Connect to WMS HGIS de las Indias

WMS Introduction

A **Web Map Service** (**WMS**) is a standard protocol for serving (over the internet) georeferenced map images which a map server generates using data from a GIS database. The Open Geospatial Consortium developed the specification and first published it in 1999.

At HGIS de las Indias we use WMS-T, the time enabled Version of WMS. With this option, it is possible to show changes over time. The problem is that only a few WMS viewers support controlling time. But QGIS (an OpenSource Desktop GIS) and ArcGIS both support WMS-T.

With WMS and the Use of GISPrograms it is possible to make your own maps and websites using data from HGIS de las Indias and other sources.

Our WMS-Server

We have different services:

- https://www.hgisindias.net:6443/arcgis/services/HGIS/HGIS_WMS_1800/MapServer/WMSServer?
 Pure WMS without time that represents the state of Spanish America by 1800.
- https://www.hgis-indias.net:6443/arcgis/services/HGIS/territorios/MapServer/WMSServer? A WMS-T of the administrative and church organization of territories (1701-1808), including capital places of entities.
- https://www.hgisindias.net:6443/arcgis/services/HGIS/Poblaciones/MapServer/WMSServer? A WMS-T of populated places (1701-1808), organized by different criteria (type of settlement; church hierarchy.
- 4) https://www.hgisindias.net:6443/arcgis/services/HGIS/HGIS_Fronteras/MapServer/WMSServer?
 A WMS-T of "external" factors (1701-1808), like indigenous territories and tribes, treaty lines, claims of foreign European nations, events of wars and rebellions, etc.
- https://www.hgis-indias.net:6443/arcgis/services/HGIS/Datos/MapServer/WMSServer? A WMS-T of aggregated data to the database (1701-1808), including demographic, economic, cultural, and other features.
- 6) https://www.hgis-indias.net:6443/arcgis/services/HGIS/hgis_fisico/MapServer/WMSServer? A WMS-T of physical features (rivers/lakes) and historical natural events (1701-1808).
- 7) <u>https://www.hgis-</u> indias.net:6443/arcgis/services/HGIS/HGIS_Comunicaciones/MapServer/WMSServer? A WMS-T of important routes and infrastructure of communications (1701-1808), like ship routes, roads, postal routes and offices, etc.

ArcMap

Open ArcMap. In the Catalog Window go to Add WMS Server.

I recommend to pause the drawing in ArcMap (Key F9) because without the Time Toolbar it will load all data from the WMS at once, which needs a long time.



Enter the address and click the Get Layers button.

	Add WMS Server	
URL: Examples: Version: Custom Param Parameter	://www.hgis-indias.net:6443/arcgis/services/HGIS/territorios/MapServer/WMSServer/ http://www.myserver.com/arcgis/services/mymap/MapServer/WMSServer? http://www.example.com/servlet/com.esri.wms.Esrimap?ServiceName=Name& Default version w neters Value	rer? ∨
Server Layers Get Layers	ers histración e iglesia (grupo) erritorios no controlados Territorios indómitos Territorios indómitos etiquetas artidos Cabeceras Partidos Cabeceras Partidos símbolos Cabeceras Partidos etiguetas	
Account (Option User: Password:	Cabeceras Partidos etiquetas Partidos límites Partidos etiquetas Partidos	~

Open the TimeSlider Toolbar



And choose the year you want.

Now it's a good time to reenable the drawing function (Key F9) to see the data.



QGIS

The Support for Time ist not very good in Qgis. Sometimes the manual works but not all the time

Installing the TimeManager Plugin

To work with Time enabled Data its necessary to Install the TimeManager Plugin first

Open QGIS. In the Menubar click "Plugins" and then select "Manage and Install Plugins..."

Ø												
Project	Edit	View	Layer	Settings	Plugi	ns Vector	Raster	Database	Web	Pro	cessing	Help
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Ø.	/		• °°° /	4	Python Console Ctrl+Alt+P					abc	abc abc	
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Search for "time" in the Search Field and select the TimeManager Plugin, then click the "Install plugin" button. After the Installation is complete, close the Pluginmanager.

Ń	Plugins	All (444)
All	Search time	Sector 2018
Not installed	 Backup layer D3 Data Visualization EqDistant Plugin Interactive Map Tracking Magnetic Declination Midvatten Mutant Pandora PosiView PS Time Series Viewer QgsWcsClient2 Temporal/Spectral Profile Tool TimeManager 	TimeManager create animations visualizing spatio-temporal data TimeManager adds time controls to QGIS. Using these time controls, you can animate vector features based on a time attribute. There is also an experimental raster layer support and support for interpolation beween point geometries. You can create animations directly in the map window and export image series. ★★★★★ 72 rating vote(s), 64756 downloads Upgrade all
		Close Help

Now it's a good time to disable the Rendering Function of QGIS, because when you open the WMS without the proper time settings you must wait a long time. To disable it uncheck Render.

In the Browser Panel right click on "WMS" and select "New Connection"



In the next window enter a name and then enter one of the urls of the WMS. Click okay

🧭 Create a new WMS connection ? 🗙										
Connection details										
Name Territorios										
URL s://www.hgis-indias.net:6443/arcgis/services/HGIS/territorios/MapServer/WMSServer?										
Authentication Configurations										
If the service requires basic authentication, enter a user name and optional password										
User name										
Password										
Referer										
DPI-Mode all 🗸										
Version										
Ignore GetMap/GetTile URI reported in capabilities										
Ignore Get-eatureInfo URI reported in capabilities Ignore axis orientation (WMS 1.3/WMTS)										
Smooth pixmap transform										
OK Cancel Help										

Now it's possible to add an WMS Layer to QGIS when you refresh the BrowserPanel (click on the refresh symbol 2).

Double click the desired layer to add to the map.



Now open the settings of the Time Manager

Time Manager		
Settings Export Video Time frame s	tart: 2000-01-01 00:00:00.000	minutes •
not set		

The next step is to enable the timefunction. Click the "Settings" Button in the TimeManager Window

Click "Add raster"

Ø.		Tim	e manager s	ettings			? X	
Layers:								
Layer name	Start	End (optional)	Enabled	Index	Time format	Offset	Add layer	
							Add raster	
							Remove layer	
<						>		
Animation Options:								
Show frame for	500	🗘 millisecon	ds					
Play animation back	kwards		Looping a	nimation				
Do not export empty frames in time managed layers								
✓ Display frame start	time on map			Time display options				
					ОК	Cancel	Help	

Enter 1701 for the Start Time and 1808 for the End Time. click okay

Ń	Select layer and column(s)		? X
Layer Start time	Jurisdicciones territorios	•	
End time	1808		(optional)
	Start of date in name		End of date in name
Get start from name	0		0
Get end from name	0	÷	0
Offset (in sec)	0	* *	(optional)
Layer is netCDF file w	ith time dimension		
		OK	Cancel

Now Click on the Time format (you must do this)

			Snow trame for	1800 6	I millseconos						
Ø			Tir	ne manager se	ttings			? X			
La	Layers:										
	Layer name	Start	End (optional)	Enabled	Index	Time format	Off	Add layer			
1	Jurisdicciones t	1701	1808	✓	Jurisdicciones_t	WILL BE INFERR	0	Add raster			
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Ar	Animation Options:										
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	Play animation back	wards		Looping anir	mation						
	Do not export empty frames in time managed layers										
•	Display frame start	time on map			Time display	options					
						ОК	Cancel	Help			