the Directive, and the cataloguing can be conducted as the four geographical objects which form the basis of this reporting are clearly identified and delineated. We will see in this section that the UWWTD SIIF platform allows implementing a first iteration of the web services. The data model conformity, which was partly addressed under the SIIF project, remains to be finalised and implemented so that the platform becomes fully conform to INSPIRE.

For the specific case of the UWWTD, the Inspire Directive needs to be implemented by MS as it covers four geographical objects (agglomeration, treatment plant, discharge point and sensitive area), and the deadlines are now passed.

While all parts of the Directive are important as regards UWWTD, the data collection being well established and documented, the *chapter II metadata* does not pose any specific difficulty, the *chapter III: Interoperability of spatial data sets and services* is partly covered by the fact a common data model already exists and the *chapter V: Data sharing* is part of the data collection process. The most important aspect for the UWWTD SIIF is therefore the situation as regards the chapter IV: network services.

The UWWTD SIIF platform is focussed to providing end users with easy to use tools to explore and use the UWWTD data. The services are implemented in the way a non-expert user would understand what this specific service covers, and they do not pretend to be fully aligned with Inspire requirements. In some cases, developing the services in a fully Inspire aligned way would have slowed down the process or required additional resources and they were implemented without considering the specific requirements of Inspire. This means the way it is currently implemented may need adjustments in the future when the data model has been adapted or new development for new useful functions have been conducted, or specific needs emerge on Inspire services. The platform was developed with a systematic view on Inspire requirements and as much as possible with using Inspire implementation approach. When it is not currently implementing fully aligned services, the remaining effort to make it is pending an end user need to do so. Overall the services implemented are providing the functions that an end user would expect for accessing and using the UWWTD data for his/her own use.



I.A Discover

"(a) discovery services making it possible to search for spatial data sets and services on the basis of the content of the corresponding metadata and to display the content of the metadata;

For UWWTD SIIF, it was necessary and useful to have an Inspire discovering service (CSW). A separate catalogue was therefore implemented using geoserver, the country being able to use alternatively its own catalogue if it already exists. It is implemented in a first glance via a specific menu of the platform which provides an easy access to a single catalogue used for all IUWWTD SIIF platforms with the main geographical objects of the respective platforms, in a set of pre-generated and partially filled in catalogue factsheets, with for each a dedicated page. These pages can be scanned, zoomed in and out, search for a specific location or name and exported for re-use.

(catalogue: <http://www.uwwtd.oieau.fr/catalogue/srv/ows/catalog.search#/home>)

The screenshot shows a web-based catalogue interface with a header containing 'Latest news' and 'Most popular' buttons. Below this is a grid of six factsheets, each representing a different dataset from the UWWTD SIIF catalogue:

- Urban Waste Water Treatment Directive, Treatment plants / Slovenia**: Shows a small map icon.
- Urban waste Water treatment Directive, Receiving area / Slovenia**: Shows a small map icon.
- Urban Waste Water Treatment Directive, Discharge points / Slovenia**: Shows a small map icon.
- Urban Waste Water Treatment Directive, Agglomerations / Slovenia**: Shows a small map icon.
- Urban Waste Water Treatment Directive, Treatment plants / Romania**: Shows a small map icon.
- Urban waste Water treatment Directive, Receiving area / Romania**: Shows a small map icon.
- Urban Waste Water Treatment Directive, Discharge points / Romania**: Shows a small map icon.
- Urban Waste Water Treatment Directive, Agglomerations / Romania**: Shows a small map icon.
- Urban Waste Water Treatment Directive, Treatment plants / Poland**: Shows a small map icon.

I.B View

"(b) view services making it possible, as a minimum, to display, navigate, zoom in/out, pan, or overlay viewable spatial data sets and to display legend information and any relevant content of metadata;

For UWWTD SIIF, this service is implemented in a first glance via the same menu than for discovering allowing an easy access to the various data available on the platform, with for each sub-set, a dedicated page comprising a map, some graphs and a table giving access to the information on each individual object. These pages display the datasets and can be scanned, searched, selection of sub-sets of data can be done, the pages can be printed, the maps can be zoomed in and out, searched for a specific location or name, and the tables can be exported for re-used



I.C Download

(c) **download services**, enabling copies of spatial data sets, or parts of such sets, to be downloaded and, where practicable, accessed directly;

The download service is accessible via a page “download/invoke” with possibility to access the datasets for the different years they were reported, to view them or download them. The page gives access to the datasets and sub-sets in different formats, to the associated metadata in different formats, to webservices for the different subsets (WFS/WMS), and explains how to make reference to individual objects or specific years.

Metadata

In this section you can access the metadata fiches for each of the four geographical layers covered by UWWT (91/271/EEC).

Title	Coverage	Download	View
Agglomerations	Country	xml, pdf	html, xml, pdf
Urban Waste Water Treatment plants	Country	xml, pdf	html, xml, pdf
Discharge points	Country	xml, pdf	html, xml, pdf
Sensitive areas	Country	xml, pdf	html, xml, pdf

Services

In this section you can access the webservices for each of the four geographical layers covered by UWWT (91/271/EEC).

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

[back](#) [Search](#)

 **Urban Waste Water Treatment Directive, Agglomerations / Ireland**

Updated: 12 hours ago

This dataset contains information on agglomerations with generated load > 2000 PE, including names, coordinates, generated load and information whether the load generated is collected through collecting system or addressed via Individual Appropriate Systems (IAS) or not collected not addressed via IAS.

Vector database of the UWWT. 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 This dataset is published in the view service (VMS) available at http://uwwtd.oeau.fr/services/ows?SERVICE=WMS& with layer name UWWT:UWWTD_recette_Ireland_Agglomeration	Add to map
UWWT:UWWTD_recette_Ireland_Agglomeration (MetadataURL)	Open link
Agglomerations (LegendURL)	Open link

associatedResources

 UWWT SIIF visualization service The main aim of Urban Waste Water Treatment Directive (UWWT) Structured Information and Implementation Framework (SIIF) is to ensure the production...	Related service
--	---------------------------------

About this resource

 INSPIRE themes
 Categories



I.D Transform

(d) transformation services, enabling spatial data sets to be transformed with a view to achieving interoperability;

The transformation services are embedded in the platform. They are not accessible from the outside like WPS services, but may be in the future as most components are already running on the platform with well-defined processes and a single data model. The most prominent is the compliance calculation for urban waste water treatment plants and agglomerations. A full set of 11 algorithms are implemented within the platform and allow calculate compliance and then display the results on maps, graphs and tables on the platform.

I.E Invoke

(e) services allowing spatial data services to be invoked."

Sub parts of the datasets can be invoked via the web services implemented in the menu download/invoke. An additional development is necessary to allow invoke the spatial data from outside the platform.

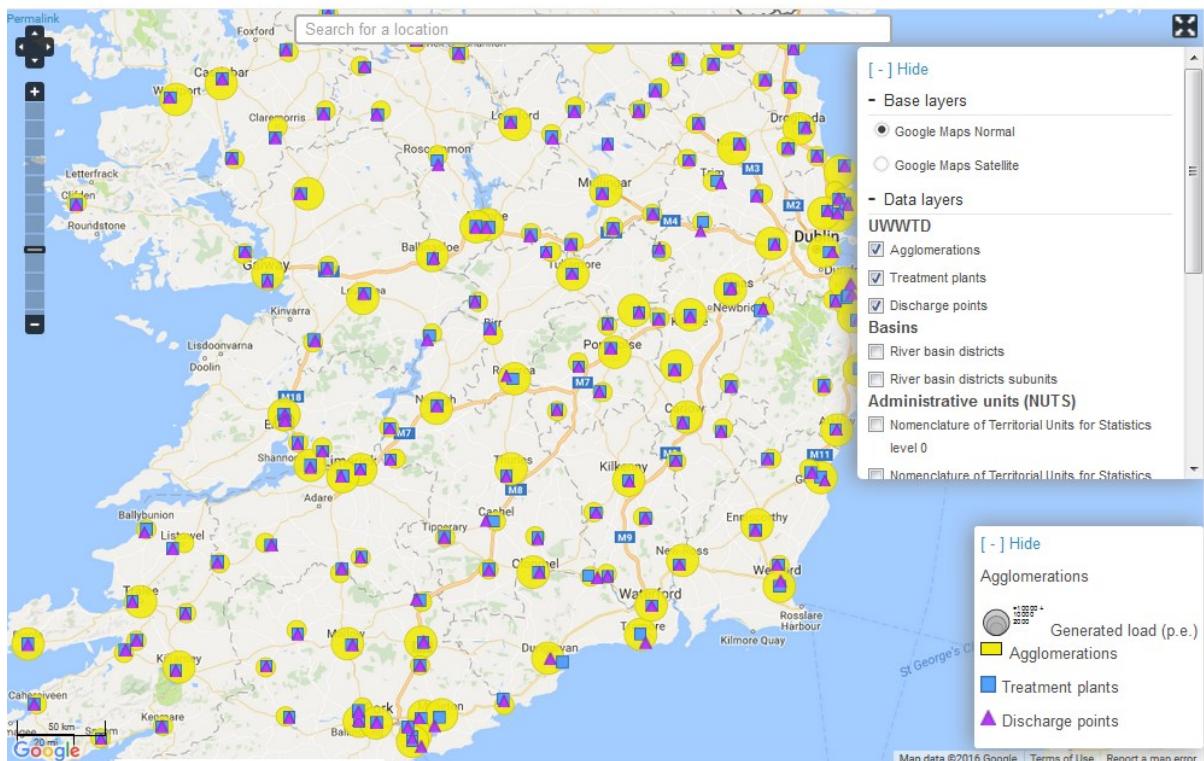


II Maps and lists

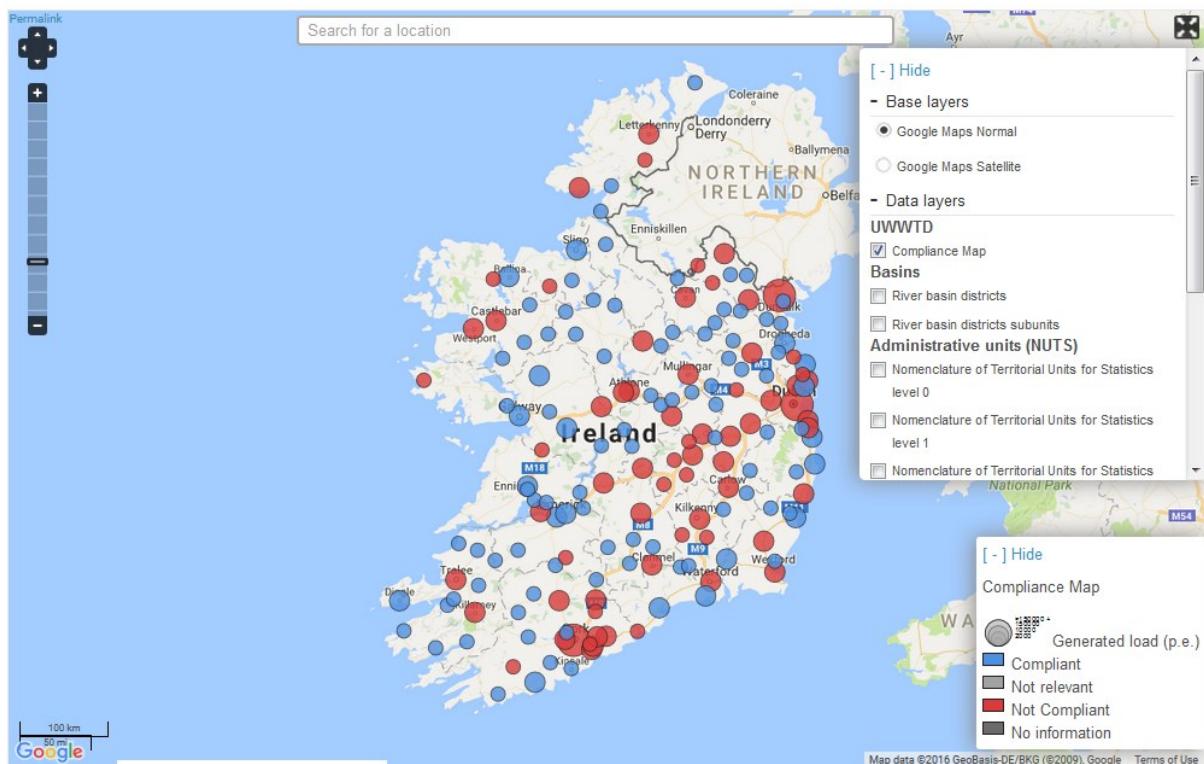
The website is organised to display urban waste water information through map viewers and lists with possibility to sort and select the different parameters and objects. The UWWTD considers four objects: Urban waste water Agglomerations, Treatment plants, Discharge points and Sensitive Areas.

II.A - The different mapviewers

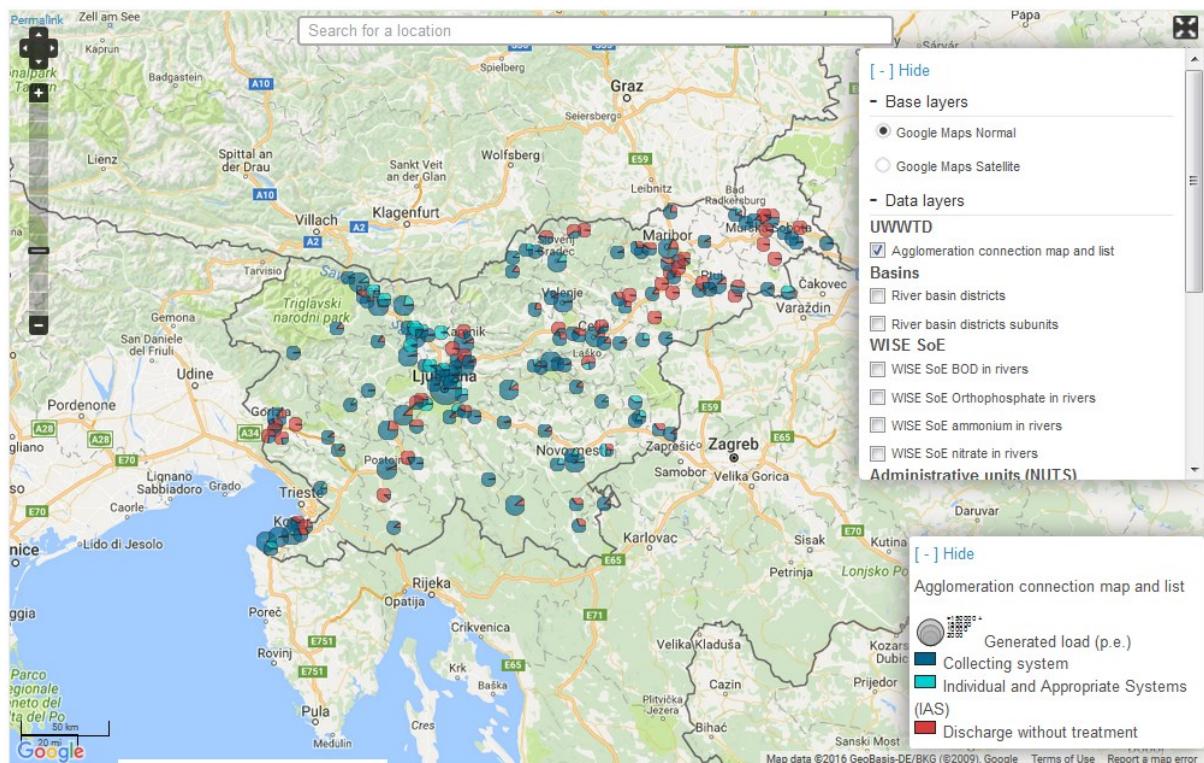
A [welcome map](#) with access to the agglomerations, treatment plants and discharge points layers



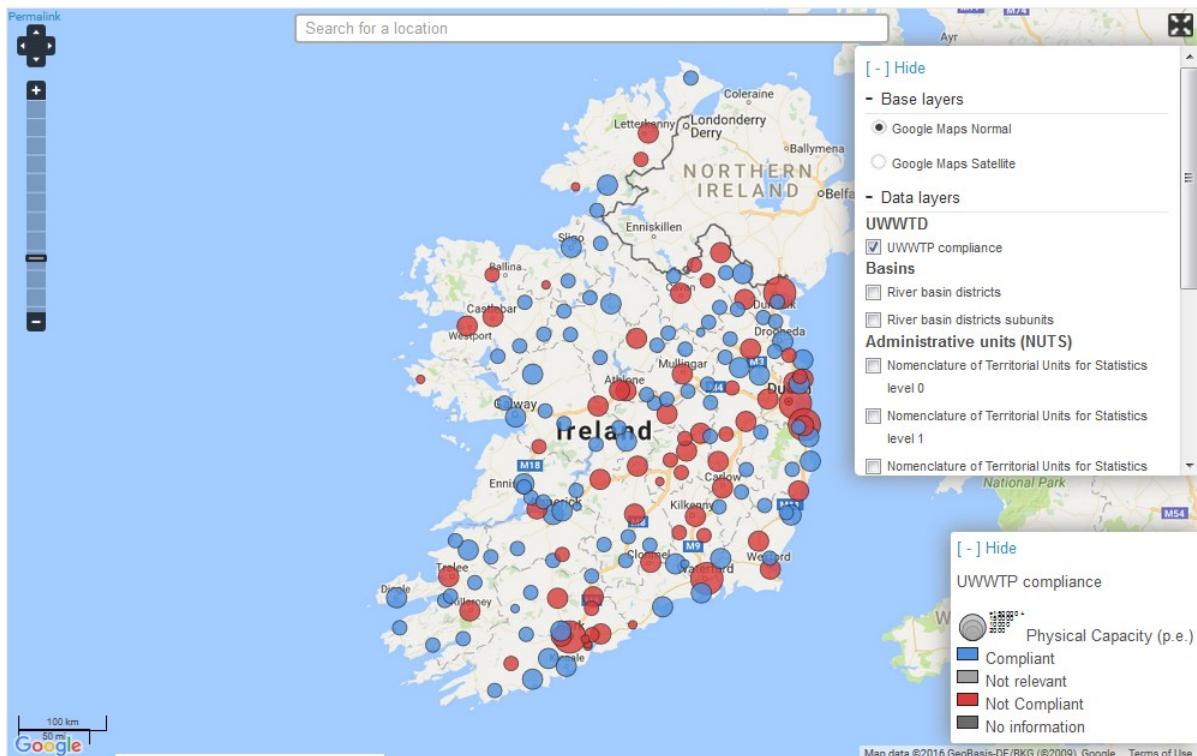
An agglomeration compliant map



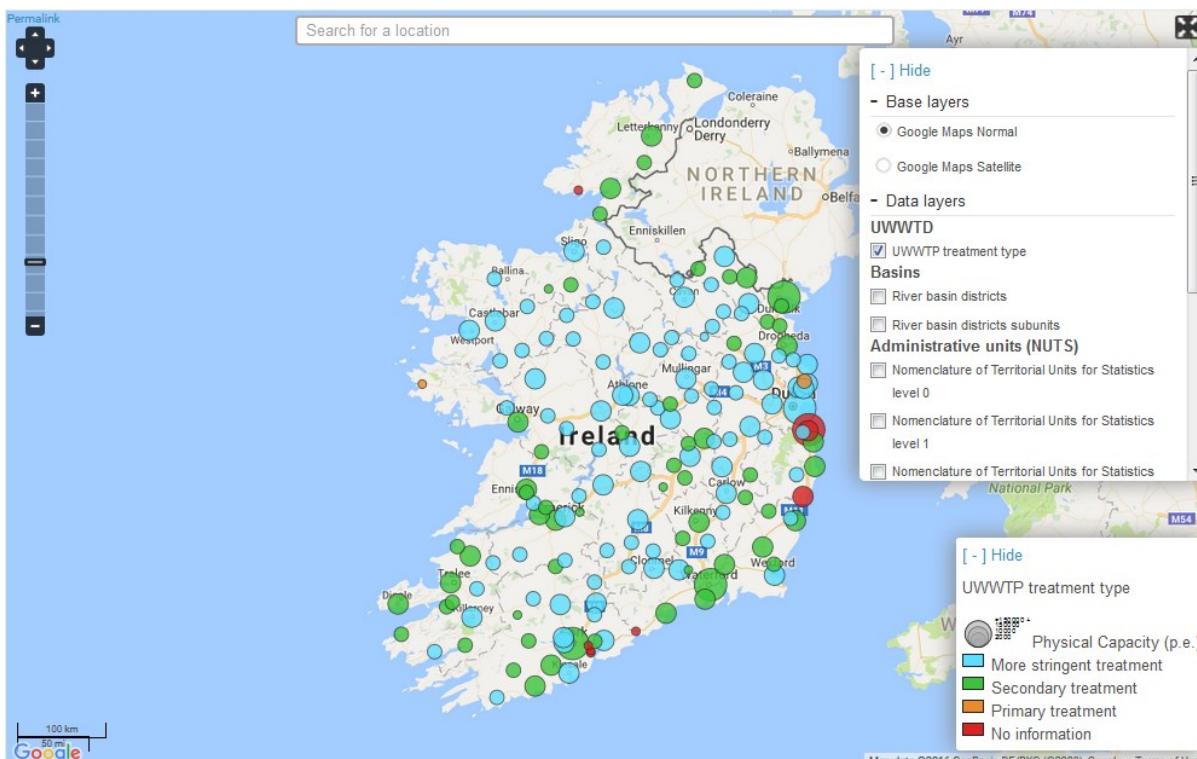
An agglomeration connection map



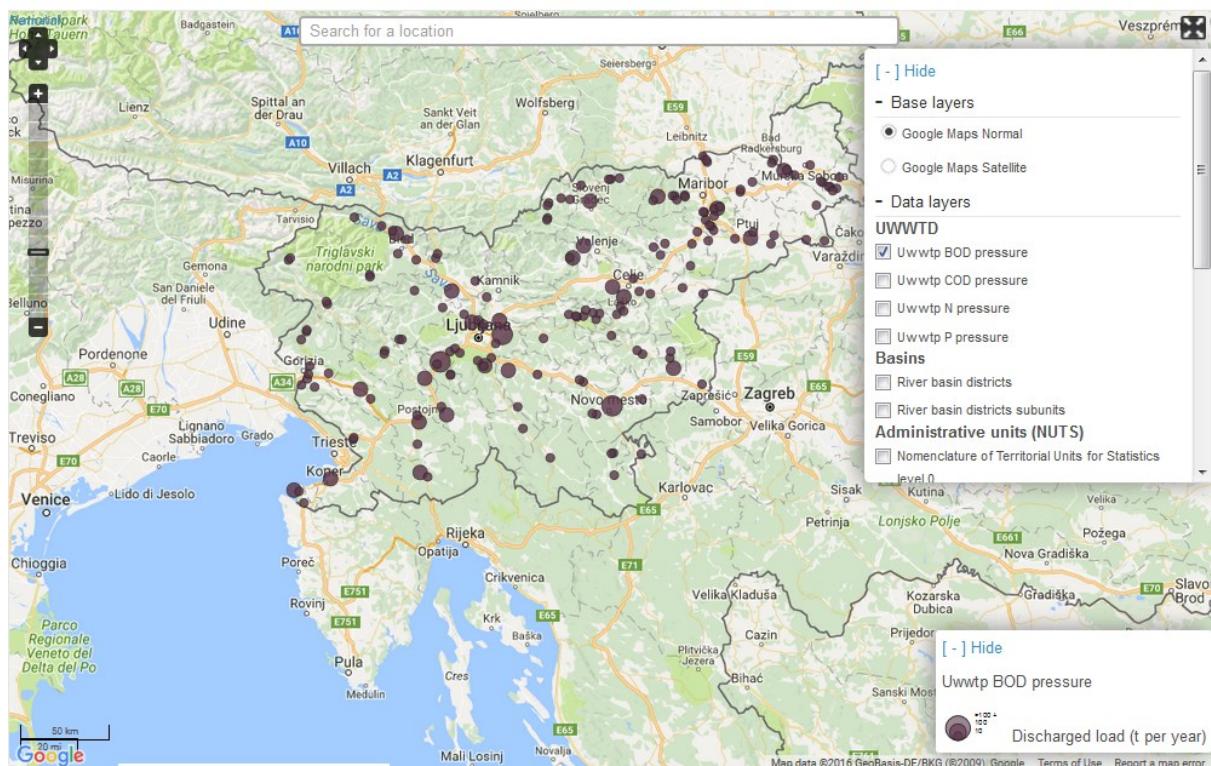
A [urban waste water treatment plant compliance map](#)



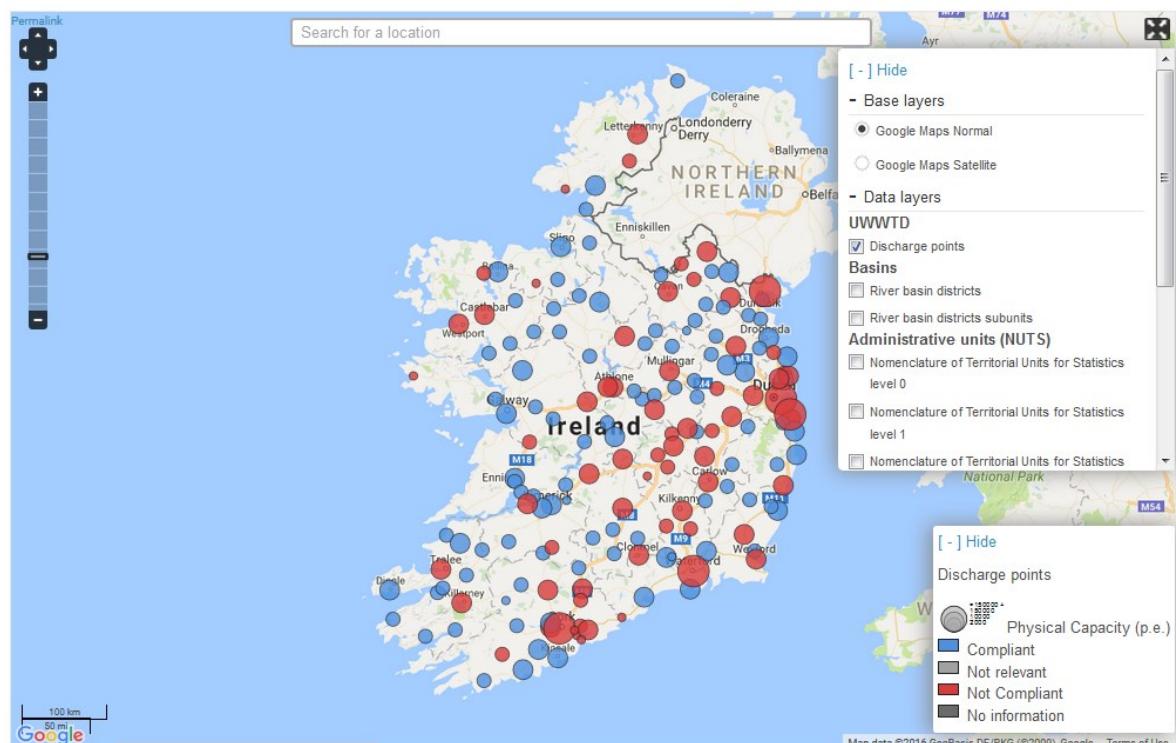
A [urban waste water treatment plant treatment map](#)



A urban waste water BOD, COD, N, P pressure map



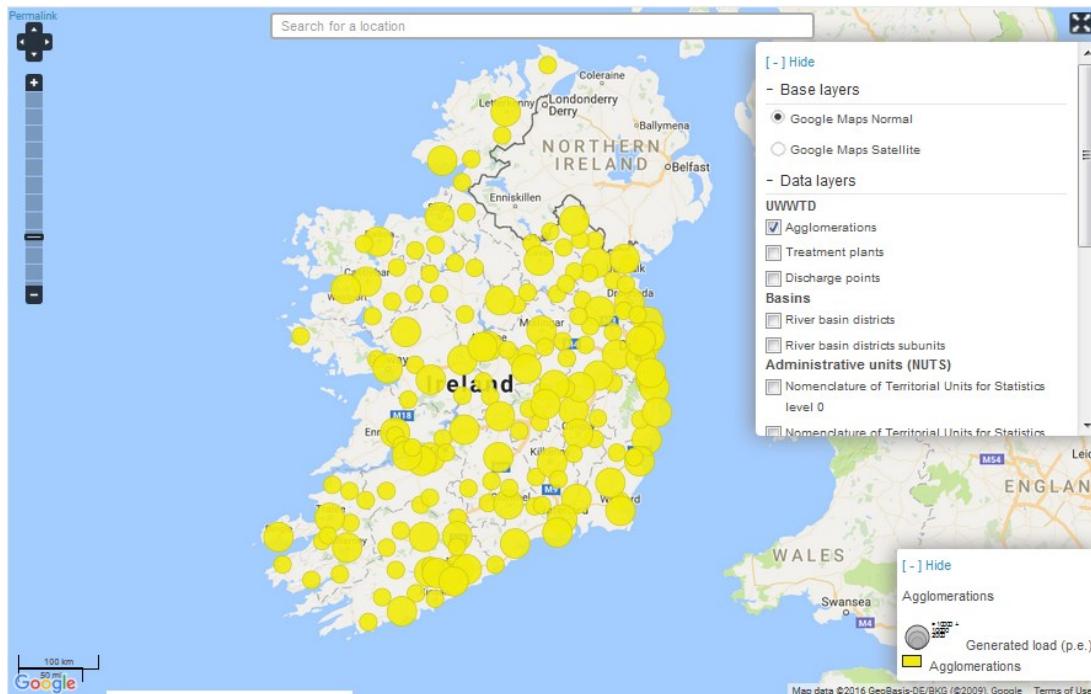
A discharge point map



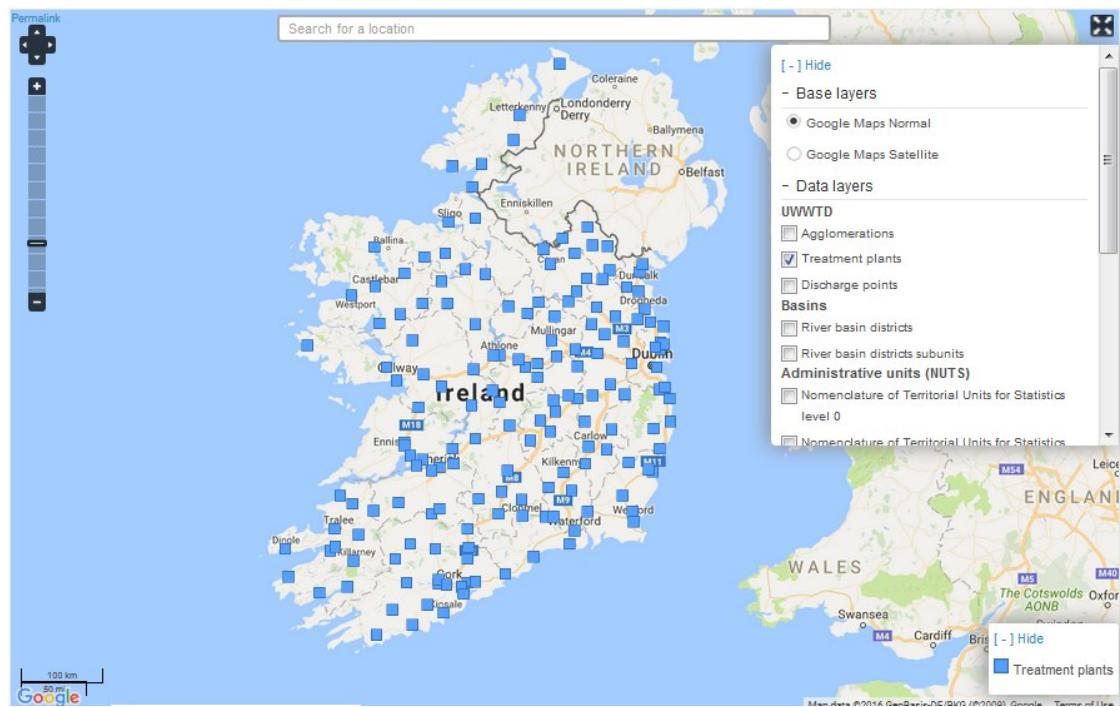
II.B - The layers available in all mapviewers

As presented above geographical layers related to urban waste water are available and can be displayed in the mapviewers with other layers to better understand an environmental situation.

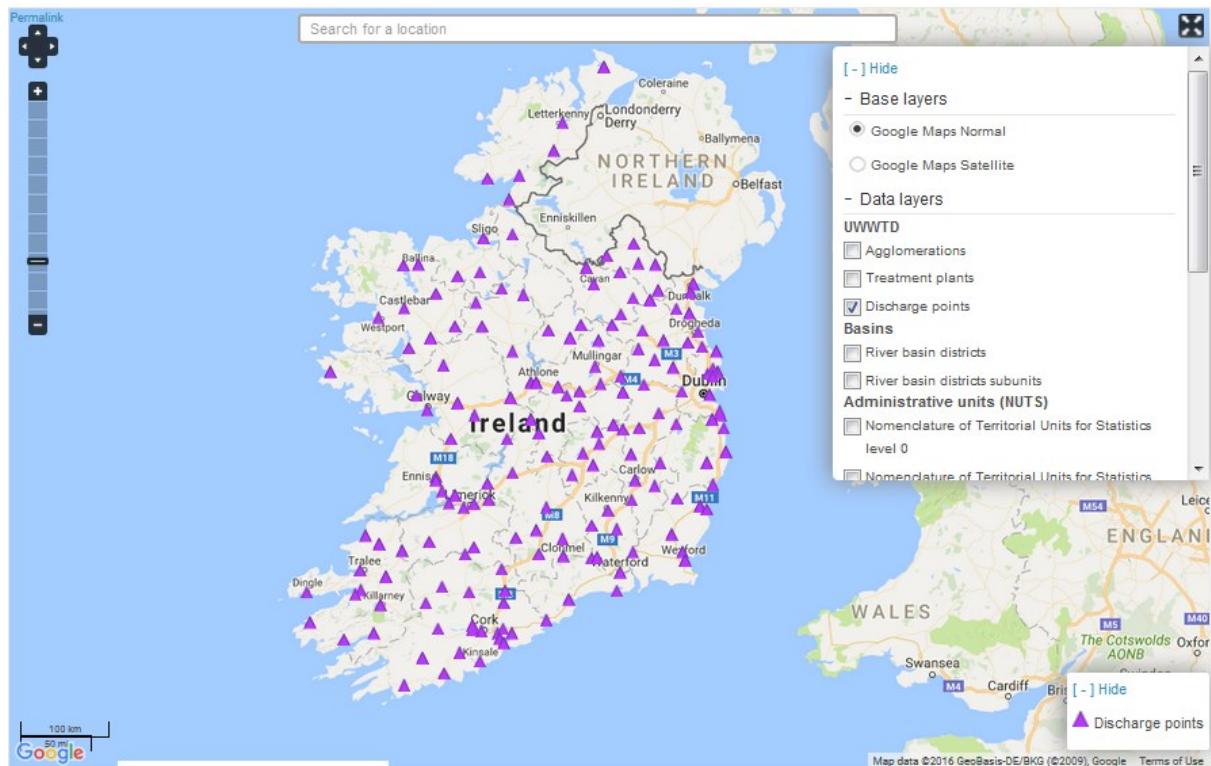
Agglomerations layer



Treatment plants layer

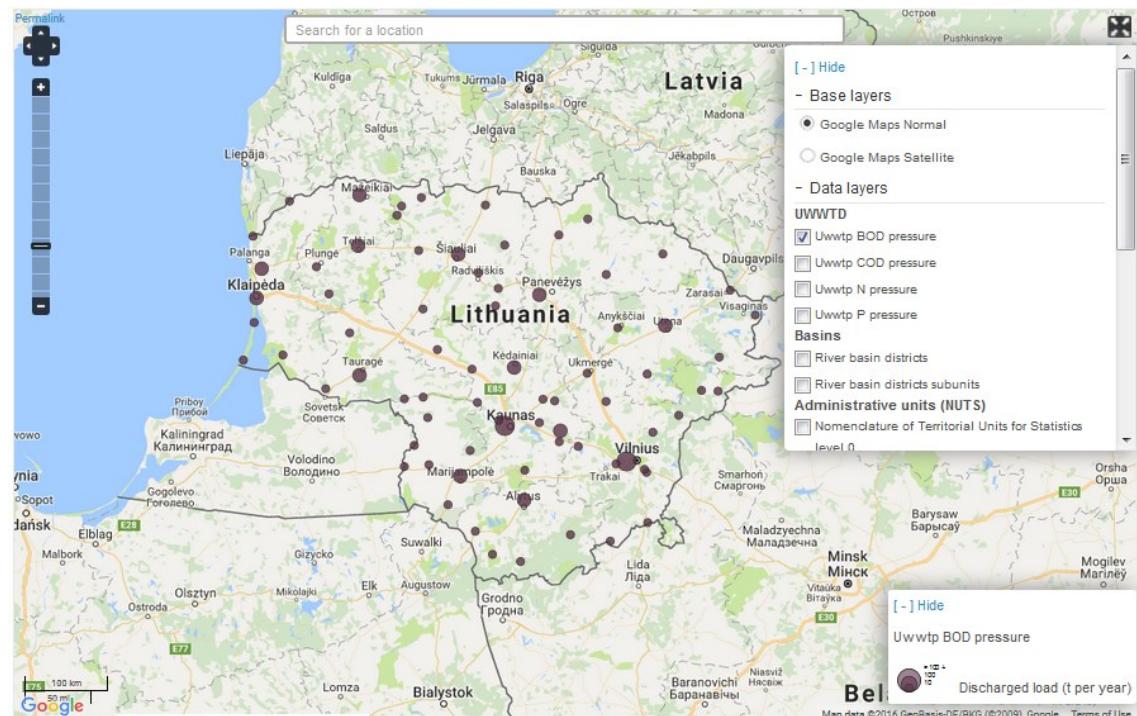


[Discharge point layer](#)

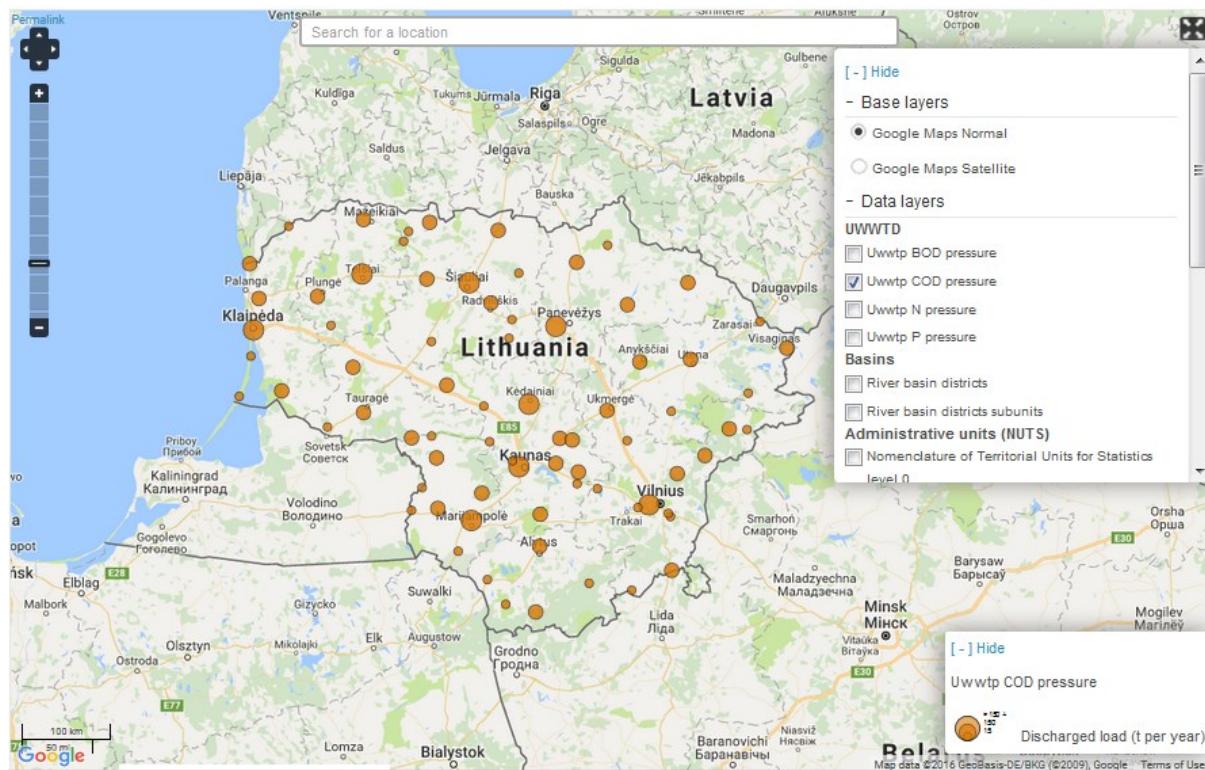


For those who provides this information there is also the possibility to have access in the [pressure mapviewer](#) to:

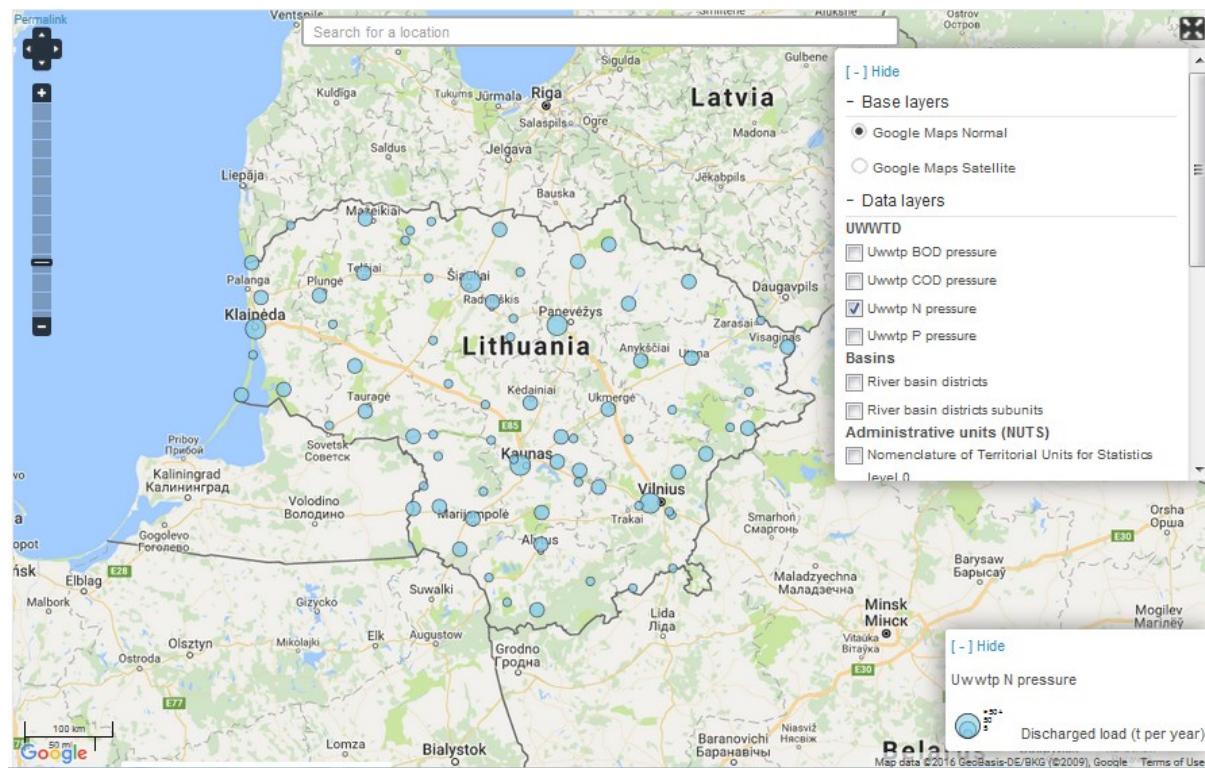
the [Uwwtp BOD pressure layer](#)



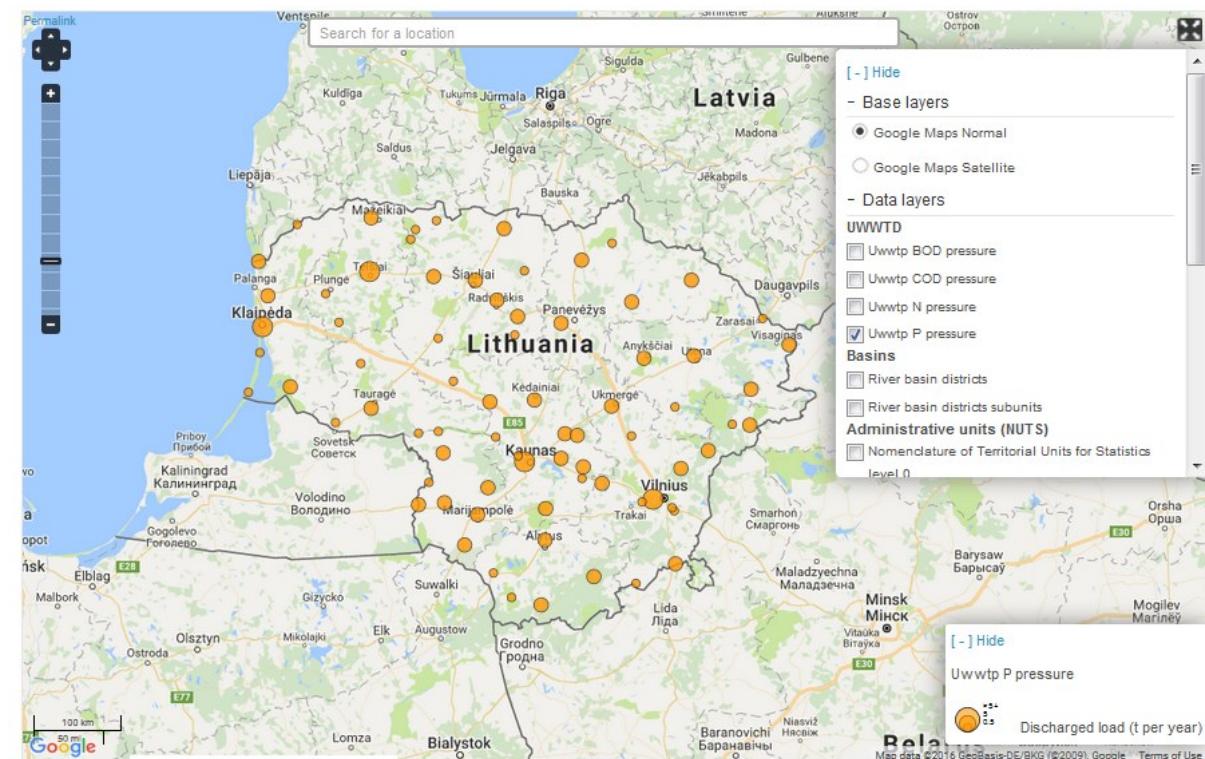
The [Uwwtp COD pressure layer](#)



The [Uwwtp N pressure layer](#)

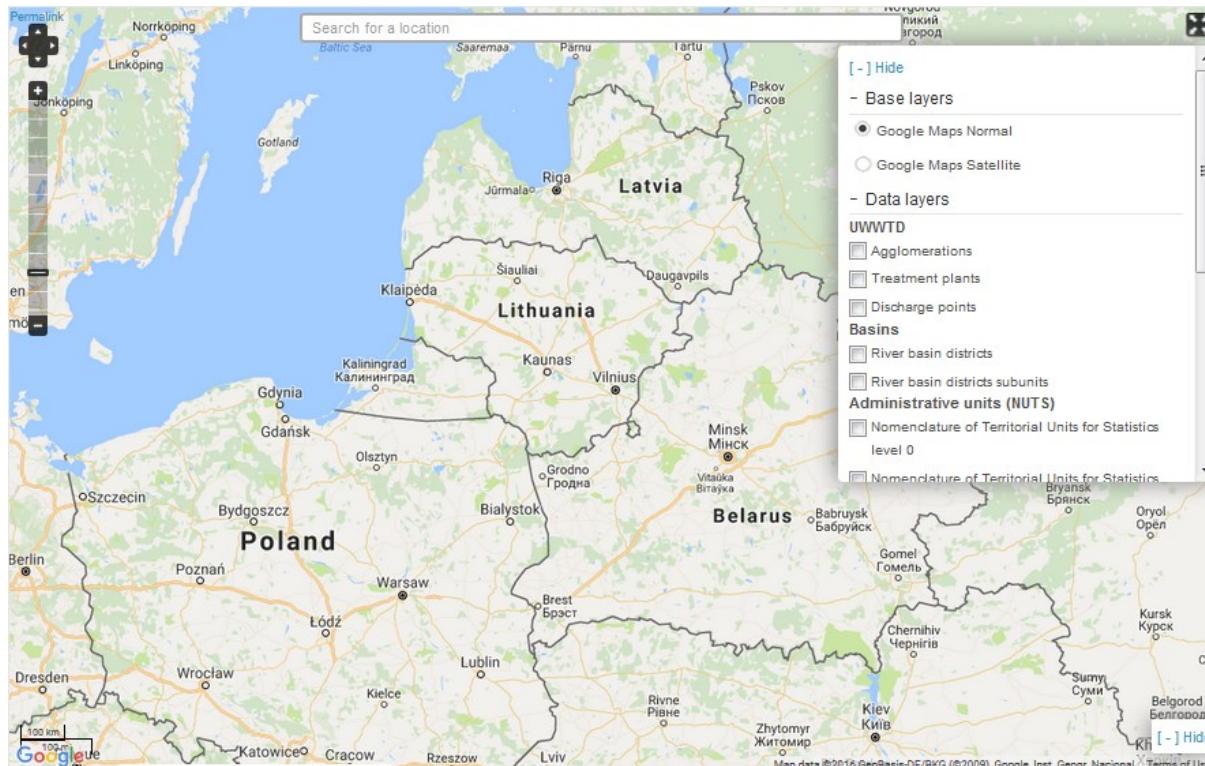


The [Uwwtp P pressure layer](#)

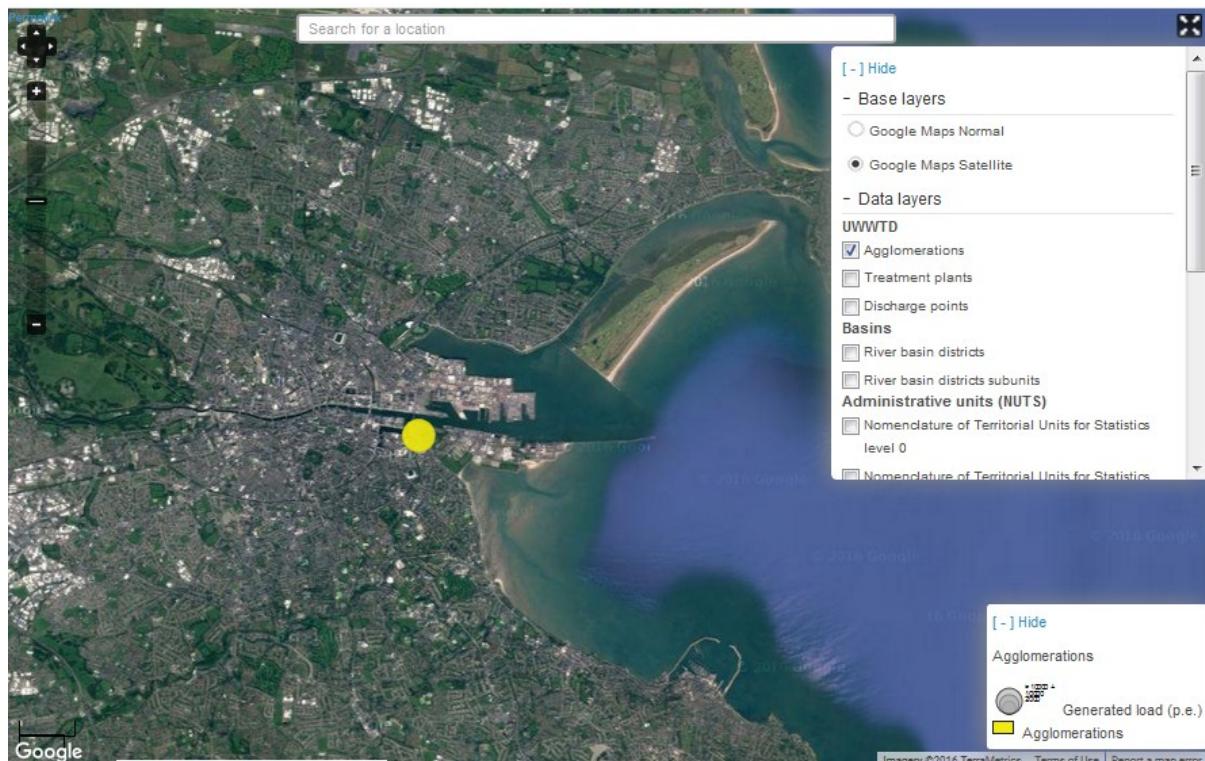


Two backgrounds layers are currently available

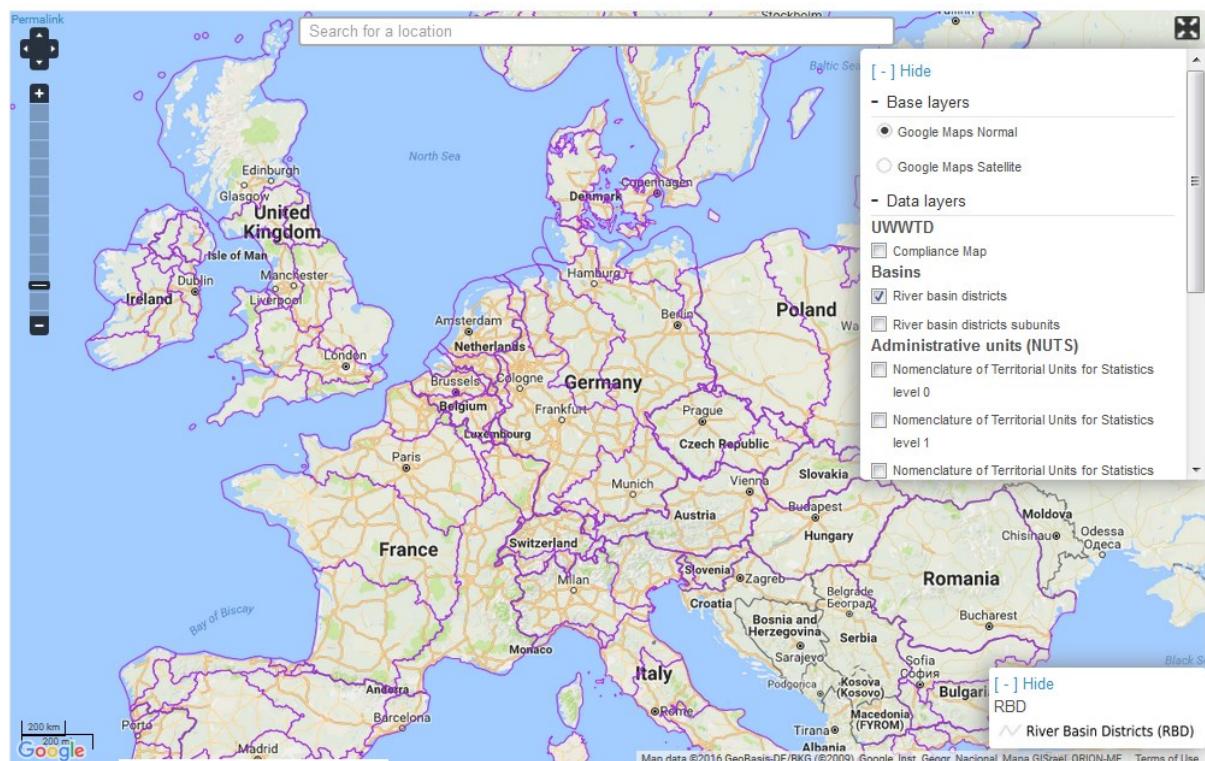
The [google map normal layer](#)



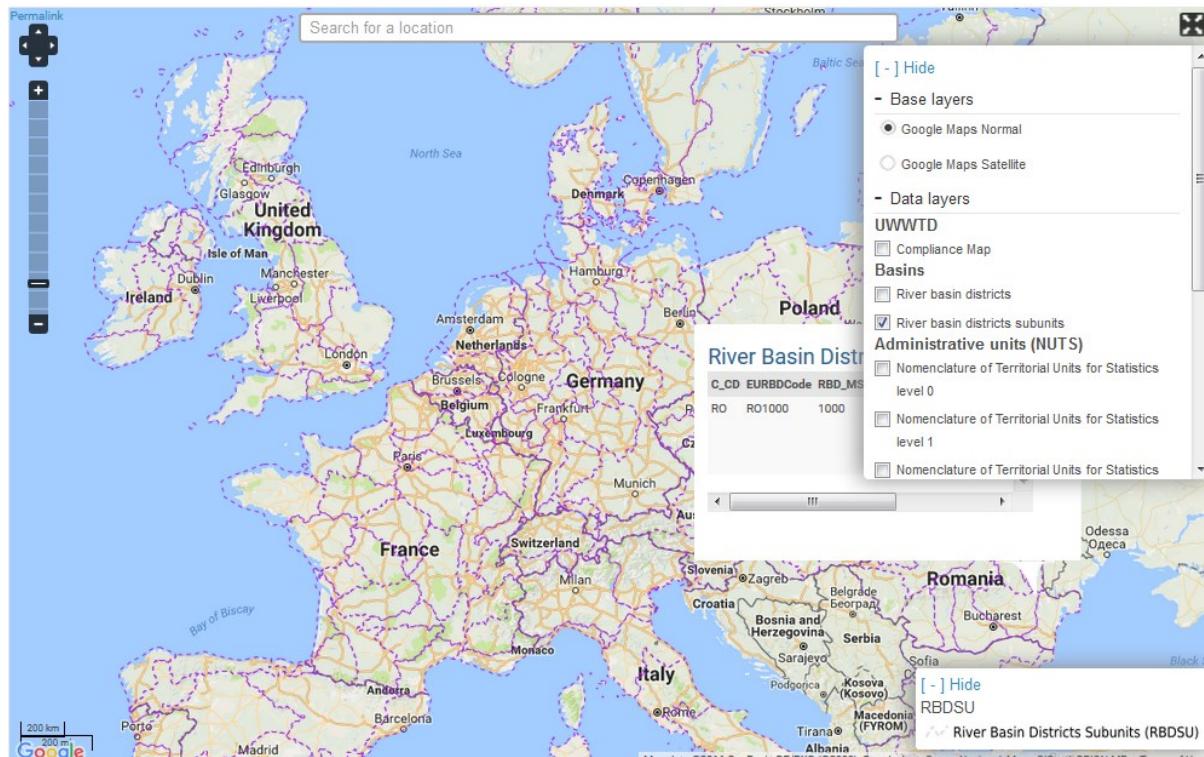
The [google map satellite layer](#)



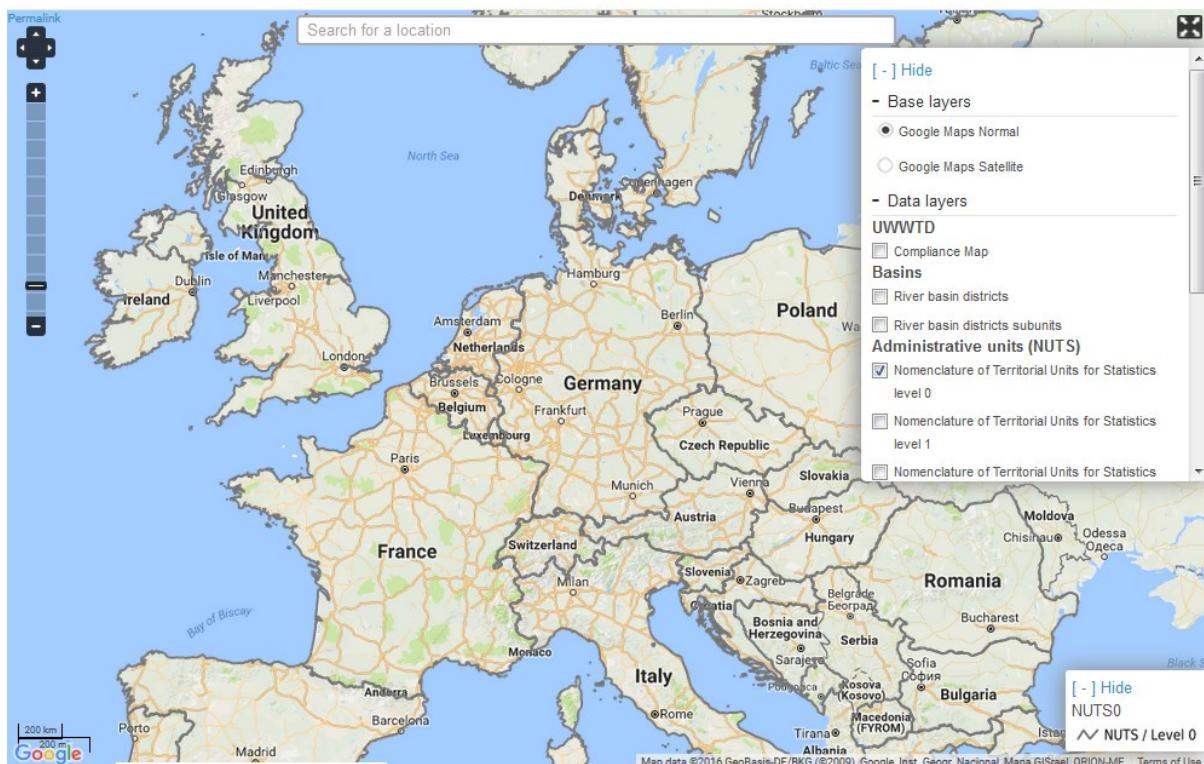
[River basin districts](#)



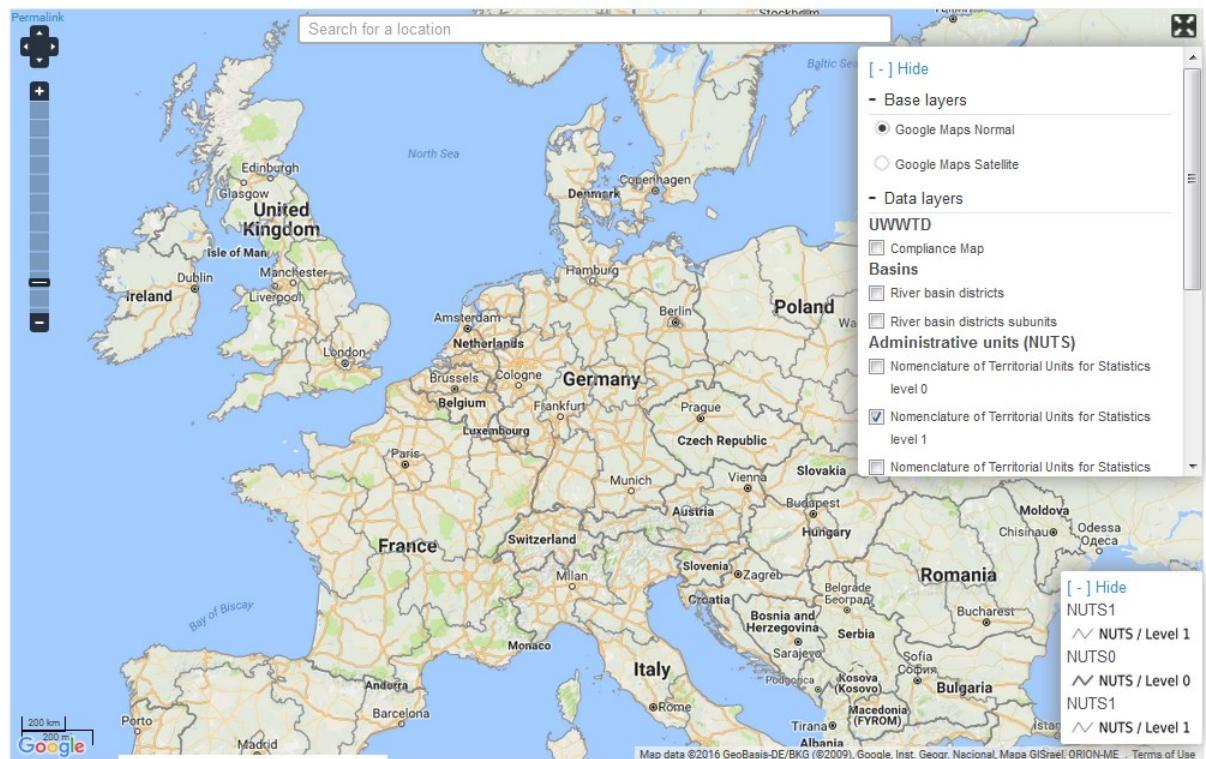
River basin subdistricts



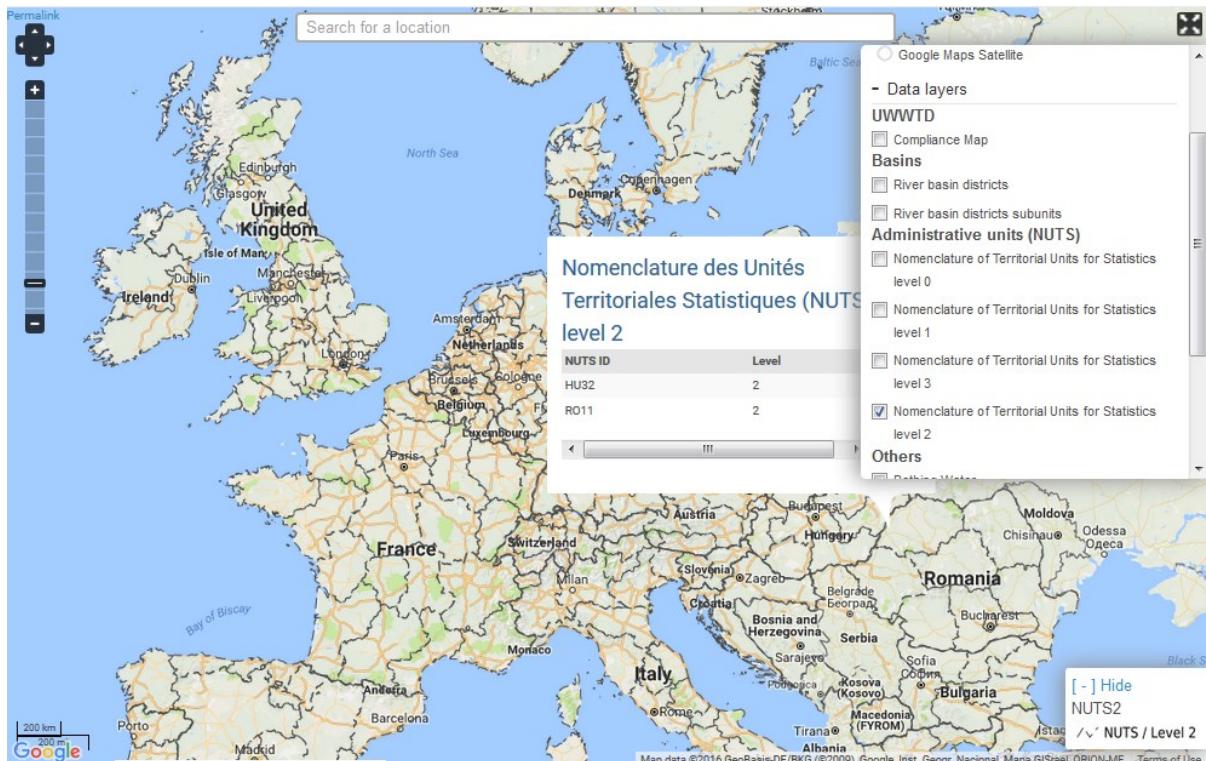
NUTS 0



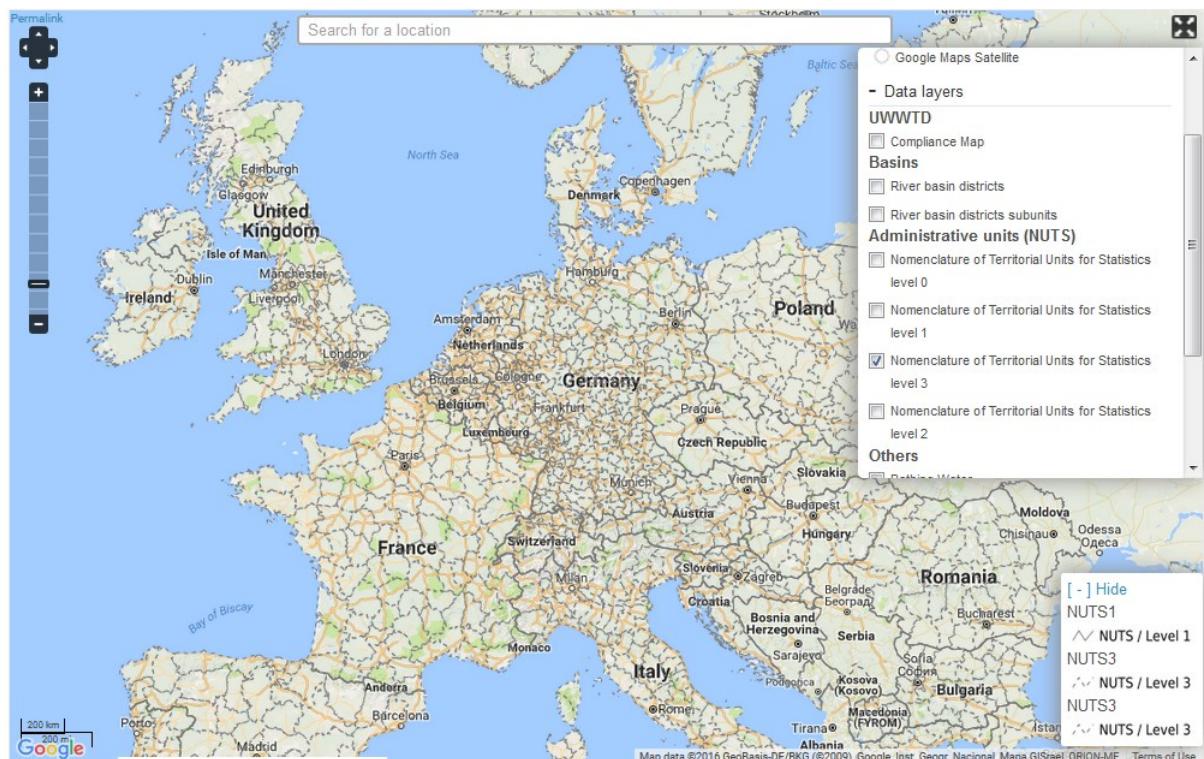
NUTS 1



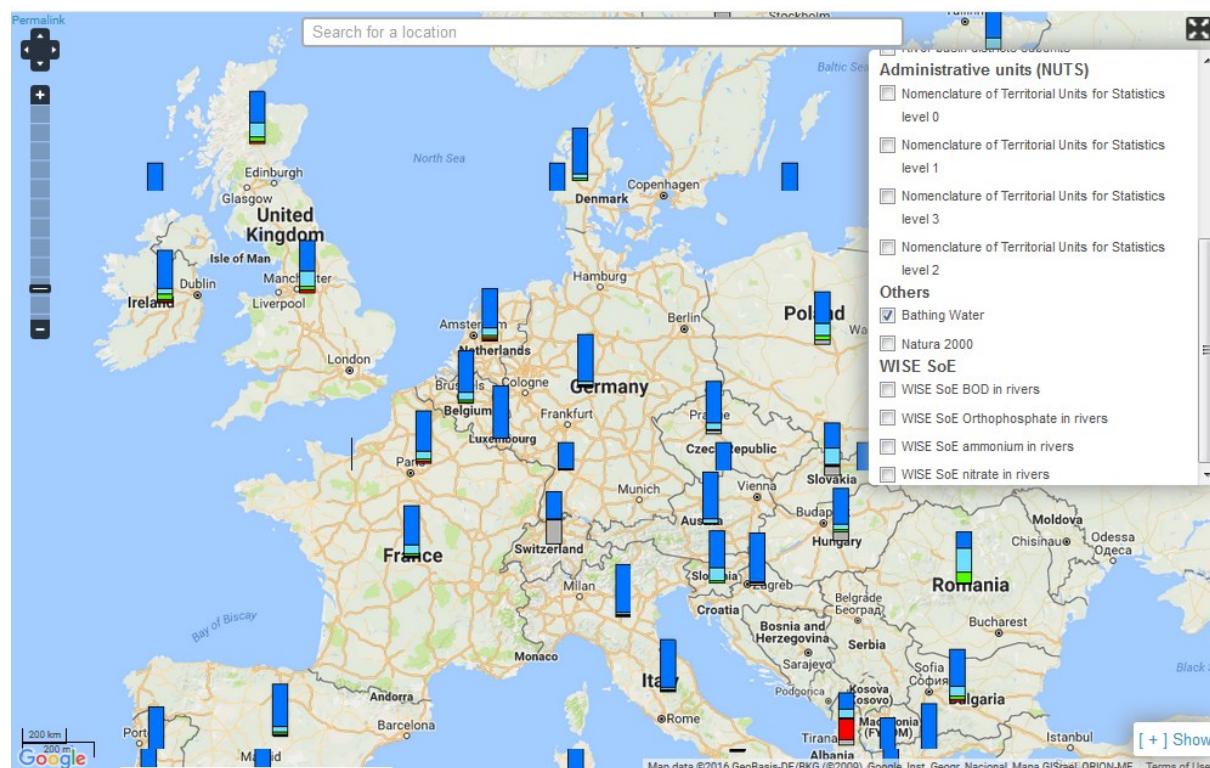
NUTS 2



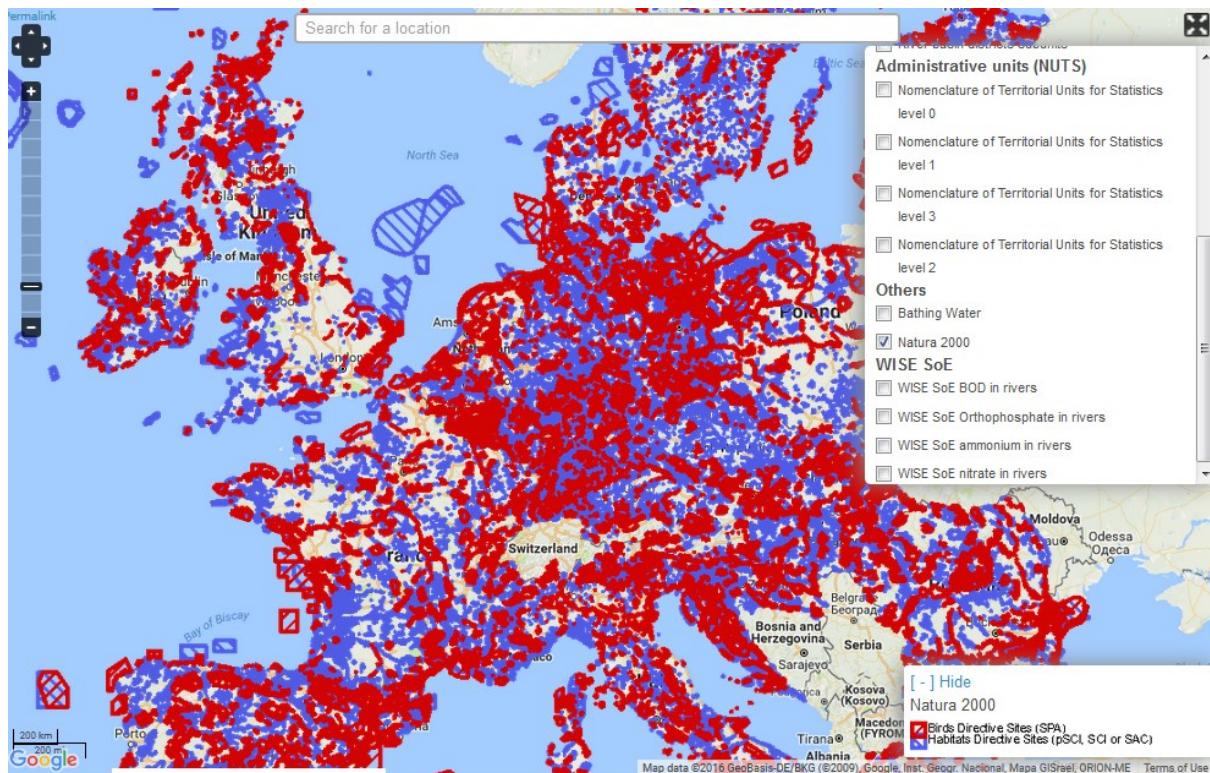
NUTS 3



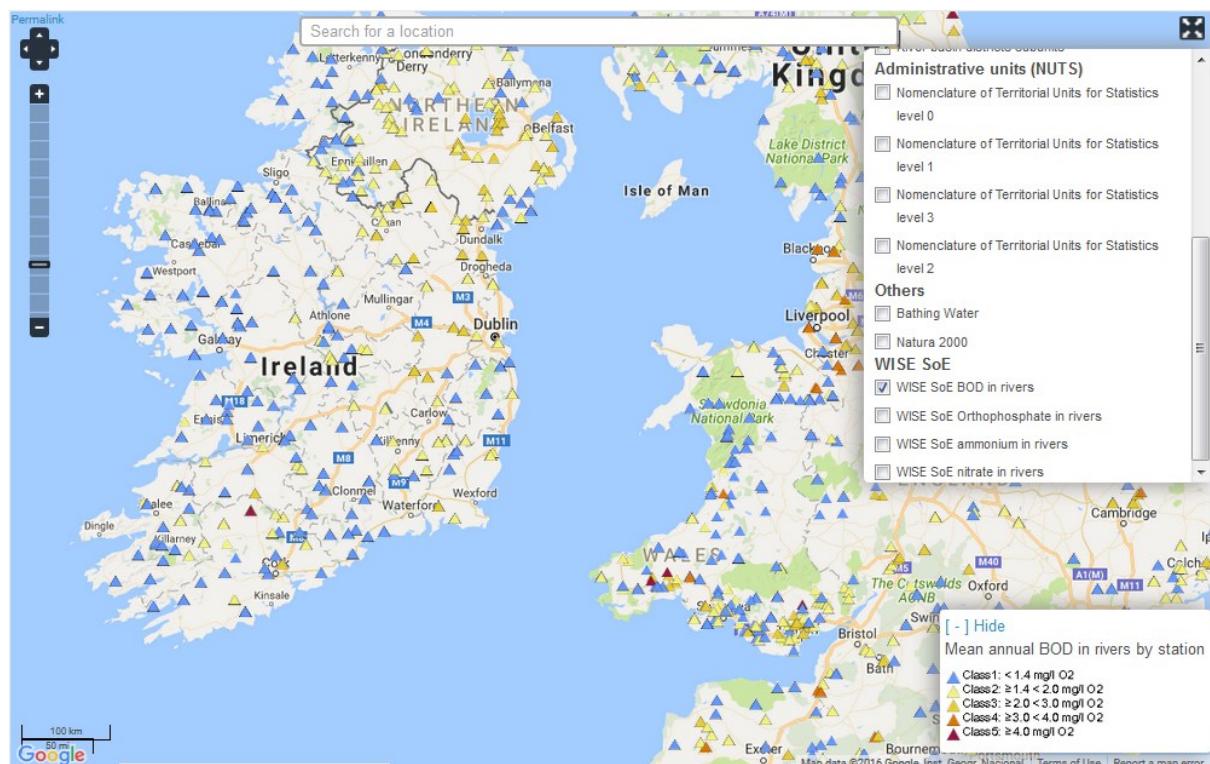
[EEA bathing water layer](#) under INSPIRE service with access to national website and bathing water profiles in some countries



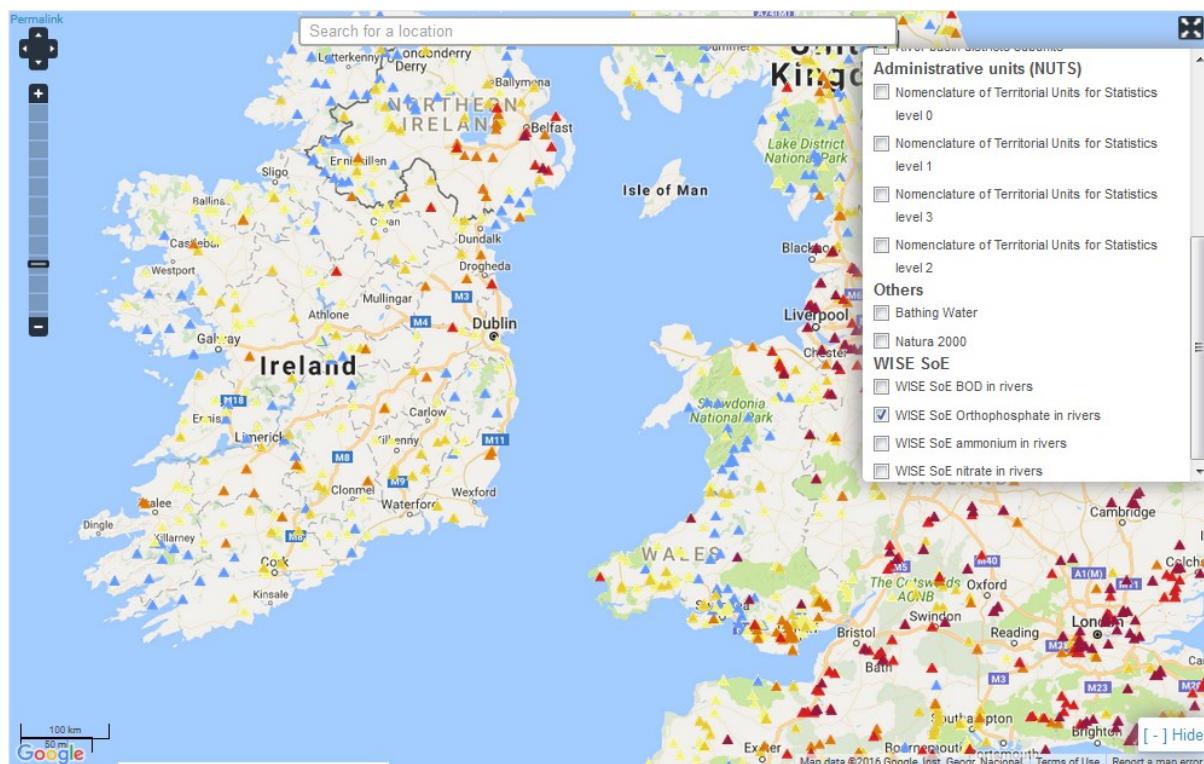
[EEA Natura 2000 layer](#) under INSPIRE service including average concentration per year



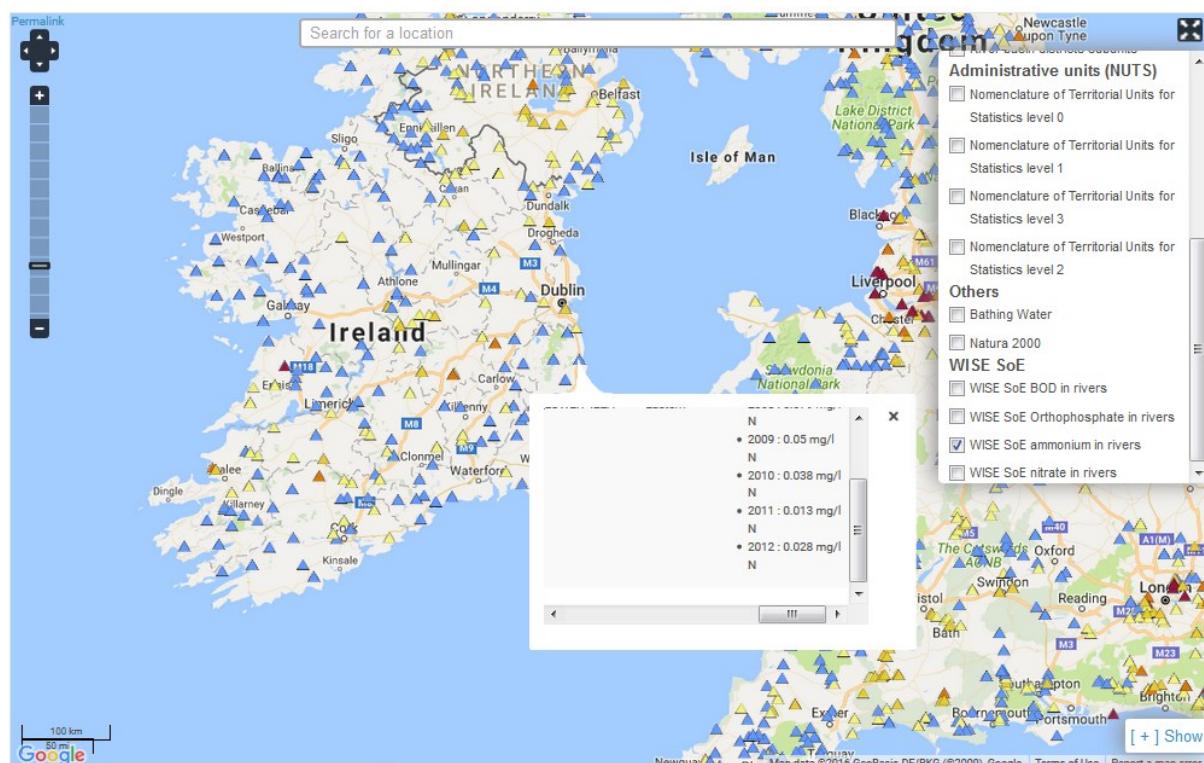
[Wise SoE BOD in rivers](#) under INSPIRE service including average concentration per year



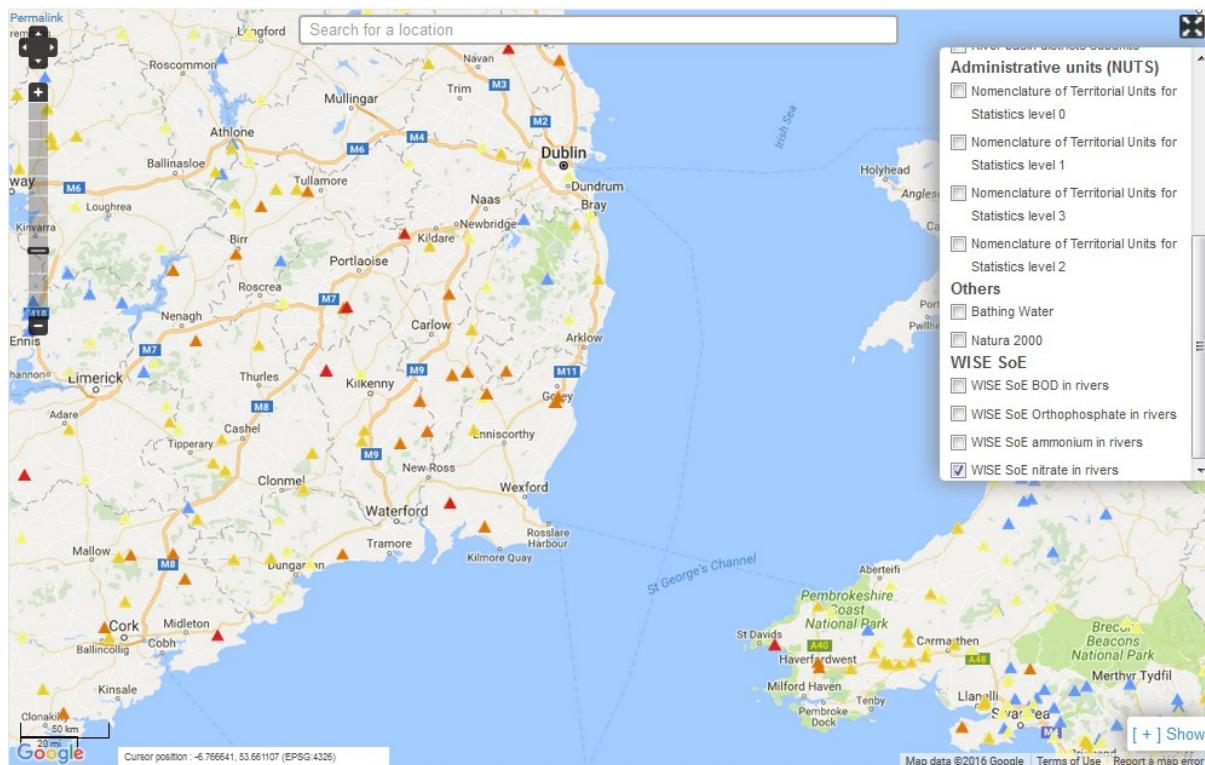
Wise SoE Orthophosphate in rivers under INSPIRE service including average concentration per year



Wise SoE ammonium in rivers under INSPIRE service including average concentration per year



[Wise SoE nitrate in rivers](#) under INSPIRE service including average concentration per year



Bathing water, Natura 2000 and Wise Soes layers are implemented in this website through INSPIRE services. When it is update at EEA level it is automatically update in this website.



II.C List of objects with possibility to sort descending and mounting the parameters

Agglomeration compliance list

Name	Identifier Code	Generated Load (p.e.)	Total UWWTP capacity (p.e.)	Region (NUTS)	RBD	Global compliance	Connection compliance	2nd treatment compliance	3rd treatment compliance	Article 17
Ringsend	IEAG_144	2362329	1640000	IE021 Dublin	IEEA Eastern	Not Compliant	Compliant	Compliant	Not Compliant	No
Cork city	IEAG_63	284696	413000	IE025 South-West (IRL)	IESW South Western	Not Compliant	Compliant	Compliant	Not Compliant	Yes
Dundalk	IEAG_298	179000	179000	IE011 Border	GBNIIENB Neagh Bann	Not Compliant	Compliant	Compliant	Not Compliant	No

Agglomeration connection list

Name	Identifier Code	Generated Load (p.e.)	Total UWWTP capacity (p.e.)	Region (NUTS)	RBD	Collecting system (% of p.e.)	IAS (% of p.e.)	Discharge without treatment (% of p.e.)	Article 17
Ringsend	IEAG_144	2 362 329	1 640 000	IE021 Dublin	IEEA Eastern	100.0	0.0	0.0	No
Cork city	IEAG_63	284 696	413 000	IE025 South-West (IRL)	IESW South Western	100.0	0.0	0.0	Yes
Dundalk	IEAG_298	179 000	179 000	IE011 Border	GBNIIENB Neagh Bann	100.0	0.0	0.0	No
Limerick City and Environs	IEAG_771	130 000	130 000	IE023 Mid-West	IENB Shannon	100.0	0.0	0.0	No
Drogheda	IEAG_299	101 000	101 000	IE011 Border	IEEA Eastern	100.0	0.0	0.0	No
Mutton Island WWTW	IEAG_162	91 600	91 600	IE013 West	IEWE Western	100.0	0.0	0.0	No

Urban waste water treatment plant compliance list

Description							Compliance		Performance			
Name	Identifier Code	Load entering (p.e.)	Physical Capacity (p.e.)	Region (NUTS)	RBD	Treatment in place	Global compliance	BOD5	COD	Total nitrogen	Total phosphorus	Article 17
Ringsend Waste Water Treatment Plant	IETP_133	2 362 329	1 640 000	IE021 Dublin	IEEA Eastern	More stringent treatment	Not Compliant	Pass	Pass	Fail	Fail	Yes
Cork City Waste Water Treatment Plant	IETP_532	284 696	413 000	IE025 South-West (IRL)	IESW South Western	Secondary treatment	Not Compliant	Pass	Pass	Fail		Yes
Dundalk Waste Water Treatment Plant	IETP_281	179 000	179 000	IE011 Border	GBNIIENB Neagh Bann	Secondary treatment	Not Compliant	Pass	Pass	Fail	Fail	Yes

Urban waste water treatment plant treatment list

Name	Identifier Code	Load entering (p.e.)	Physical Capacity (p.e.)	Region (NUTS)	RBD	Primary treatment	Secondary treatment	N removal	P removal	Other more stringent treatment	Article 17
Ringsend Waste Water Treatment Plant	IETP_133	2 362 329	1 640 000	IE021 Dublin	IEEA Eastern	Yes	Yes		No	SBR with uv disinfection	Yes
Cork City Waste Water Treatment Plant	IETP_532	284 696	413 000	IE025 South-West (IRL)	IESW South Western	Yes	Yes		No		Yes
Dundalk Waste Water Treatment Plant	IETP_281	179 000	179 000	IE011 Border	GBNIIENB Neagh Bann	Yes	Yes		No		Yes
Limerick City Waste Water Treatment Plant	IETP_535	130 000	130 000	IE023 Mid-West	IENB Shannon	Yes	Yes		No		No
Drogheda Waste Water Treatment Plant	IETP_280	101 000	101 000	IE011	IEEA	Yes	Yes		No		No



Urban waste water treatment plant pressure list

Name	Identifier Code	Load entering (p.e.)	Physical Capacity (p.e.)	Region (NUTS)	RBD	Discharged load BOD (t per year)	Discharged load COD (t per year)	Discharged load Ntot (t per year)	Discharged load Ptot (t per year)
Vilniaus nuotekų valykla	LT-AG-001-WWTP-01	631 160	740 000	LT00	LT1100 Nemunas River Basin District	292.00	2 761.00	359.00	28.74
Panevezio nuotekų valykla	LT-AG-005-WWTP-01	273 070	292 000	LT00	LT1100 Nemunas River Basin District	42.00	535.94	65.53	4.56
Kauno nuotekų valykla	LT-AG-002-WWTP-01	236 540	432 000	LT00	LT1100 Nemunas River Basin District	144.06	780.47	198.61	6.96

Discharge point list

175 results | Download results: [csv](#) [xls](#)

Name	Identifier Code	Linked receiving areas	Type of area	Linked treatment plant	Compliance of treatment plant
DP_SI_AGG_SI_BISTRICA OB DRAVNI LOG_16520	SI_DP_AGG_SI16520	Catchment of MPVT Drava Dravograd – Maribor	Catchment of Sensitive Area	SI_AGG_SI_BISTRICA OB DRAVNI LOG_16520	Pending Deadline
DP_SI_AGG_SI_BOHINJSKA BISTRICA_3414	SI_DP_AGG_SI03414	Catchment of VT Sava Sveti Janez – Jezernica	Catchment of Sensitive Area	SI_AGG_SI_BOHINJSKA BISTRICA_3414	Pending Deadline
DP_SI_AGG_SI_BOROVNICA_16466	SI_DP_AGG_SI16466	Catchment of VT Ljubljanica povirje – Ljubljana	Catchment of Sensitive Area	SI_AGG_SI_BOROVNICA_16466	Pending Deadline
DP_SI_AGG_SI_BOVEC * 2873	SI_DP_AGG_SI02873	Catchment of VT Soča Bovec – Tolmin	Catchment of Sensitive Area	SI_AGG_SI_BOVEC * 2873	Pending Deadline
DP_SI_AGG_SI_BRATONCI_9633	SI_DP_AGG_SI09633	Catchment of VT Ledava	Catchment of	SI_AGG_SI_BRATONCI_9633	Pending Deadline

Sensitive areas list

296 results | Download results: [csv](#) [xls](#)

Name	Identifier Code	Type of area	Article 52 applied	Article 54 applied	Article 58 applied	Number of UWWT	Total physical Capacity (p.e.)	Total load entering (p.e.)
VT Ljubljanica Zalog – Podgrad	SIRI-SI14VT97	Sensitive Area	Yes	No	No	1	360 000	462 872
Catchment of VT Sava Krško – Vrbina	SICM-SI1VT913	Catchment of Sensitive Area	Yes	No	No	2	193 500	167 065
Catchment of VT Drava Maribor – Ptuj	SICM-SI3VT5171	Catchment of Sensitive Area	Yes	No	No	3	190 000	138 872
Catchment of VT Kamniška Bistrica Študia – Dol	SICM-SI132VT7	Catchment of Sensitive Area	Yes	No	No	1	200 000	132 337
MPVT Sava Mavčiče – Medvode	SIRI-SI1VT170	Sensitive Area	Yes	No	No	1	100 000	105 995
Catchment of VT Savinja Celje – Zidani Most	SICM-SI16VT97	Catchment of Sensitive Area	Yes	No	No	1	85 000	74 039
MPVT zadrževalnik Ptujsko jezero	SILK-SI3VT5172	Sensitive Area	Yes	No	No	2	68 000	72 576
Catchment of VT Ledava zadrževalnik Ledavsko jezero – sotočje z Veliko Krko	SICM-SI442VT91	Catchment of Sensitive Area	Yes	No	No	9	84 900	61 972



II.C Criteria Selection

This selection allows displaying only the selected objects in the map and in the list above

[Agglomeration compliance](#)

Agglomeration Compliance map

Year of data	Generated Load (p.e.)	Global compliance	Connection compliance	2nd treatment compliance	3rd treatment compliance	Article 17	Region (NUTS)	River Basin District	Apply	Reset
2012	Is less than	- Any -	- Any -	- Any -	- Any -	- Any -	- Any -	- Any -		
									Print	

[Agglomeration connection](#)

Agglomeration connection map and list

Year of data	Generated Load (p.e.)	IAS (% of p.e.)	Collecting system (% of p.e.)	Discharge without treatment (% of p.e.)	Article 17	Region (NUTS)	River Basin District	Print
2012	Is less than	- Any -	Is less than	Is less than	- Any -	- Any -	- Any -	Apply
								Reset

[Urban waste water treatment plants compliance](#)

UWWTD Treatment Plants- Compliance map

Year of data	Load entering (p.e.)	Treatment in place	Global compliance	Region (NUTS)	River Basin District	BOD5	COD	Total nitrogen	Total phosphorus	Article 17	Apply	Reset
2012	Is less than	- Any -	- Any -	- Any -	- Any -	- Any -	- Any -	- Any -	- Any -	- Any -		
											Print	

[Urban waste water treatment plants treatment](#)

UWWTD Treatment Plants- Treatment map

Year of data	Load entering (p.e.)	Primary treatment	Secondary treatment	N removal	P removal	Article 17	Region (NUTS)	River Basin District	Print
2012	Is less than	- Any -	- Any -	- Any -	- Any -	- Any -	- Any -	- Any -	Apply
									Reset

[Urban waste water treatment plants pressure](#)

UWWTD Treatment Plants- Pressure map

Year of data	Load entering (p.e.)	Discharged load BOD (t per year)	Discharged load COD (t per year)	Discharged load Ntot (t per year)	Discharged load Ptot (t per year)	Region (NUTS)	River Basin District	Article 17	Print
2012	Is less than	Is less than	Is less than	Is less than	Is less than	- Any -	- Any -	- Any -	Apply
									Reset

[Discharge points](#)

Discharge points

Year of data	Type of area	Apply	Reset
2012	- Any -		

[Sensitive areas](#)

Sensitive areas

Year of data	Total physical Capacity (p.e.)	Total load entering (p.e.)	Article 52 applied	Article 54 applied	Article 56 applied	Type of area	Print
2012	Is less than	Is less than	- Any -	- Any -	- Any -	- Any -	Apply
							Reset



III Detailed information about each object

The website displays the content of the European urban waste water database in an user-friendly ways using map to locate the object, picture to illustrate the links between the objects. It provides also historical approach and easy access to the other linked object.

III.A Urban Waste Water Agglomeration

The screenshot shows a detailed view of the European urban waste water database for the Bucuresti agglomeration. At the top, there is a satellite map of the area with a red marker indicating the location. Below the map, the agglomeration details are listed: Bucuresti, Identifier: ROAG_179132, Status: Active, Reporting year: 2012, Region (NUTS) Code: RO081, Region (NUTS) Name: RO081. To the right of the map are 'Location on the map' and 'Print' buttons. Below the map is a 'Compliance timeline' section showing data for 2009 and 2012. A legend indicates: Compliant (blue), Not compliant (red), Not relevant (grey), No information (black), and ? (white). The 'Historical access' section shows the same timeline and legend. The 'Agglomeration load' section contains data: Generated load (p.e.): 2 159 995, Connected to collecting system: 85.0 % (1 834 916 p.e.), Individual or Appropriate Systems (IAS): 0.1 % (2 376 p.e.), Discharged without treatment: 14.9 % (322 703 p.e.). The 'Description 2012' section includes a compliance icon and a table for 'Distance to compliance'. The 'Automatic calculation of the compliance' section is highlighted with a large yellow circle around the table. The 'Automatic calculation of the distance to compliance' section is also highlighted with a large yellow circle around the table.

Agglomeration : Bucuresti - Identifier : ROAG_179132 - Status : Active - Reporting year : 2012
Region (NUTS) Code : RO081 - Region (NUTS) Name : RO081

Location on the map

Print

Compliance timeline

2009 2012

Historical access

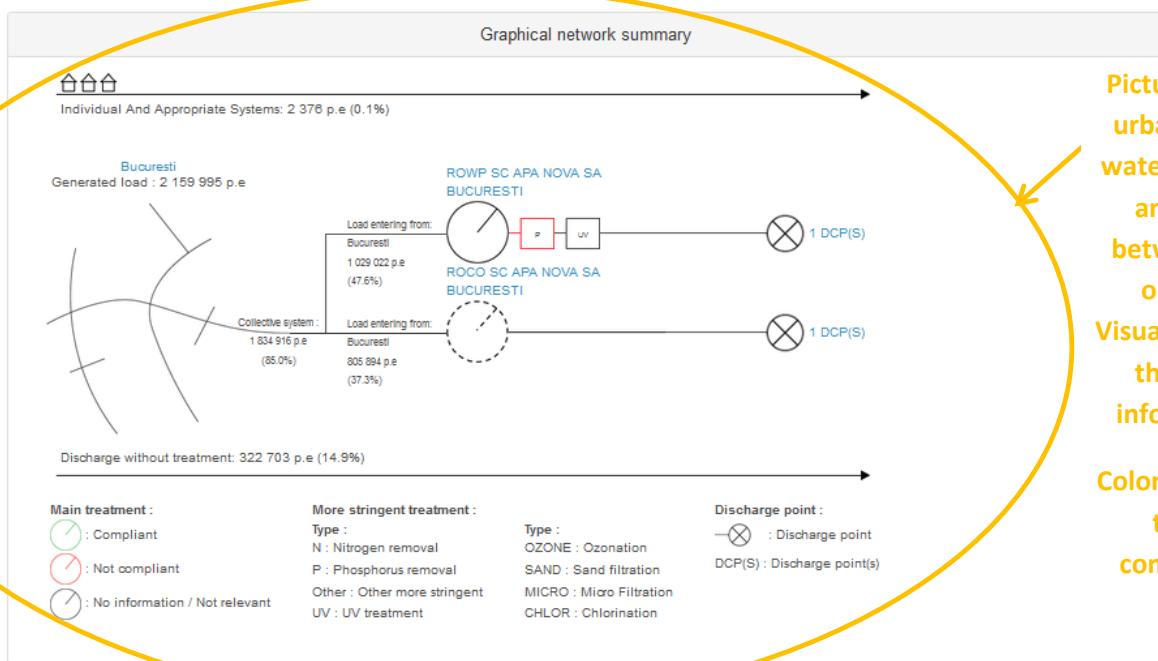
Agglomeration load

Automatic calculation of the compliance

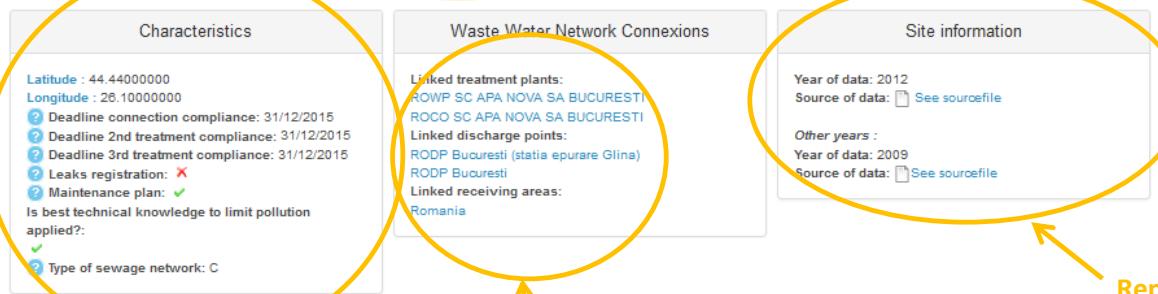
Automatic calculation of the distance to compliance

	Equipment	Performance
Connection	14.9%	
	322 703 p.e.	
2nd treatment	37.3%	37.3%
	805 894 p.e.	805 894 p.e.
3rd treatment	85.0%	85.0%
	1 834 916 p.e.	1 834 916 p.e.





Picture of the urban waste water systems and links between the objects.
Visualisation of the main information
Color is related to the compliance



Reporting XML

Coordinated and deadlines related to the agglomeration

Hyperlink to UWWT(p)s, discharge point(s) and receiving areas

Forward looking aspect

Identified reason(s) for non compliance:
1) validation of CSO performance

Measure(s) foreseen to reach compliance with Article 3 (collecting systems and IAS):
Study

Name of EU fund planned to be used to complete the collecting system or IAS (if any): -

Amount of (planned) EU funds likely to be requested to complete the collecting system or IAS (if any): 0

Any relevant comment on collecting system or IAS:
IEAG-491 also refers. Consultants to be appointed to review the network system and efficacy of the existing model. Pending this review the precise scale of required works cannot be determined. There is no provision for major upgrading works in the present Investment Plan (2014 - 2016), and works would not be expected to commence until after 2016.

Information about projects to become compliant



III.B Urban Waste Water Treatment Plant

Location on the map

Historical access

Compliance calculation

Treatment plant load, design capacity and performance

Automatic calculation of the concentration and percentage of removal

Picture of the urban waste water systems and links between the objects. Visualisation of the main information. Color is related to the compliance

Graphical network summary

Agglomerations : 1

Cork City Waste Water Treatment Plant

Entering : 284 696 p.e.

1 DOP(S)

Main treatment :

- Green circle: Compliant
- Red circle: Not compliant
- Grey circle: No information / Not relevant

More stringent treatment :

- Green line: Pass performance
- Red line: Fail performance
- White line: Not relevant

Type :

- N : Nitrogen removal
- P : Phosphorus removal
- UV : UV treatment
- MICRO : Micro Filtration

Type :

- CHLOR : Chlorination
- OZONE : Ozonation
- SAND : Sand filtration
- O : Other more stringent

Discharge point :

- Black circle with a cross: Discharge point
- Black circle: DCP(S) : Discharge point(s)



Reporting file

XML

<p>Characteristics</p> <p>Latitude : 51.89000000 Longitude : -8.50000000</p> <p>Treatment in place :</p> <ul style="list-style-type: none"> Primary treatment: <input checked="" type="checkbox"/> Secondary treatment: <input checked="" type="checkbox"/> <p>More stringent treatment :</p> <ul style="list-style-type: none"> N removal: Not provided P removal: <input checked="" type="checkbox"/> UV: <input checked="" type="checkbox"/> Chlorination: <input checked="" type="checkbox"/> Ozonation: <input checked="" type="checkbox"/> Sand filtration: <input checked="" type="checkbox"/> Micro filtration: <input checked="" type="checkbox"/> Other treatment: <input checked="" type="checkbox"/> 	<p>Waste Water Network Connexions</p> <p>Linked agglomeration(s): Cork city Linked discharge point(s): Cork City Waste Water Treatment Plant Linked receiving area(s): Lee Estuary / Lough Mahon</p>	<p>Site information</p> <p>Year of data: 2012 Source of data: <input type="checkbox"/> See sourcefile</p> <p>Other year : Year of data: 2010 Source of data: file See sourcefile</p>
---	---	---

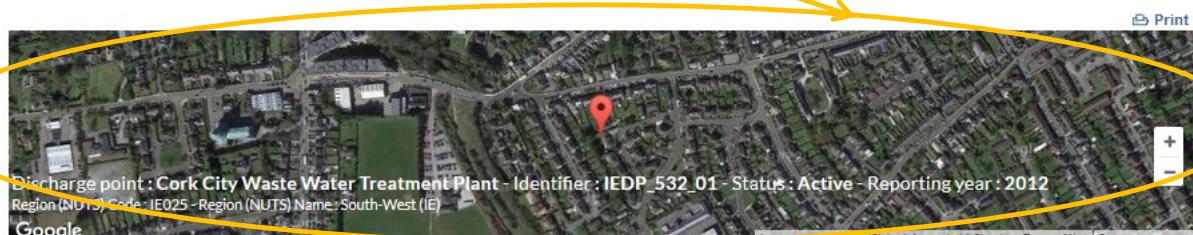
Coordinates and treatment in place

Hyperlink to Agglomeration(s), discharge point(s) and receiving areas

Information about projects related to compliance

III.C Discharge point

Location on the map



<p>Characteristics</p> <p>Latitude : 51.88830000 Longitude : -8.50070000 Receiving water: Freshwater Type of receiving area: Catchment sensitive area Surface water: <input checked="" type="checkbox"/></p> <p>In case of discharge on land please specify the purpose: Not provided</p>	<p>Waste Water Network Connexions</p> <p>Linked agglomerations: Cork city Linked treatment plants: Cork City Waste Water Treatment Plant Linked receiving areas: Lee Estuary / Lough Mahon Linked River Basin District: IE19_1890 Linked water body: IE_SW_19_1744</p>	<p>Site information</p> <p>Year of data: 2012 Source of data: <input type="checkbox"/> See sourcefile</p>
--	---	--

Coordinates and receiving area

Hyperlink to Agglomeration(s), treatment plant(s) and receiving areas

Reporting file XML



III.C Sensitive area

Location on the map

Catchment of Sensitive Area : Lee Estuary / Lough Mahon - Identifier : IECM_19_01 - Status : Active - Reporting year : 2012

Characteristics of the sensitive area

Characteristics 2012	
75% removal Nitrogen and Phosphorus: <input checked="" type="checkbox"/> X	Date of designation: -
Article 5(2) applied: <input checked="" type="checkbox"/> ✓	Date of designation: Wednesday, July 14, 2004
Designation Criteria Eutrophication - Nitrogen: <input checked="" type="checkbox"/> ✓	Starting date of application: -
Designation Criteria Eutrophication - Phosphorus: <input checked="" type="checkbox"/> ✓	<input checked="" type="checkbox"/> Starting date of application: -
Designation Criteria: b: <input checked="" type="checkbox"/> X	<input checked="" type="checkbox"/> Starting date of application: -
Designation Criteria: c: <input checked="" type="checkbox"/> X	Starting date of application: -
Designation Criteria other: Not provided Article 5(4) applied: <input checked="" type="checkbox"/> X	

Reporting file XML

Agglomerations, treatment plants and discharge points located in the sensitive area

Site information

- Year of data: 2012
- Source of data: [See sourcefile](#)

Related Sensitive area

- Related Sensitive area: IETW_SW_2004_0041

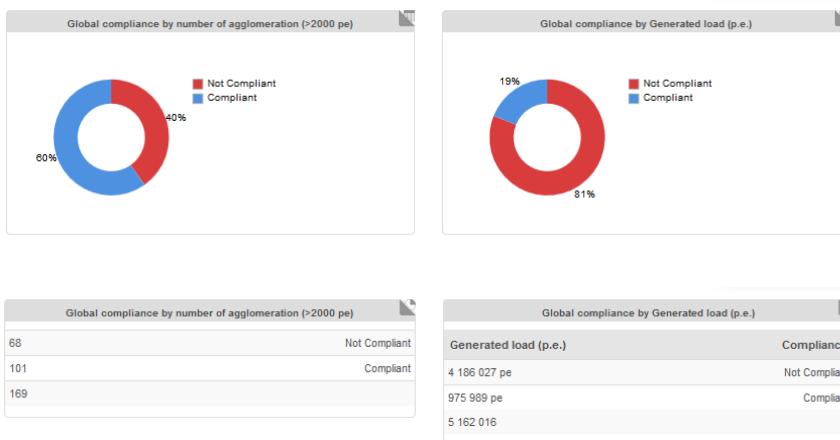


IV Other functionalities provided

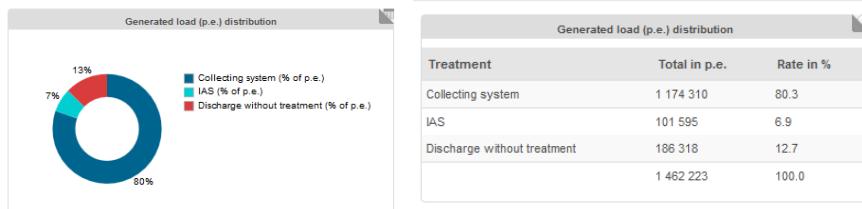
IV.A Automatic generation of Statistics

Statistics are included in the webpages related to the maps and the lists. It provided graphs and also the table that was used to create the maps when clicking on the top right of each graph.

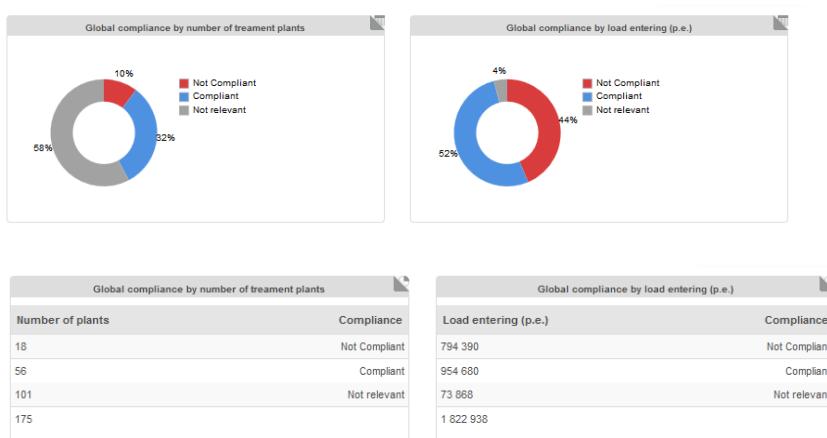
Agglomeration compliance



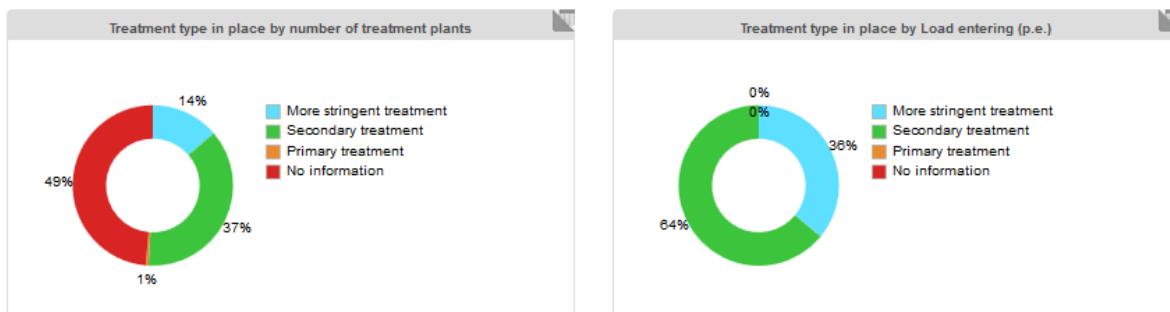
Agglomeration connection



Urban waste water treatment plants compliance



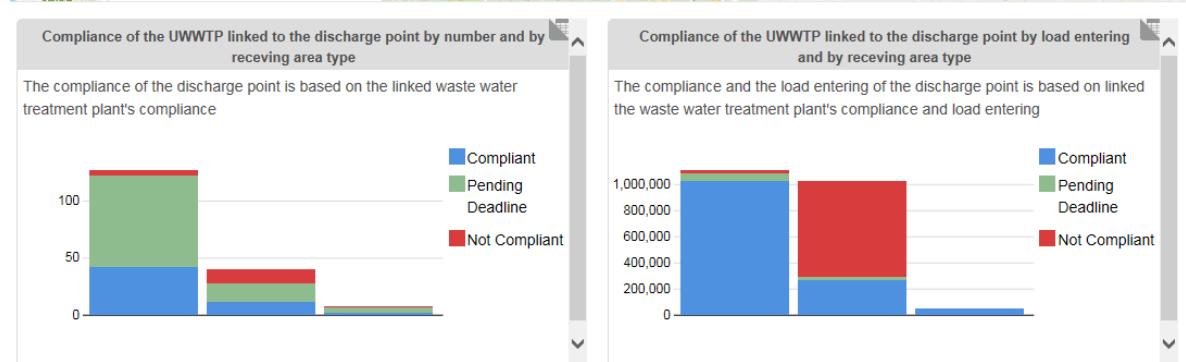
Urban waste water treatment plants treatment



Treatment type in place by number of treatment plants	
Number of plants	Treatment type in place
24	More stringent treatment
65	Secondary treatment
1	Primary treatment
85	No information
175	

Treatment type in place by Load entering (p.e.)	
Load entering (p.e.)	Treatment type in place
655 987	More stringent treatment
1 166 951	Secondary treatment
0	Primary treatment
0	No information
1 822 938	

Discharge points



Compliance of the UWWTP linked to the discharge point by number and by receiving area type			
Area type	Compliant	Pending Deadline	Not Compliant
Catchment of Sensitive Area	42	80	5
Sensitive Area	12	16	12
Normal Area	2	5	1
Total	56	101	18

Compliance of the UWWTP linked to the discharge point by load entering and by receiving area type			
Area type	Compliant	Pending Deadline	Not Compliant
Catchment of Sensitive Area	1024170	59220	25750
Sensitive Area	269200	24700	735000
Normal Area	51333	0	0
Total	1344703	83920	760750



A specific menu is also dedicated [to statistics that are automatically generated](#) when updating a new database. It is also possible to have access to the table related to the graph by clicking of the top right of each graph.

There is first a possibility to select the reference year or all years

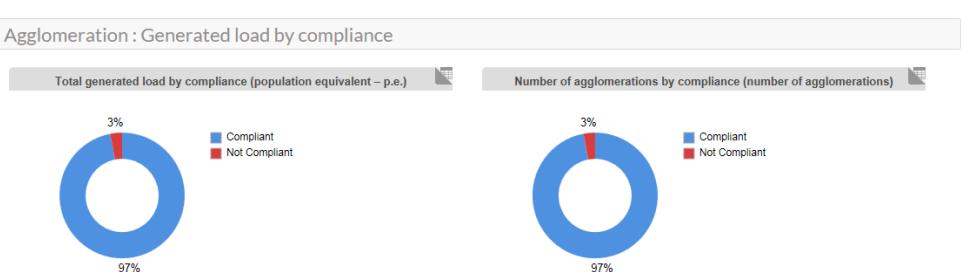
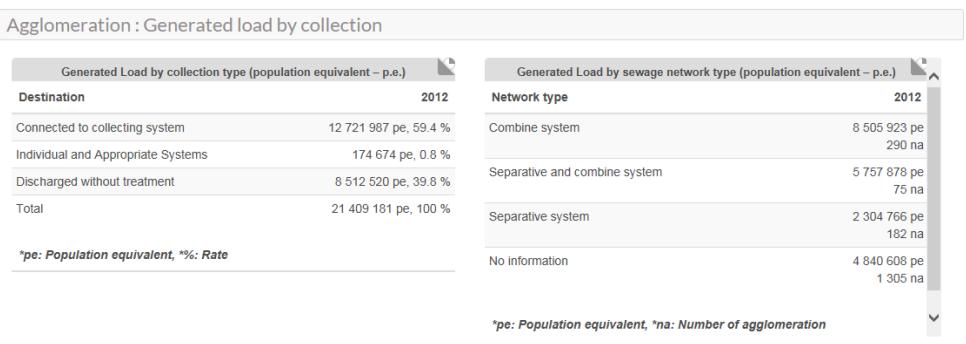
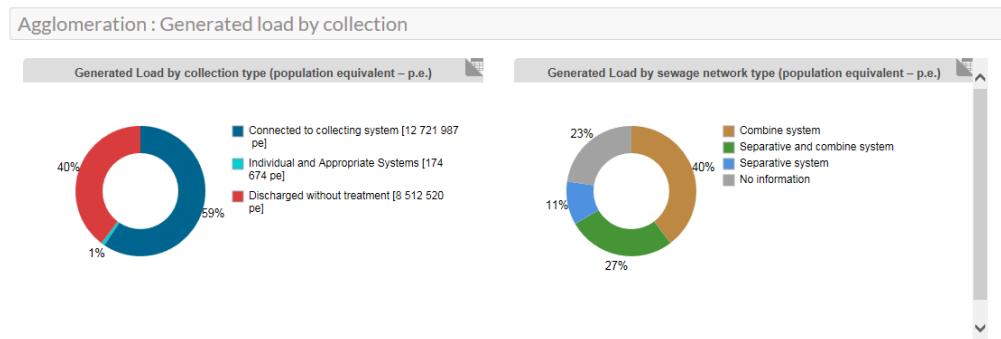
[Graphs for national stats](#)

Select the year to generate the graphs.

Available years

2012	<input type="checkbox"/>
------	--------------------------

Then the statistics are displayed concerning different topics



Agglomeration : Generated load by compliance		
Total generated load by compliance (population equivalent – p.e.)		
Compliance state	2011	
Compliant	2 672 900 pe	
Not Compliant	85 000 pe	
Total	2 757 900 pe	

Number of agglomerations by compliance (number of agglomerations)		
Compliance state	2011	
Compliant	65	
Not Compliant	2	
Total	67	

*pe: Population equivalent

*: Number of agglomerations

IV.B Creation of statistics

Using the [create statistic menu](#) is a way to generate statistic by year or geographical areas such as regions or river basins. It is another to use the website if a user has a specific need.

Statistics

Select the type of content, type of data (if needed) and geographical extent to generate the statistics.

Type

Agglomerations

Data type

Compliance

Year

2011

Geographical extent

Regions (NUTS)

Load statistics

IV.C Print and download buttons

At the top of most of the webpages there is a print button that allows to print the content of the webpage that is displayed.



At the top of each list displayed (see chapter II.C) there is also a download button that allows the user to download the content of the list under .CSV or .xls format.

75 results Download results: csv xls											
Description							Compliance	Performance			
Name	Identifier Code	Load entering (p.e.)	Physical Capacity (p.e.)	Region (NUTS)	RBD	Treatment in place	Global compliance	BOD5	COD	Total nitrogen	Total phosphorus



V Conclusion

As explained in this document the European Commission and its contractor have tried to build a concrete urban waste water website that provides lots of different functionalities for the Benefit of the European Member States and the final users of this information. By easing the access to the knowledge It helps to implement better [the Urban Waste Water Treatment Directive 91/271/EEC](#). It allows also to implement some of the requirements of the [INSPIRE](#) and [public access to environmental information](#) directives.

It shows concretely the benefits of implementing INSPIRE services.

A new improved version will be available at the beginning of 2017. It will be used to display the 2014 urban waste water reporting information concerning all European Member States.

Some Member States are also going to choose to install this software directly on their own server to use it as national urban waste water national website. Translation in their national language is expected from their side with more national information in the regulations and resources webpages.

This website can also be used by countries that have to implement European urban waste water regulation due to partnership agreements.

