



## **SPATIAL DATA INFRASTRUCTURES (2021/2022)**

### **PRACTICAL LESSON 1**

- 1.** Use the following link to access the INSPIRE Home Page to watch a video about the INSPIRE Directive.

<https://inspire.ec.europa.eu/>

- 2.** Download the INSPIRE Directive (both in English and Portuguese).

English version (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32007L0002&from=EN>)

Portuguese version (<https://eur-lex.europa.eu/legal-content/PT/TXT/PDF/?uri=CELEX:32007L0002&from=EN>)

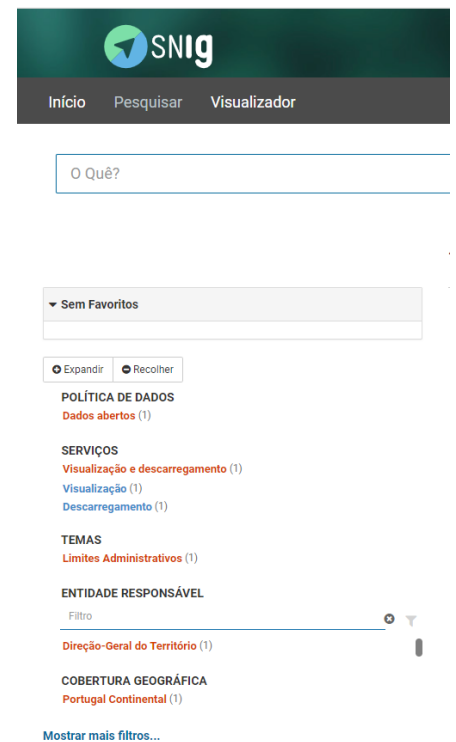
- 3.** Use the following link to access to the INSPIRE Geoportal.

<http://inspire-geoportal.ec.europa.eu/>

- a) Browse the INSPIRE Thematic Data Sets and then the Country Overview and select Portugal. Identify the number of available data sets for Portugal and how many are downloadable or just viewable.
- b) For Portugal, identify the number of available data sets under the INSPIRE theme - Administrative Units. Visualize the corresponding metadata file. Download the most recent data and visualize it using QGIS.
- c) Search for data sets related to “Carta de Uso e Ocupação do Solo”. Download the most recent data and visualize it using QGIS.

4. Use the following link to access to the SNIG geoportal.

<https://snig.dgterritorio.gov.pt/>



- a) Browse for available data sets using the following filtering criteria, download the most recent data as an ATOM service and visualize it using QGIS. First, you must install the following QGIS plugin “INSPIRE Atom Client”

([http://mapas.dgterritorio.pt/geoportal/pdf/Tutorial\\_ATOM\\_QGIS.pdf](http://mapas.dgterritorio.pt/geoportal/pdf/Tutorial_ATOM_QGIS.pdf)).

- b) Browse for the “Rede Geodésica Nacional” data set, download it as a Web Feature Service (WFS) and visualize it using QGIS.

5. Analyse the INSPIRE Metadata Regulation and its corresponding technical guidelines document (the regulation is available both in English and Portuguese and the technical guidance just in English).

- COMMISSION REGULATION (EC) N.º 1205/2008 of 3 December 2008 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards metadata (<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX%3A32008R1205&from=EN>)

REGULAMENTO (CE) N.º 1205/2008 DA COMISSÃO de 3 de Dezembro de 2008 que estabelece as modalidades de aplicação da Directiva 2007/2/CE do Parlamento Europeu e do Conselho em matéria de metadados (<https://eur-lex.europa.eu/legal-content/PT/TXT/PDF/?uri=CELEX%3A32008R1205&from=PT>)

- Technical Guidance for the implementation of INSPIRE dataset and service metadata based on ISO/TS 19139:2007 (<https://inspire.ec.europa.eu/id/document/tg/metadata-iso19139>)

- a) Identify which metadata elements are mandatory (M), conditional (C) and optional (O) according both to INSPIRE and ISO.
- b) Find out the multiplicity and the related conditions set expected for each metadata element or groups of metadata elements.
- c) Identify the type of resources that are described in the metadata files.
- d) Select what possible topic categories would you choose to classify a spatial data set related to fish species identified in the Azores region.
- e) Find out what types of spatial data services are available.
- f) How many keywords are required to describe a spatial data set.
- g) Considering the spatial data set “Carta de Uso e Ocupação do Solo” (INSPIRE theme “Land cover” – Annex 2), what keywords should you adopt, from the General Multilingual Environmental Thesaurus – GEMET (<https://www.eionet.europa.eu/gemet/en/inspire-themes/>), to improve the search for these data?

6. Use the GeMA metadata editor to create a metadata file (xml file). The GeMA metadata editor can be freely downloaded from the following link (<http://www.ideia.azores.gov.pt/Paginas/gema.aspx>). Use, as an example, one of the metadata files available at SNIG.

<https://snig.dgterritorio.gov.pt/rndg/srv/api/records/198497815bf647ecaa990c34c42e932e/formatters/snig-view>

<https://snig.dgterritorio.gov.pt/rndg/srv/api/records/198497815bf647ecaa990c34c42e932e/formatters/xml>

