

Use Driven Assessment of GKI requirements : Engaging with education communities

Bénédicte BUCHER, Univ. Gustave Eiffel, ENSG, IGN, LaSTIG

UN GGIM Webinar

Online, June 19th 2023

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EuroSDR.net
non for profit
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linking
mapping agencies
with Universities
since 1953.

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MEMBERS

The spatial data research interests of European countries are represented through the membership in EuroSDR of national organisations from their production and research sectors.

Being a member of EuroSDR has several benefits. More information can be found [here](#).

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Commission 3: Information Usage and Visualization

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Commission 4: Business Models and Operation

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Commission 5: Knowledge Transfer

Study how we engage with research and education communities :

- 2019 survey
- 2022 workshop



European Spatial Data Research

December 2021

EuroSDR Survey:
Initiatives for Providing Data and Tools
for Research and Education

Bénédicte Bucher, Markéta Potůčková, Joep Crompvoets

Survey Report



European Spatial Data Research

February 2023

Geodata and Tools for Education and Research

AGILE Pre-Conference Workshop

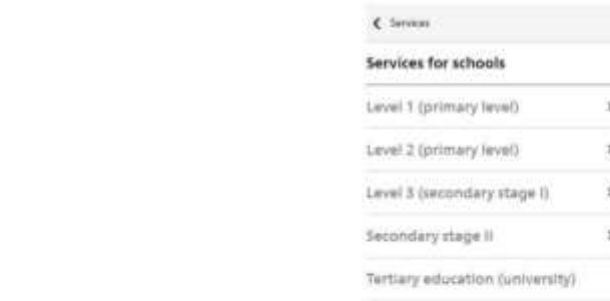
June 14th 2022 - Vilnius, Lithuania (hybrid)

Bénédicte Bucher, Frédéric Cantat, Joep Crompvoets,
Anka Liseč, Markéta Potůčková, Conor Cahalane,
Evelyn Uuemaa, Mathieu Chartier

Official Workshop Report

NMCAs engage with education communities from primary school to higher education through :

- Dedicated webpage
- Licences, contracts,
- Events
- Services,
- Teaching materials,
- Lab trucks



Teach with GIS and geodata
Geographical is a natural part of Lycéens' activities. We are the authority that most teachers. With Géoschool, we meet the basic school's and upper secondary school's basic need for geographical information. In this way, we create conditions for increasing and broadening knowledge about and use of geographical information, what we call geodata. [Read more about the Geo School.](#)

swisstopo teaching materials and services for schools

Free teaching materials and worksheets on map reading, treasure hunts, time travelling, geology and more for all educational levels.



Our range of educational material includes:

- Fun materials such as treasure hunts.
- Map reading manuals.
- "A journey through time": Switzerland in its entirety since 1864, so you can show the development of a city or a landscape, for example.
- LUBIS: swisstopo aerial photos and image strips from 1920 to the present.

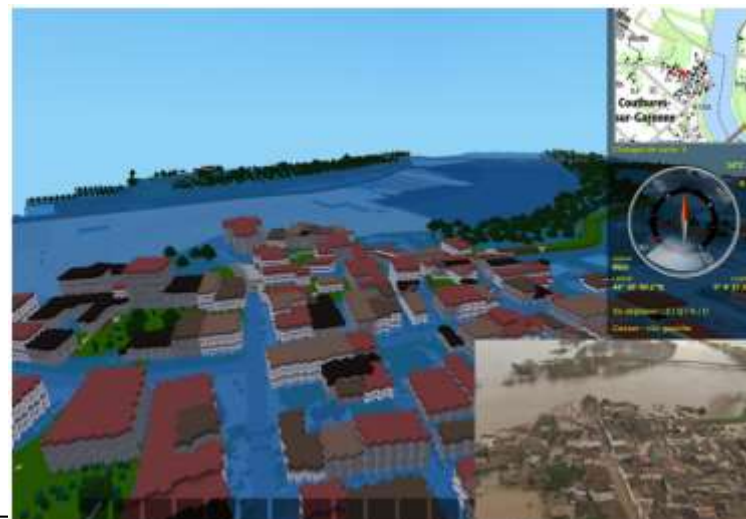
Actions at national levels, with no connections (yet) between them



© OSI



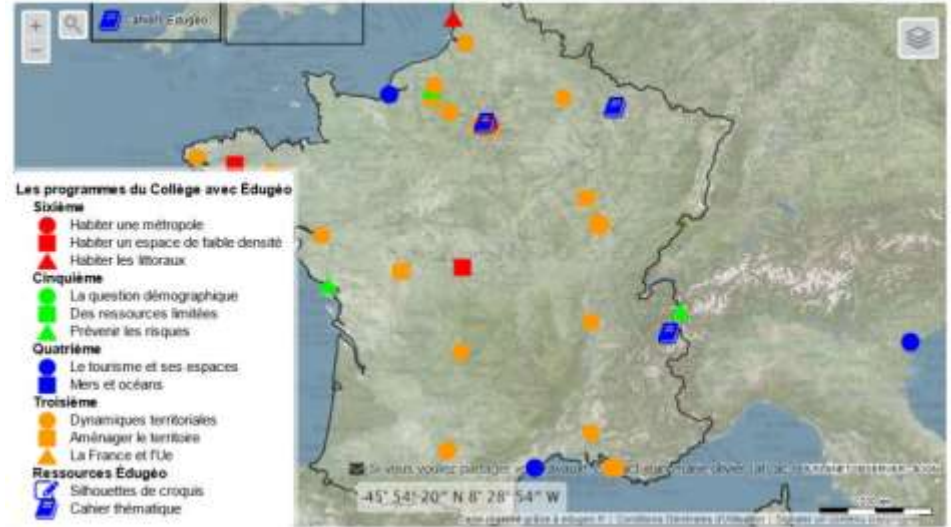
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Important to integrate within teaching activity :

- services embedded
in the digital
workplace of
teachers and
students
- storymaps indexed
by the official
syllabus





OSi MAPS

OSi's large scale maps, aerial photography, historic maps and Discovery series maps for the Republic of Ireland. Viewable in all schools on the Schools Broadband Network. Log-in required from non-school locations.

To view OSi maps outside schools you need a ScoInet account. Teachers can register [here](#).

[VIEW MAPS](#)

[LEGEND FOR MAPS](#)

Education
relies on
national maps
and on world
maps

WORLD MAPS

Global street maps, aerial photography and topographical mapping (courtesy of Esri inc).
Viewable from all locations. No log-in required.

[VIEW MAPS](#)



Some national land cover products bring **deeper insight** than world maps

but come as a **patchwork**, each piece of the patchwork requiring local expertise to interpret

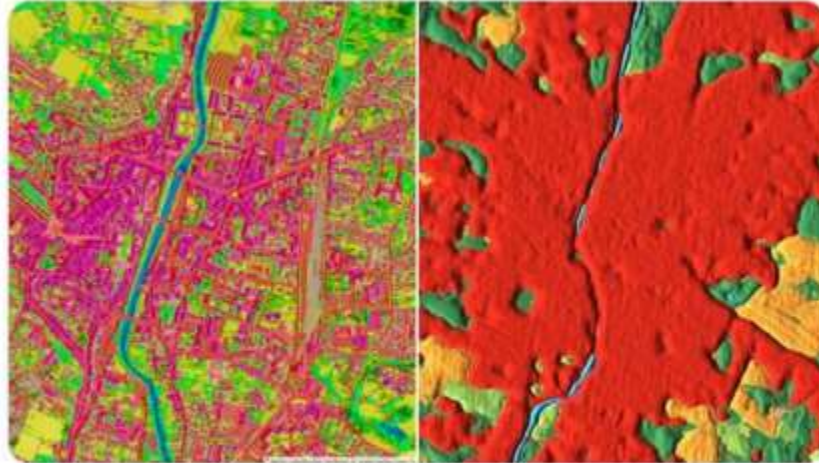


Figure 8: Comparison of Land cover products, produced through state of the art Artificial Intelligence and sensors, on a city in South of France, one from the national mapping agency and one from Google.

Investigate Geospatial User Feedback standard to share and reuse knowledge of expert users



BD Topo 2020



BD Topo 2022

Feedback from examining the dataset #DS1 and reading the detailed product specification #BDTopo2022 :
Between 2010 and 2022, the threshold for buildings has shifted, some buildings have a different source for geometry (walls and not roofs)

Investigate Geospatial User Feedback standard to share product knowledge among expert users



Need for GUF management solutions



Use AI to assist expert users in the reading of lengthy products specifications

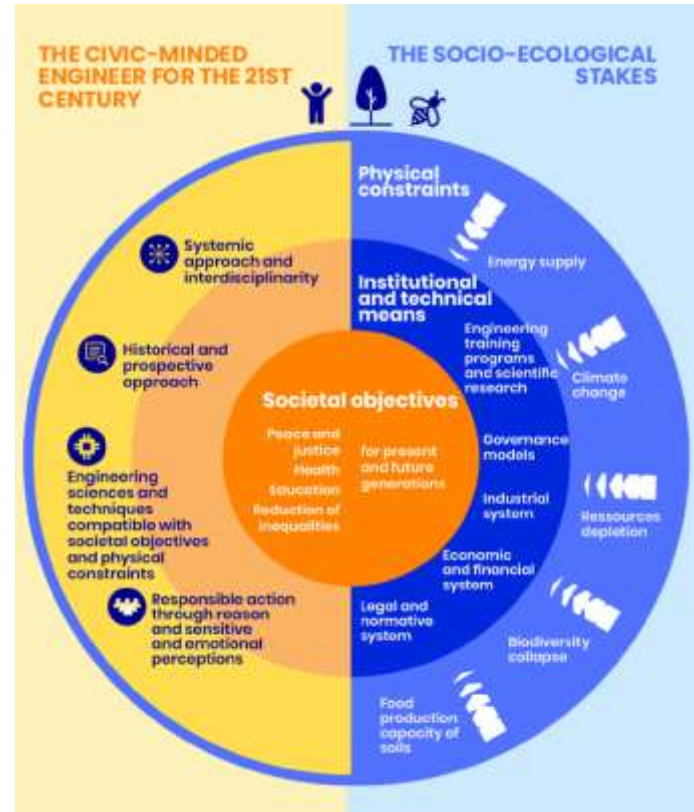
Develop interfaces to integrate metadata in GIS tools

Feedback from examining the dataset #DS1 and reading the detailed product specification

Between 2010 and 2022, the threshold for buildings has shifted, some buildings have a different source for geometry (walls and not roofs)

New stake :

- teach students skills for the ecological transition
- help teachers transform their syllabus to do that



© Shift Project

- A team project : 7 master students in geomatics
- Each student : browses SDGs, targets, indicators, compares a northern country (usually France) and a southern country and reports on source data, methodology, nation specific indicators
- Each student : develops a dashboard reusing available open data to propose additional indicators

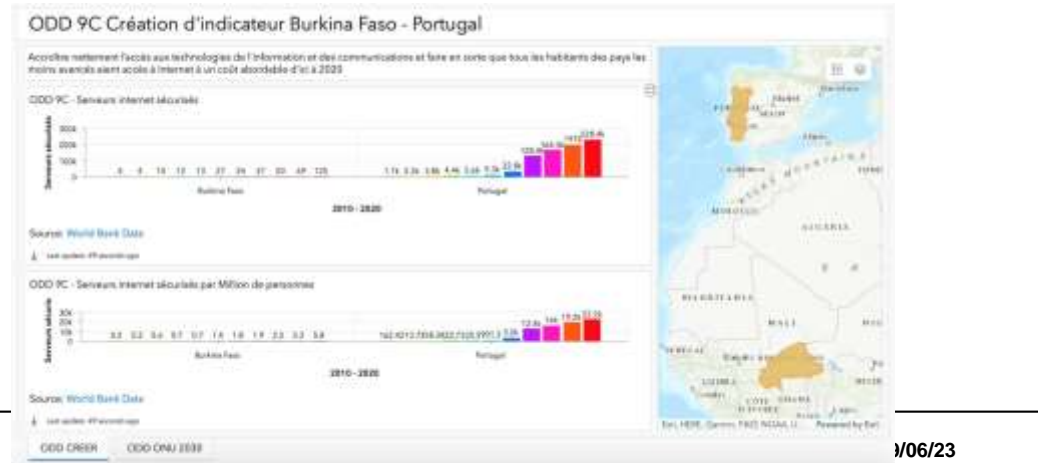
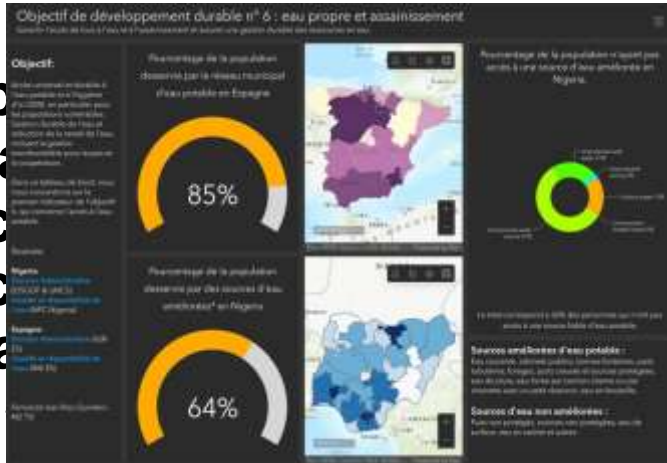
**ENSG (french school for geomatics)
ODDNotebook project for master students, in SDI curricula**

apply what they learn to concrete actions for the ecological transition

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- Each student : browses SDGs, targets, indicators, compares a northern country (usually France) and a southern country and reports on source data, methodology, nation specific indicators
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ENSG (french school for geomatics) ODDNotebook project for master students, in SDI curricula

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- A team project : 7 master students in geomatics
- Each student : browses SDGs, targets, indicators, compares a northern country (usually France) and a southern country and reports on source data, methodology, nation specific indicators
- Each student : develops a dashboard reusing available open data to propose additional indicators
- Evaluation of the team through oral presentation of a synthesis in front of a jury (teachers, scientists, + our network like Worldbank)

ENSG (french school for geomatics) ODDNotebook project for master students, in SDI curricula

apply what they learn to concrete actions for the ecological transition

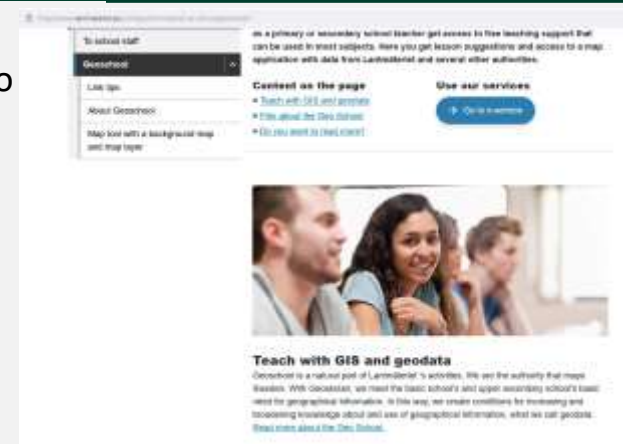
Students' feedback on the ODDNotebook project :

- This project opens to new topics and domains
- **Superficial understanding of SDGs before the project**
- It is nice to work on an open issue
- **Lack of knowledge to create indicators**
- Real experience on searching for data portals, assessing redundancies and specificities of portals
- Depending on the chosen themes and countries, data and metadata are not always available
- Need to integrate more the project with the different courses of the master

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(Reminder from Slide 5)



Take away messages :

- ❖ NMA have engaged for years with national education communities, users communities around specific solutions
- ❖ Un Agenda 2030 is a good focus to engage students in ecological transition
- ❖ Need for **solutions** to network expertises (on data engineering, on indicators definition, on countries, on domains), teachers and students

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