

Consuming Inspire Services

1. The List of the INSPIRE themes

Below is the list of the 34 INSPIRE data themes. Data themes implemented using ESRI technology (ArcGIS for INSPIRE), are shown in bold. The rest of the data themes are implemented as GML file packages. Data themes in light color have not been implemented at all.

ANNEX	THEMES	
ANNEX I	AD	Addresses
	GN	Geographical names
	AU	Administrative units
	HY	Hydrography
	CP	Cadastral parcels
	PS	Protected sites
	RS	Coordinate reference systems
	TN	Transport networks
	GG	Geographical grid systems
ANNEX II	EL	Elevation
	GE	Geology
	LC	Land cover
	OI	Orthoimagery
ANNEX III	AF	Agricultural and aquaculture facilities
	HB	Habitats and biotopes
	PD	Population distribution and demography
	AM	Area management / restriction / regulation zones & reporting units
	HH	Human health and safety
	PF	Production and industrial facilities
	AC	Atmospheric conditions
	LU	Land use
	SR	Sea regions
	BR	Bio-geographical regions
	MF	Meteorological geographical features
	SO	Soil
	BU	Buildings
	MR	Mineral Resources
	SD	Species distribution
	ER	Energy Resources
	NZ	Natural risk zones
	SU	Statistical units
	EF	Environmental monitoring Facilities
	OF	Oceanographic geographical features
US	Utility and governmental services	

2. DATA themes supported by ESRI


a. INSPIRE view services

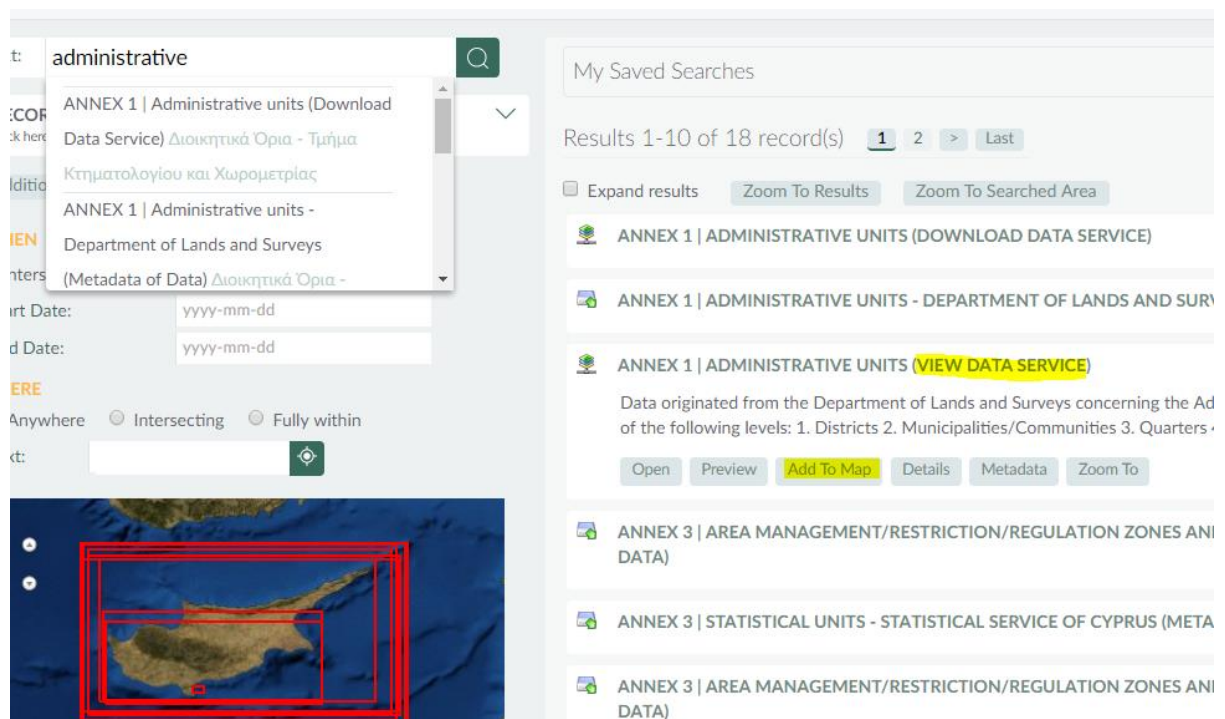
View services can be consumed by any client supporting WMS specification. The description of the INSPIRE geoportal **Map Viewer**, **ArcGIS for Desktop** and **QGIS** follows.

Map Viewer

In a web browser go to the INSPIRE Geoportal of the "DLS PORTAL"

(<http://eservices.dls.moi.gov.cy/index.html#/national/inspiregeoportalmapviewer>) and in

Search tab type the name of the INSPIRE theme and click on the Search button . In Results, find the appropriate theme (in brackets "VIEW DATA SERVICE" must be specified) and click on the name. Under the name the buttons will appear.



Now click on the "Add To Map" and a new window with Map Viewer and appropriate data will be opened.

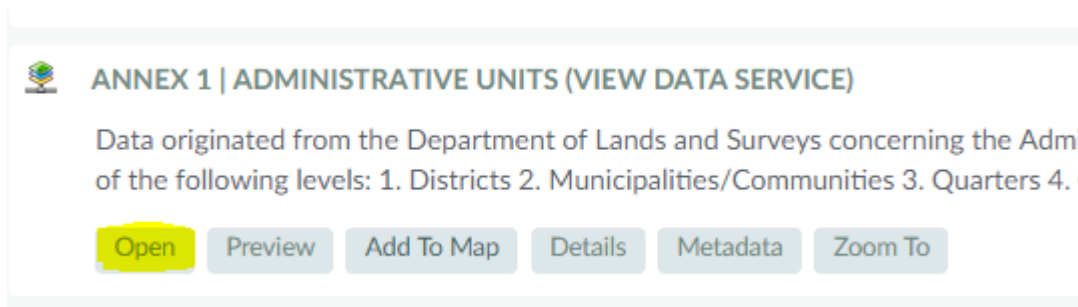


Press the icon  so as you see the layer list, as shown in the next figure.



ArcGIS for Desktop (ArcMap)

As afore-mentioned, find the appropriate theme in INSPIRE geoportal but now click on the button "Open".



Copy the URL from browser (only the part in front of the question mark), as shown with yellow color in the following figure:

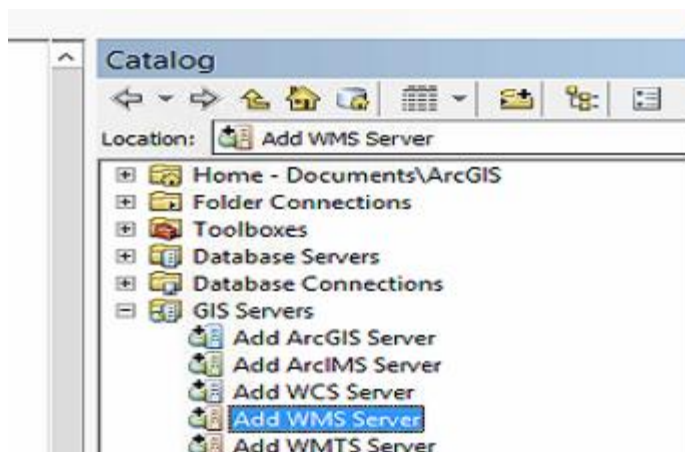
http://weba-test.dls.moi.gov.cy/arcgis/rest/services/INSPIRE/AU_AdmsUnits/MapServer/exts/InspireView/service?VERSION=1.3.0&SERVICE=wms&REC

This XML file does not appear to have any style information associated with it. The document tree is shown below.

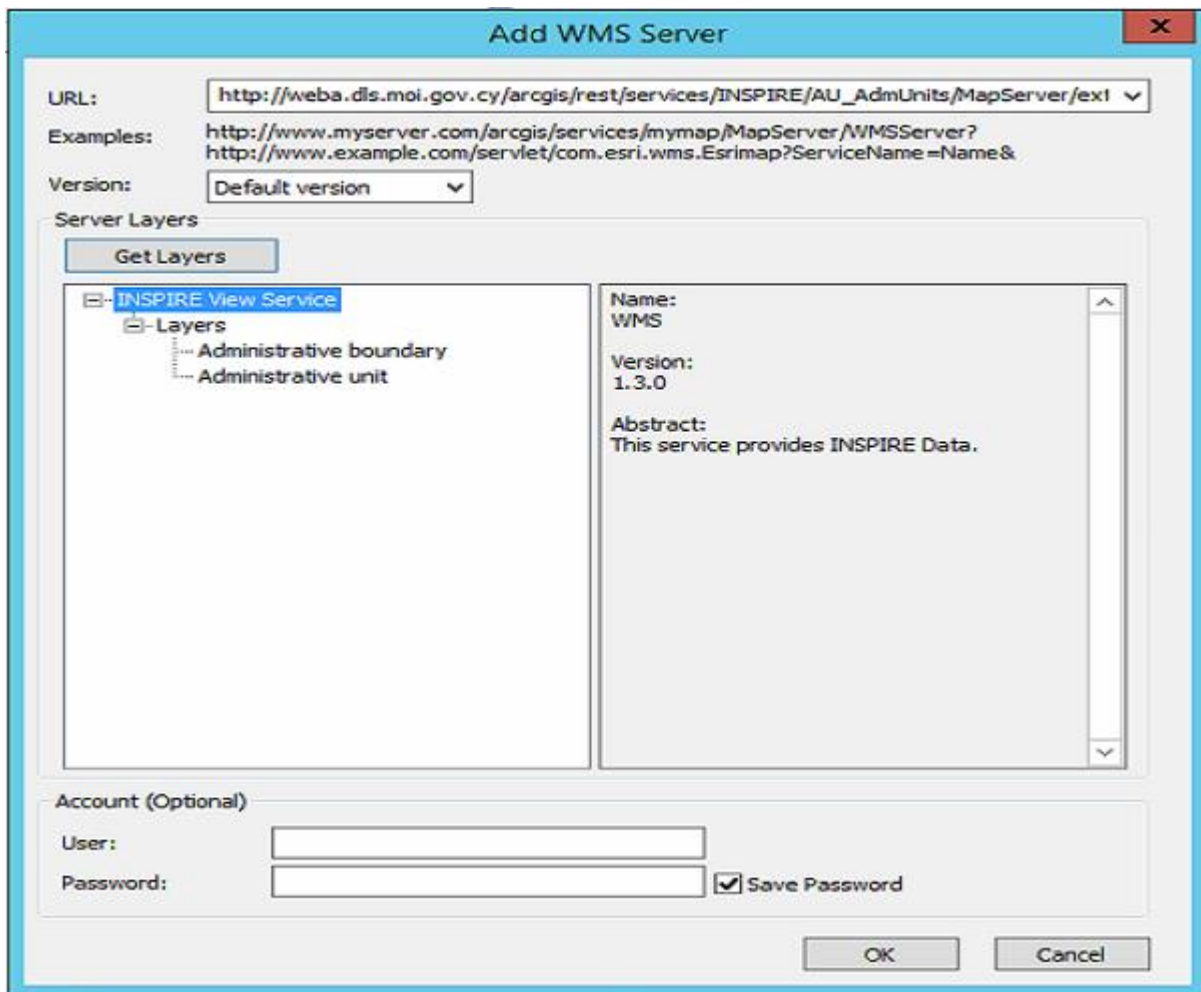
```
<?xml version="1.0" encoding="UTF-8" style="display:none" />
<wms:Capabilities xmlns:wms="http://www.opengis.net/wms" xmlns:esri_wms="http://www.esri.com/wms"
xmlns:inspire_common="http://inspire.ec.europa.eu/schemas/common/1.0" xmlns:inspire_vs="http://inspire.ec.europa.eu/schemas/inspire_vs/1.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" version="1.3.0" xsi:schemaLocation="http://inspire.ec.europa.eu/schemas/inspire_vs/1.0 http://weba-
test.dls.moi.gov.cy/arcgis/rest/directories/arcgisforinspire/schema/networkservices/inspire_vs/1.0/inspire-wms-extension.xsd">
  <Service>
    <Name>WMS</Name>
    <Title>INSPIRE View Service</Title>
    <Abstract>This service provides INSPIRE Data.</Abstract>
    <KeywordList>
      <Keyword>WMS</Keyword>
      <Keyword>INSPIRE</Keyword>
      <Keyword>ViewService</Keyword>
      <Keyword vocabulary="ISO">infoMapAccessService</Keyword>
    </KeywordList>
    <OnlineResource xmlns:xlink="http://www.w3.org/1999/xlink" xlink:href="http://weba-
test.dls.moi.gov.cy/arcgis/rest/services/INSPIRE/AU_AdmsUnits/MapServer/exts/InspireView/service" xlink:type="simple"/>
    <ContactInformation>
      <ContactPersonPrimary>
        <ContactPerson>Neoklis Neokleous</ContactPerson>
        <ContactOrganization>Department of Lands and Surveys</ContactOrganization>
      </ContactPersonPrimary>
      <ContactPosition>service administrator</ContactPosition>
      <ContactAddress>
        <AddressType>postal</AddressType>
        <Address>your street and house number</Address>
        <City>your city</City>
        <StateOrProvince>your state or province</StateOrProvince>
        <PostCode>your zipcode</PostCode>
        <Country>your country</Country>
      </ContactAddress>
      <ContactVoiceTelephone>your telephone number</ContactVoiceTelephone>
      <ContactFacsimileTelephone>your fax number</ContactFacsimileTelephone>
      <ContactElectronicMailAddress>director@dls.moi.gov.cy</ContactElectronicMailAddress>
    </ContactInformation>
    <Fees>no conditions apply</Fees>
    <AccessConstraints>None</AccessConstraints>
    <MaxWidth>4096</MaxWidth>
    <MaxHeight>4096</MaxHeight>
  </Service>
  <Capability>
    <Request>
      <GetCapabilities>
        <Format>application/vnd.ogc.wms_xml</Format>
      </GetCapabilities>
    </Request>
  </Capability>
</Capabilities>
```

http://weba.dls.moi.gov.cy/arcgis/rest/services/INSPIRE/AU_AdmsUnits/MapServer/exts/InspireView/service

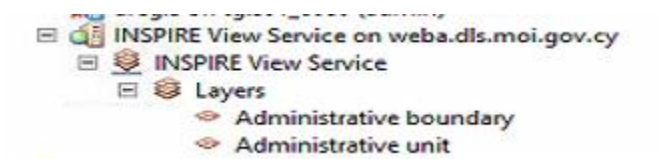
Open ArcMap and in ArcCatalog window, browse to "GIS Servers" and double click on "Add WMS Server".



Paste the copied URL in field URL, then click on "Get Layers" and finally press "OK", as shown on the next figure.



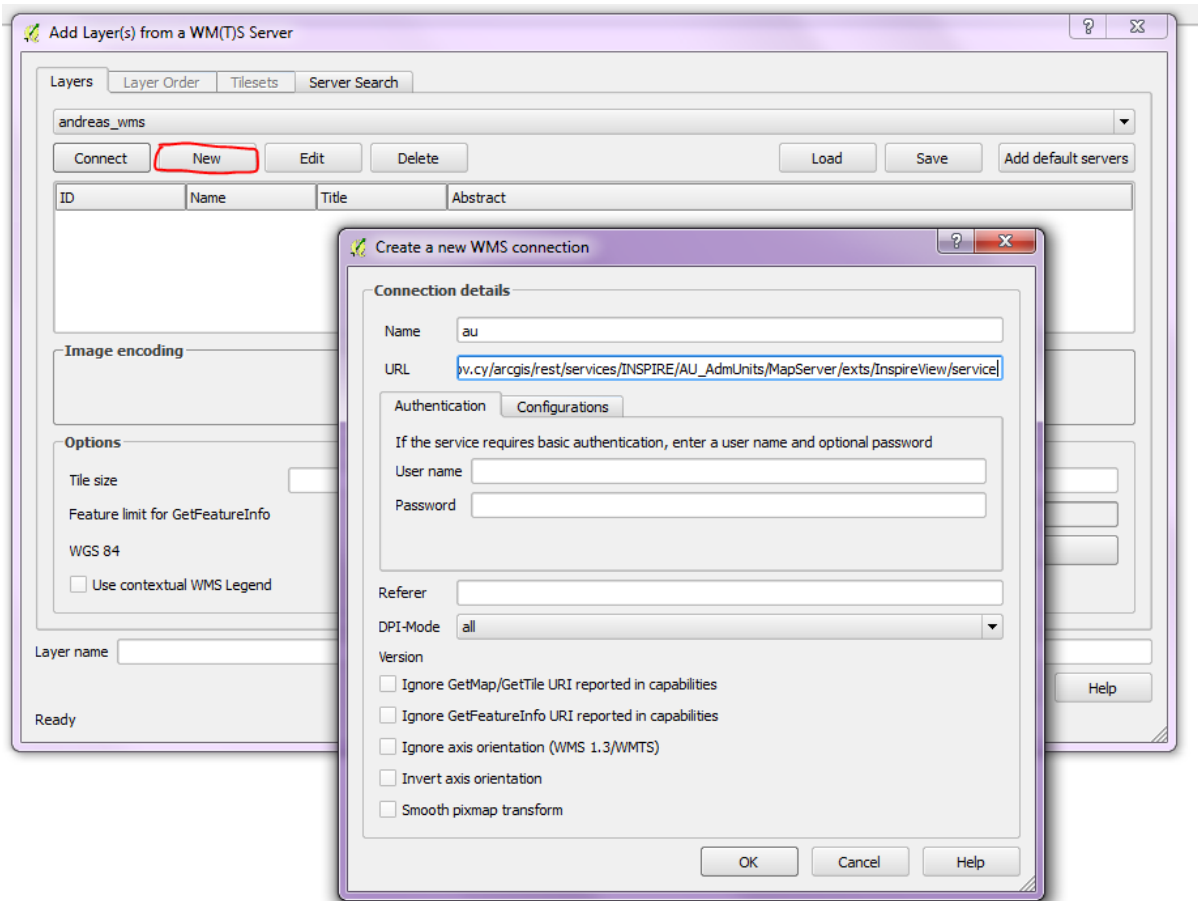
There will be a new connection to INSPIRE service created in "GIS Servers". You can by drag and drop add to the Table of Contents of ArcMap the entire "INSPIRE View Service" or expand it and add only one layer.



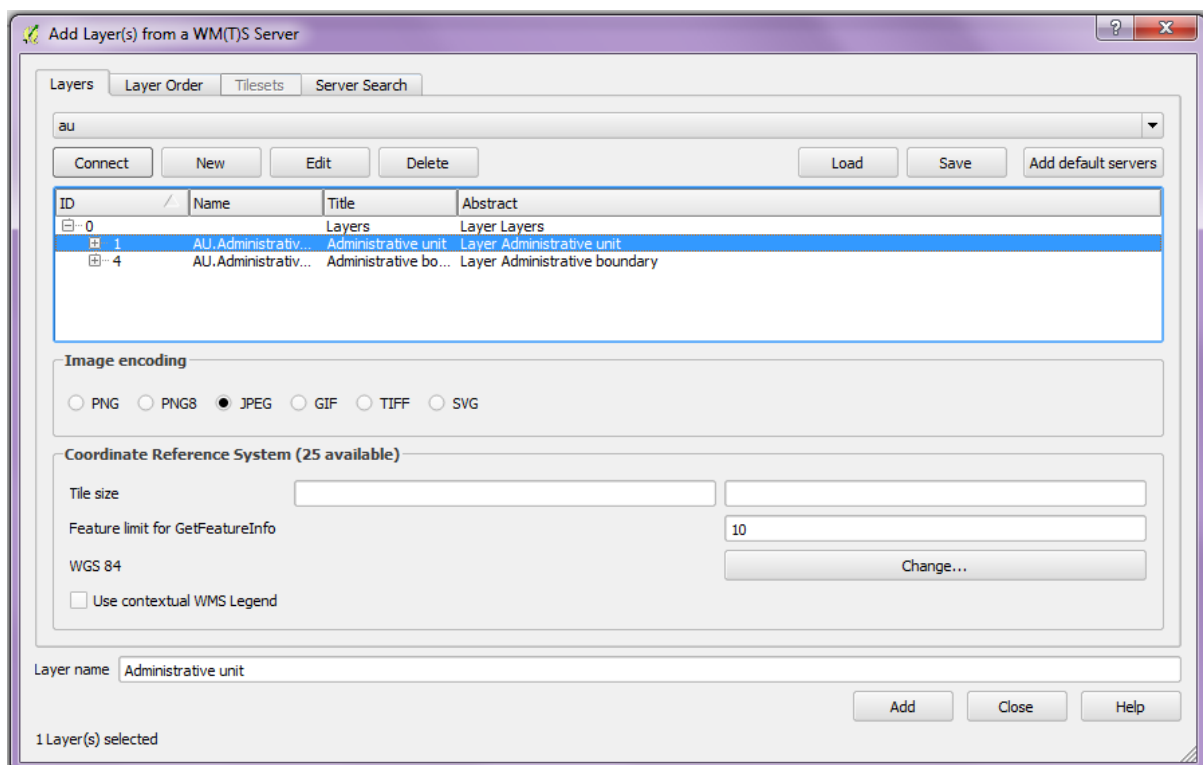
QGIS



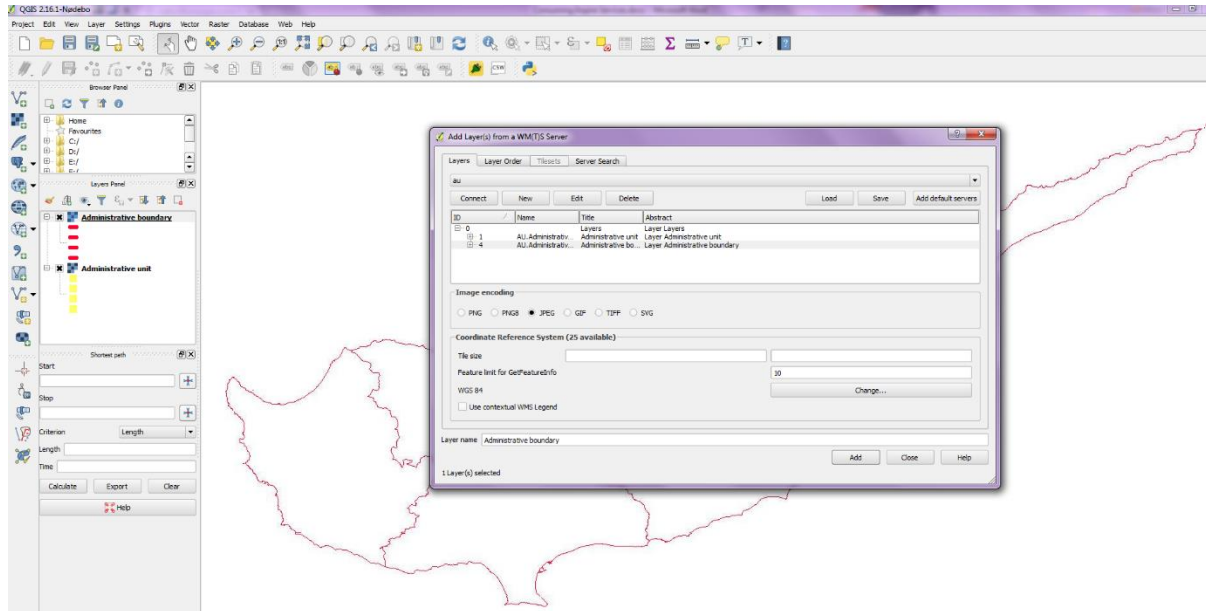
Using this button you Add WMS layer



Give a name to your connection and paste the url (use the URL already copied). Press OK



Select your connection from the drop down list, then click Connect and you will get a list of the feature types included in the specific Data Theme. Select one or all and Add in the map window.



b. INSPIRE download services

On the next pages, there will be a description on how to download an INSPIRE service, using ArcGIS for Desktop (prerequisite: Data Interoperability Extension by FME) and QGIS.

ArcGIS for Desktop (ArcMap)

Browse or search the appropriate data theme in INSPIRE Geoportal (in brackets "DOWNLOAD DATA SERVICE" must be specified) and click on the name.



Click on "Download" button and copy the URL (only the part in front of the question mark) from the new window that appears (an xml file) in a browser (new tab), like the figure that follows:

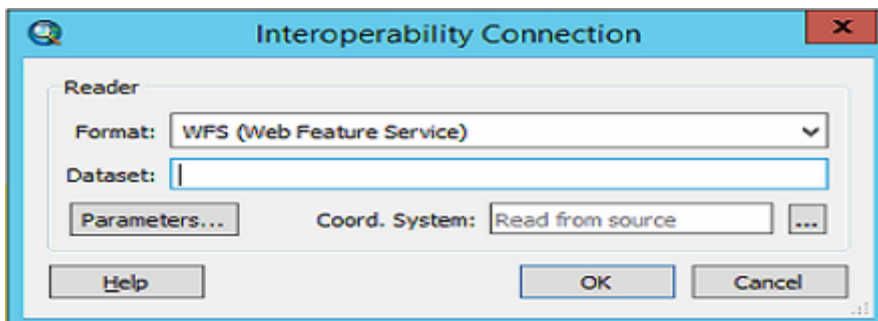
← → ↻ weba-test.dls.moi.gov.cy/arcgis/rest/services/INSPIRE/AU_AdmsUnits/MapServer/xts/InspireFeatureDownload/service?V

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<wfs:WFS_Capabilities xmlns:fes="http://www.opengis.net/fes/2.0" xmlns:gml="http://www.opengis.net/gml/3.2"
xmlns:inspire_common="http://inspire.ec.europa.eu/schemas/common/1.0" xmlns:inspire_dls="http://inspire.ec.europa.eu/schemas/inspire
xmlns:ows="http://www.opengis.net/ows/1.1" xmlns:wfs="http://www.opengis.net/wfs/2.0" xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" version="2.0.0"
xsi:schemaLocation="http://www.opengis.net/wfs/2.0 http://weba-test.dls.moi.gov.cy/arcgis/rest/directories/arcgisforinspire/schema/o
http://inspire.ec.europa.eu/schemas/inspire_dls/1.0 http://weba-
test.dls.moi.gov.cy/arcgis/rest/directories/arcgisforinspire/schema/networkservices/inspire_fds/1.0/inspire_dls.xsd http://www.openg
test.dls.moi.gov.cy/arcgis/rest/directories/arcgisforinspire/schema/ogc/ows/1.1.0/owsAll.xsd">
  <ows:ServiceIdentification>
    <ows:Title>INSPIRE Download Service</ows:Title>
    <ows:Abstract>This service provides INSPIRE Data.</ows:Abstract>
    <ows:Keywords>
      <ows:Keyword>INSPIRE</ows:Keyword>
      <ows:Keyword>Download Service</ows:Keyword>
    </ows:Keywords>
    <ows:Keywords>
      <ows:Keyword>infoFeatureAccessService</ows:Keyword>
      <ows:Type>ISO</ows:Type>
    </ows:Keywords>
    <ows:ServiceType>WFS</ows:ServiceType>
    <ows:ServiceTypeVersion>1.1.0</ows:ServiceTypeVersion>
    <ows:ServiceTypeVersion>2.0.0</ows:ServiceTypeVersion>
    <ows:Fees>no conditions apply</ows:Fees>
    <ows:AccessConstraints>None</ows:AccessConstraints>
  </ows:ServiceIdentification>
  <ows:ServiceProvider>
    <ows:ProviderName>Department of Lands and Surveys</ows:ProviderName>
    <ows:ProviderSite/>
    <ows:ServiceContact>
      <ows:IndividualName>Neoklis Neokleous</ows:IndividualName>
      <ows:PositionName>service administrator</ows:PositionName>
      <ows:ContactInfo>
        <ows:Phone>
          <ows:Voice>your telephone number</ows:Voice>
          <ows:Facsimile>your fax number</ows:Facsimile>
        </ows:Phone>
        <ows:Address>
          <ows:DeliveryPoint>your street and house number</ows:DeliveryPoint>
          <ows:City>your city</ows:City>
          <ows:AdministrativeArea>your state or province</ows:AdministrativeArea>
          <ows:PostalCode>your zipcode</ows:PostalCode>
          <ows:Country>your country</ows:Country>
          <ows:ElectronicMailAddress>director@dls.moi.gov.cy</ows:ElectronicMailAddress>
        </ows:Address>
      </ows:ContactInfo>
    </ows:ServiceContact>
  </ows:ServiceProvider>
</wfs:WFS_Capabilities>
```

http://weba.dls.moi.gov.cy/arcgis/rest/services/INSPIRE/AU_AdmsUnits/MapServer/xts/InspireFeatureDownload/service

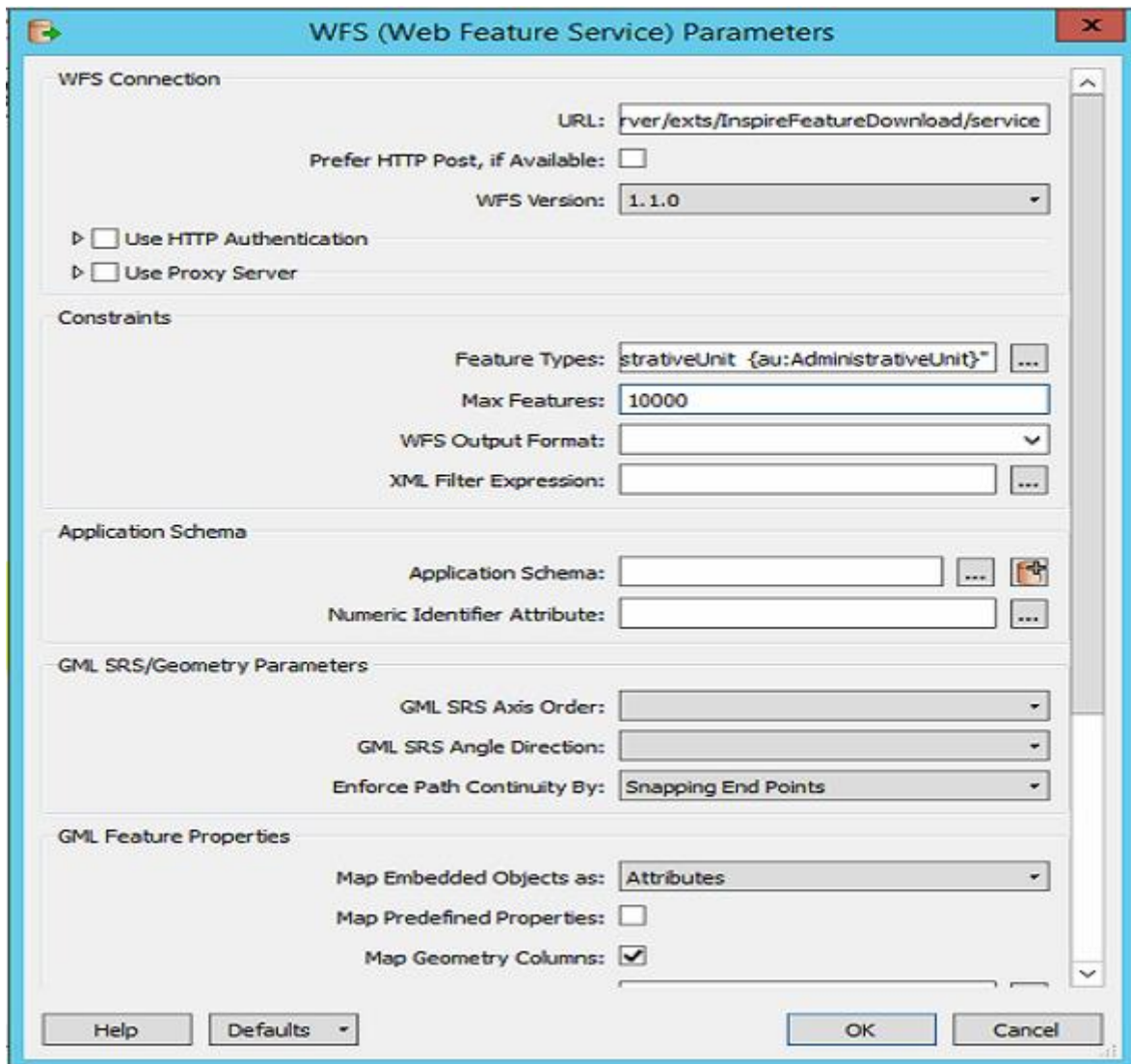
Open ArcMap and in ArcCatalog window browse to "Interoperability Connections" and click on "Add Interoperability Connection"(please note that "Data Interoperability" must be checked in Extensions).



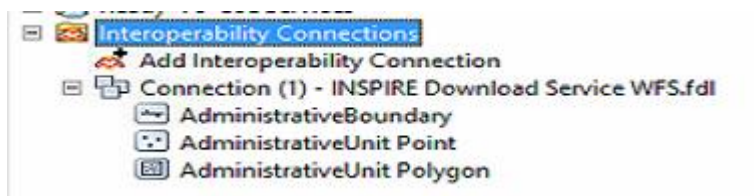
In Format choose "WFS (Web Feature Service)" and click on Parameters and fill in these items:

- URL: copied from browser, ensure if the copied URL to the properties window is correct (sometimes **URL is duplicated** within itself and an error appears)

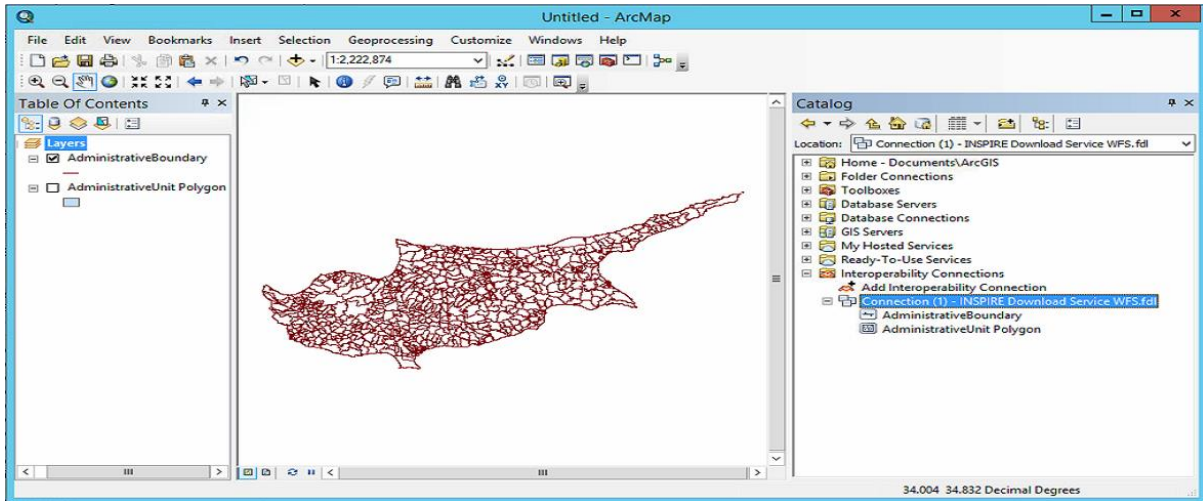
- WFS Version: 1.1.0
- Feature types: choose the right from dropdown list
- Max Features: consider how many features is optimal to download



Click OK and then again OK. Now the Interoperability connection is created. You can expand it.



You can see more layers than you expect. Add entire connection or even one layer to TOC (table of contents) in ArcMap. ArcMap starts downloading the features from server. When data has been downloaded, you can right click on connection and choose Refresh. After refresh, only appropriate layers should be displayed in the connection.



If the service contains **large amount of data**, it is necessary to set up Parameters "Use Search Envelope" (as in figure below). In this case, the client firstly downloads data from this envelope and then data from the actual extent of ArcMap.

WFS (Web Feature Service) Parameters

Constraints

Feature Types: "Address {ad:Address}"

Max Features: 30000

WFS Output Format:

XML Filter Expression:

Application Schema

Application Schema:

Numeric Identifier Attribute:

GML SRS/Geometry Parameters

GML SRS Axis Order:

GML SRS Angle Direction:

Enforce Path Continuity By: Snapping End Points

GML Feature Properties

Map Embedded Objects as: Attributes

Map Predefined Properties:

Map Geometry Columns:

Properties to Ignore:

GML Feature Properties - Attribute Handling

Map Complex Properties as: Nested Attributes

Limit Number of Lists in Nested Attributes:

Include XML Declaration in XML Fragments:

Flatten XML Fragments

▶ GML Reader Version and XML Namespace Processing

▶ ArcGIS Cache Expiry

▶ Schema Attributes

Use Search Envelope

Minimum X: 33.30

Minimum Y: 35.10

Maximum X: 33.35

Maximum Y: 35.15

Clip to Search Envelope:

Search Envelope Coordinate System: EPSG:3048

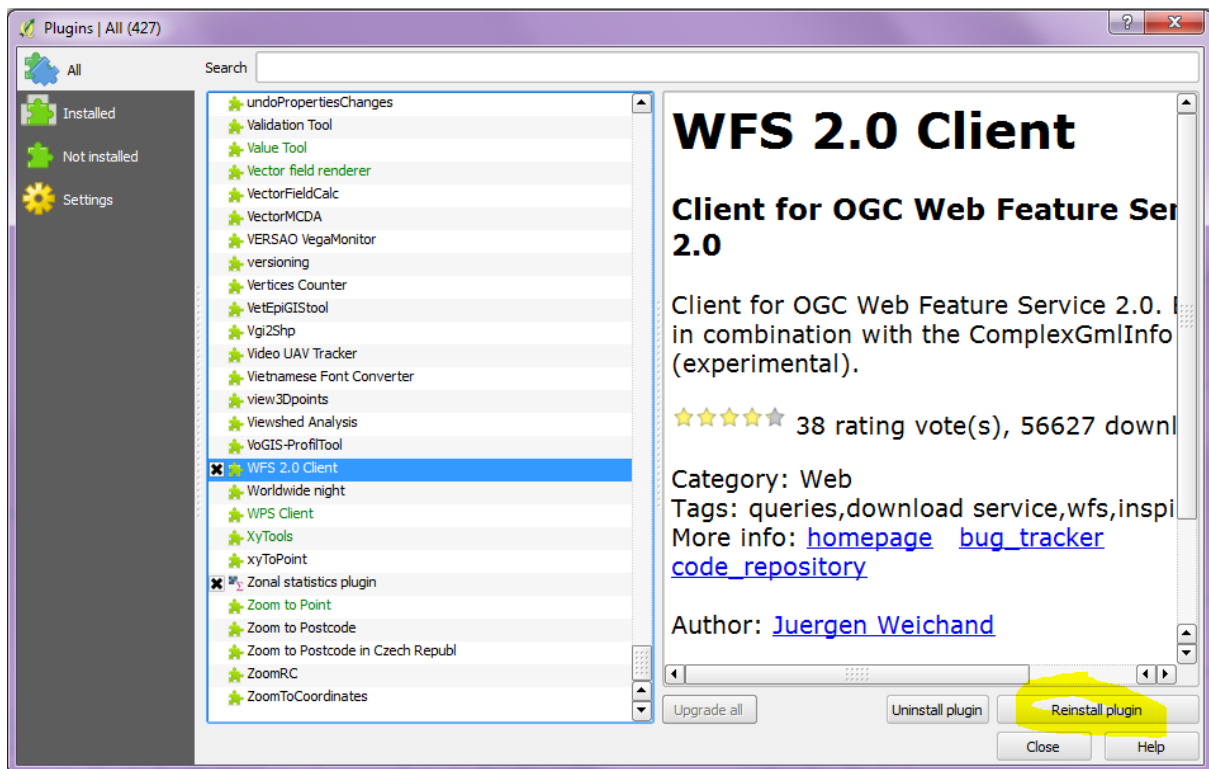
Help Defaults OK Cancel

QGIS

In QGIS, user has to first install WFS 2.0 Client plugin, in order to be able to consume the download service.

The procedure is as follows:

In QGIS, from the main menu select Plugins, Manage and Install Plugins.



The icon in red circle should appear in your toolbar.



The user should then click on this icon.

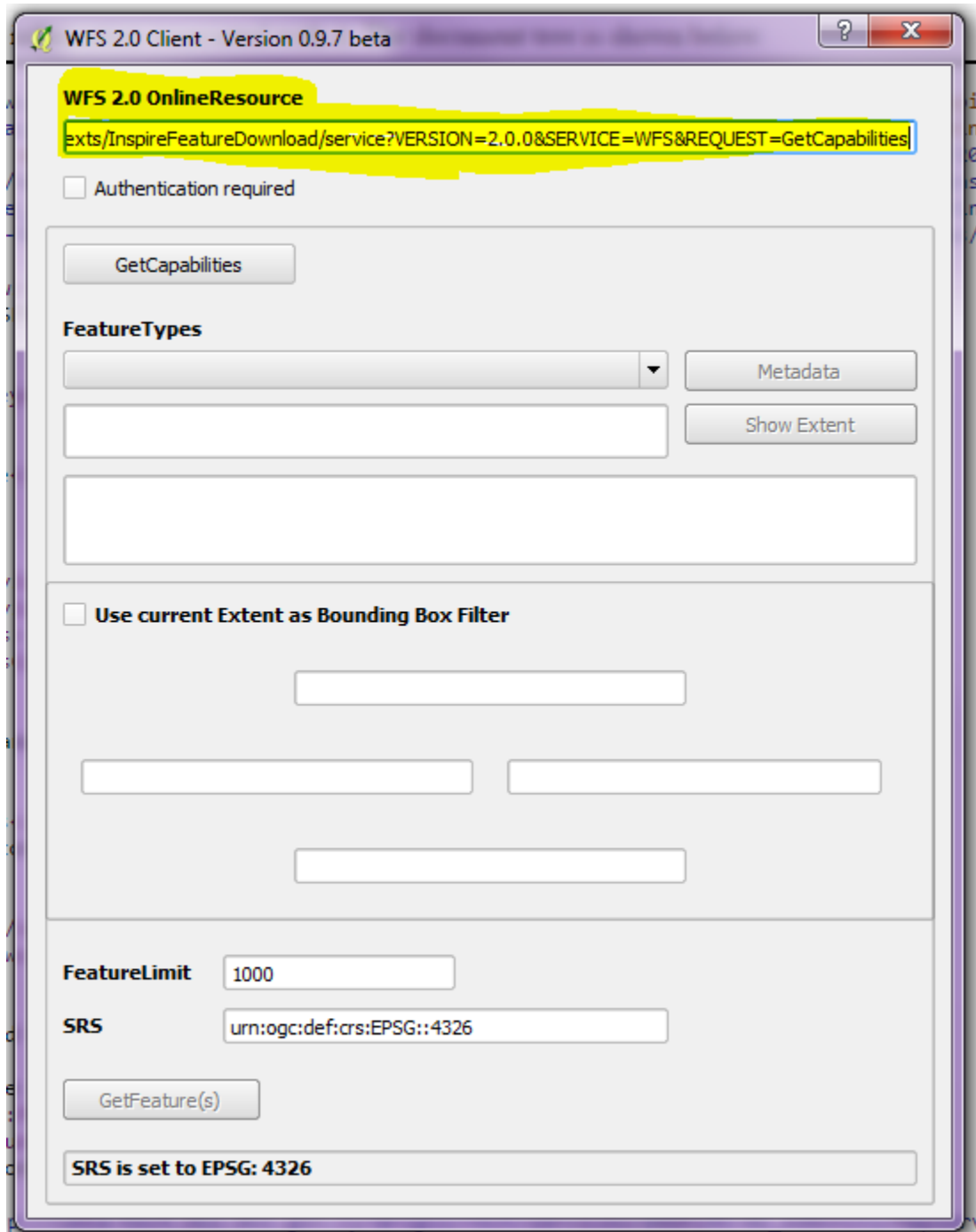
Select **the whole download** url address of the data theme of your interest

← → C weba-test.dls.moi.gov.cy/arcgis/rest/services/INSPIRE/AU_AdmsUnits/MapServer/exports/InspireFeatureDownload/service?VERSION=2.0.0&SERVICE=WFS&REQUEST=GetCapabilities ☆

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<?xml version="1.0" encoding="UTF-8" ?>
<wfs:WFS_Capabilities xmlns:fes="http://www.opengis.net/fes/2.0" xmlns:gml="http://www.opengis.net/gml/3.2" xmlns:inspire_common="http://inspire.ec.europa.eu/schemas/common/1.0"
xmlns:inspire_dls="http://inspire.ec.europa.eu/schemas/inspire_dls/1.0" xmlns:ows="http://www.opengis.net/ows/1.1" xmlns:wfs="http://www.opengis.net/wfs/2.0"
xmlns:xlink="http://www.w3.org/1999/xlink" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" version="2.0.0"
xsi:schemaLocation="http://www.opengis.net/wfs/2.0 http://weba-test.dls.moi.gov.cy/arcgis/rest/directories/arcgisforinspire/schema/ogc/wfs/2.0/wfs.xsd
http://inspire.ec.europa.eu/schemas/inspire_dls/1.0 http://weba-test.dls.moi.gov.cy/arcgis/rest/directories/arcgisforinspire/schema/networkservices/inspire_fds/1.0/inspire_dls.x
http://www.opengis.net/ows/1.1 http://weba-test.dls.moi.gov.cy/arcgis/rest/directories/arcgisforinspire/schema/ogc/ows/1.1.0/owsAll.xsd">
  <ows:ServiceIdentification>
    <ows:Title>INSPIRE Download Service</ows:Title>
    <ows:Abstract>This service provides INSPIRE Data.</ows:Abstract>
  </ows:ServiceIdentification>
  <ows:Keywords>
    <ows:Keyword>INSPIRE</ows:Keyword>
    <ows:Keyword>Download Service</ows:Keyword>
  </ows:Keywords>
  <ows:ServiceType>
    <ows:Keyword>infoFeatureAccessService</ows:Keyword>
    <ows:Type>ISO</ows:Type>
  </ows:ServiceType>
  <ows:ServiceTypeVersion>
    <ows:ServiceTypeVersion>1.0.0</ows:ServiceTypeVersion>
    <ows:ServiceTypeVersion>2.0.0</ows:ServiceTypeVersion>
  </ows:ServiceTypeVersion>
  <ows:Fees>no conditions apply</ows:Fees>
  <ows:AccessConstraints>None</ows:AccessConstraints>
</ows:ServiceIdentification>
  <ows:ServiceProvider>
    <ows:ProviderName>Department of Lands and Surveys</ows:ProviderName>
    <ows:ProviderSite/>
  </ows:ServiceProvider>
  <ows:ServiceContact>
    <ows:IndividualName>Neoklis Neokleous</ows:IndividualName>
    <ows:PositionName>service administrator</ows:PositionName>
  </ows:ServiceContact>
  <ows:ContactInfo>
    <ows:Phone>
      <ows:Voice>your telephone number</ows:Voice>
      <ows:Facsimile>your fax number</ows:Facsimile>
    </ows:Phone>
    <ows:Address>
      <ows:DeliveryPoint>your street and house number</ows:DeliveryPoint>
      <ows:City>your city</ows:City>
      <ows:AdministrativeArea>your state or province</ows:AdministrativeArea>
      <ows:PostalCode>your zipcode</ows:PostalCode>
      <ows:Country>your country</ows:Country>
      <ows:ElectronicMailAddress>director@dls.moi.gov.cy</ows:ElectronicMailAddress>
    </ows:Address>
  </ows:ContactInfo>
</wfs:WFS_Capabilities>
```

and paste it in the field WFS 2.0 OnlineResource, as shown in next figure.



On field Feature Types, there should be a drop down list, in case more than one feature type exists in data theme.

In fields Feature Limit, change/increase the number of features for data themes expected to have greater number of records.

Also, in SRS you may change the EPSG:: in 3048 (ETRS89, TM, 36N)

Finally, click on GetFeatures.

In case there are more than one feature types in the Data Theme, then this procedure should be applied for all of them (one by one feature type).

3.Data Themes not supported by ESRI

a. INSPIRE view services

The procedure is the same as for ESRI Supported themes. Please see the chapter 2. INSPIRE view services.

b. INSPIRE download services

Download is now implemented as GML file packages. These packages can be downloaded by a link placed in ATOM feed XML which is downloaded by clicking on Download button in the INSPIRE geoportal.

GML files can be displayed using ArcGIS for Desktop (ArcMap) although in some cases it does not display them properly.

FME Data Inspector software (part of ESRI Data Interoperability Extension - DIE) gives better results. The cons are the necessity of Data Interoperability license and the lack of availability of usual GIS functionality, e.g. a setting of visualization for layers.

The best experiences consuming GML files are using **QGIS** (an open source free download software). This powerful application allows loading GMLs without any problems regarding geometry.

How to download data

Browse or search the appropriate theme in the INSPIRE Geoportal of the "DLS PORTAL" (after data theme name "DOWNLOAD DATA SERVICE" should be specified) and click on the name.



Under the name the buttons will appear. Click on "Download" and XML file will be downloaded. Open it in a new browser and find the link to the XML.

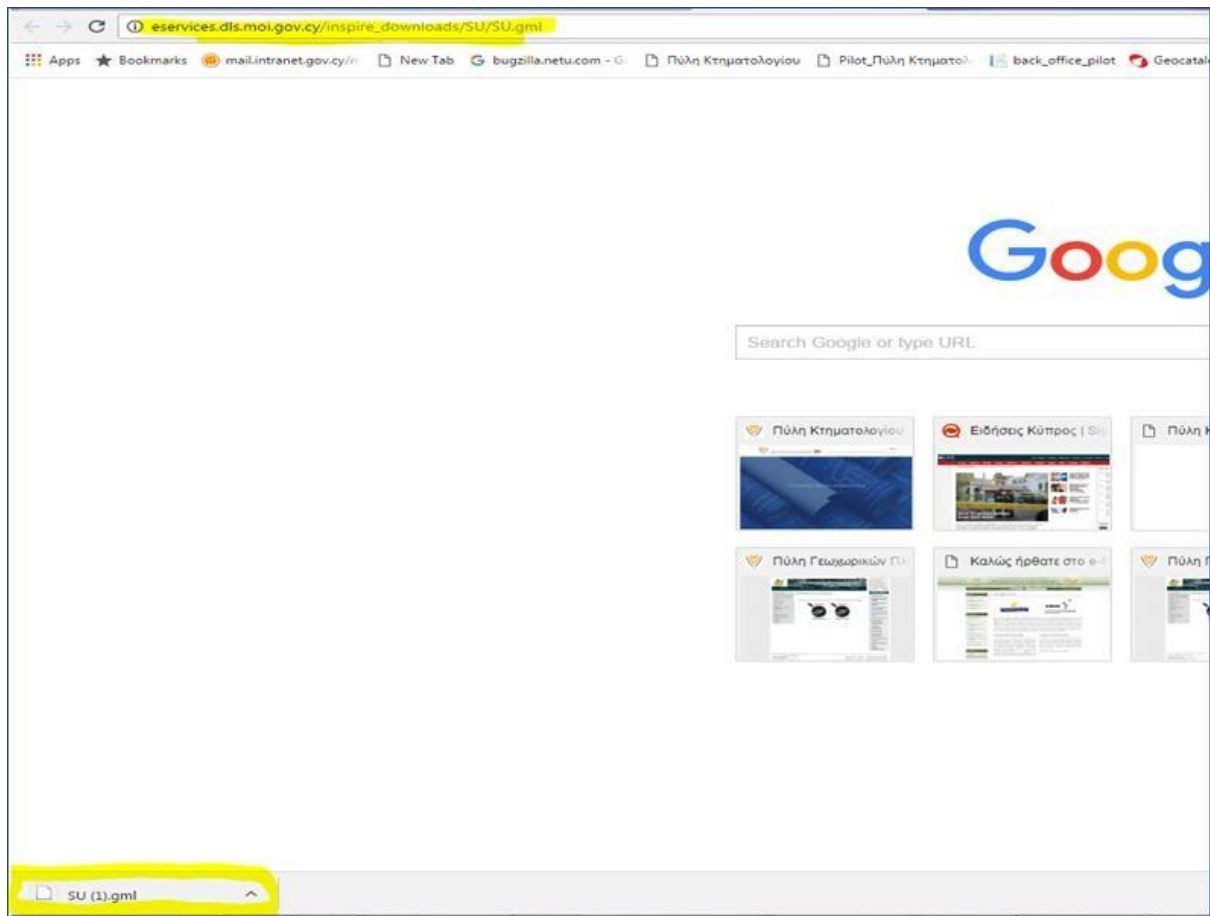
```
<?xml version="1.0"?>
- <feed xmlns:lang="en" xmlns:inspire_dls="http://inspire.ec.europa.eu/schemas/inspire_dls/1.0" xmlns:georss="http://www.georss.org/georss" xmlns="http://www.w3.org/2005/Atom">
  <title>Statistical units</title>
  <subtitle>Statistical units</subtitle>
  <link type="application/vnd.iso.19139+xml" rel="describedby" href="http://eservices.dls.moi.gov.cy/geoportal/inspire/rest/document?id=%788B46102B-62AF-4D79-B4C4-79B18A6E927F%7D"/>
  <link type="application/atom+xml" rel="self" href="http://weba.dls.moi.gov.cy/arcgis/rest/directories/arcgisforinspire/INSPIRE/SU_StatisticalUnits_MapServer/serviceatoma1.xml" hreflang="en"/>
  <link title="Open Search Description" type="application/opensearchdescription+xml" rel="search" href="opensearchdescriptiona1.xml" hreflang="en"/>
  <id>http://weba.dls.moi.gov.cy/arcgis/rest/directories/arcgisforinspire/INSPIRE/SU_StatisticalUnits_MapServer/serviceatoma1.xml</id>
  <rights>Copyright (c) 2015, DLS; all rights reserved</rights>
  <updated>2012-03-31T13:45:03Z</updated>
  <author>
    <name>Neoklis Neokleous</name>
    <email>director@dls.moi.gov.cy</email>
  </author>
  <entry>
    <inspire_dls:spatial_dataset_identifier_code>%7BF747CB86-0903-46D8-BC99-843A52D5E8A%7D</inspire_dls:spatial_dataset_identifier_code>
    <inspire_dls:spatial_dataset_identifier_namespace>http://moi.gov.cy</inspire_dls:spatial_dataset_identifier_namespace>
    <link type="application/vnd.iso.19139+xml" rel="describedby" href="http://eservices.dls.moi.gov.cy/geoportal/inspire/rest/document?id=%78D9121BE9-AF9E-4815-B82B-4CBBE644BCA6%7D"/>
    <link title="dataset link" type="application/atom+xml" rel="alternate" href="http://weba.dls.moi.gov.cy/arcgis/rest/directories/arcgisforinspire/INSPIRE/SU_StatisticalUnits_MapServer/datasetatoma1.xml" hreflang="en"/>
    <link title="Service Implementing Direct Access operations" type="application/xml" rel="related" href="http://servername/arcgis/rest/services/o4iatom/MapServer/xts/InspireFeatureDownload/service?Request=GetCapabilities&service=WFS"/>
    <id>http://weba.dls.moi.gov.cy/arcgis/rest/directories/arcgisforinspire/INSPIRE/SU_StatisticalUnits_MapServer/datasetatoma1.xml</id>
    <title>Statistical units</title>
    <updated>2012-03-31T13:45:03Z</updated>
    <rights>Copyright (c) 2015, DLS; all rights reserved</rights>
    <author>
      <name>Neoklis Neokleous</name>
      <email>director@dls.moi.gov.cy</email>
    </author>
    <summary>Statistical units of Cyprus</summary>
    <georss:polygon>47.202 5.755 55.183 5.755 55.183 15.253 47.202 15.253 47.202 5.755</georss:polygon>
    <category term="http://www.opengis.net/def/crs/EPSC/0/4258" label="ETRS89"/>
  </entry>
</feed>
```

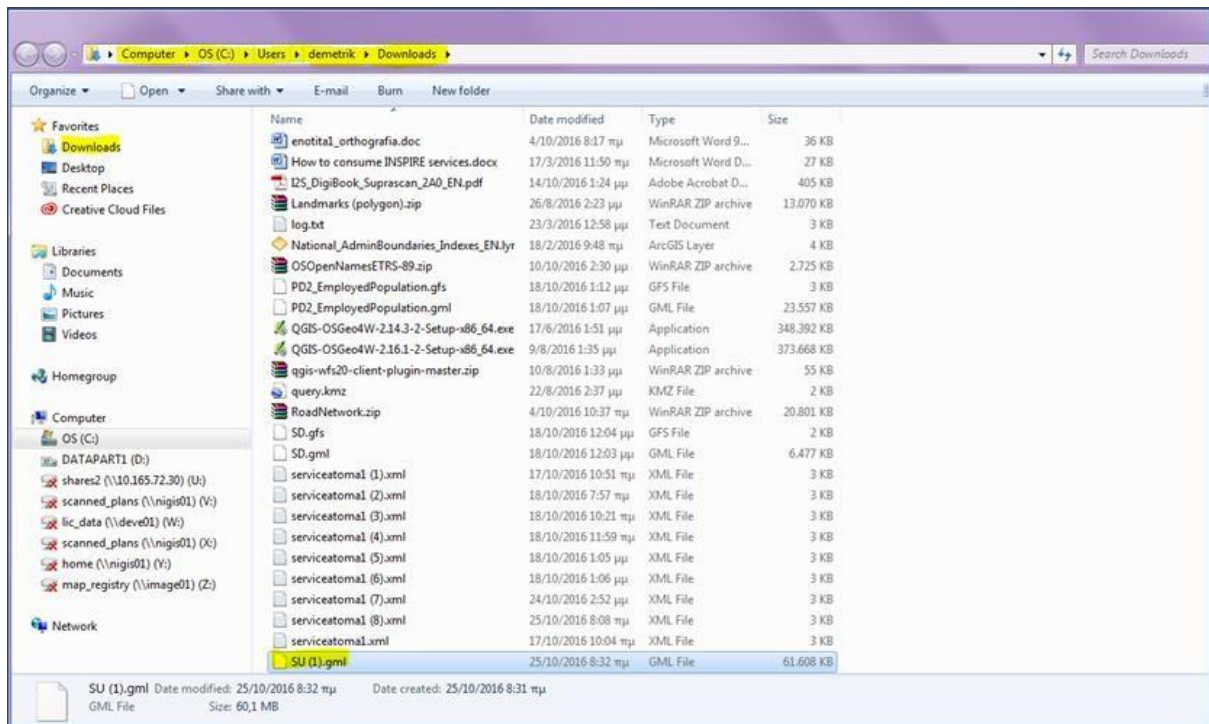
You select and copy this url and paste it in a new browser window (new tab). You get a new xml file.

```
<?xml version="1.0"?>
- <feed xmlns:lang="en" xmlns:inspire_dls="http://inspire.ec.europa.eu/schemas/inspire_dls/1.0"
  xmlns:georss="http://www.georss.org/georss" xmlns="http://www.w3.org/2005/Atom">
  <title>Environmental monitoring Facilities</title>
  <subtitle>Environmental monitoring Facilities</subtitle>
  <link type="application/xml" rel="describedby" href="http://servername/geoportal/rest/document?id={5A0A943B-D6AE-403D-886B-B02944D0E4B3}"/>
  <link title="This document" type="application/atom+xml" rel="self" href="datasetatoma1.xml" hreflang="en"/>
  <link title="The parent service feed document" type="application/atom+xml" rel="up" href="http://weba.dls.moi.gov.cy/arcgis/rest/directories/arcgisforinspire/INSPIRE/EF_EnvironmentalFacilities_MapServer/serviceatoma1.xml" hreflang="en"/>
  <link title="Open Search Description" type="application/opensearchdescription+xml" rel="search" href="opensearchdescriptiona1.xml" hreflang="en"/>
  <id>http://weba.dls.moi.gov.cy/arcgis/rest/directories/arcgisforinspire/INSPIRE/EF_EnvironmentalFacilities_MapServer/serviceatoma1.xml</id>
  <rights>Copyright (c) 2015, DLS; all rights reserved</rights>
  <updated>2012-01-01T13:45:03Z</updated>
  <author>
    <name>Firstname Lastname</name>
    <email>doe@xyz.org</email>
  </author>
  <link title="title" type="text/html" rel="describedby" href="http://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/412" hreflang="en"/>
  <entry>
    <title>Environmental monitoring Facilities</title>
    <updated>2012-03-31T13:45:03Z</updated>
    <id>EF.gml</id>
    <link title="The dataset encoded as a dataset in WGS84 in zip format" type="text/html" rel="alternate" href="http://eservices.dls.moi.gov.cy/inspire_downloads/EF/EF.gml" hreflang="en" length="34987"/>
    <category term="http://www.opengis.net/def/crs/EPSC/0/4258" label="ETRS89"/>
    <georss:polygon>47.202 5.755 55.183 5.755 55.183 15.253 47.202 15.253 47.202 5.755</georss:polygon>
  </entry>
</feed>
```

Now you find the link to the GML file (see in figure above)

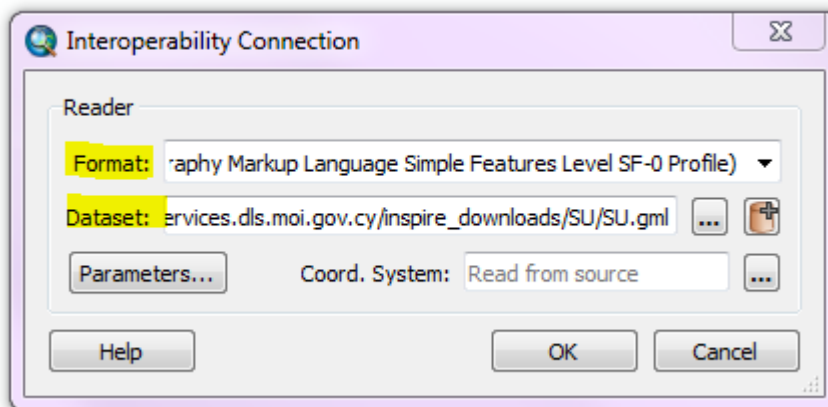
If you select the url and paste it in a new browser window then you have the GML file downloaded (copied) on your disk (Downloads)





ARGIS for Desktop

From the Interoperability Connections, Add Interoperability Connection:

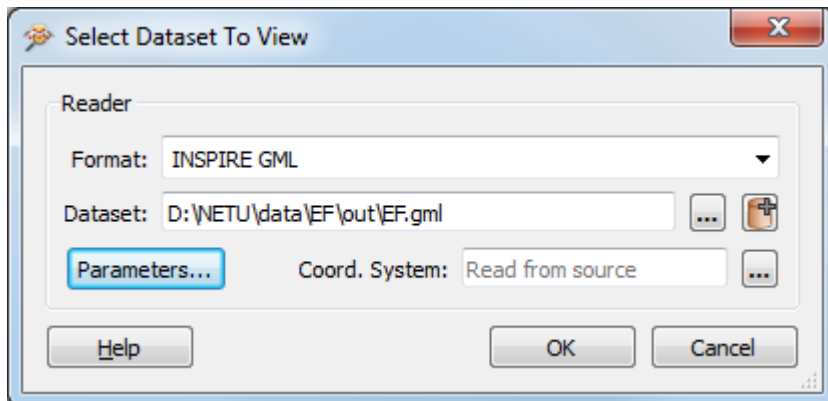


Choose appropriate format (GML) from dropdown list and copy the url in Dataset. Click ok. Add entire connection or even one layer to TOC (table of contents) of ArcMap (drag and drop). ArcMap starts downloading the features from server. When data have been downloaded you can right click on connection and choose Refresh. After refresh only appropriate layers should be displayed in your connection.

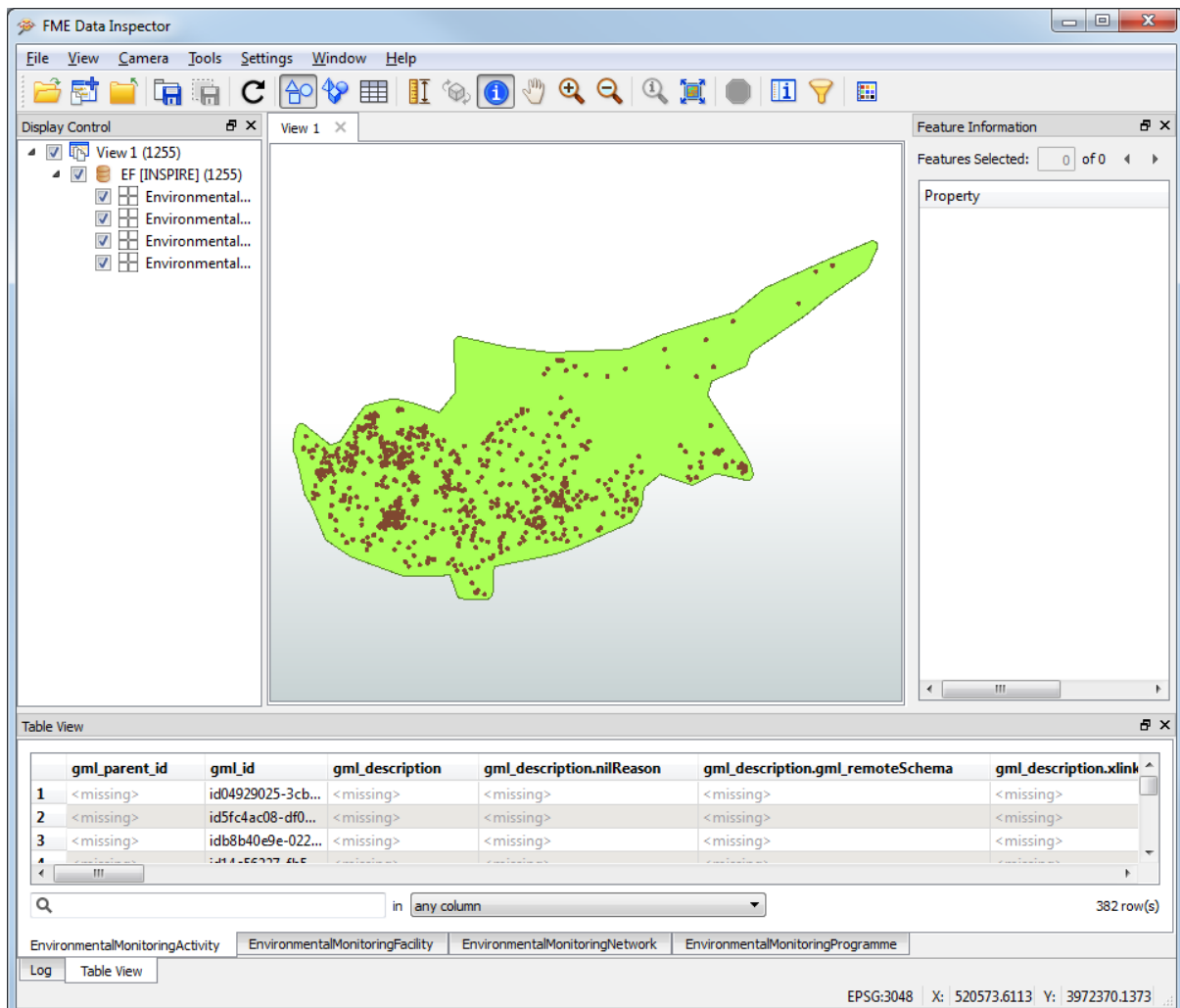
FME Data Inspector


You can open FME Data Inspector from any Spatial ETL tool or directly from file system ("c:\Program Files (x86)\ESRI\Data Interoperability (x86)\fmedatainspector.exe").

The easiest way to add the downloaded GML to Inspector is by drag and drop. Then a window with reader parameters appears in Inspector. This window is the same as in Data Interoperability Extension.



You can use default parameters and click on OK button. The data will be added to Inspector, as it shown in the following picture.



There is limited possibility of setting visualization or manipulation of data. But you can use "Select features and display information"  instead by clicking on any feature. Then you


can see all information about it. In the picture below you can see attribute "contains{0}.xlink_href" which involves a list of values. Also the whole list is given.

The screenshot shows a 'Feature Information' window with a table of properties and attributes. The 'Attributes (560)' section is expanded, showing a list of attributes. The attribute 'contains{0}.xlink_href' is highlighted with a red box, indicating its value is '#EF.EMF.MAM_194'. The table also shows other attributes like 'additionalDescription', 'broader.nilReason', and 'broader.owns'.

Property	Value
Feature Type	EnvironmentalMonitoring...
Coordinate System	EPSG:3048
Dimension	2D
Number of Vertices	256
Min Extents	435428.65378526301, 3824...
Max Extents	630543.84892585804, 3945...
Attributes (560)	
additionalDescription (encoded: utf-16)	Monitoring of mammals ...
broader.nilReason (encoded: utf-16)	Unknown
broader.owns (encoded: utf-16)	false
broader.xsi_nil (encoded: utf-16)	true
contains{0}.owns (encoded: utf-16)	false
contains{0}.xlink_href (encoded: utf-16)	#EF.EMF.MAM_194
contains{1}.owns (encoded: utf-16)	false
contains{1}.xlink_href (encoded: utf-16)	#EF.EMF.MAM_45
contains{2}.owns (encoded: utf-16)	false
contains{2}.xlink_href (encoded: utf-16)	#EF.EMF.MAM_124
contains{3}.owns (encoded: utf-16)	false
contains{3}.xlink_href (encoded: utf-16)	#EF.EMF.MAM_103
contains{4}.owns (encoded: utf-16)	false
contains{4}.xlink_href (encoded: utf-16)	#EF.EMF.MAM_173
contains{5}.owns (encoded: utf-16)	false
contains{5}.xlink_href (encoded: utf-16)	#EF.EMF.MAM_73
contains{6}.owns (encoded: utf-16)	false
contains{6}.xlink_href (encoded: utf-16)	#EF.EMF.MAM_174
contains{7}.owns (encoded: utf-16)	false
contains{7}.xlink_href (encoded: utf-16)	#EF.EMF.MAM_32
contains{8}.owns (encoded: utf-16)	false
contains{8}.xlink_href (encoded: utf-16)	#EF.EMF.MAM_154
contains{9}.owns (encoded: utf-16)	false
contains{9}.xlink_href (encoded: utf-16)	#EF.EMF.MAM_14
contains{10}.owns (encoded: utf-16)	false
contains{10}.xlink_href (encoded: utf-16)	#EF.EMF.MAM_100
contains{11}.owns (encoded: utf-16)	false
contains{11}.xlink_href (encoded: utf-16)	#EF.EMF.MAM_69
contains{12}.owns (encoded: utf-16)	false

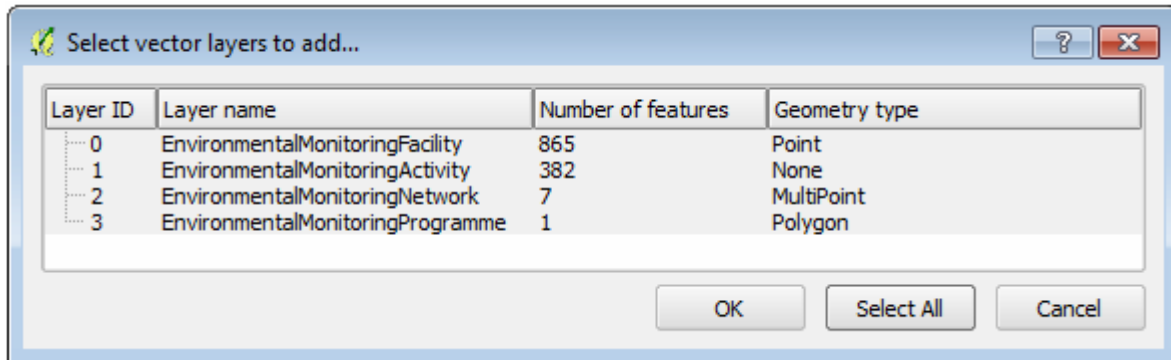
Feature Information

Features Selected: 1 of 2

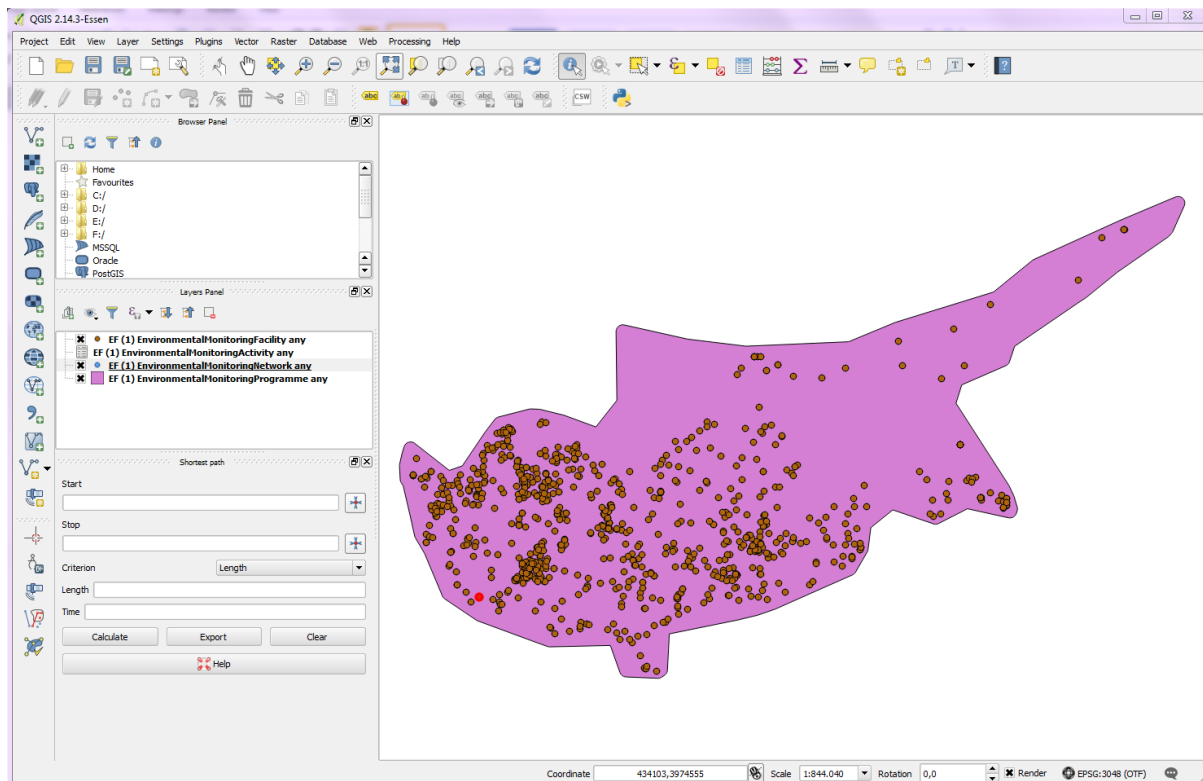
Property	Value
contains{254}.xlink_href (encoded: utf-16)	#EF.EMF.MAM_28
contains{255}.owns (encoded: utf-16)	false
contains{255}.xlink_href (encoded: utf-16)	#EF.EMF.MAM_68
fme_geometry (string)	fme_aggregate
fme_type (string)	fme_point
gml_id (encoded: utf-16)	id12a25349-d1be-4bd2-bd...
gml_original_coordinate_system (encod...	EPSG:3048
hasObservation{0}.nilReason (encoded: ...	Unpopulated
hasObservation{0}.xsi_nil (encoded: utf-16)	true
inspireId.Identifier.localId (encoded: utf-...	EF.EMN.MAM_1
inspireId.Identifier.namespace (encoded:...	CY.0003-DE.EF
inspireId.Identifier.versionId (encoded: ut...	<null>
inspireId.Identifier.versionId.nilReason (e...	Unknown
inspireId.Identifier.versionId.xsi_nil (enco...	true
involvedIn{0}.owns (encoded: utf-16)	false
involvedIn{0}.xlink_href (encoded: utf-16)	#EF.EMA.MAM_1
legalBackground{0}.nilReason (encoded:...	Unknown
legalBackground{0}.owns (encoded: utf-...	false
legalBackground{0}.xsi_nil (encoded: utf-...	true
mediaMonitored{0}.gml_remoteSchema ...	http://inspire.ec.europa.e...
mediaMonitored{0}.owns (encoded: utf-...	false
name{0} (encoded: utf-16)	<null>
name{0}.nilReason (encoded: utf-16)	Unknown
name{0}.xsi_nil (encoded: utf-16)	true
narrower{0}.nilReason (encoded: utf-16)	Unknown
narrower{0}.owns (encoded: utf-16)	false
narrower{0}.xsi_nil (encoded: utf-16)	true
observingCapability{0}.nilReason (encod...	Unknown
observingCapability{0}.owns (encoded: ...	false
onlineResource{0} (encoded: utf-16)	<null>
onlineResource{0}.nilReason (encoded: u...	Unknown
onlineResource{0}.xsi_nil (encoded: utf-16)	true
organisationLevel.nilReason (encoded: u...	Unknown
organisationLevel.owns (encoded: utf-16)	false
organisationLevel.xsi_nil (encoded: utf-16)	true
purpose{0}.nilReason (encoded: utf-16)	Unknown
purpose{0}.owns (encoded: utf-16)	false
purpose{0}.xsi_nil (encoded: utf-16)	true
reportedTo{0}.nilReason (encoded: utf-16)	Unknown
reportedTo{0}.xsi_nil (encoded: utf-16)	true
responsibleParty{0} (encoded: utf-16)	<?xml version="1.0" enco...
supersededBy{0}.nilReason (encoded: utf-...	Unknown
supersededBy{0}.owns (encoded: utf-16)	false
supersedes{0}.nilReason (encoded: utf-16)	Unknown
supersedes{0}.owns (encoded: utf-16)	false
supersedes{0}.xsi_nil (encoded: utf-16)	true
xml_type (string)	xml_point
 IFMEMultiPoint (256 Parts)	

QGIS

Browse to downloaded GML file in windows explorer (downloads) and drag and drop the file into QGIS. If there are more object types in GML, the list of them appears (including non-spatial object types also).



Click on "Select All" and then on "OK". All object types will be added to QGIS..



You can use "Identify feature" to see the attributes of spatial data. The result is the same as in FME Data Inspector:

Identify Results

Feature Value

[-] EF (1) EnvironmentalMonitoringFacility.any	
[-] namespace	CY.0006-WDD.EF
[-] (Derived)	
(clicked coordinate X)	472067
(clicked coordinate Y)	3892821
X	470675
Y	3893031
feature id	711
[-] (Actions)	
[icon]	View feature form
gml_id	id4bfa485c-9f23-49f2-a448-c681051d32a9
localId	EF.EMF.GRO_69
namespace	CY.0006-WDD.EF
name	NULL
additionalDescription	CY_16
CharacterString	Τμήμα Υδάτων - Water Development Department
[-] namespace	CY.0006-WDD.EF
[-] (Derived)	
[-] (Actions)	
gml_id	id3aac43c1-b0f6-4ba2-8279-ba66d3f5c579
localId	EF.EMF.GRO_67
namespace	CY.0006-WDD.EF
name	NULL
additionalDescription	CY_16
CharacterString	Τμήμα Υδάτων - Water Development Department

Mode: Top down, stop at first

View: Tree

Auto open form

Help