IW:LEARN Spatial Lab training

Paris, France

http://geonode.iwlearn.org/
Why is this important?
Principles of spatial data management

• Spatial data should be stored in a long-term stable platform

• All data should have appropriate metadata to allow users to search and understand the source and use of the data

• Spatial data should be stored in an electronic, standard format

• All data collected in GEF IW projects should be open and accessible – collect once, use multiple times
What is spatial data?

Spatial data is data that has a spatial reference
UNESCO Annex Building

Latitude 48° 50’ 56.76"N
Longitude 2° 18’ 22.32"E
Line Data

Eiffel Tower

UNESCO Annex Building
Data Category

A. Spatial Data

• Vector- Point, Line, Polygon
• Raster- Satellite Imagery, GRID Data, Scanned maps

B. Non-Spatial : All other associated data or information e.g. Metadata, Attribute data
Projects have to deal with a wide range of data

• Collected samples
• Remote sensing data
• Administrative boundaries
• Environmental features
• Human use data
• Plus much more!
Challenge: How to manage data

• During the project
• After the project

IW:LEARN Spatial Lab can provide support
Welcome to IW:LEARN Spatial Lab

Discover The IW:LEARN Spatial Datasets

http://geonode.iwlearn.org
GeoNode Architecture
What is IWLEARN Spatial Lab

• Built on GeoNode (www.geonode.org)
• Open Source Geospatial Content Management System
• Platform for the management and publication of geospatial data

Store, Find, Visualise
Spatial Data and Metadata
IW:LEARN Spatial Lab Training
Geonode training

• How to create an account
• Exploring the interface
• Upload your own data
• Creating metadata
• Styling Data
• Creating maps
• Sharing maps
• Create/Edit/Update Data
Creating an account
All entries must be fill in order to create a new user.
Welcome to IW:LEARN Spatial

Discover The IW:LEARN Spatial Datasets

Search for Data.
Miles Macmillan-Lawler (miles_GRIDA)

Miles

<table>
<thead>
<tr>
<th>Email</th>
<th>miles.ma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position</td>
<td>Program</td>
</tr>
<tr>
<td>Location</td>
<td>NOR</td>
</tr>
<tr>
<td>Voice</td>
<td>Not provided</td>
</tr>
<tr>
<td>Fax</td>
<td>Not provided</td>
</tr>
<tr>
<td>Description</td>
<td>Miles is the Spatial Analysis and Geospatial Information Lead at IWLEARN. He oversees the web development and visualisation components of the IWLEARN project.</td>
</tr>
</tbody>
</table>

Keywords: Marine, Spatial Analysis, Data, IWLEARN

Resources

<table>
<thead>
<tr>
<th>All contents</th>
<th>Layers</th>
<th>Maps</th>
<th>Documents</th>
</tr>
</thead>
</table>

Message User

Edit profile

Change password

Upload new layers

Create a new map

My Activities

Announcements

Remote Services

Invite User

GeoServer

Admin
Exploring the interface
Explore existing layers, documents, and remote services.

Add new layers, documents, and remote services.

View existing maps.

Create new maps.

Explore people and groups.

Search content (layers, documents).

Explore content thematically.

Manage profile.

Logout.

Search for Data.
Upload your own data
Note: The Spatial Lab accepts most standard spatial data formats
Welcome to IW:LEARN Spatial Lab

Discover The IW:LEARN Spatial Datasets

LME  |  Aquifers  |  River Basins  |  Lakes  |  Oceans  |  Others

Search for Data.

Search

Advanced Search
Required .shp, .dbf, .shx, .prj
Optional sld, xml
Seamounts

ESRI Shapefile

- Seamounts.dbf
- Seamounts.prt
- Seamounts.shp
- Seamounts.shx
- Seamounts.sld
- Seamounts.xml

Permissions

Who can view it?
- Anyone
- The following users:

Who can download it?
- Who can change metadata for it?
- Who can edit data for this layer?
- Who can edit styles for this layer?
- Who can manage it? (update, delete, change permissions, publish/unpublish it)
Your layer was successfully uploaded

Layer Info  Edit Metadata  Manage Styles
Note: your own SDI can be linked directly to IWLEARN Spatial Lab using web services
Register New Service

Service URL

Service name

Service Type
  Auto-detect

Create
## Remote Services

<table>
<thead>
<tr>
<th>Title</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flanders Marine Institute (VLIZ) - Geoserver WMS Service</td>
<td><a href="http://geovliz.be/geoserver/MarineRegions/wms">http://geovliz.be/geoserver/MarineRegions/wms</a></td>
</tr>
<tr>
<td>Layers</td>
<td><a href="https://services.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer/">https://services.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer/</a></td>
</tr>
<tr>
<td>GeoServer Web Map Service</td>
<td><a href="http://twap-rivers.org:8080/geoserver/twap/ows">http://twap-rivers.org:8080/geoserver/twap/ows</a></td>
</tr>
</tbody>
</table>
Metadata
Metadata is not a dirty word

• Describes the data about data
• Can be used to search for data
• Others can understand about the data, limitations, age, purpose etc.
Standards for metadata

- ISO 19115, FGDC, Dublin Core, EU Inspire Directive
- Stored in xml file (ISO 19139)
- The Spatial Lab can import existing metadata or be used to create metadata
Upload Layers

Drop files here

or select them one by one:

Choose Files

Files to be uploaded

Seamounts

ESRI Shapefile

- Seamounts.dbf
- Seamounts.prj
- Seamounts.shp
- Seamounts.shx
- Seamounts.sld
- Seamounts.xml
- Preserve Metadata XEL

Permissions

Who can view it?

- Anyone
  - The following users:
  - Choose users...

Who can download it?

Who can change metadata for it?

Who can edit data for this layer?

Who can edit styles for this layer?

Who can manage it? (update, delete, change permissions, publish/unpublish it)
Edit Metadata

Editing details for geonode:seamounts

Note: this layer's original metadata was populated by importing a metadata XML file. GeoNode's metadata import supports a subset of ISO, FGDC, and Dublin Core metadata elements. Some of your original metadata may have been lost.

Update

Owner
© miles_GRIDA

Title
Seamount geomorphic feature layer

Date
2014-02-20 12:00 AM

Date type
Publication

Edition

Abstract
The seamount geomorphic feature layer represents the spatial extent of the seamounts of the world's oceans based on interpretation of the SRTM30 plus v7 global bathymetry model. The layer is one of the 25 layers that make up the global seafloor geomorphic features map.
Mandatory metadata fields

• Title
• Date/Date type
• Abstract
• Purpose
• Maintenance frequency
• Regions

• License
• Spatial representation type
• Data Quality Statement
• Keywords
• Category
Styling a layer
Option 1. SLD style file

• Can be created using desktop GIS (e.g. QGIS)
• Upload with the layer
Upload Layers

Drop files here

or select them one by one:

Choose Files

Files to be uploaded

Seamounts

ESRI Shapefile

- Seamounts.dbf Remove
- Seamounts.prj Remove
- Seamounts.shp Remove
- Seamounts.shx Remove
- Seamounts.sld Remove
- Seamounts.xml Remove

Preserve Metadata

Permissions

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- Choose users...
- The following groups:
- Choose groups...

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Option 2. Within the Spatial Lab

• Geonode has an inbuilt style tool
• Layers can have multiple styles
Seamount geomorphic feature layer

[Map interface with style settings dialog]

Legend
- Seamounts

Maps using this layer
- List of maps using this layer:
  - Benguela Current LME seamounts

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

Create a Map

Styles
The following styles are associated with this layer:
- Style Rule: Seamounts

Download Layer
Metadata Details
Edit Layer
Download Metadata
Making a map
Welcome to IW:LEARN Spatial Lab

Discover The IW:LEARN Spatial Datasets

Search for Data.

Advanced Search
Seamount geomorphic feature layer

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

Create a Map
Saving, sharing and publishing a map
About this Map

Title:
Banguebo Current LME seamounts

Abstract:
A map showing the seamounts identified by Mark et al. (2014) in relation to the Banguebo Current LME region.
Benguela Current LME seamounts
A map showing the seamounts identified by Harris et al. (2014) in relation to the Benguela Current LME region
Seamount geomorphic feature layer

Maps using this layer
List of maps using this layer:
- Benguela Current LME seamounts

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

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

Title: Seamount geomorphic feature layer
http://geonode.iwlearn.org/maps/3277
<iframe style="border: none;" height="400" width="600" src="http://geonode.iwlearn.org/maps/3277/embed"></iframe>
<!DOCTYPE html>
<html>
  <head>
    <title>Sample Map</title>
  </head>
  <body>
    <iframe style="border: none;" height="400" width="600" src="http://geonode.iwlearn.org/maps/3277/embed"/>
  </body>
</html>
<!DOCTYPE html>
<html>
<head>
  <title>Sample Map</title>
</head>
<body>
  <iframe style="border: none;" height="600" width="800" src="http://geonode.1wlearn.org/maps/3277/embed"></iframe>
</body>
</html>
Seamount geomorphic feature layer

Download Layer

- Images
- Data
- Tiles
- View in Google Earth
- KML
- PNG
- PDF
- JPEG

Legend
- Seamounts

Maps using this layer
List of maps using this layer:
- Benguela Current LME seamounts

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

Create a Map

Documents related to this layer
List of documents related to this layer:
- Seamount description
What about non-spatial data?
Non-spatial data


Links to external documents using URL

Link to maps and layers
Upload Documents

Allowed document types:

Title:
Seamount description
name by which the cited resource is known

File:
Browse... Seamounts.pdf

URL:
The URL of the document if it is external.

Link to:
Seamount geomorphic feature layer

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  Choose users...
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Creating / Editing Data
Data Editing
Data Compilation

Owner 1: Road
Owner 2: Settlement
Owner 3: River
Owner 4: Water Quality

MAP
What is Next ?
Data Computation and Visualization
Documents

- IWLEARN Spatial Lab Training Gaborone, Botswana
- IWLEARN Spatial Lab Data Guidelines - May, 2019

IW:LEARN Spatial Lab Video Tutorials

- How to Create an Account
- How to Explore Map Layers
- How to Search for Datasets
- How to Upload a Layer
- How to Change Layer Styling
- How to Publish a Map
Need more information or support!
Come and talk to me!

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