

### e) Create a view based on a WMS request

Vector and raster data can be streamed into MapX without being published directly into its geodatabase through WMS requests. Data is however directly rasterized during the process and cannot be queried once available in the web application. WMS requests are also the only way to include raster data in MapX, mostly in reason of their potentially very large dimension that might impose low fluidity to the platform.

WMS requests can be the right solutions for setting data available into MapX in the following cases:

- 1) The data is streamed by some spatial data infrastructure via https connection → directly stream the data via WMS request from the data provider;
- 2) The data is streamed by some spatial data infrastructure without a secure connection → stream the data via WMS cascading service through a Geoserver;
- 3) The data provider does not comply with OGC standards but the data can be downloaded → publish the data into a Geoserver and stream it into MapX via WMS request from the personal Geoserver.

WMS connections into MapX can be set up following this procedure:

- i. Select “World” through the button “Select country”. You are going to create a view of a global dataset such as the estimates of global population.
- ii. Create a new raster view (Toolbox → Add view, select Raster) and give it a relevant name (e.g. “Estimates of population 2020”). Always select raster because the data is rasterized during the process.
- iii. Find the new view on the views sidebox and open the configuration window.
- iv. Open the WMS generator; enter the url of the WMS service where the layers you want to stream are stored. For example, <https://preview.grid.unep.ch/geoserver/wms> or the one of your geoserver) and then click on “Get layers”. Chose a layer among the ones proposed in the case below. Urls of tiles endpoints and legend will be generated (Figure 31).

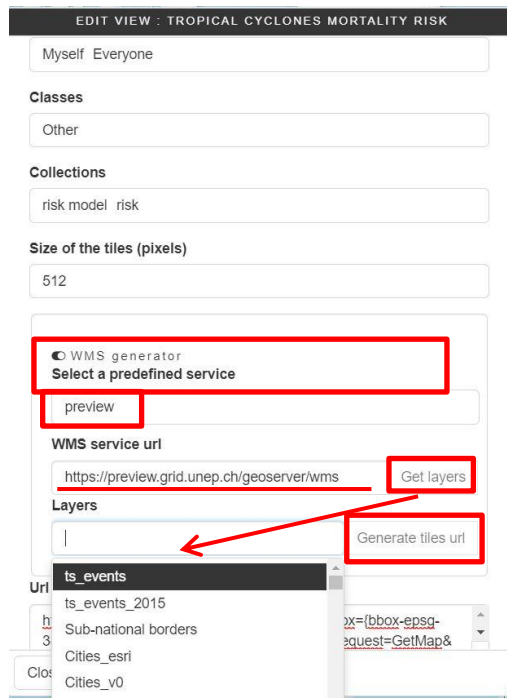


Figure 31: WMS request for a raster view from the PREVIEW repository.

- v. In case the url does give any access to the layers available in the server, the urls of the tiles endpoints and of the legend must be written manually. This is the case with columbia.edu....
- vi. Go to the following website (<http://sedac.ciesin.columbia.edu/data/collection/gpw-v4/maps/services>) and find the url and the ID of the layer: “UN-adjusted population count v4 for 2020” for making the WMS request of the layer. Complete the necessary information for the request as follows in the next lines.

Tape the url for the WMS request in the case “Url of tiles endpoint”.

Keep in mind that the MapX platform requires the requested data to be in this format: [See also Figure 32 for this passage]

(e.g. [https://sedac.ciesin.columbia.edu/geoserver/wms?](https://sedac.ciesin.columbia.edu/geoserver/wms?bbox={bbox-epsg-3857}&service=WMS&version=1.1.1&request=GetMap&srs=EPSG:3857&style=&layers=gpw-v4:gpw-v4-population-count-adjusted-to-2015-unwpp-country-totals_2020&format=image/png&transparent=true&height=256&width=256})  
**bbox={bbox-epsg-3857}&**  
**service=WMS&**  
**version=1.1.1&**  
**request=GetMap&**  
**srs=EPSG:3857&**  
**style=&**  
**layers= gpw-v4:gpw-v4-population-count-adjusted-to-2015-unwpp-country-totals\_2020&**  
**format=image/png&&**  
**transparent=true&**  
**height=256&**  
**width=256).**

“https” is the only way it is accepted in the platform for security reasons. “http” does not work therefore.

Name of requested layer

Dynamic bounding box that gets updated as we move on the screen

Source reference system must be in EPSG:3857

Server url where data is stored

Furthermore, set the “Size of the tiles (points)” to as the same value as the resolution on the WMS request code (in this case it should be 256).

- vii. The legend can also be visualized by adding a similar request to the bottom case of the View configuration window:  
[https://sedac.ciesin.columbia.edu/geoserver/wms?service=WMS&version=1.1.1&styles=&request=GetLegendGraphic&layer=gpw-v4:gpw-v4-population-count-adjusted-to-2015-unwpp-country-totals\\_2020&format=image/png&transparent=true](https://sedac.ciesin.columbia.edu/geoserver/wms?service=WMS&version=1.1.1&styles=&request=GetLegendGraphic&layer=gpw-v4:gpw-v4-population-count-adjusted-to-2015-unwpp-country-totals_2020&format=image/png&transparent=true).
- viii. This view is automatically set to be available for “World” (because we previously selected “World” through the upper left button “Select country”). This does not make the view to be available for all countries. On the contrary, it only makes the view accessible when selecting “World” as a country.

Any view can be set available for a number of secondary countries through the configuration parameters of each view. (Countries must be entered as in Figure 32). However, views that are accessed from the secondary countries do not allow users to access the view configurator. To do so, views must be accessed from the country that is selected under “Country of the view” in the view configuration’s window (Figure 32). As views are not stably associated to a country, such parameter can be changed manually so that a view is shifted to another country. After this editing, the view will be primarily accessed by the new country and only there it will give access to the view’s configuration window.

Views can be set available to all countries by typing GLB (= Global) as secondary country.

EDIT VIEW : TEST POP

Country of the view  
World

Other countries where the view is visible  
GLB

Target group. Who can view this.  
Myself Publisher

Classes  
Social

Collections

Size of the tiles (pixels)  
256

WMS generator

Uri of tiles endpoint  
[https://sedac.ciesin.columbia.edu/geoserver/wms?service=WMS&version=1.1.1&styles=&request=GetMap&layers=gpw-v4:gpw-v4-population-count-adjusted-to-2015-unwpp-country-totals\\_2020&bbox={bbox-epsg-](https://sedac.ciesin.columbia.edu/geoserver/wms?service=WMS&version=1.1.1&styles=&request=GetMap&layers=gpw-v4:gpw-v4-population-count-adjusted-to-2015-unwpp-country-totals_2020&bbox={bbox-epsg-)

Close Save

Saved at 2018-01-01 18:05:18.5930

Figure 32: Manual configuration of a WMS view (raster).