

GI Pedagogy

Section 1

**An innovative model using
geoinformation for teaching about
sustainability**



Welcome



In this module, you will
learn:

- **What GIS actually is and how it is used**
- **Why GIS is a valuable tool for teaching**
- **What you need to use GIS in your teaching**
- **What some of the barriers to using GIS are**



Introduction

Geoinformation (GI) is used to

- analyse **sets of information (layers)** by
- organising them **geographically**
- into visualisations such as maps and 3D scenes.

The goal is to find better solutions for the problems facing our planet and society, but you can start by making a map.





What is GIS?

"GIS technology will develop into a nervous system for our planet where we, on an ongoing basis, measure and encapsulate knowledge, share it, and respond to issues that people care about.... It will be a framework for communication, decision support, understanding geographic science, and educating our children."

Jack Dangermond, ESRI, 2017



Defining GIS

“... a framework for gathering, managing, and analysing data. Rooted in the science of geography, GIS integrates many types of data. It analyzes spatial location and organises layers of information into visualisations using maps and 3D scenes. With this unique capability, GIS reveals deeper insights into data, such as patterns, relationships, and situations—helping users make smarter decisions.” (ESRI)



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What do teachers need to be able to use GIS effectively?



- **TOOLS (=GIS)**
- **(raw) material (DATA)**
- **KNOWLEDGE and SKILLS to process data into valuable SOLUTIONS**
- **Some QUESTIONS to investigate**