

## OGC SERVICES - WMS

The Open Geospatial Consortium (OGC) has defined Web Mapping Service (WMS) specification protocols for the transfer of geospatial data from servers to client applications. A Web Map Service (WMS) produces *an image* (e.g. GIF, JPG) of geospatial data.

### 1. URL list

WMS gives clients access to an image of data without storing a local copy of the dataset. Using a specially structured http request, you can call a dataset into your GIS software application.

#### 1.1. Mediterranean Sea and Black Sea scale

Base map

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/BaseMaps\\_36/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/BaseMaps_36/MapServer/WMServer?)

Elevation

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/BaseMaps\\_36/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/BaseMaps_36/MapServer/WMServer?)

Sea regions

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/SeaRegions\\_38/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/SeaRegions_38/MapServer/WMServer?)

Maritime units

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/MaritimeUnits\\_39/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/MaritimeUnits_39/MapServer/WMServer?)

Socioeconomics

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/Socioeconomics\\_45/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/Socioeconomics_45/MapServer/WMServer?)

Threats

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/Threats\\_47/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/Threats_47/MapServer/WMServer?)

Geology

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/Geology\\_46/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/Geology_46/MapServer/WMServer?)

Oceanography

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/Oceanography\\_43/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/Oceanography_43/MapServer/WMServer?)

Biodiversity

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/Biodiversity\\_51/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/Biodiversity_51/MapServer/WMServer?)

Habitat suitability

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/HabitatSuitability\\_48/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/HabitatSuitability_48/MapServer/WMServer?)

Habitat and biotopes

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/HabitatsAndBiotopes\\_40/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/HabitatsAndBiotopes_40/MapServer/WMServer?)

Mediterranean Sea – wind

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/Mediterranean\\_Sea\\_-\\_Wind\\_61/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/Mediterranean_Sea_-_Wind_61/MapServer/WMServer?)

Black Sea – SeaWindII

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/Black\\_Sea\\_-\\_SeaWind\\_II\\_62/MapServer/WmsServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/Black_Sea_-_SeaWind_II_62/MapServer/WmsServer?)

Offshore Wind Farms

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/OffshoreWindFarms\\_60/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/OffshoreWindFarms_60/MapServer/WMServer?)

Protected sites

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/ProtectedSites\\_44/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/ProtectedSites_44/MapServer/WMServer?)

## **1.2. Pilot project areas scale**

Elevation

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/Elevation\\_53/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/Elevation_53/MapServer/WMServer?)

Oceanography

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/Oceanography\\_58/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/Oceanography_58/MapServer/WMServer?)

Habitat mapping

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/HabitatMapping\\_57/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/HabitatMapping_57/MapServer/WMServer?)

Connectivity

[http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published\\_moka/Connectivity\\_59/MapServer/WMServer?](http://gismarblack.bo.ismar.cnr.it:6080/arcgis/services/published_moka/Connectivity_59/MapServer/WMServer?)

## **2. How to use WMS services**

To connect to a WMS, select and copy a WMS link and paste the link where your software asks to specify a WMS URL. The next two paragraphs show how to use WMS services in ArcGIS (ESRI) and QGIS (Free and Open source).

### **2.1. ArcGIS**

- Click "Add Data" and in the "Look In" window, scroll down near the bottom to "GIS Servers"
- Choose "Add WMS Server"
- In the window that opens (Fig1), copy/paste the WMS URL link and click "Get Layers" to initiate a connection. Once the Server Layers window is populated, click OK.

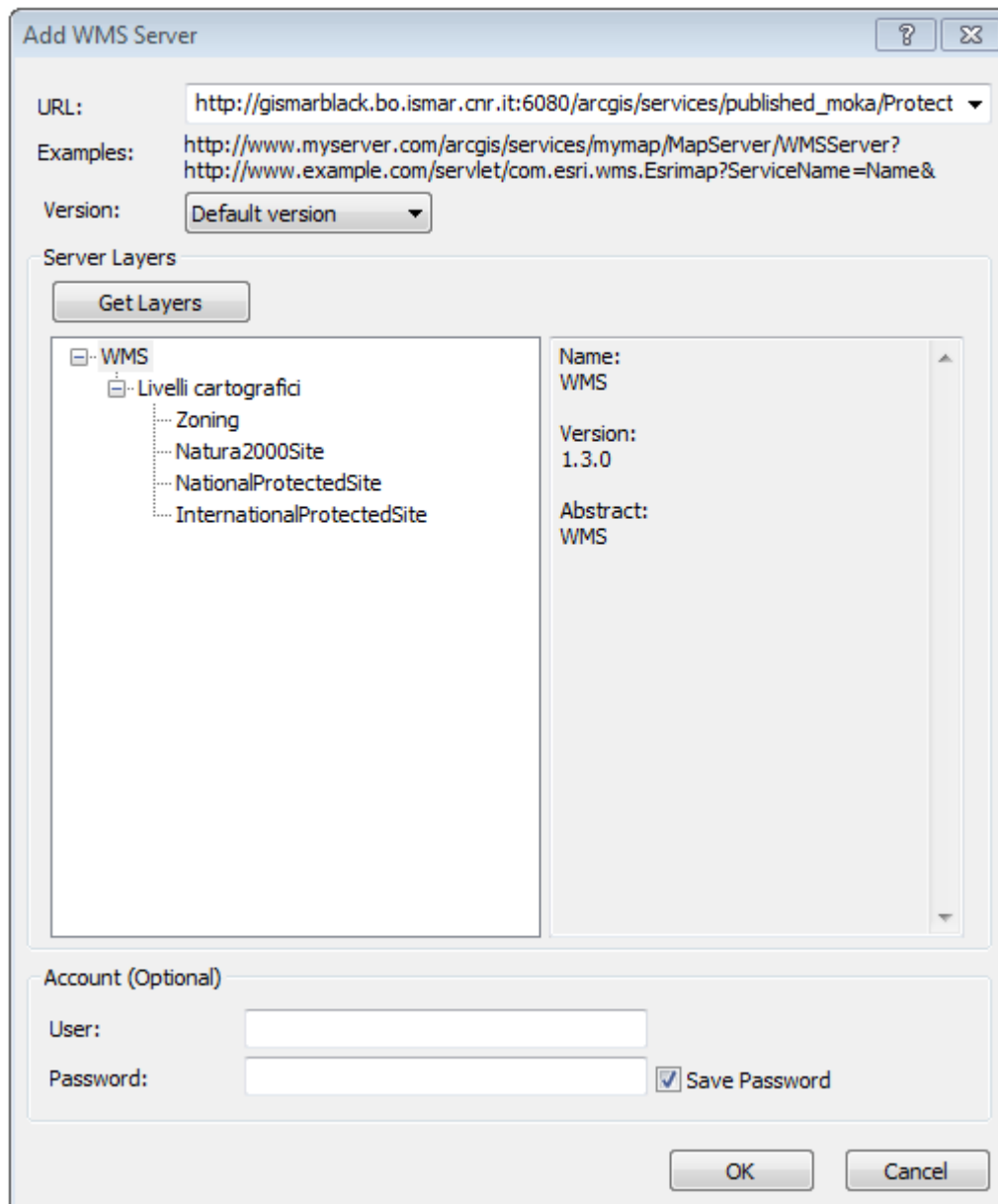


Fig1. "Add WMS Server" window.

## 2.2. QGIS

- Click "Add WMS/WMTS Layer"
- Choose "New"
- In the window that opens (Fig2), copy/paste the WMS URL link and click OK.
- Click "Connect" and once the Layers window is populated, select the layer(s) of interest and click ADD (Fig3).

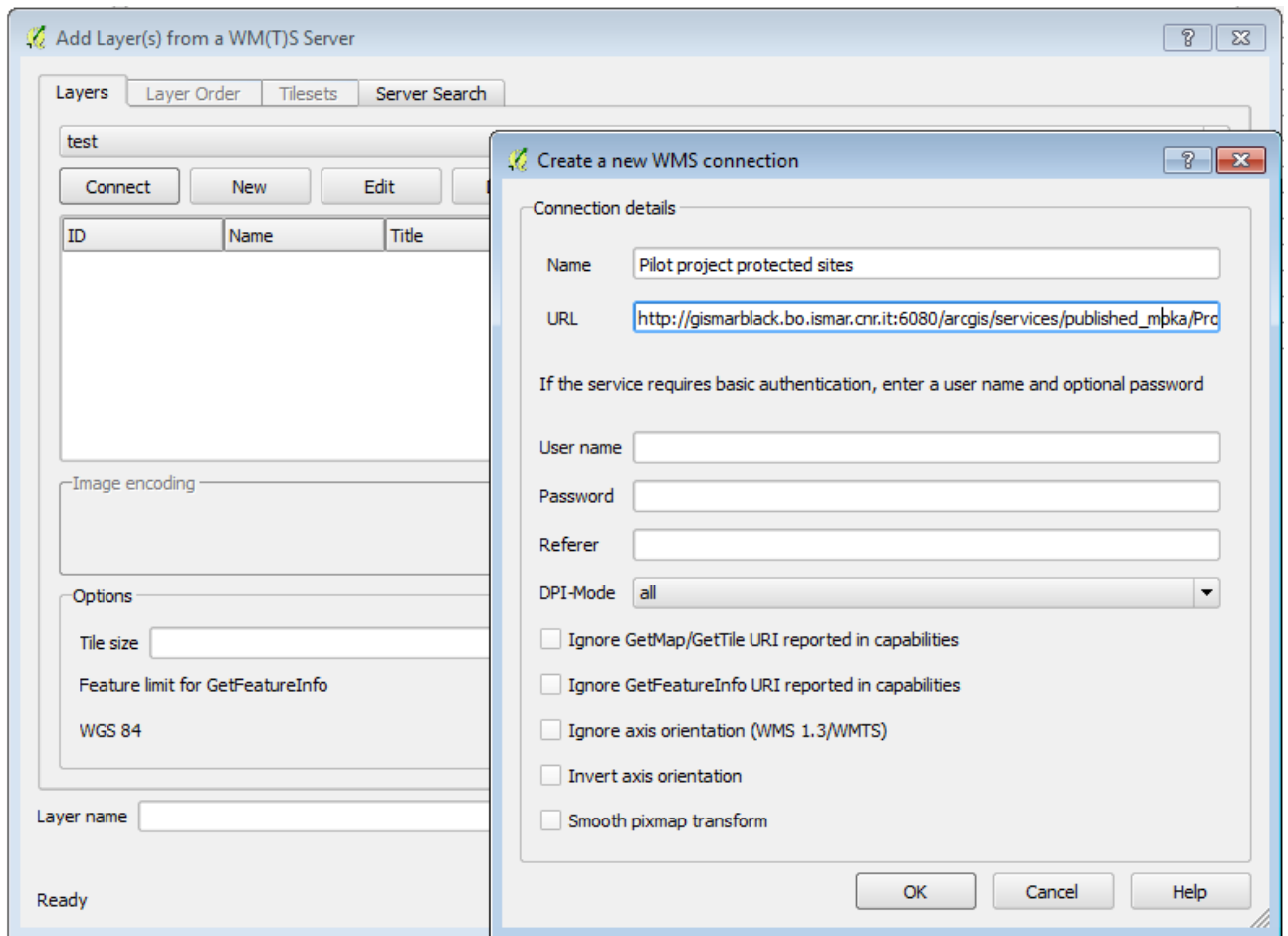


Fig2. "Create a new WMS connection" window.

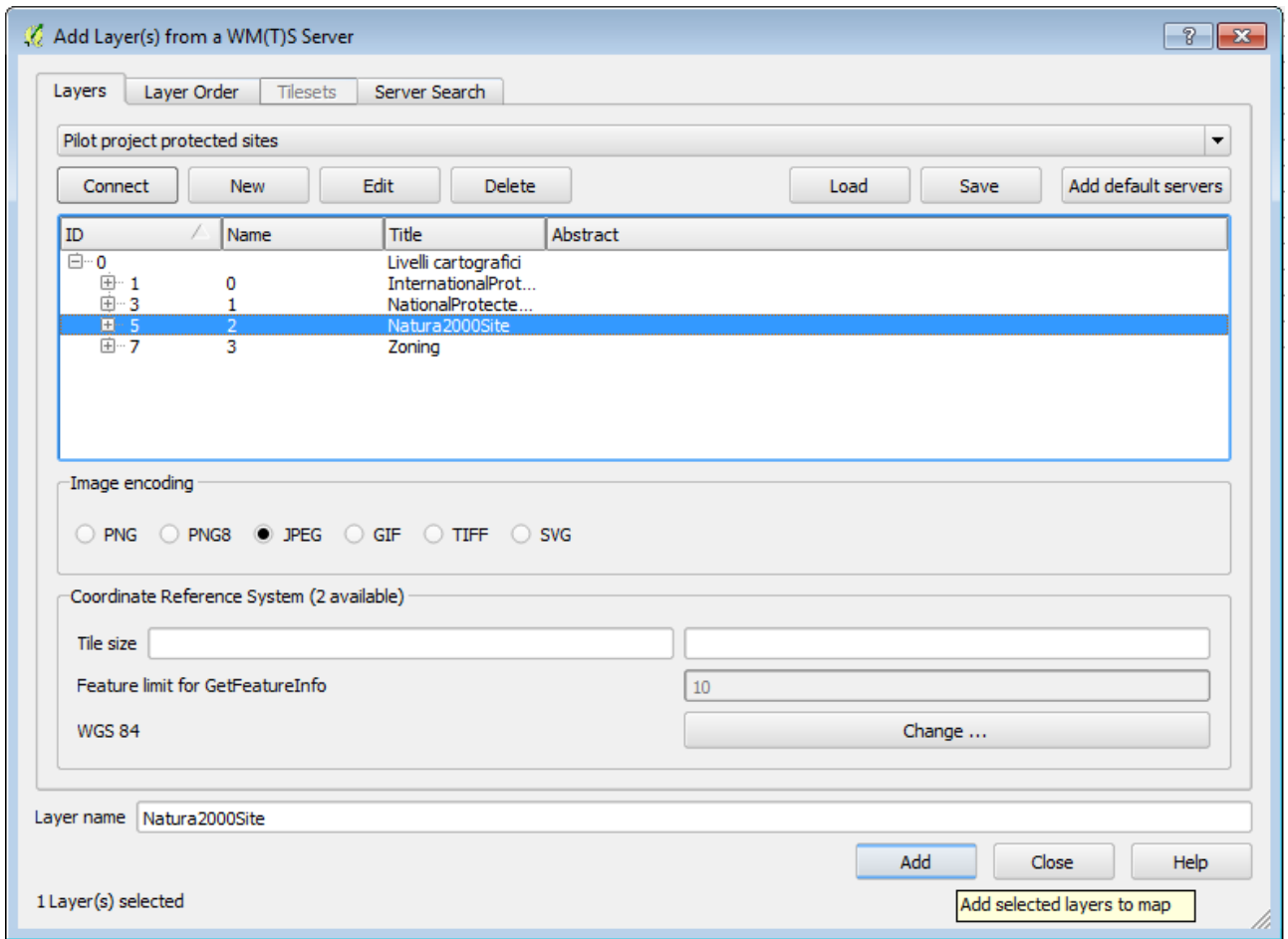


Fig3. "Add Layer(s) from WM(T)S Server" window.