

Sustainable Development Goals in Applied Geo-Information Science Education, an Example How to Incorporate Societal Challenges in a Curriculum.

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SUMMARY

Many societal challenges like climate change, energy transition, food security are related with and depend on reliable geo-information data. But to collect data of a high and relevant quality and useful for society we need also good, educated people. The four-year bachelor course Applied Geo-information Science (formerly known as Geo Media & Design) of the HAS University of Applied Sciences in the Netherlands started 8 years ago.

To incorporate design thinking in a geo-information curriculum was new. But more and more societal challenges and the increase of available data ask for changes. From educating students as intermediaries between (spatial) questions and technology, we see that the students should also be versed in the challenges of our society and data science. A redesign was necessary.

In this paper we will discuss how to balance in our curriculum: the technology (use of GIS hard- and software); data science (collection, analysis, visualization); user interface development (due to new users like policymakers, managers, citizens); soft skills (like communication and project management) and most important the relevance and usage of geo-information for the societal challenges.

We think that the students but also the job market are helped and structured by two processes.

1. From data towards information
2. Information towards application.

Our general approach, visualised as a circle of three connecting rings is organized as

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follows:

- Center ring: Dimensions of (geo-spatial) data: Space, Time, Theme, Process, Data management.
- First ring: Connecting: Law & Regulations, Public value, Governance, Ethics, Do.
- Outer ring: Applications, the 17 SDG's, all in relation with the needed data and software. We put emphasis on: Quality Education (4); Affordable and clean energy (7); Industry innovation and infrastructure (9); Sustainable cities and communities (11); Climate action (13); Life on land (15).

HAS university of Applied Sciences adopted the SDG's as a major guideline in our activities. The major themes are Agriculture, Food and Living Environment. For Applied Geo-Information Science accent will be on Living Environment.

Examples of how we can interest and attract students but also the job market and employers towards the connection between the SDG's and the usage of data in a broadest sense will be discussed.

In the end we aim that challenges can be met by developing the knowledge and skills to analyse, monitor (geo-spatial) data and apply these with the help of ICT, Big Data and visualisation technology. A better, more sustainable world should be the result.

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