

GeoNode – Basic Use in Spatial Data Infrastructure



THE WORLD BANK
Working for a World Free of Poverty



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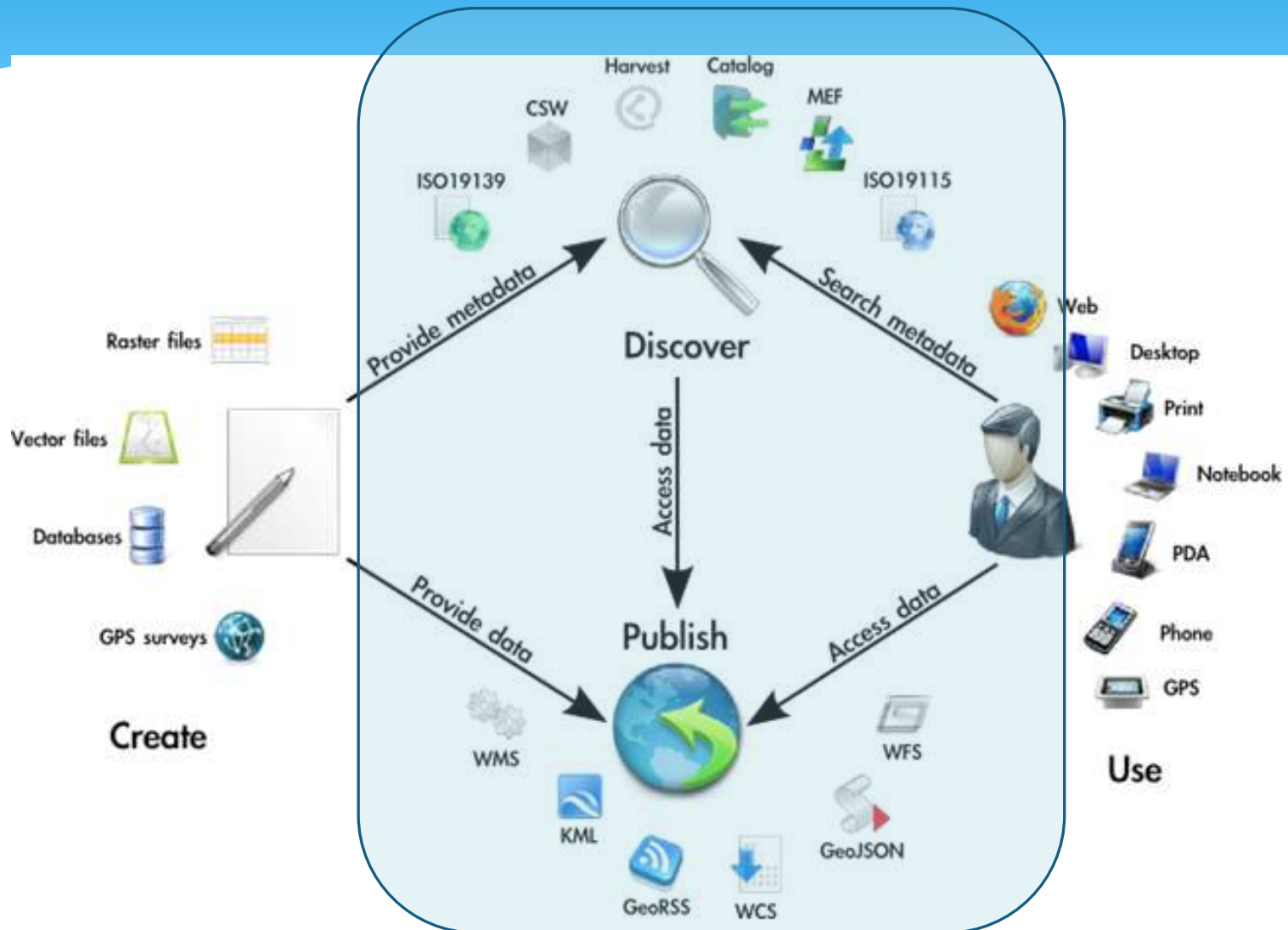
GeoNode scope

- * The main goal of GeoNode is to provide a quick and complete installation of an SDI-compliant node ('SDI-in-a-box' concept)
- * The lack of simple integration was a weakness of open-source SDI solutions. A complete stack had to be integrated by hand
- * GeoNode includes a complete set of *data* and *service* layer components, so Web and GIS clients can access these resources via standard Web services
- * GeoNode also provides an *application* layer component (Web client), so it's easy to build a full geoportal

GeoNode scope

- * GeoNode makes easier to:
 - * Upload data to shared databases
 - * Make maps for online viewing
 - * Publish maps in Web sites
 - * Create metadata
 - * Catalog documents
 - * Connect SDI and GIS desktops
 - * Add social interaction to SDIs
 - * Control access and permissions
 - * Connect services from different nodes

GeoNode scope



GeoNode scope



Rolando Peñate

Rolando Peñate joined CAPRA on May 15, 2009 and has shared **352 data sets** and created **17 maps**.

Description:

I make maps, I help make software for making maps, and I generally spend too much time around maps.

Languages:

English (Preferred), Spanish

Location:

Brooklyn, NY, USA 11238

Organization:

OpenGeo
349 W 12th Street #3
New York, NY 10014

[Edit profile](#)

Following (4)



Easy metadata generation!

General Details	
Dataset Title:	Domestic Energy Consumption, 2006
Time Period of Dataset(s):	01/01/2006 to 31/12/2006
Geographic Coverage:	England and Wales
Lowest Area Output:	Middle Layer Super Output Areas (MSOA)
Supplier:	Department of Energy and Climate Change (DECC)
Department:	Energy Statistics
National Statistics Data?	National Statistics
Revisions:	None
Data Quality	
This document provides a range of information that describes the quality of the data and details any points that should be noted when using the data.	
ONS has developed Guidelines For Measuring Statistical Quality : these are based upon the six European Statistical Service (ESS) Dimensions of Quality developed by Eurostat. The dimensions are:	
<ul style="list-style-type: none">• Relevance• Accuracy• Timeliness and Punctuality• Accessibility and Clarity• Comparability• Coherence	
About the dataset	
(including the quality dimensions: Relevance and Timeliness and Punctuality)	
The dataset provides total and average consumption of domestic ordinary electricity, economy 7 electricity and gas as well as counts of meter points at Government Office Region (GOR), Local	

Search, Collaborate and Create Interactive Map

Haiti Data [bshwa](#) [Change password](#) [Log out](#)

[Home](#) [Data](#) [Maps](#) [Partners](#) [Profile](#) [Admin](#)

Title: Haiti Administrative Boundaries Admin Level1 (Department), CNIGS - polygons

File name: h1_boundaries_departements_admin1_cnigs_polygon

Abstract: This polygon vector layer shows the official boundary data intended to provide the delimitation of the 10 departments within Haiti. This dataset has been published by the Centre National de l'Information Géospatiale in Haiti (CNIGS). There is no sharing restriction.

Metadata language: eng

Map date: May 9, 2012, 10:05 a.m. **Date Type:** publication **Editor:**

Type: vector

Update frequency: unknown

Point of Contact: [bshwa](#) - bshwa - None

Country and Region: HTI

Use Constraints (Legal): copyright

Topic Category: boundaries

Platform: openstreet

Download

[Download raw data](#)

Other formats: [Zipped Shapefile](#) [GML 2.0 UML 3.1.1 GML](#) [Excel](#) [GeoJSON](#) [JPEG](#) [PDF](#) [PNG](#) [KML](#) [View in Google Earth](#)

Metadata: [TC211](#) [Excel](#)

Legend

☐

Maps

This layer is not currently used in any maps.

[Create new map](#)

Styles

This following styles are associated with this data set. Choose a style to view it in the preview to the left. Click on a style name to view or edit the style.

- [H1_Boundaries_Departements_Admin1_Cnigs_Polygon_Fr](#) [SLD](#)
- [H1_Boundaries_Departements_Admin1_Cnigs_Polygon_Labels_Es](#) [SLD](#)
- [H1_Boundaries_Departements_Admin1_Cnigs_Polygon_Labels_Fr](#) [SLD](#)
- [H1_Boundaries_Departements_Admin1_Cnigs_Polygon_Labels_Es](#) [SLD](#)
- [H1_Boundaries_Departements_Admin1_Cnigs_Polygon_Labels_Fr](#) [SLD](#)

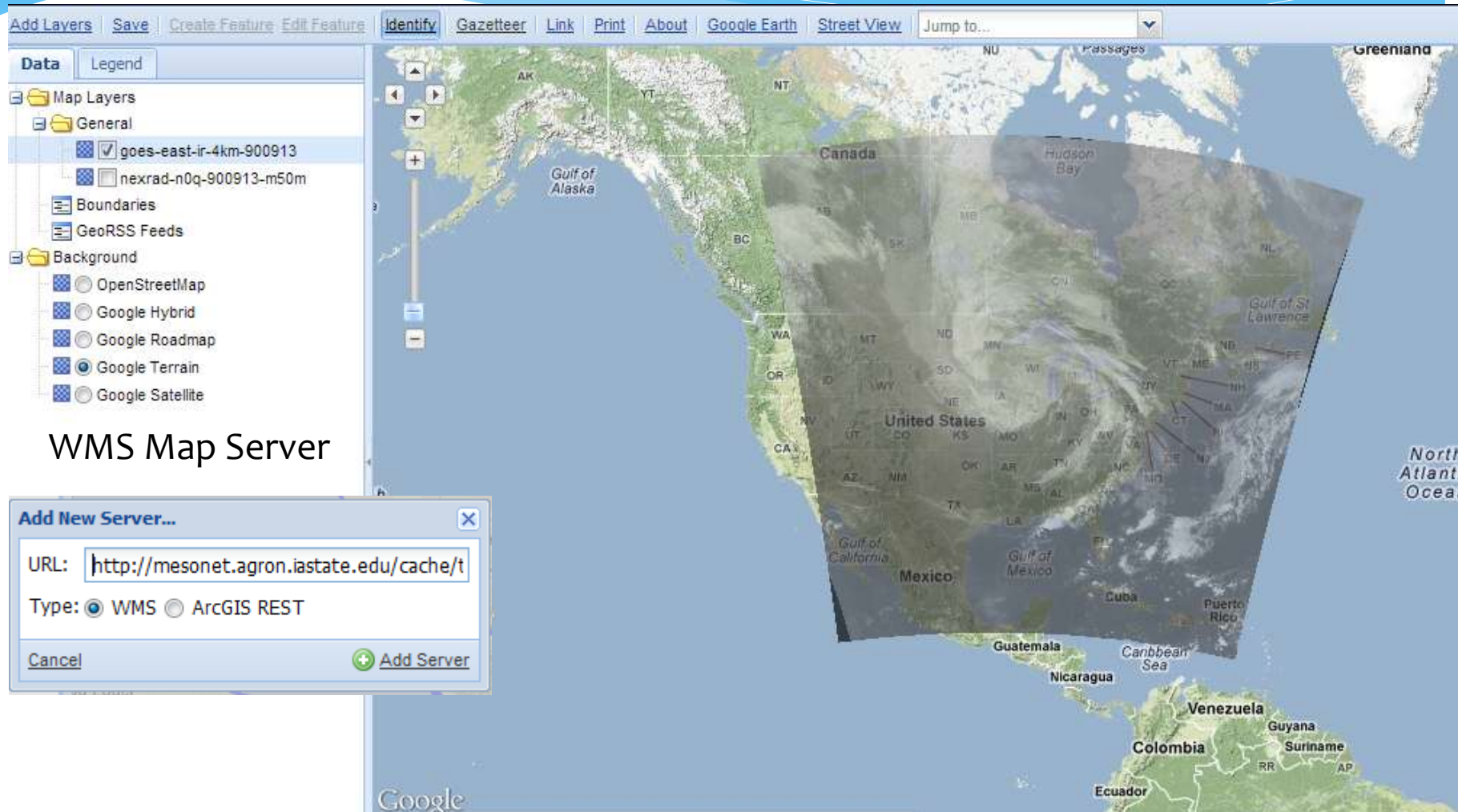
Default style: [H1_Boundaries_Departements_Admin1_Cnigs_Polygon_Fr](#) [Create new style](#)

Manage

- [Update the description of this data](#)
- [Upload a new version of this data](#)
- [Metadata](#)



Add Data From External Source



Add Data From External Source

GeoRSS Feed

GeoNode Capability1

[bishwa](#) | [Sign out](#) | [Create Map](#) | [View Map](#) | [Help](#)

Identify Link Print Gazetteer About Notes Google Earth Street View Share Map Revis

The map displays the geographical context of the earthquake, showing the borders of India, Pakistan, and Nepal. The earthquake is marked with a yellow star icon in the northeastern part of India, specifically in the Jammu and Kashmir region. A red star is also visible in the northwestern part of India, near the border with Pakistan. The map includes labels for various states and territories, such as Gilgit-Baltistan, Azad Kashmir, Jammu and Kashmir, Islamabad Capital Territory, Federally Administered Tribal Areas, Punjab, Haryana, Rajasthan, Uttar Pradesh, Bihar, West Bengal, Odisha, Maharashtra, Gujarat, Sindh, Balochistan, Nepal, Arunachal Pradesh, Assam, Nagaland, Meghalaya, Manipur, Mizoram, and Tripura. A scale bar at the bottom right indicates 200 km and 100 mi, with a scale of 1 : 17471330.

M 5.4, eastern Kashmir
August 02, 2013 02:32:48 GMT

Add a GeoRSS Feed

Type:

- ☐ Picasa Photos
- ☐ YouTube Videos
- ☐ Harvard Geospatial Library
- ☒ Other GeoRSS Feed

Feed Title:

URL:

Symbol:

Size:

☒ Fill

Color:

Opacity:

☒ Stroke

Style:

Color:

Width:

Opacity:

Add Data From External Source

ArcGIS Server

Add New Server...

URL:

Type: ☐ WMS ☒ ArcGIS REST



Share Map

Copy the html code

Paste the html code in your web application

```
<h1>Earthquake with Magnitude of 2.5 or more in past 7 days </h1>
```

```
<iframe height="400" width="600"  
src="http://worldmap.harvard.edu/maps/2265/Ehc/embed"></iframe>
```

Link to Map

Paste link in email or IM:

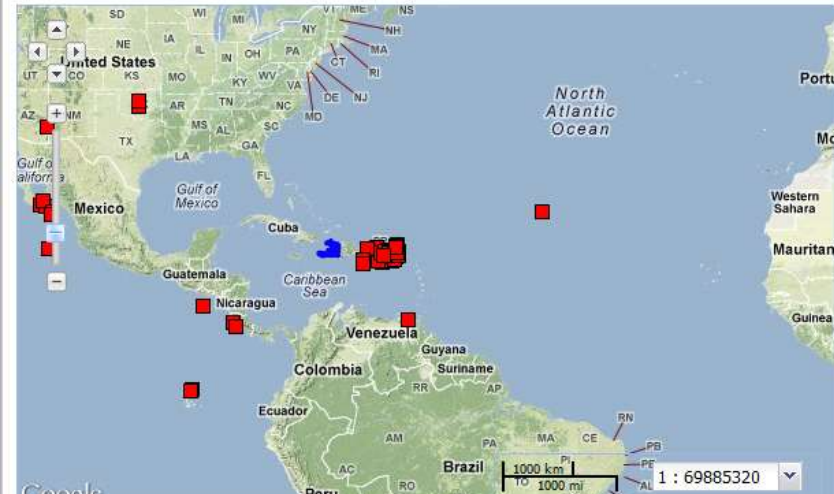
<http://worldmap.harvard.edu/maps/2265/Ehc>

Paste HTML to embed in webs:

```
<iframe height="400" width="600"  
src="http://worldmap.harvard.edu/maps/2265/Ehc/embed"></iframe>
```

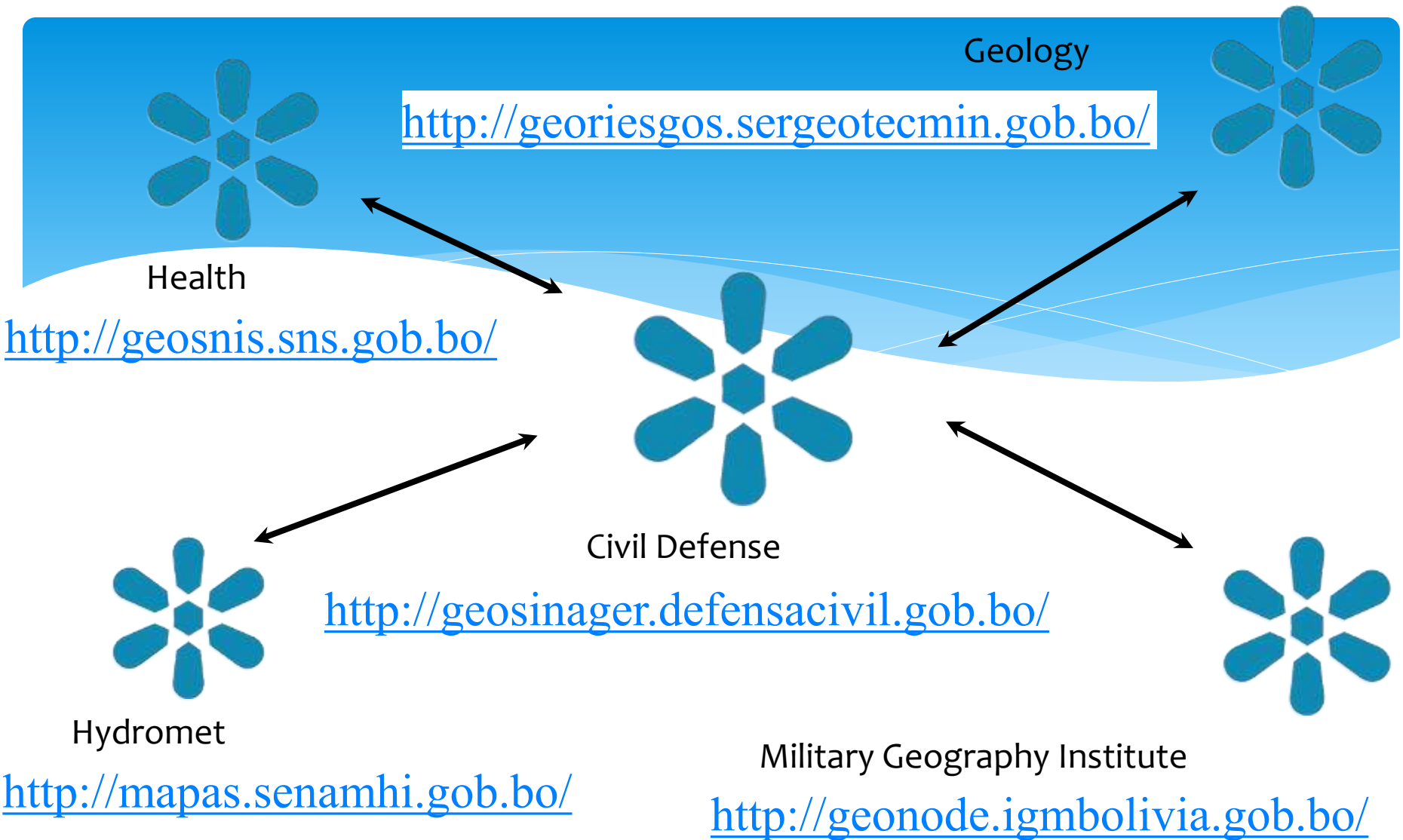
Map Size Large Height

Earthquake with Magnitude of 2.5 or more in past 7 days



The map displays the United States, Mexico, and Central America. Red squares indicate earthquake locations. The map is titled 'Earthquake with Magnitude of 2.5 or more in past 7 days'. The map includes labels for various countries and regions, such as United States, Mexico, Central America, and the Caribbean Sea. A scale bar at the bottom indicates 1000 km and 1000 mi. The map is displayed in a web browser window with a title bar and address bar.

Map is embedded in your Web Application



GeoNode Bolivia – Federation Model

GeoNode scope

Easy access control!

PERMISSIONS

Who can view and download this data?

- ☐ Anyone ☐ Any registered user
☒ Only users who can edit

Who can edit this data?

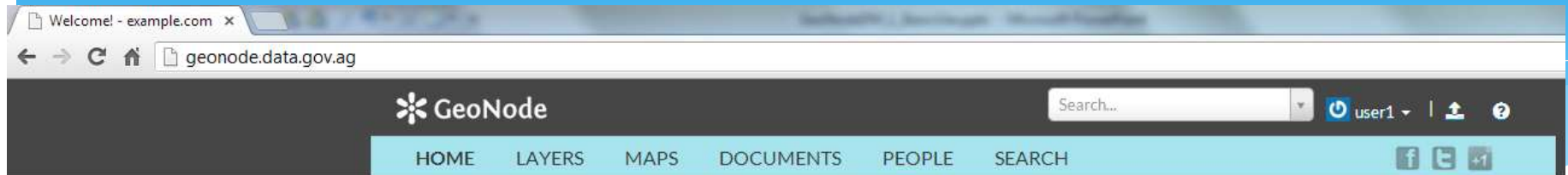
- ☐ Any registered user
☒ Only the following users or groups:

× bobby

Who can manage and edit this data?

× geonode2

Starting Geonode



WELCOME

GeoNode is an open source platform for sharing geospatial data and maps. If you have any questions about the software or service, join our [mailing list](#).

Need help [Getting Started?](#)

[Explore Layers](#)

[Explore Maps](#)

LATEST LAYERS

Total: 9



Coast Line

Layer from [user1](#), 54 minutes ago

No abstract provided

9

views



Average rating (0 votes)

[Download](#)

[Create a map](#)



Antigua Coral Reef

Layer from [georoot](#), 2 months ago

No abstract provided

15

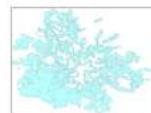
views



Average rating (0 votes)

[Download](#)

[Create a map](#)



Antigua Contour Lines

Layer from [georoot](#), 2 months ago

No abstract provided

9

views



Average rating (0 votes)

[Download](#)

[Create a map](#)

CONTRIBUTE

GeoNode enables you to upload, manage, and browse data layers. Search for data that is valuable to you, or upload your own data.

[Upload Layers](#)

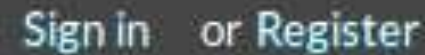
GeoNode enables you to compose and share maps. Create a map with our cartography tool, or explore maps shared by others.

[Create a Map](#)

LATEST MAPS

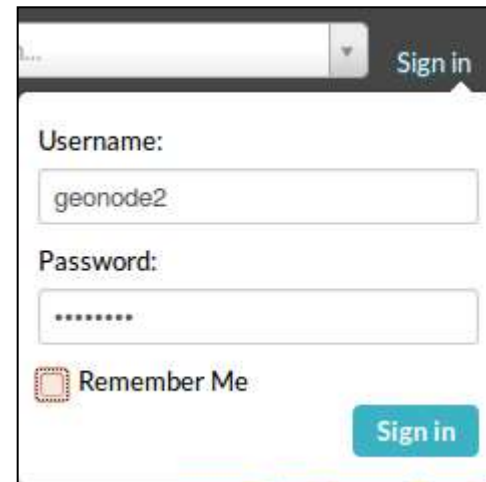
Registration / logging in

- * Some GeoNode sites have enabled user registration. If so, you can *register* (sign up), wait for the confirmation email, and use this account to sign in:



- * Otherwise, the GeoNode administrator needs to create a user for you to *sign in*

In the workshop, sign in with the account and password provided by the instructor



Uploading data

- * GeoNode can directly upload **vector data** (points, lines, polygons) from shape files and **raster data** (images, elevation grids) from geoTIFF files
- * Go to the 'LAYERS' main tab, and then 'UPLOAD LAYERS' subtab
- * There, you can 'drag and drop' files, or use the 'Browse...' button to select and load

Uploading data

The screenshot shows the GeoNode web interface. At the top, the 'LAYERS' menu item is highlighted with a red box, and a red arrow points from it to the 'UPLOAD LAYERS' button, which is also highlighted with a red box. Below this, the 'UPLOAD LAYERS' section features a large dashed box with the text 'Drop files here', outlined with a red border. To the right of this section is the 'PERMISSIONS' panel. Below the drop zone, the text 'or select them one by one:' is followed by a 'Browse...' button (highlighted with a red box) and a 'No files selected.' status. A dark grey bar labeled 'FILES TO BE UPLOADED' is positioned below the file selection area. At the bottom, there is a 'Select the charset or leave default' dropdown menu showing 'UTF-8/Unicode', a 'Clear' button, and an 'Upload files' button.

GeoNode

Search...

geonode2 geonode2

HOME LAYERS MAPS DOCUMENTS PEOPLE SEARCH

EXPLORE LAYERS UPLOAD LAYERS

UPLOAD LAYERS

Drop files here

or select them one by one:

Browse... No files selected.

FILES TO BE UPLOADED

Select the charset or leave default

UTF-8/Unicode

Clear Upload files

PERMISSIONS

Who can view and download this data?

☒ Anyone ☐ Any registered user
☐ Only users who can edit

Who can edit this data?














☒ Any registered user
☐ Only the following users or groups:
Choose one or more users...

Who can manage and edit this data?

Choose one or more users...

Uploading data: shape files

- * Browse for the shapefiles directory and select all with the same name in the workshop's data folder

Name	Date modified	Type	Size	Tags
 acoast.dbf	10/27/2000 3:45 PM	DBF File	4 KB	
 acoast.prj	12/3/2013 7:46 PM	PRJ File	1 KB	
 acoast.sbn	10/27/2000 3:45 PM	SBN File	1 KB	
 acoast.sbx	10/27/2000 3:45 PM	SBX File	1 KB	
 acoast.shp	10/27/2000 3:45 PM	SHP File	120 KB	
 acoast.shx	10/27/2000 3:45 PM	SHX File	1 KB	
 ancoast.dbf	10/28/2000 1:21 PM	DBF File	1 KB	
 ancoast.prj	12/3/2013 7:46 PM	PRJ File	1 KB	
 ancoast.sbn	10/28/2000 1:18 PM	SBN File	1 KB	
 ancoast.sbx	10/28/2000 1:18 PM	SBX File	1 KB	
 ancoast.shp	10/28/2000 1:18 PM	SHP File	118 KB	
 ancoast.shx	10/28/2000 1:18 PM	SHX File	1 KB	
 antcliff.dbf	10/2/2000 11:09 AM	DBF File	1 KB	

Uploading data: shape files

- * Verify that the data is recognized (title should appear and no 'missing' error messages)
- * Click on 'Upload files'

The screenshot displays the GeoNode web interface for uploading files. At the top, the navigation bar includes links for HOME, LAYERS, MAPS, DOCUMENTS, PEOPLE, and SEARCH. A search bar is also present. Below the navigation bar, there is a large dashed box labeled "Drop files here". To the right of this box, there are settings for "Who can edit this data?" and "Who can manage and edit this data?", both set to "Any registered user". Below the "Drop files here" box, there is a "Choose Files" button and a "No file chosen" status. A section titled "FILES TO BE UPLOADED" lists several files under the heading "ANCOAST" and "ESRI SHAPEFILE". The files listed are: ancoast.dbf, ancoast.prj, ancoast.sbn, ancoast.sbx, ancoast.shp, and ancoast.shx. Each file has a "Remove" link next to it. Below the file list, there is a "Select the charset or leave default" dropdown menu, which is currently set to "UTF-8/Unicode". A red arrow points from the "Upload Files" button at the bottom left to a green box on the right that says "Your upload has started" and shows a progress bar at 6.81%.

GeoNode

HOME LAYERS MAPS DOCUMENTS PEOPLE SEARCH

Drop files here

or select them one by one:

Choose Files No file chosen

FILES TO BE UPLOADED

ANCOAST ESRI SHAPEFILE

- ancoast.dbf Remove
- ancoast.prj Remove
- ancoast.sbn Remove
- ancoast.sbx Remove
- ancoast.shp Remove
- ancoast.shx Remove

Select the charset or leave default

UTF-8/Unicode

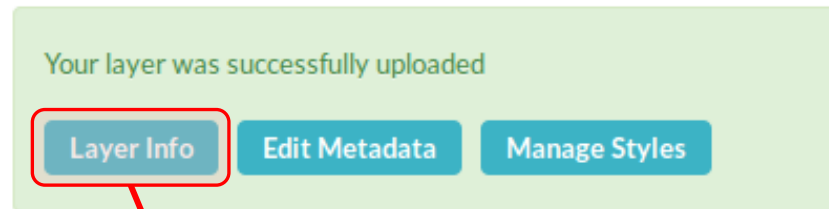
Clear Upload Files

Your upload has started

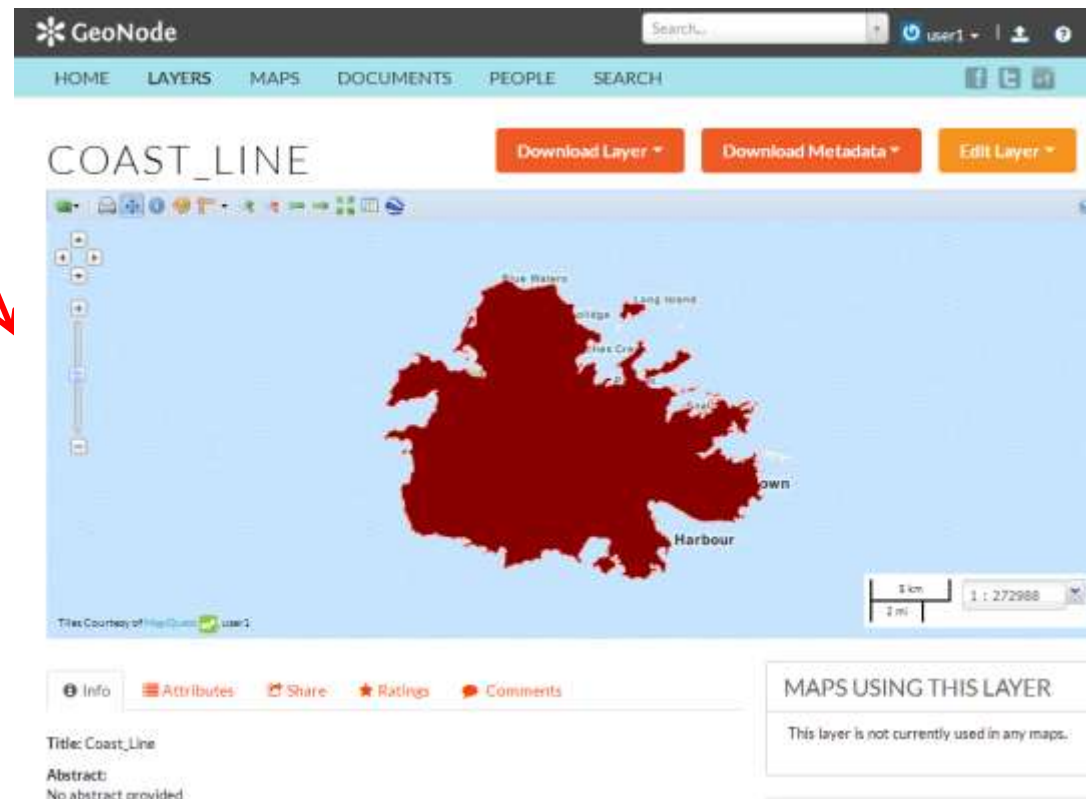
6.81%

Uploading data: shape files

- * After the data is uploaded as a layer, you have different options



See the layer (with default style) on a map, and access its properties



Uploading data: shape files

- * Exercise:

Upload some shapefiles from the workshop data folder
Don't worry about the metadata for now

Managing data

- * We can find layers in the 'Layers / Explore Layers' tab
- * We can filter by category, popularity, date or keywords

The screenshot displays the GeoNode 'EXPLORE LAYERS' page. At the top, the GeoNode logo and a search bar are visible. Below the navigation bar, the 'EXPLORE LAYERS' tab is selected. The page features a sidebar with 'Your selections' and a 'CATEGORIES' dropdown menu. The main content area shows a list of layers, including 'srtm_22_09' and 'hti_boundaries_communes_adm2_cnigs_polygon'. A right-hand panel contains filters for 'DATE' and 'KEYWORDS'. The bottom right corner indicates 'results 1-2 of 2' and 'page 1 of 1'.

GeoNode Search...

HOME LAYERS MAPS DOCUMENTS PEOPLE SEARCH

EXPLORE LAYERS UPLOAD LAYERS

EXPLORE LAYERS

Most Recent Less Recent A - Z Z - A Most Popular Relevance

Your selections Clear all

▼ CATEGORIES

All Categories

- Biota 0
- Boundaries 0
- Climatology Meteorology Atmosphere 0
- Economy 0
- Elevation 0

Total: 2

srtm_22_09
Layer from geonode2, 7 minutes ago
No abstract provided
1 view Average rating (0 votes) Download Create a map

hti_boundaries_communes_adm2_cnigs_polygon
Layer from geonode2, 48 minutes ago
No abstract provided
2 views Average rating (0 votes) Download Create a map

DATE

Date begins after:
yyyy-mm-dd

Date ends before:
yyyy-mm-dd

KEYWORDS

results 1-2 of 2
page 1 of 1

Managing data

- * From the list of layers, click on the layer name to go to the **Layer Info page** that we saw earlier
- * In this page we can see and change the layer properties

[Info](#) [Attributes](#) [Share](#) [Ratings](#) [Comments](#)

Title: hti_boundaries_communes_adm2_cnigs_polygon

Abstract:
No abstract provided

Publication Date: Nov. 19, 2013, 6:11 a.m.

Type: Vector Data

Category: Location

Owner: [geonode2](#)

Point of Contact: [geonode2](#)

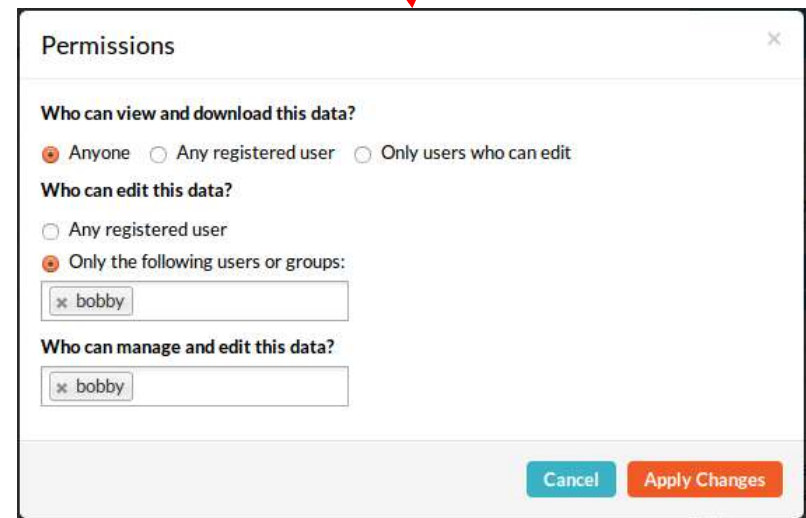
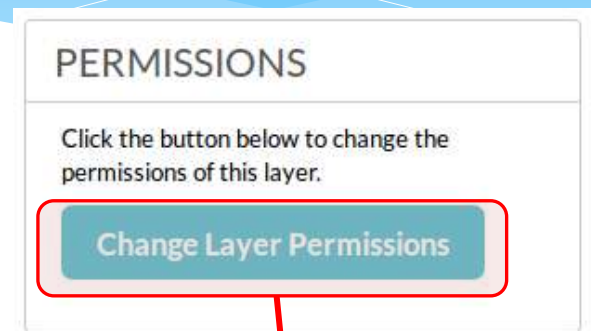
[Show/Hide](#)

[Info](#) [Attributes](#) [Share](#) [Ratings](#)

Attribute Name	Range
Shape_Area	0.0307858227166
Shape_Le_1	0.530133956266
Longitude	-73.7516056644
Latitude	18.2852321562
Shape_Leng	0.530133956266
Departemen	NA
Id_Dep	1
Commune	NA
Id_Com	821
The_Geom	NA

Managing data: permissions

- * By default, all users will be able to view and download the data you upload, but only you can change them
- * To modify this default, you can manage permissions from the layer info page
- * You can give separate permissions to
 - * *View and download* the layer
 - * *Edit* (modify metadata, styles)
 - * *Edit and manage* (delete, change permissions)



Managing data: metadata

- * You can also find all layer editing options at the top of the Layer Info page, including 'Edit Metadata'

The screenshot displays the 'EDITING DETAILS FOR GEONODE:HTI_BOUNDARIES_COMMUNES' page. At the top, there are three buttons: 'Download Layer', 'Download Metadata', and 'Edit Layer'. The 'Edit Layer' button is highlighted with a red box, and a red arrow points from it to a dropdown menu. The dropdown menu contains the following options: 'EDIT METADATA', 'EDIT PERMISSIONS', 'MANAGE STYLES', 'EDIT STYLES', 'REPLACE THIS LAYER', and 'REMOVE THIS LAYER'. The 'EDIT METADATA' option is highlighted with a red box. A red arrow points from this option to the 'Title' field in the metadata form. The 'Title' field contains the text 'hti_boundaries_communes_adr' and is highlighted with a red box. Below the 'Title' field, there is a description: 'name by which the cited resource is known'. Other fields in the form include 'Owner' (geonode2), 'Date' (2013-11-19 06:11:30), 'Date type' (Publication), 'Edition' (empty), and 'Abstract' (No abstract provided).

Download Layer ▾ Download Metadata ▾ Edit Layer ▾

- EDIT METADATA ▸
- EDIT PERMISSIONS ▸
- MANAGE STYLES ▸
- EDIT STYLES ▸
- REPLACE THIS LAYER ▸
- REMOVE THIS LAYER ▸

EDITING DETAILS FOR GEONODE:HTI_BOUNDARIES_COMMUNES

Owner geonode2 ▾

Title hti_boundaries_communes_adr

name by which the cited resource is known

Date 2013-11-19 06:11:30

Date type Publication ▾

identification of when a given event occurred

Edition

version of the cited resource

Abstract No abstract provided

This is where you can change the name of the layer

Managing data: metadata

- * This information is very important in the context of an SDI
- * Some of the metadata are hidden, like the Geographic Bounding Box, and others are automatically populated by GeoNode but can be changed

The screenshot displays a metadata form with the following sections:

- Maintenance frequency:** A dropdown menu showing "data is updated every year".
- Keywords region:** A list box containing "Haiti", "Holy See (Vatican City)", "Honduras", and "Hungary".
- Restrictions:** A dropdown menu showing "formal permission to do something".
- Keywords:** An empty text input field.
- Point Of Contact:** A dropdown menu showing "geonode2 (None)".
- Metadata Author:** A dropdown menu showing "geonode2 (None)".

Below the "Keywords region" list box, there is a note: "keyword identifies a location Hold down 'Control' to select multiple items".

The distribution URL is the address of the layer info Web page
(it can not be changed here)



The screenshot shows the "Distribution URL" field with the following value:

`http://127.0.0.1/layers/geonode:hti_boundaries_communes_adm2_cnigs_polygon`

Managing data: metadata

- * The category is used by Geonode to organize the resource (layer, map or document) in groups in the 'Explore' tabs

Category


Location

Biota
Boundaries
Climatology Meteorology Atmosphere
Economy
Elevation
Environment
Farming
Geoscientific Information
Health
Imagery Base Maps Earth C
Inland Waters
Intelligence Military
Location
Oceans
Planning Cadastre
Society
Structure
Transportation
Utilities Communication

Your selections [Clear all](#) **Total: 1**

▼ CATEGORIES

All Categories	
Biota	0
Boundaries	1
Climatology Meteorology Atmosphere	0
Economy	0
Elevation	1

 **srtm_22_09**
Layer from [geonode2](#), 1 week, 2 days ago
No abstract provided
12 views ★ ★ ★ ★ ★ Average rating (0 votes) [Download](#) [Create a map](#)

Managing data: metadata

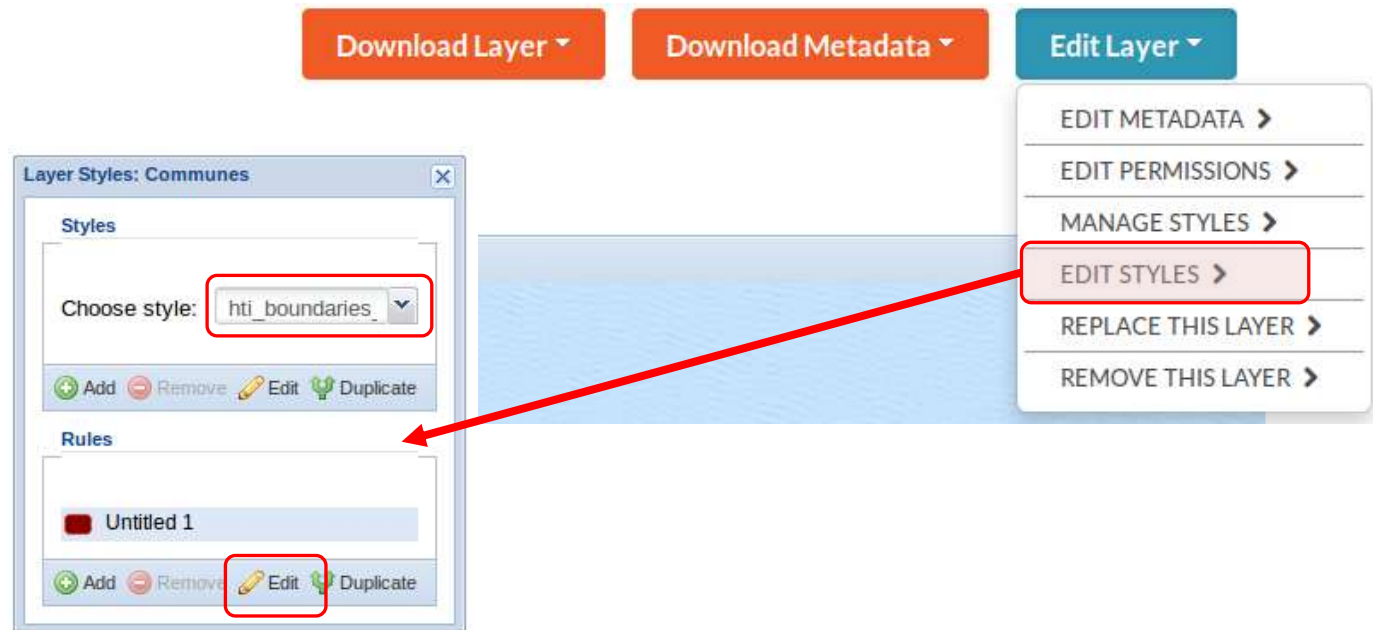
- * Exercise

Edit metadata for at least one layer

Set the proper category for all the layers you have uploaded

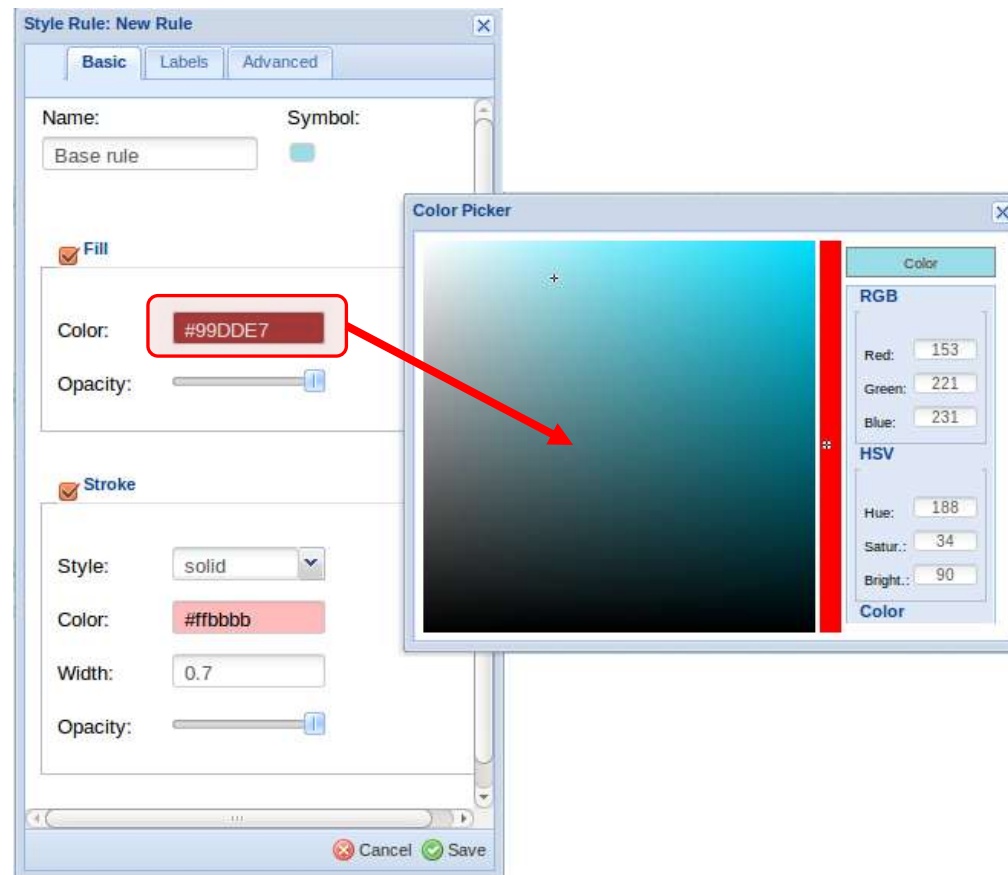
Managing data: styles

- * A style specifies how data is displayed. It is defined by one or more rules
- * The default style contains one rule that applies the same color to all features
- * To change a rule, we must select it in the list, and then click on 'Edit' to open the rule editor



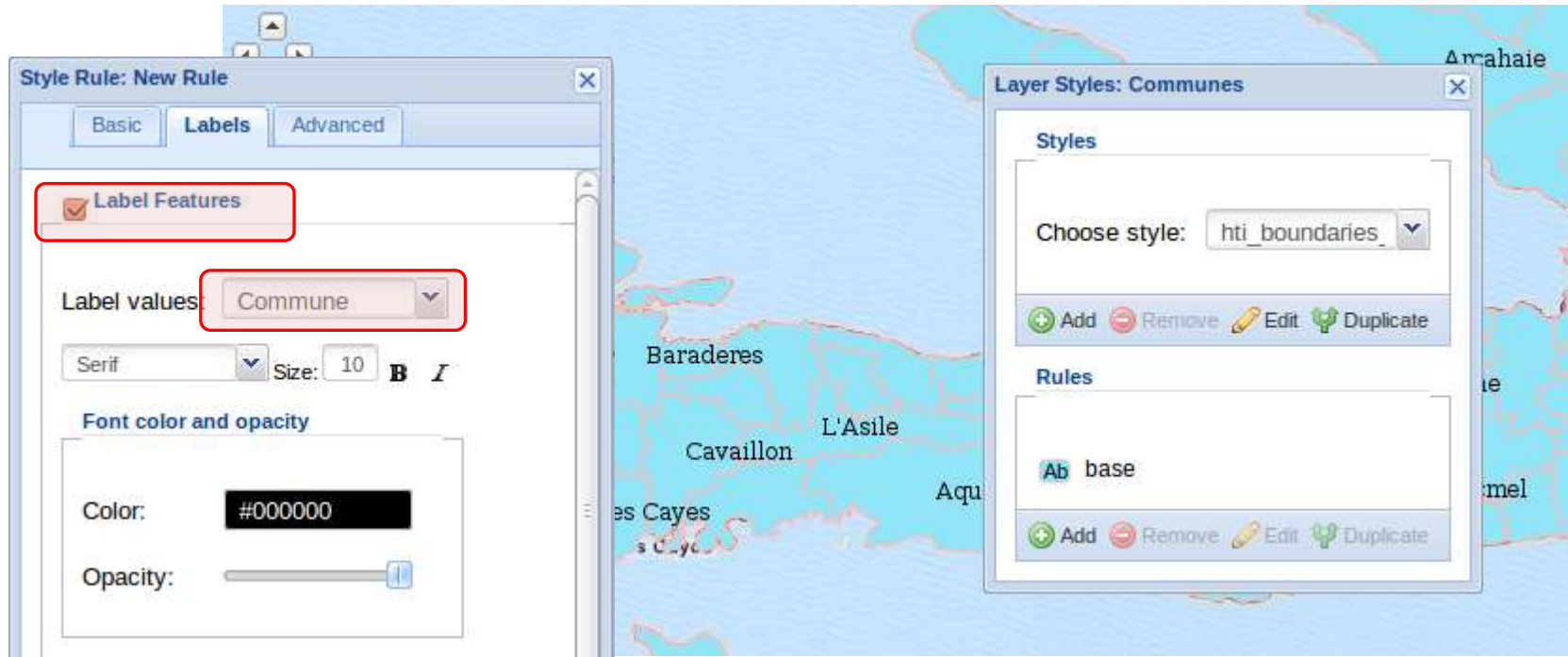
Managing data: styles

In the *Basic* tab, we can change the fill and stroke properties applied by the rule (double-click on the color selector to apply)



Managing data: styles

The *Labels* tab in the rule editor allows us to display texts taken from an attribute (field) or our data



Managing data: styles

The 'Advanced' tab allows us to limit the rule application by geographic scale or by a condition on the feature attributes. For instance, "apply this border only to communes in this department".



Managing data: styles

We can use the 'Duplicate' tool in the Style editor to create many related versions of the same rule

For instance, try creating a multiple classes of features with different colors



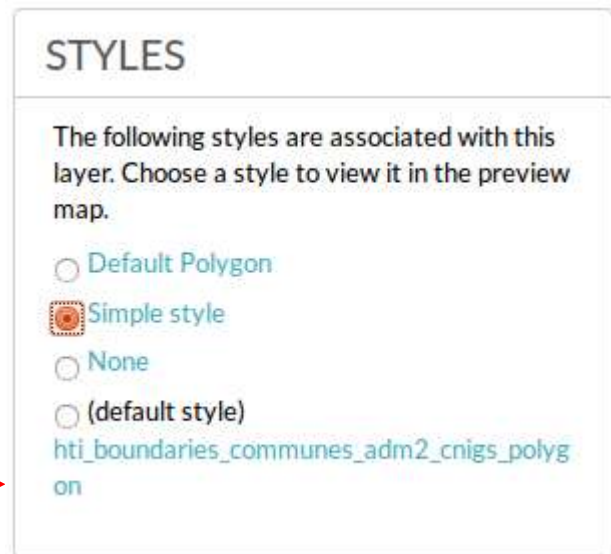
It may be cumbersome to create styles in this manner, since the base symbols are very simple

Managing data: styles

When creating a new style, we first can specify the title and abstract

After saving, we can edit it like any other style and it will appear in the list associated to our dataset

We may need to refresh the page to see the new style in the list



Managing data: styles

- * With the 'Manage styles' menu, we can select which styles are available for each layer, and the default

The screenshot shows the 'MANAGE STYLES' interface for the layer 'geonode:hti_boundaries_communes_adm2_cnigs_polygon'. At the top, there are three buttons: 'Download Layer', 'Download Metadata', and 'Edit Layer'. The 'Edit Layer' button is expanded, showing a menu with options: 'EDIT METADATA', 'EDIT PERMISSIONS', 'MANAGE STYLES' (highlighted with a red box), 'EDIT STYLES', 'REPLACE THIS LAYER', and 'REMOVE THIS LAYER'. The main area is titled 'MANAGE STYLES' and 'Manage Available Styles for geonode:hti_boundaries_communes_adm2_cnigs_polygon'. It contains two panels: 'Available styles' on the left and a layer style list on the right. The 'Available styles' panel has a list of styles: 'line', 'point', 'raster' (selected), and 'srtm_22_09'. The layer style list on the right shows 'hti_boundaries_communes_adm2_cnigs_polygon' with 'polygon' selected. A yellow box with the text 'Select which styles can be used by the layer and which one is the default' points to the 'Available styles' panel. A red arrow points from the 'MANAGE STYLES' menu item to the 'Available styles' panel. Another red arrow points from the 'polygon' style in the layer list to the 'Layer Default Style' panel. The 'Layer Default Style' panel shows a dropdown menu with 'hti_boundaries_communes_adm2_cnigs_polygon' selected and a list of styles: 'hti_boundaries_communes_adm2_cnigs_polygon' and 'polygon' (highlighted with a red box). A red arrow points from the 'Update Available Styles' button to the 'Layer Default Style' panel.

Download Layer ▾ Download Metadata ▾ Edit Layer ▾

EDIT METADATA ▸
EDIT PERMISSIONS ▸
MANAGE STYLES ▸
EDIT STYLES ▸
REPLACE THIS LAYER ▸
REMOVE THIS LAYER ▸

MANAGE STYLES
Manage Available Styles for **geonode:hti_boundaries_communes_adm2_cnigs_polygon**

Available styles
Click on an available style in the upper box to assign it to this layer. Selected styles appear in the lower box.

line
point
raster
srtm_22_09

htiboundaries_communes_adm2_cnigs_polygon

polygon

Select which styles can be used by the layer and which one is the default

Layer Default Style

hti_boundaries_communes_adm2_cnigs_polygon
hti_boundaries_communes_adm2_cnigs_polygon
polygon

Update Available Styles

Managing data: styles

- * The current style can be selected in the layer info page, from the available list



STYLES

The following styles are associated with this layer. Choose a style to view it in the preview map.

- ☒ (default style)
hti_boundaries_communes_adm2_cnigs_polygon
- ☐ Default Polygon



STYLES

The following styles are associated with this layer. Choose a style to view it in the preview map.

- ☐ (default style)
hti_boundaries_communes_adm2_cnigs_polygon
- ☒ Default Polygon

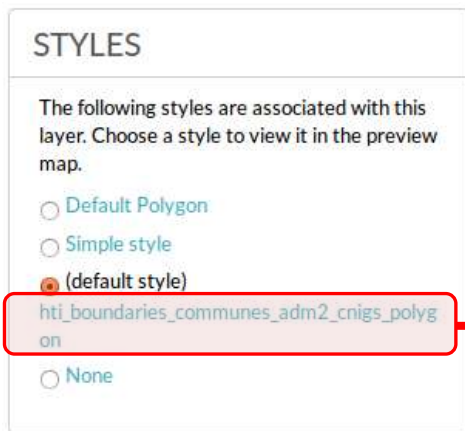
Managing data: styles

- * Exercise:

- * Change and create new styles for a feature layer
- * Use a condition in the advanced tab to give different colors to different features

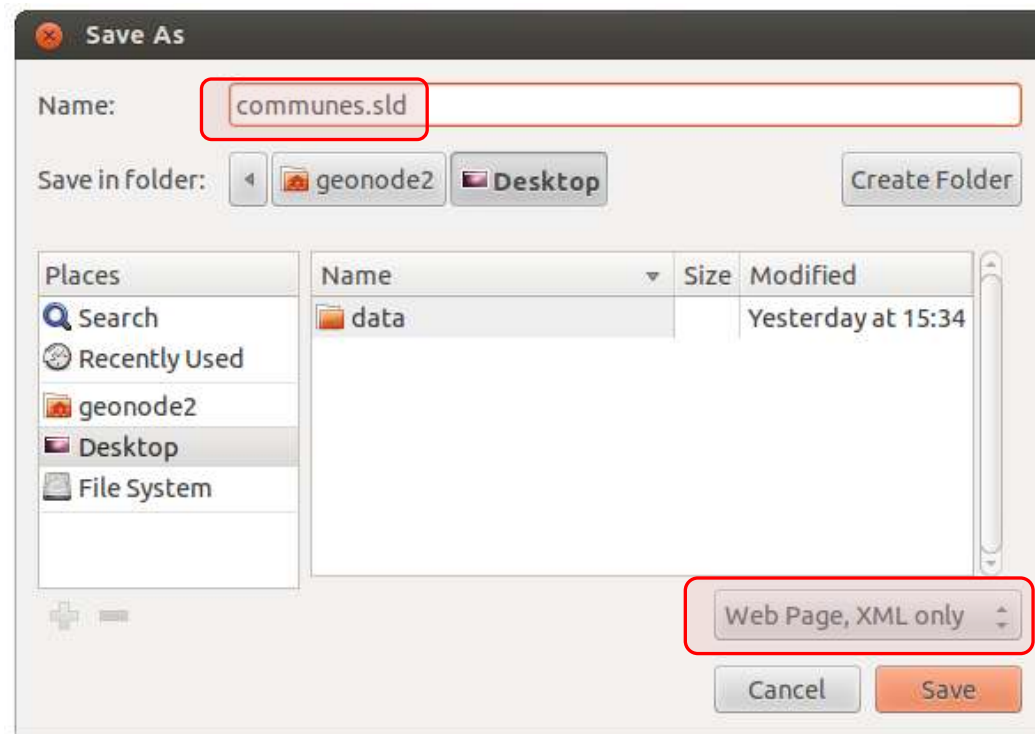
Managing data: saving styles

- * Internally, Geonode (actually, Geoserver) uses the SLD style standard format to store the symbols definition
- * We can save the style as an *SLD file* together with the data, for future use, although the style will be available in the Geonode for other layers via the style manager
- * If you click on the style name, Geonode will open its SLD code in the Web browser



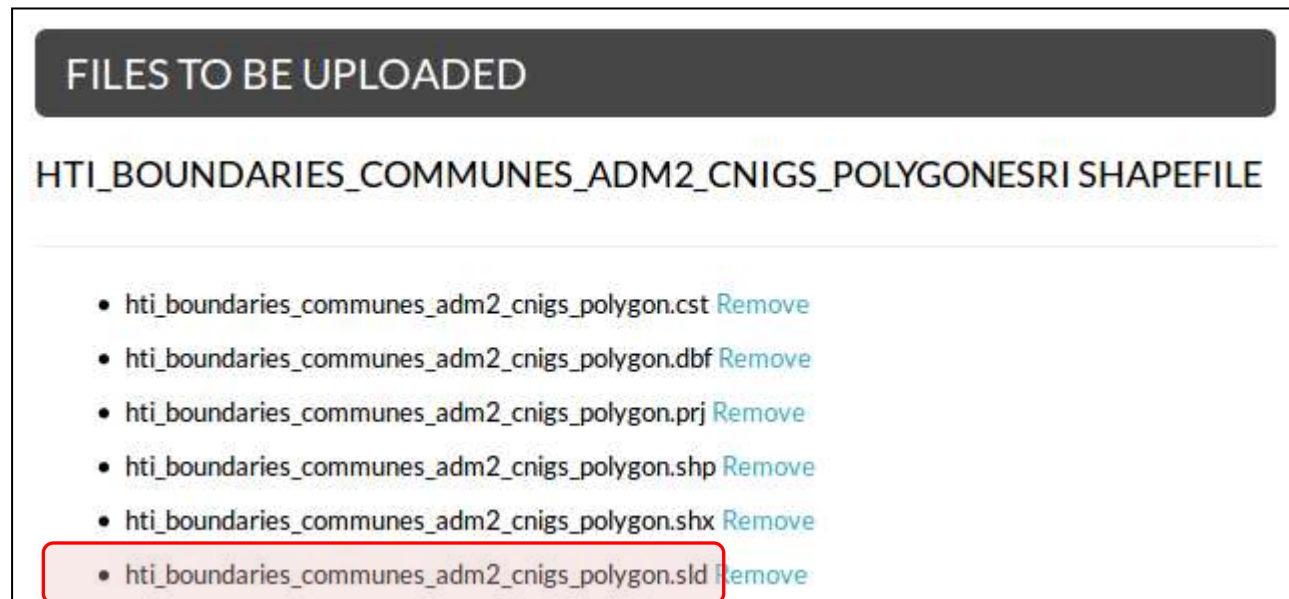
Managing data: saving styles

- * We can save the SLD file *as XML* from the Web browser



Managing data: uploading styles

- * We can use saved SLD files when we upload feature or raster data, but...
 - * We must give the same name to the SLD file as the data files
 - * We must select the SLD file together with the other ones (otherwise it won't be recognized)
- * We can also use saved SLD files in GeoServer (see later)



Managing data: styles

- * Exercise:

- * Save a style SLD file and upload data again with this file included
- * Check that the default style matches your SLD

Creating maps

- * Maps are made of one or more *layers*
- * Each layer in a map can be ours or from other users, or can be from *external sources* like WMS services
- * We can create maps from at least 3 places! 😊

GeoNode

Search...

geonode2

HOME LAYERS MAPS DOCUMENTS PEOPLE SEARCH


EXPLORE MAPS

EXPLORE MAPS

Create a New Map

View by Grid List

Most Recent Less Recent A-Z Z-A Most Popular Relevance

 Communes

Layer from geonode2, 8 hours, 32 minutes ago

No abstract provided

11 views

Average rating (0 votes)

Download Create a map

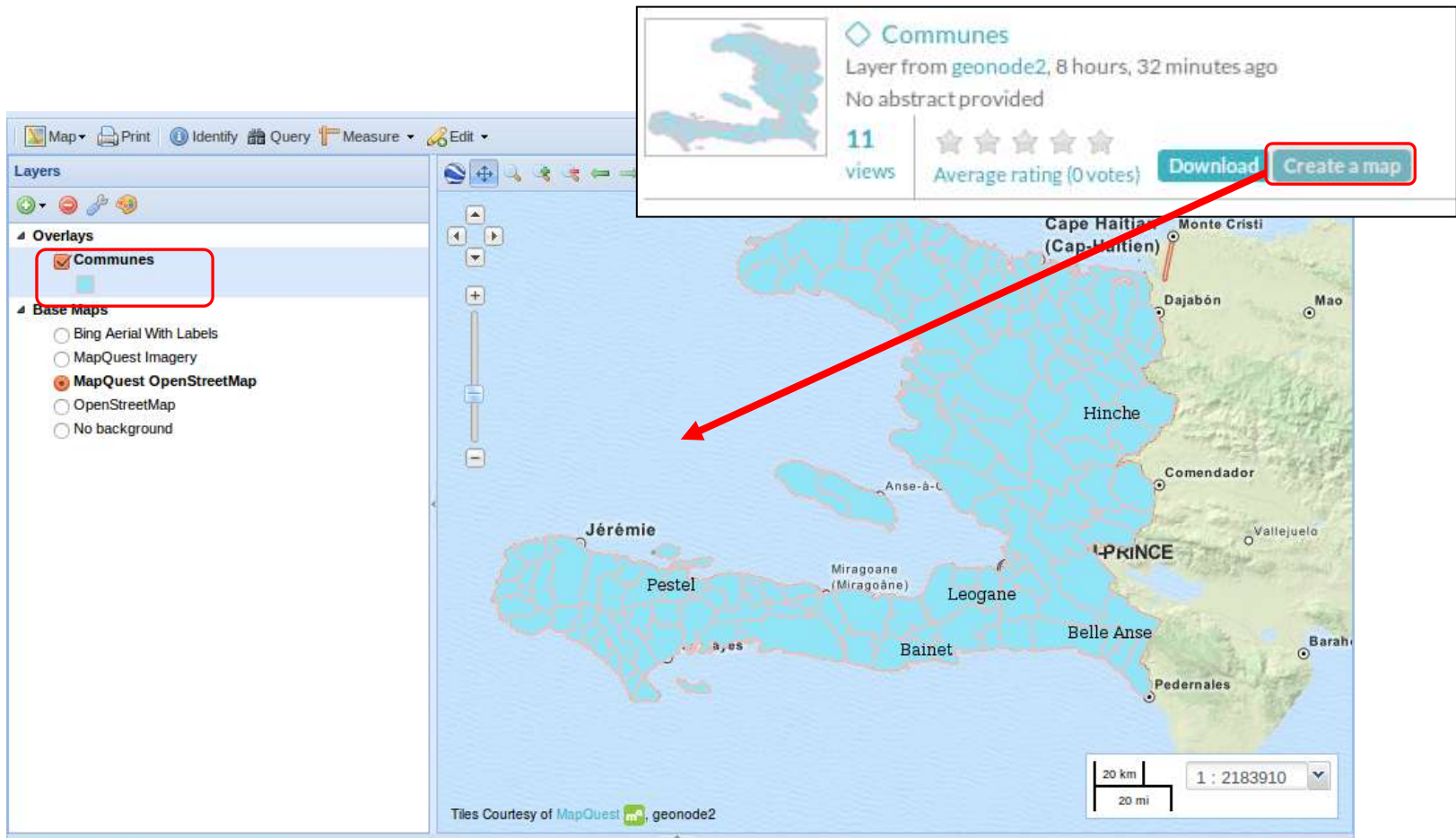
CREATE A MAP USING THIS LAYER

Click the button below to generate a new map based on this layer.

Create a Map

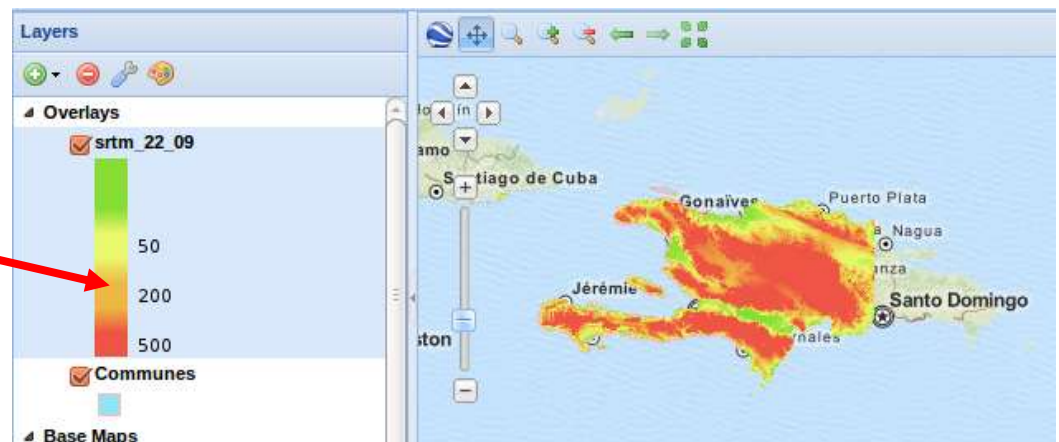
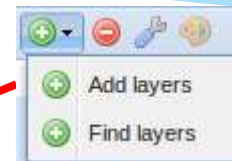
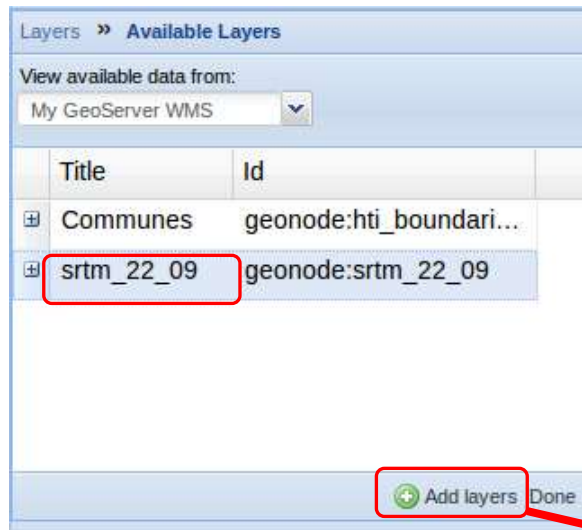
Creating maps

- * When we create a map from a layer, we'll see it in the table of contents of a new map in the Map Viewer



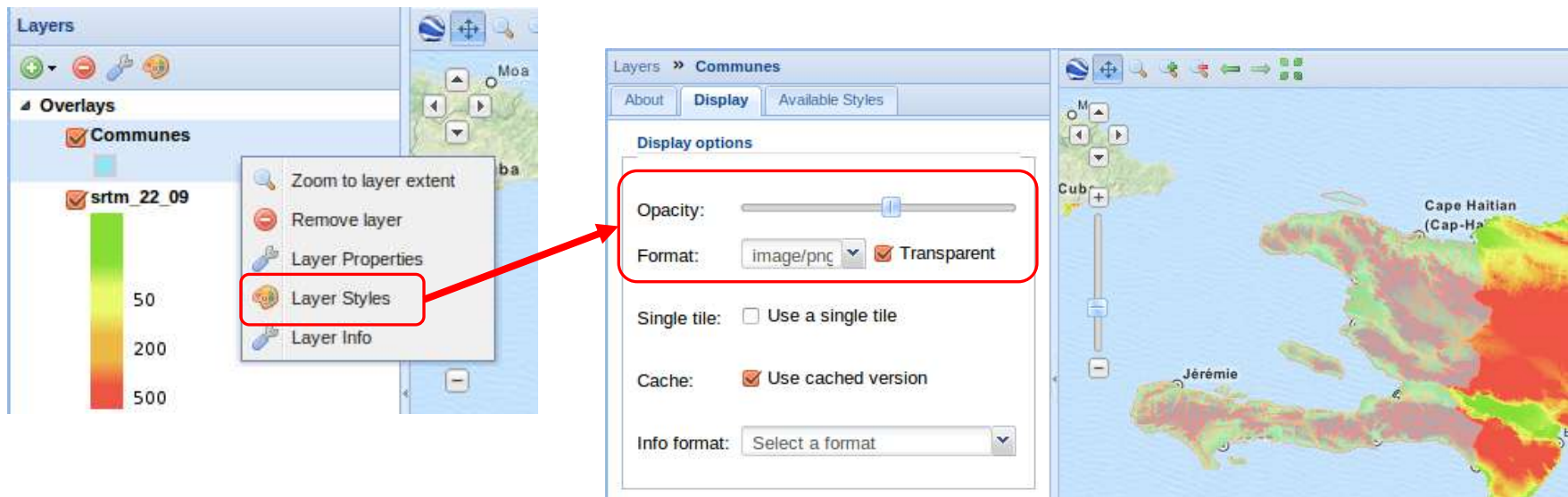
Creating maps: adding layers

- * More layers can be added to the map using the Add and Find layer tools in the map viewer



Creating maps: layer visibility

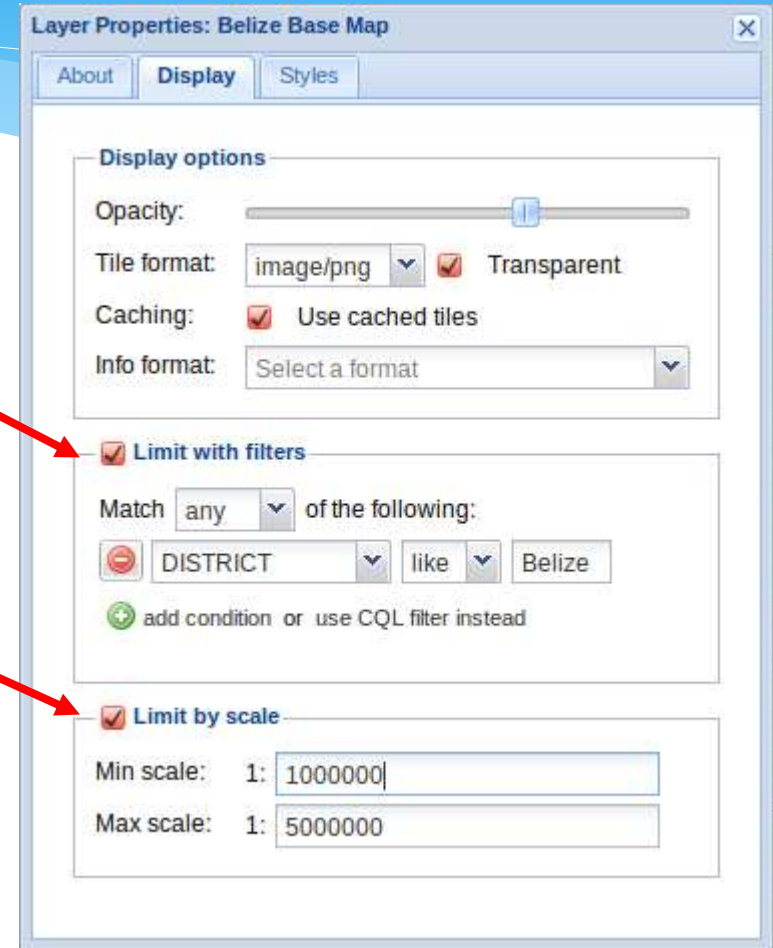
- * We can change the drawing order by clicking on a layer and dragging it up or down in the Table of Contents (Legend)
- * If we need to change a layer's opacity to be able to see through it (blend it with layers below it), we can use the right-click menu on the layer and edit the layer properties ('display' tab)



Creating maps: layer visibility

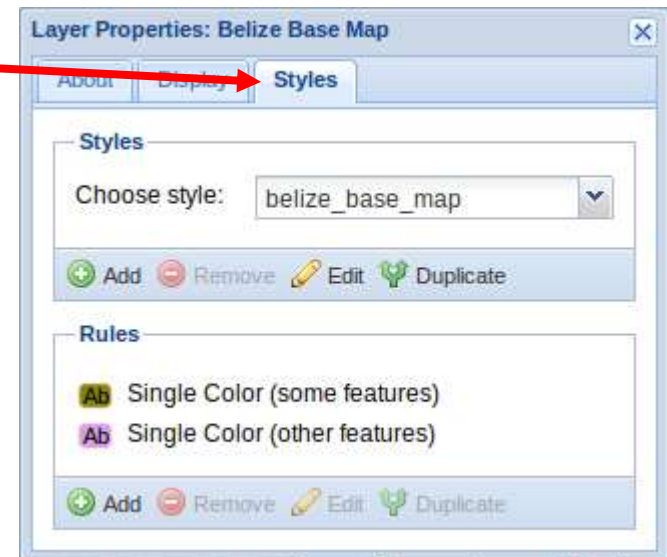
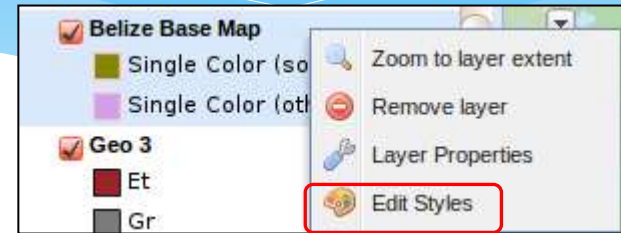
- * We can also limit the features we display of a layer by setting a *filter* (*this will apply to any style*)
- * And we can control in which scales the layer is visible by setting *scale limits*

The latter technique is very important to provide adequate map services, hiding information for scales that do not match the data quality or precision



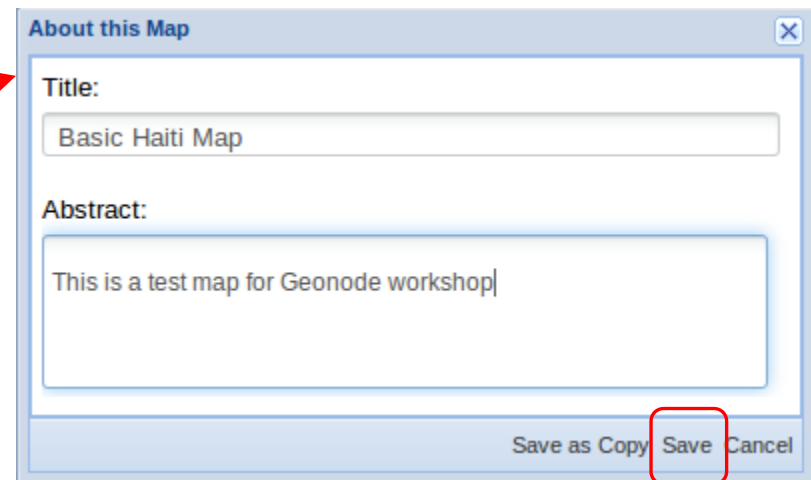
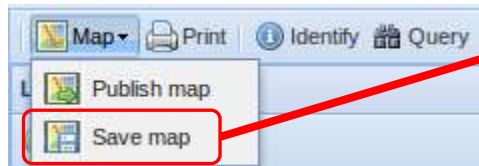
Creating maps: layer styling

- * We can select, edit and create the styles for the layers in the map by clicking on 'Edit Styles' in the right-click menu
- * Or by using the 'Styles' tab in the Layer Properties
- * The styling process is identical to the one we saw from the dataset page



Creating maps: saving

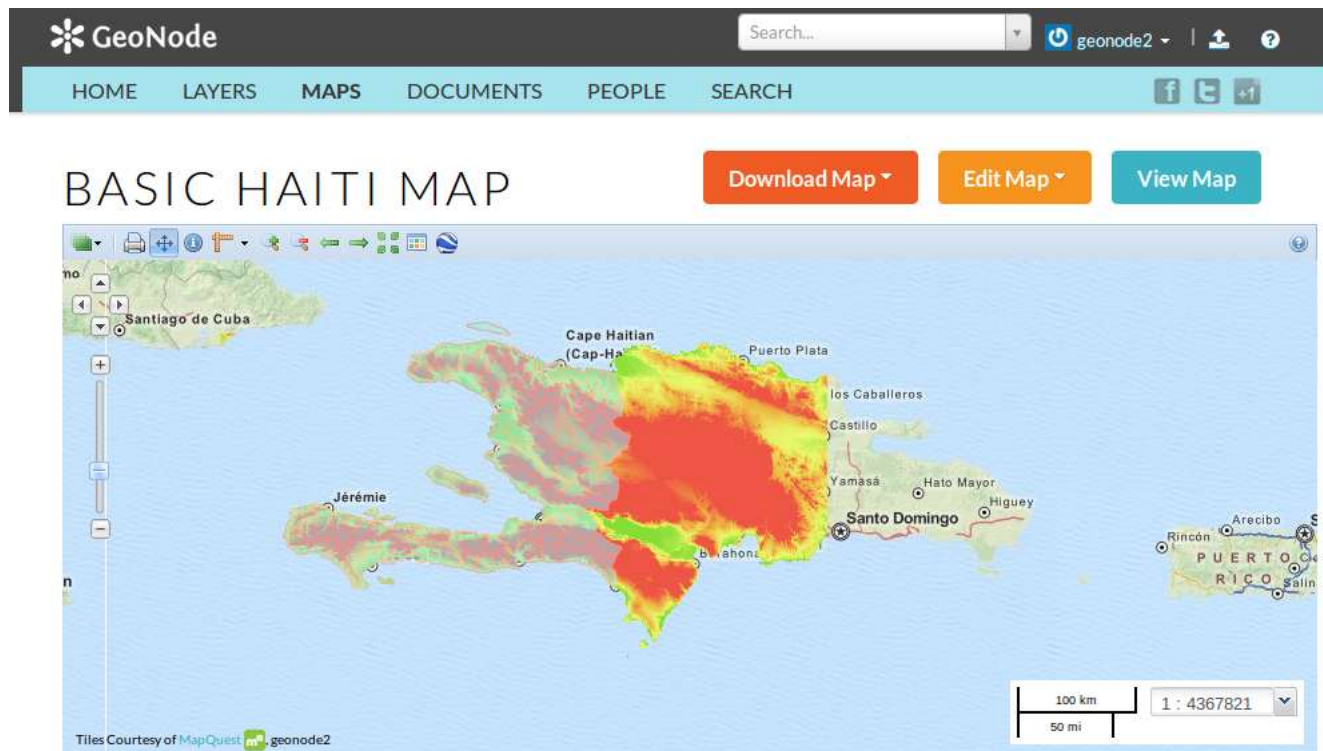
- * To save the map, so other users can see it and we can publish it, use the 'Save map' command
- * Fill in the basic metadata to identify and describe your map to others

A screenshot of a dialog box titled 'About this Map'. It contains two text input fields: 'Title:' with the text 'Basic Haiti Map' and 'Abstract:' with the text 'This is a test map for Geonode workshop'. At the bottom right of the dialog, there are three buttons: 'Save as Copy', 'Save', and 'Cancel'. The 'Save' button is highlighted with a red rectangular box.

Now the map will be visible in Geonode's Maps tab

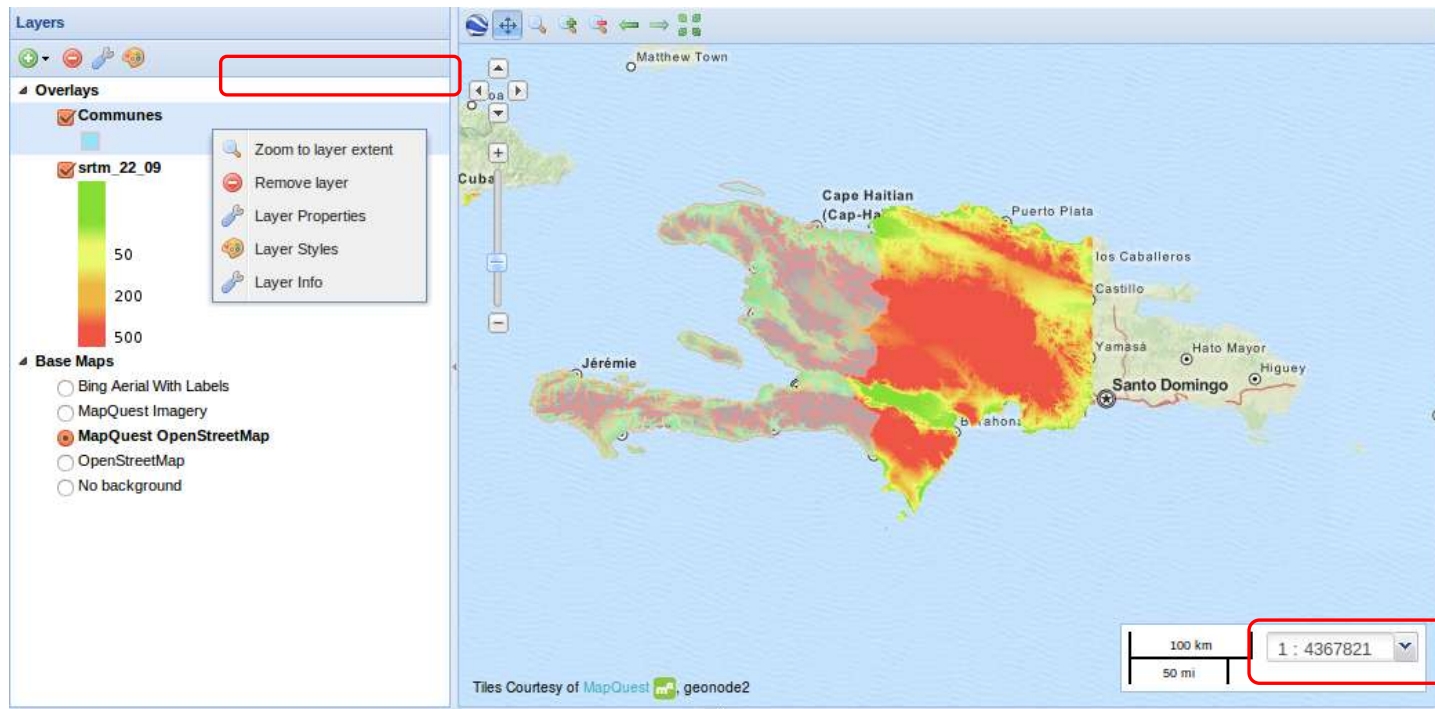
Creating maps: managing

- * Similarly to layers, we can access each *map's page* from the general Maps tab to change it, manage permissions, edit metadata and download the map's layers



Exploring maps: navigation

- * There are several ways you can zoom in GeoNode's map viewer:
 - * Map navigation tools include the standard zoom bar and map drag
 - * Roll your mouse wheel
 - * Choose a scale from the scale bar readout
 - * You can right-click on a layer name and select *Zoom to Layer Extent* to zoom to that layer



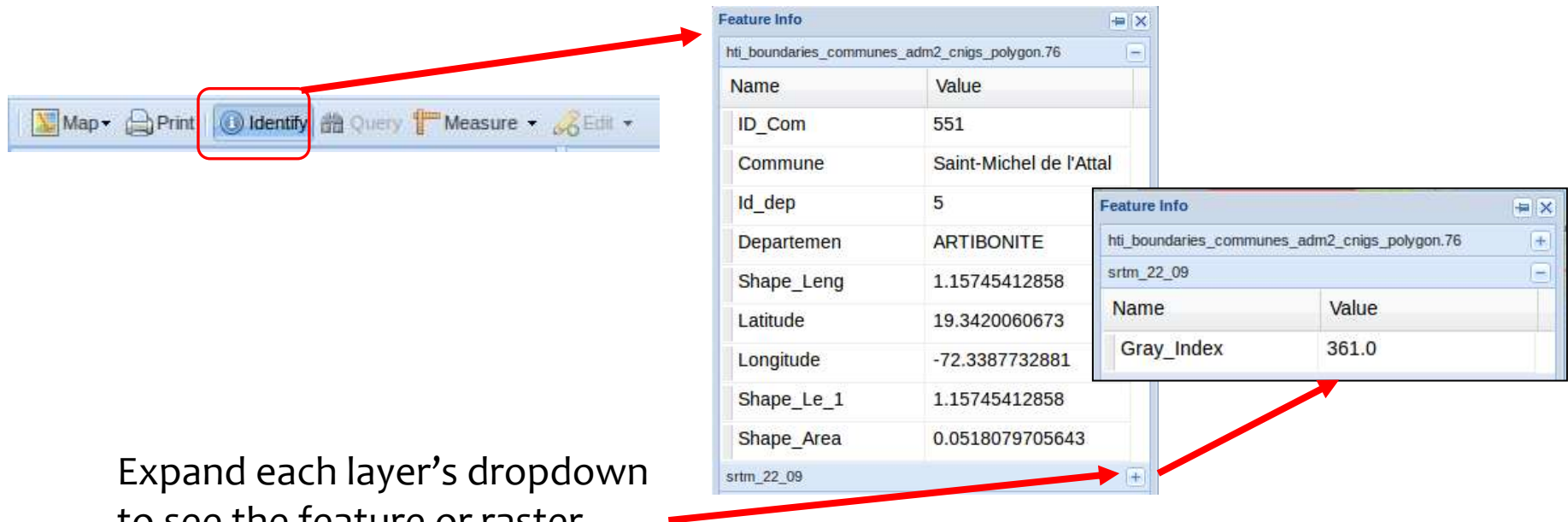
Creating and exploring maps

- * Exercise

- * Create 3 different maps by combining layers and setting appropriate styles for different themes (e.g. boundaries and location, human environment, physical and biological environment)

Exploring maps: identify

- * Since layers are visible in the map via an WMS service, we can use the GetFeatureInfo request to get attribute information about features on the map
- * To do this, enable the *Identify* tool and click on the map view



The screenshot illustrates the process of using the Identify tool in a map application. On the left, a toolbar contains icons for Map, Print, Identify, Query, Measure, and Edit. The Identify icon, which shows an information symbol, is highlighted with a red rectangle. A red arrow points from this icon to a 'Feature Info' window. This window displays a table of attributes for a selected feature. Below this, another red arrow points from the 'srtm_22_09' layer dropdown in the main window to a second, smaller 'Feature Info' window. This second window shows the 'Gray_Index' attribute for a selected feature in the 'srtm_22_09' layer.

Name	Value
ID_Com	551
Commune	Saint-Michel de l'Attal
Id_dep	5
Departemen	ARTIBONITE
Shape_Leng	1.15745412858
Latitude	19.3420060673
Longitude	-72.3387732881
Shape_Le_1	1.15745412858
Shape_Area	0.0518079705643

Name	Value
Gray_Index	361.0

Expand each layer's dropdown to see the feature or raster info for that layer

Exploring maps: query

- * Because layers are also published with WFS service, we can query their attributes with a spatial and/or value query
- * To do this, select the feature layer and enable the Query tool to open the query and table result windows

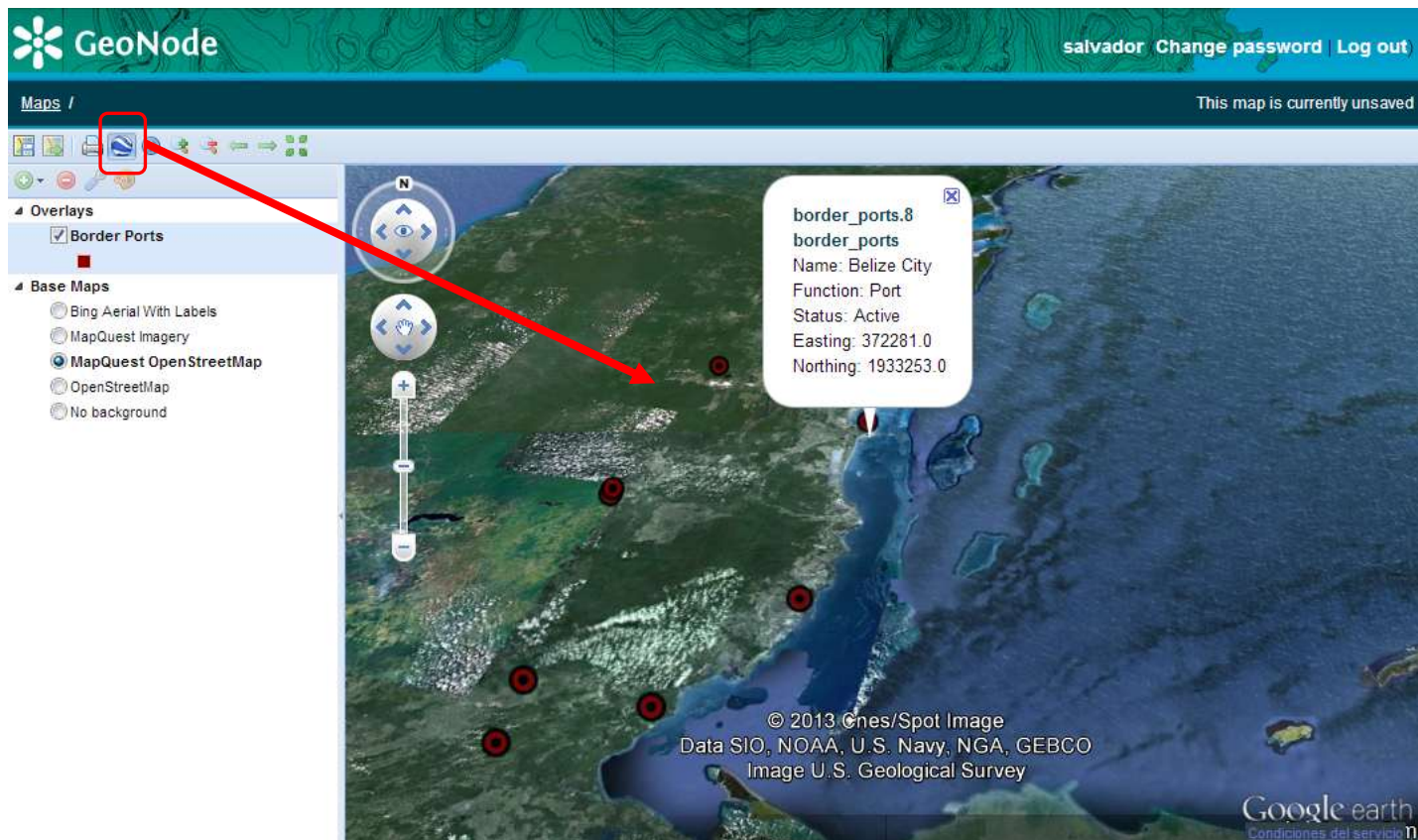
The screenshot shows a GIS application interface. At the top, a toolbar contains icons for Map, Print, Identify, Query, and Measure. The 'Query' icon is highlighted with a red box. Below the toolbar, a 'Layers' panel shows a list of layers, with 'Communes' selected and checked. A red arrow points from the 'Query' icon in the toolbar to the 'Query' dialog box. The 'Query' dialog box has two tabs: 'Query' and 'Table'. The 'Query' tab is active, showing options for 'Query by current map extent' and 'Query by attributes'. The 'Query by attributes' section is expanded, showing a 'Match any of the following:' section. A red box highlights the condition: 'Departemen' (with a dropdown arrow), 'like' (with a dropdown arrow), and 'SUD'. Below this, there is an 'add condition' button. The 'Table' tab is also visible, showing a table with the following data:

ID_Com	Commune	Id_dep	Departemen
715	Maniche	7	SUD
716	Ile A Vache	7	SUD
721	Port-Salut	7	SUD
741	Coteaux	7	SUD
742	Port-a-Piment	7	SUD
743	Roche-A-B.	7	SUD
751	Charbonnie...	7	SUD
752	Les Anglais	7	SUD

A red arrow points from the 'Query' tab to the 'Table' tab. At the bottom of the 'Query' dialog box, there is a 'Cancel' button and a 'Query' button, both highlighted with red boxes.

Exploring maps: 3D view

- * On Windows and MacOS, GeoNode integrates a Google Earth control which can be used to have a 3D view of the maps



Managing documents

- * With version 2 of Geonode, we can upload and manage documents with geographic metadata, as we do with layers and maps. Use the *Documents/Upload documents* tab

GeoNode

Search...

HOME LAYERS MAPS DOCUMENTS PEOPLE SEARCH

EXPLORE DOCUMENTS UPLOAD DOCUMENTS

UPLOAD DOCUMENTS

Type a title

HAITI AT A GLANCE

Link to

Basic Haiti Map

Choose a file

Browse... haiti_at_a_glance.pdf

Upload

You can link your documents to existing layers or maps

Browser to find your document

Managing documents

- * As with layers and maps, after uploading we can edit documents' metadata, including the thematic category

EDITING DETAILS FOR

Owner	<input type="text" value="geonode2"/>	
Title	<input type="text" value="Haiti at a glance"/>	
	name by which the cited resource is known	
Date	<input type="text" value="2013-11-28"/>	<input type="text" value="14:44:08"/>
Date type	<input type="text" value="Publication"/>	
	identification of when a given event occurred	
Edition	<input type="text"/>	
	version of the cited resource	
Abstract	<input type="text" value="No abstract provided"/>	

Managing documents

- * And documents have their own Web page with information, comments, ratings, etc.

The screenshot shows a web interface for a document titled "HAITI AT A GLANCE". At the top right, there are two buttons: "Download Metadata" (orange) and "Edit Document" (orange). Below the title, there is a link "Download the Haiti at a glance document". A navigation bar contains "Info" (selected), "Comments", "Ratings", and "Share". The main content area on the left lists document details: Title: Haiti at a glance, Abstract: No abstract provided, Publication Date: Nov. 28, 2013, 2:44 p.m., Category: Location, Owner: geonode2, and Point of Contact: geonode2. A "Show/Hide" link is at the bottom of this section. On the right, there are two sidebars. The top sidebar, "RESOURCE USING THIS DOCUMENT", states "This document is related to a map" and links to "Basic Haiti Map". The bottom sidebar, "PERMISSIONS", instructs the user to "Click the button below to change the permissions of this document." and features a "Change Document Permissions" button.

HAITI AT A GLANCE

Download Metadata Edit Document

Download the Haiti at a glance document

Info Comments Ratings Share

Title: Haiti at a glance

Abstract:
No abstract provided

Publication Date: Nov. 28, 2013, 2:44 p.m.

Category: Location

Owner: geonode2

Point of Contact: geonode2

Show/Hide

RESOURCE USING THIS DOCUMENT

This document is related to a map

[Basic Haiti Map](#)

PERMISSIONS

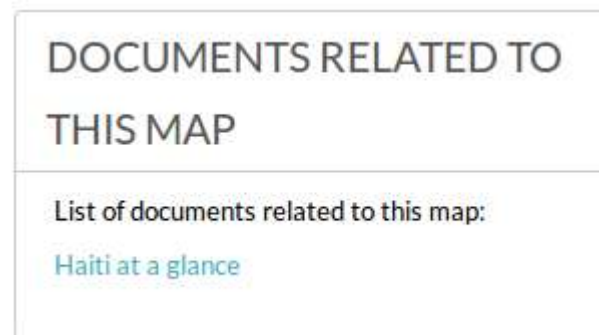
Click the button below to change the permissions of this document.

Change Document Permissions

Note: for some reason, downloading does not work from Explore tab, but it does from the document page

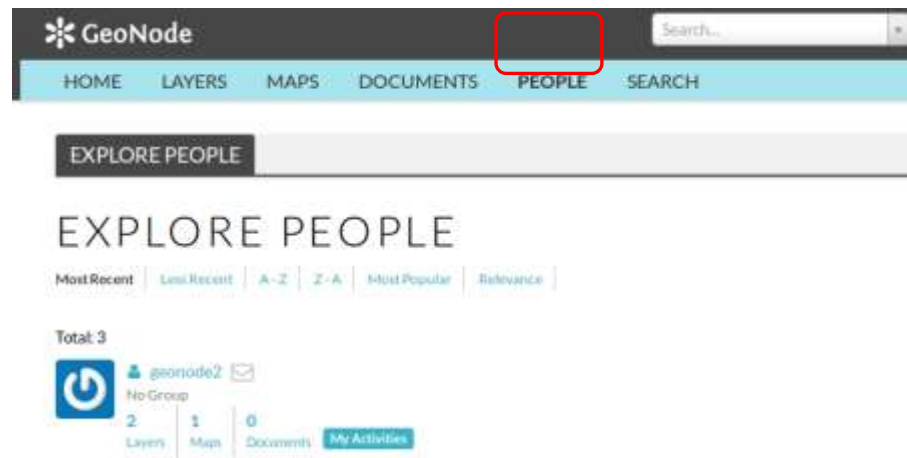
Managing documents

- * From a layer or map we can access all documents *linked* to it
- * So this is a convenient way to attach any kind of file (images, videos, PDFs, etc.) to data layers and maps, providing complementary information



Sharing: people profiles and activity

- * If you give viewing permissions to others, they will be able to see your data and maps
 - * Visiting your GeoNode Web site
 - * Connecting to your GeoNode services from other GeoNodes, Web and GIS clients (more about this later).
- * By listing the layers and maps in the GeoNode, users can see who has updated which layer, and who has published maps
- * In the *People* tab, you can see all users, and see what Activities each one has done



Sharing: your profile and activity

- * From your user menu you can see and edit your profile
- * You can list all the resources you have created

The screenshot displays the Geonode2 user interface. On the left, a user menu is open, showing options: Profile (highlighted with a red box), Admin, Announcements, GeoServer, Recent Activity, and Log out. A red arrow points from the 'Profile' option to the main profile page. The main profile page features a header 'EXPLORE PEOPLE' and a user profile for 'GEONODE2'. The profile includes a blue circular logo with a white power symbol, the username 'geonode2', organization 'Organization N/A', and location 'Location N/A'. Below the profile is a red 'My Activities' button. To the right of the profile, a red box highlights the 'Edit profile information' link, with other links below it: 'Account Settings', 'Change password', 'Upload new layers', and 'Create a new map'. The 'Resources' section below the profile lists two items: 'Basic Haiti Map' (a test map for Geonode workshop, shared on 19 nov 2013) and 'srtm_22_09' (no abstract provided, shared on 19 nov 2013). Navigation links for 'All Contents', 'Layers', 'Maps', 'Documents', 'Sort By Date', and 'Sort By Title' are visible above the resources list.

geonode2

Profile

Admin

Announcements

GeoServer

Recent Activity

Log out

EXPLORE PEOPLE

GEONODE2

geonode2

Organization N/A

Location N/A

My Activities

Resources

All Contents | Layers | Maps | Documents | Sort By Date | Sort By Title

Basic Haiti Map

This is a test map for Geonode workshop

Shared on 19 nov 2013

srtm_22_09

No abstract provided

Shared on 19 nov 2013

Edit profile information

Account Settings

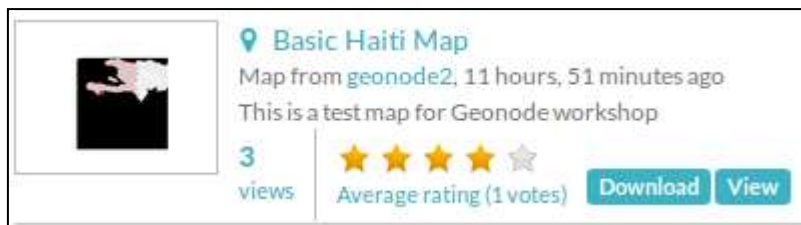
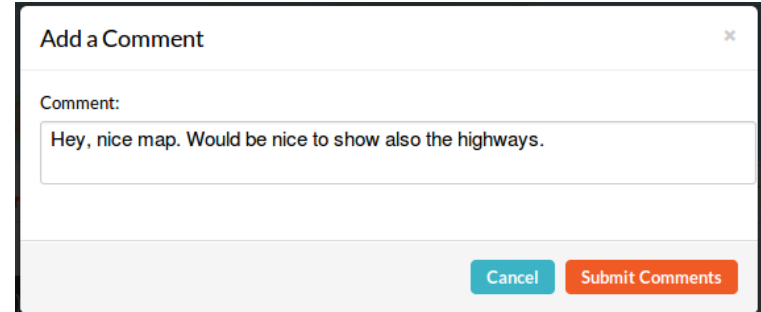
Change password

Upload new layers

Create a new map

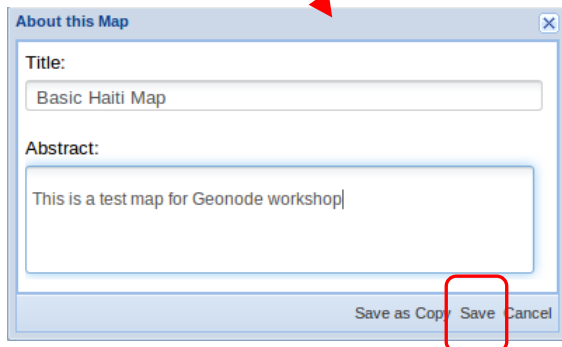
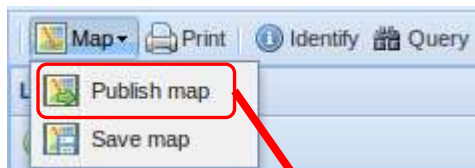
Sharing: social tools

- * Other users can comment and rate your layers and maps to give you feedback
- * You can also customize your GeoNode to add more social features using the Django Web framework



Sharing: publishing your maps

- * If you want to include a view of one of your maps in a Web page, blog, etc. you can use the 'Publish Map' command in the Map Viewer toolbar (Map menu)
- * The tool will open a dialog where you can set the size of the view in pixels and copy the HTML code to share it

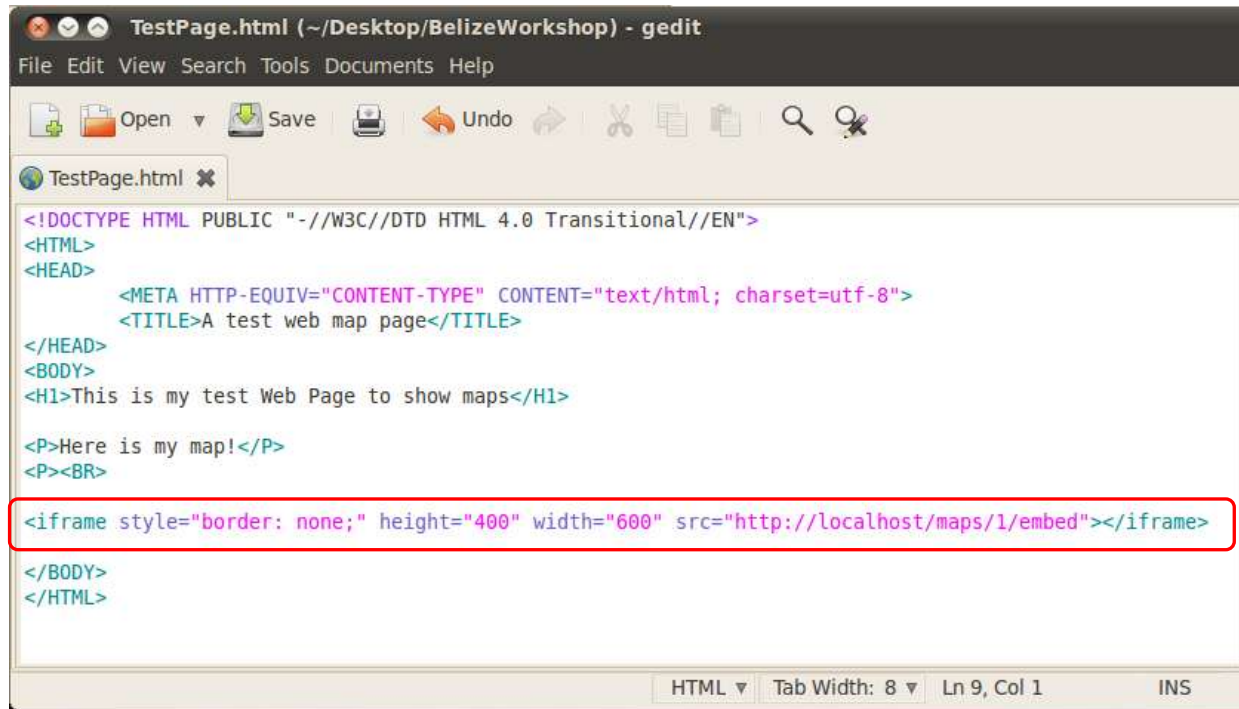


Copy this
into a Web
page or
blog

Sharing: publishing your maps

* Exercise:

- * Right-click on the *Test Web Page.html* file (in the desktop) and select the “Open with text editor” option
- * Paste the HTML code from the Publish Map tool, as shown:



```
TestPage.html (~/Desktop/BelizeWorkshop) - gedit
File Edit View Search Tools Documents Help

Open Save Undo

TestPage.html x

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<HTML>
<HEAD>
  <META HTTP-EQUIV="CONTENT-TYPE" CONTENT="text/html; charset=utf-8">
  <TITLE>A test web map page</TITLE>
</HEAD>
<BODY>
<H1>This is my test Web Page to show maps</H1>

<P>Here is my map!</P>
<P><BR>

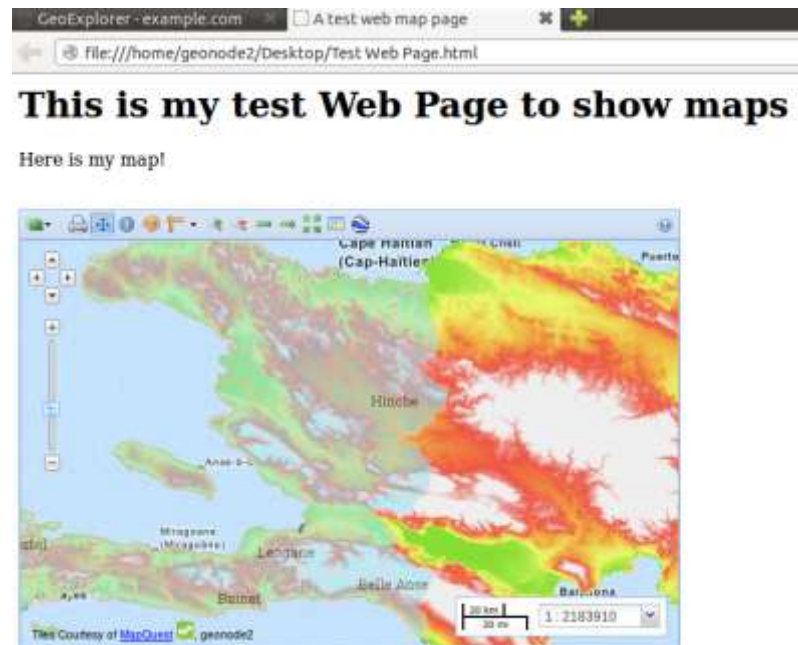
<iframe style="border: none;" height="400" width="600" src="http://localhost/maps/1/embed"></iframe>

</BODY>
</HTML>

HTML Tab Width: 8 Ln 9, Col 1 INS
```

Sharing: publishing exercise

- * Save the HTML file to disk. Then, double-click on it to open in the Web Browser. After a few seconds, you will see the embedded map, which is a live map
- * Try building a more complex page with multiple maps
- * If you have a blog or Web page, try adding a GeoNode map



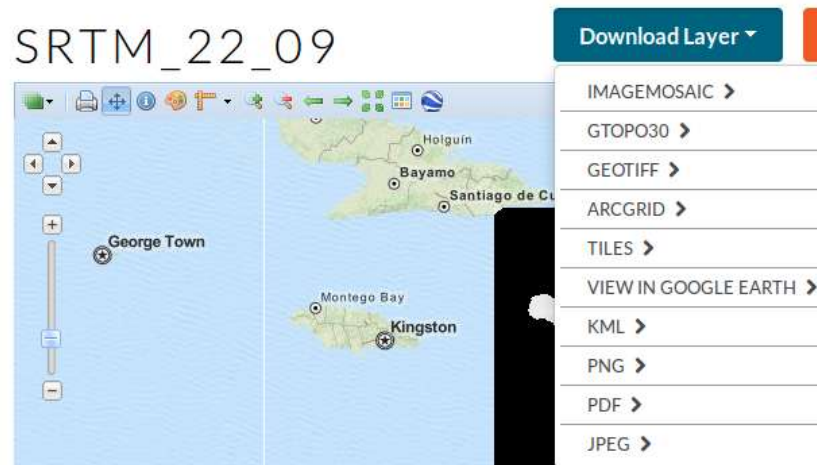
Sharing: publishing your maps as WMS

- * All uploaded layers are automatically published as WMS map services
- * You can also publish maps as WMS with a group of layers, so external user can add them to client applications (we'll see that later) by using a *name*
- * From the map info page:



Sharing: downloading data

- * Users with permission can download the data or images of your layers and maps
- * However, in most cases it is a better practice to *use your data and maps via Web services*, so users always see the most updated version (more about external access later)



Sharing: downloading data

EXPLORE MAPS

Most Recent | Less Recent | A-Z | Z-A | Most Popular | Relevance

Total: 1



Basic Haiti Map

Map from [geonode2](#), 12 hours, 25 minutes ago
This is a test map for Geonode workshop

5 views

Average rating (1 votes)

[Download](#) [View](#)

EXPLORE MAPS

Download Basic Haiti Map

Here you can download all the layers of this map that are hosted on this GeoNode. The following layers will be downloaded:

- [srtm_22_09](#)
- [Communes](#)

[Start downloading this map](#)

BASIC HAITI MAP



Download Map ▾

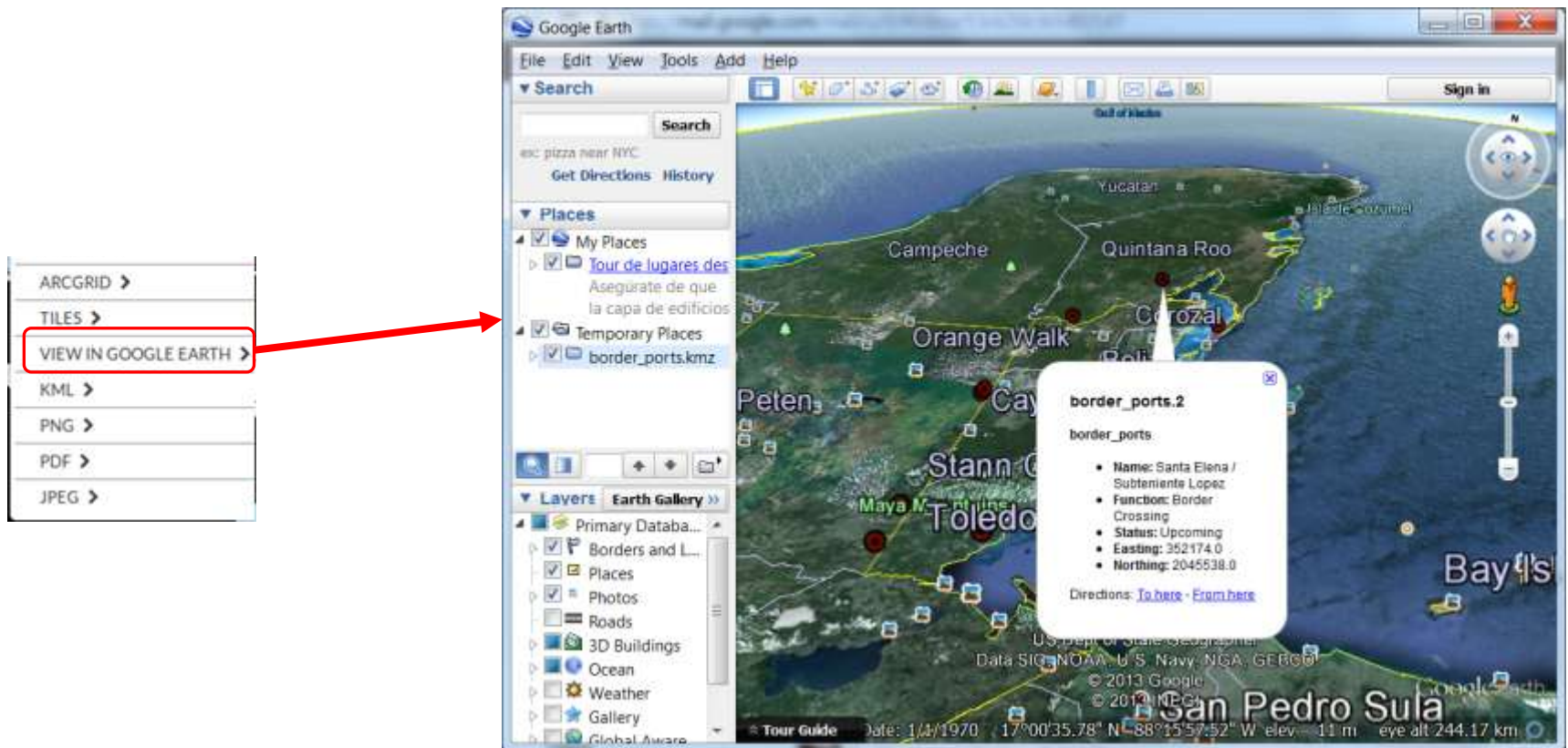
Edit Map ▾

DOWNLOAD DATA LAYERS >

DOWNLOAD WEB MAP CONTEXT >

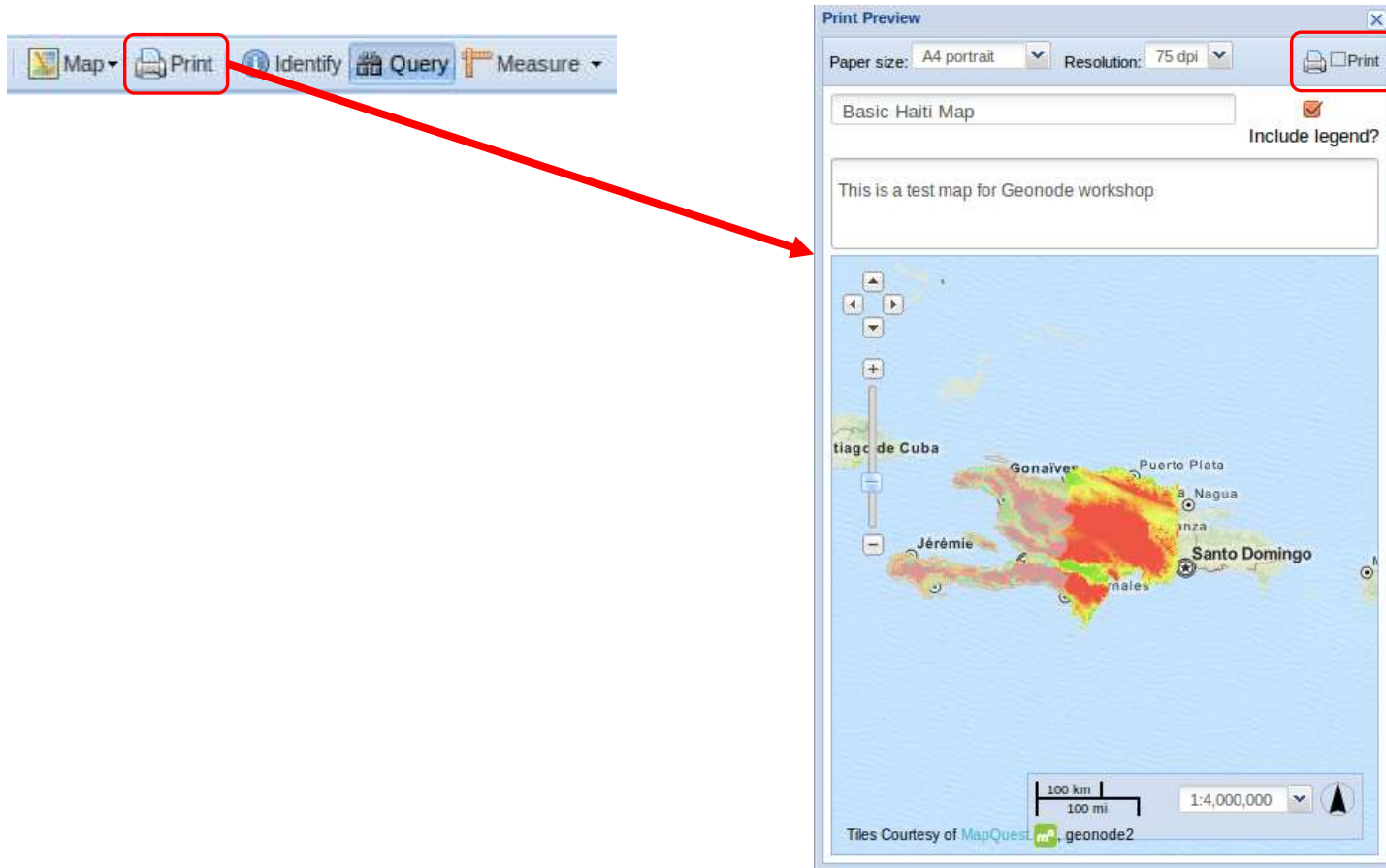
Sharing: viewing in Google Earth

- * With the 'View in Google Earth' option, users will be able to display data exported as .kmz in GE



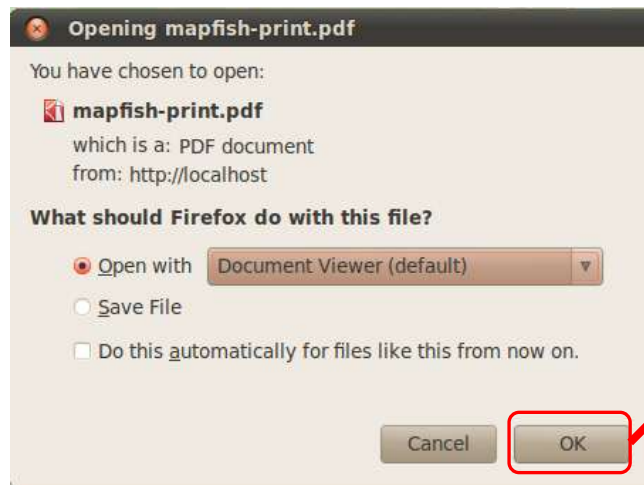
Sharing: printing

- * The 'Print' tool in the map viewer will open a dialog to define a map print using a simple template



Sharing: printing

- * If the following dialog does not pop up, enable popups for your GeoNode site (see the Preferences button that appeared at the top of the Web page) and try again



Save the PDF with the name and location you prefer

GeoNode Communities

- * You can visit existing GeoNode servers, explore what they are publishing, interact with users and maybe join yourself!


Harvard World Map
(<http://worldmap.harvard.edu>)



GeoNode Communities

- * Web application of the Collaborative Spatial Assessment (CoSA) group

<http://geonode.ithacaweb.org/>



Information Technology for Humanitarian Assistance,
Cooperation and Action

GMES Lot2 Demonstrator

CoSA Web Application

The aim of the Collaborative Spatial Assessment (CoSA) group is to define the ways in which remote sensing techniques can be used to aid the PDNA process. A successful execution of a CoSA requires a consistent framework for the organization of a number of managerial, technical and communication task. Among other technical tasks, data preparedness (baseline data) is defined critical to ensure a successful PDNA mapping and a web mapping application is specifically proposed as an operational tool.

The demonstrator is intended as a platform that allows access to the reference data in visualtion and download. The CoSA Web Application is based on GeoNode, an open source platform for sharing geospatial data and maps.

Mapas

GeoNode lets you compose and share maps. [Create](#) a map with our cartography tool, or [explore](#) maps shared by others.

[Explora Mapas](#) [Crea Mapas](#)

[INICIO](#) [DATOS](#) [MAPAS](#) [SIGN IN](#)

Latest Maps

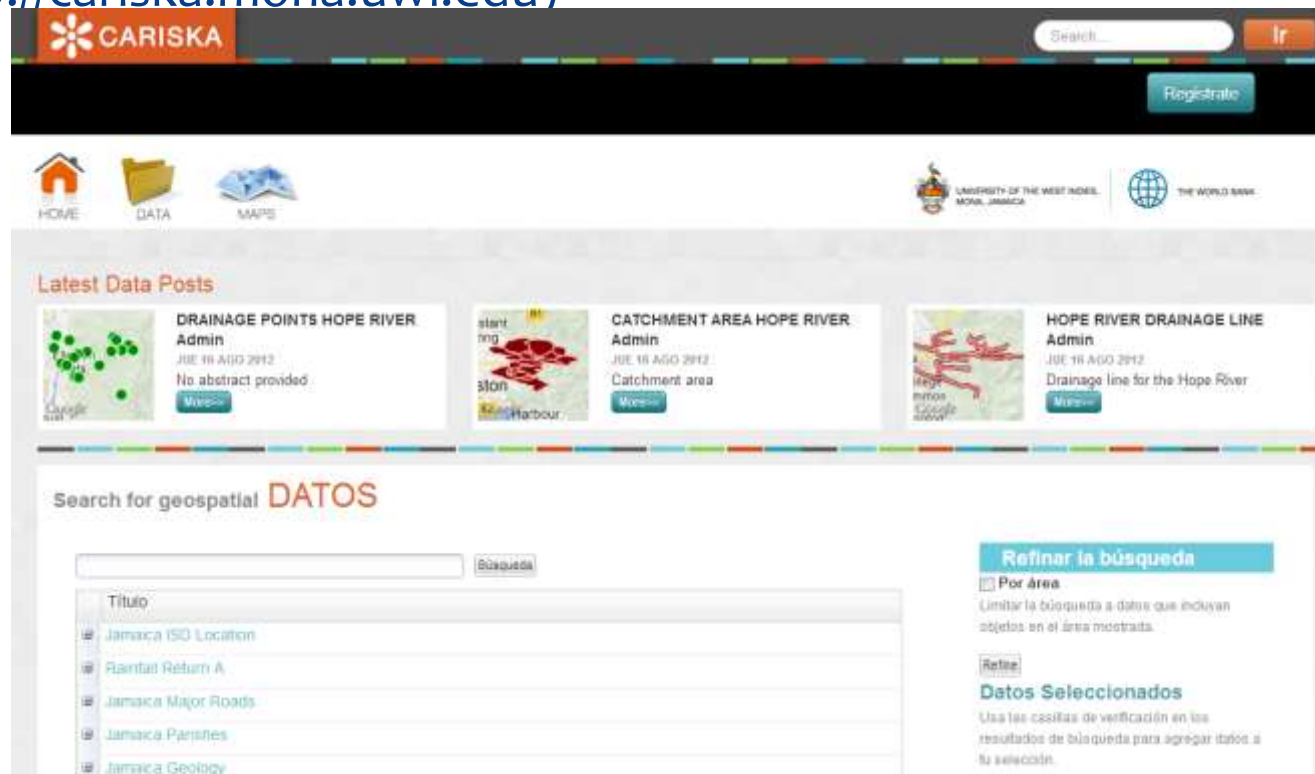
- [Georgia PDNA - Test Area](#)
- [Georgia Land Cover](#)
- [Georgia Reference Map](#)
- [Kakheti Region \(Georgia\) Reference Map](#)
- [Sahel](#)

Latest Data

- [Georgia PDNA - Agricultural Parcels](#)
- [Georgia PDNA - Area of Interest](#)
- [Georgia - Building Footprint - Test Area](#)
- [VHR image Vardisuban](#)
- [2005v5_igbp1_geog](#)

GeoNode Communities

- * The University of the West Indies (UWI) Disaster Risk Reduction Centre (DRRC) and the World Bank collaborated on the "Caribbean Risk Atlas" project (<http://cariska.mona.uwi.edu>)



GeoNode Communities

- * Moz-adapt (<http://moz-adapt.org/>) has been developed as a tool to better understand and prepare for Climate Change in the country of Mozambique

The screenshot shows the moz-adapt.org website. The header is green with the INGC logo and navigation links: moz-adapt, Vulnerability, Adaptation, Data, and Tools. The main content area is divided into four sections: 'About moz-adapt.org', 'Vulnerability', 'Adaptation', 'Tools', and 'Data'. Each section contains descriptive text, a 'Learn more' or 'View all layers' button, and a small icon. The 'About' section mentions support from The World Bank and The Global Facility for Disaster Reduction and Recovery. The 'Vulnerability' section features an icon of a house with a green arrow pointing to it. The 'Adaptation' section features an icon of a building with a green arrow pointing to it. The 'Tools' section features an icon of a person's head with a green arrow pointing to it. The 'Data' section features an icon of a stack of books with a green arrow pointing to it.

INGC moz-adapt Vulnerability Adaptation Data Tools

About moz-adapt.org
The purpose of moz-adapt.org is to provide tools and data in order to better understand and prepare for Climate Change in the country of Mozambique with an emphasis on reducing disasters caused by natural hazards.
This site has been developed by and for INGC, with support from The World Bank, The Global Facility for Disaster Reduction and Recovery
• [Terms of Use](#)

Vulnerability
Quickly explore climate projections, impacts and vulnerability information for your area.
[Learn more »](#)


Adaptation
Learn and explore options to adapt to climate change.
[Learn more »](#)

Tools
For citizens and decision makers to learn more about climate change and it's impacts.
• Interactive maps
• Simulations
[View interactive simulations »](#)

Data
 [Search](#)
Find and download the raw data used in many of the country's research initiatives.
[View all layers »](#)

GeoNode Communities

* Malawi Spatial Data Portal (<http://23.22.63.123/>)

 **MASDAP** *A Public Platform for Open Spatial Data to Support Development in Malawi*

[Inicio](#) [Datos](#) [Mapas](#) [Documents](#) [Sign in](#)

[AGRICULTURE](#) [BOUNDARIES](#) [CLIMATE](#) [ECONOMY](#) [ELEVATION](#) [HYDROLOGY](#) [INFRASTRUCTURE](#) [LAND COVER](#) [POINTS OF INTEREST](#) [POPULATION](#)

Malawi Spatial Data Portal


Welcome to the BETA version of MASDAP, a web-based data sharing tool launched in November 2012, managed by the National Spatial Data Center (in the Department of Surveys), in collaboration with the National Statistics Office and a number of technical Ministries.

This user-friendly platform is based on free and open-source software and will create a platform for improved inter-agency information collaboration and enhanced public access for awareness-building, research, further knowledge product creation and decision support.

Portal Functionalities

- Upload, Manage and Browse Spatial Data
- Explore, Compose and Share maps
- Search and Download Documents
- Profiles for Users

A substantial amount of data has already been collated, and it is envisioned that in the near future, MASDAP will include further information and visualization to the platform from various global and in-country sources, expanding institutional commitments to open data, supporting community mapping activities, and developing decision support tools that leverage open data to assist the Government of Malawi with contingency and land-use planning activities. MASDAP is receiving start-up support through the World Bank DRM program under the Open Data for Resilience Initiative. We do hope you can share your or your institution's datasets on the portal to enable others to benefit from this work.



GeoNode Communities

- * UN World Food Programme: <http://geonode.wfp.org>
(customized with online editing for quick data generation in emergencies)
- * Saint Lucia Integrated National Geonode: <http://sling.gosl.gov.lc/>
- * St. Vincent & the Grenadines Geonode: <http://geonode.gov.vc/>
- * Virtual Kenya project: <http://maps.virtualkenya.org/>
- * Malawi Spatial Data Portal: <http://23.22.63.123/>
- * Yemen Data for Resilience Initiative: <http://yemen.rcdrrdri.org/>
- * Pacific Risk Information Systems (PaRIS): <http://paris.sopac.org>
- * Haiti Data: haitidata.org
- * Geographical Data Infrastructure for the National Information System for Risk Reduction in Bolivia (5 nodes), like <http://geosinager.defensacivil.gob.bo>

GeoNode Communities

- * And a GeoNode 2.0 site for Haiti has been implemented!

The screenshot shows the 'Haiti Data' GeoNode 2.0 website. The browser address bar displays '66.36.241.75/layers/'. The website has a red header with the 'Haiti Data' logo, a search bar, and a 'Sign in' link. Below the header is a navigation bar with links for HOME, LAYERS, MAPS, DOCUMENTS, PEOPLE, SEARCH, and PARTNERS, along with social media icons for Facebook, Twitter, and YouTube. A secondary navigation bar contains 'EXPLORE LAYERS' and 'UPLOAD LAYERS' buttons. The main content area is titled 'EXPLORE LAYERS' and includes sorting options: Most Recent, Less Recent, A-Z, Z-A, Most Popular, and Relevance. On the right, there are 'View by' options for Grid and List. A 'Your selections' section shows 'Total: 3' and a 'Clear all' button. A sidebar on the left lists categories: All Categories, Geography (26), Boundaries (10), Elevation (9), Imagery Base Maps Earth Cover (4), and Inland Waters (3). The main content area displays a layer titled 'Haiti Flood Zone: Frequent UNITAR [05-2010]' with a thumbnail map of Haiti. To the right of the thumbnail are 'Download' and 'Create a map' buttons. Below the title, it says 'from geonode, 2 years, 7 months ago'. A description follows: 'This map layer modelizes areas of frequent flooding for Port-au-Prince region. It was created by United Nations Institute for Training and Research (UNITAR), in May 2010. [It need improvement in the basic flood modeling]'. At the bottom, it shows '0 views | Average rating ★ ★ ★ ★ ★ (0)'.

66.36.241.75/layers/

Haiti Data

Sign in

HOME LAYERS MAPS DOCUMENTS PEOPLE SEARCH PARTNERS

EXPLORE LAYERS UPLOAD LAYERS

EXPLORE LAYERS

Most Recent | Less Recent | A-Z | Z-A | Most Popular | Relevance

View by Grid List

Your selections **Clear all** Total: 3

CATEGORIES

- All Categories
- Geography (26)**
- Boundaries (10)
- Elevation (9)
- Imagery Base Maps Earth Cover (4)
- Inland Waters (3)

Layer

Environment

Haiti Flood Zone: Frequent UNITAR [05-2010]

Download Create a map

from geonode, 2 years, 7 months ago

This map layer modelizes areas of frequent flooding for Port-au-Prince region. It was created by United Nations Institute for Training and Research (UNITAR), in May 2010. [It need improvement in the basic flood modeling]

0 views | Average rating ★ ★ ★ ★ ★ (0)

GeoNode Use References

- * GeoNode user documentation can be found at

<http://geonode.org/workshops/user/> (2.0)

<http://docs.geonode.org/en/latest/> (includes tutorials)

- * Subscribe to the GeoNode users mail list and check previous discussions at

<http://geonode.org/communication/>