



Overview

Currently at 7 billion, the Earth's population is on target to reach 8 billion by 2027. What are some of the key sustainability challenges confronting society at the moment, and in the future? Are there solutions for some of these challenges? And what can you do to make a real change in this world? Leiden University College's major Earth, Energy and Sustainability might be what you are looking for.

Major Tracks:

- > Ecosystems Health
- > Earth System Science
- > Energy and Natural Resources

Combined Tracks:

- > Governance, Economic and Development
- > Global Public Health

Creating a sustainable society

What is sustainability? How do we achieve a sustainable society? This major is focused on Ecosystems, Earth systems and Resource Management. At Leiden University College we train you in finding your own answer. Examples of topics you will work on, are:

- > The challenges and opportunities when feeding 7 billion people What are GMOs and what are the opportunities and risk associated with using them? How are nutrients related to dead zones in river deltas?
- > The hunt for new fossil fuel sources What are the risks of fracking? And why is one of the richest countries in the world (Canada) destroying complete ecosystems?
- > The global loss of biodiversity Should we care about biodiversity? Why are panda bears important to save? And how is biodiversity related to biofuel production?
- > Environmental change and human health How are pesticides related to cancer rates? And how are reductions in IQ related to contaminants in breast milk?

At LUC we also emphasize that sustainability ultimately exists within a human context. Therefore there are many cross-links within the major to social sciences, with courses such as public policy, environmental law, and international development. Additionally, the major includes methodology courses in Quantitative Methods, Geographic Information Systems, Environmental Modelling, and Field Methods.

Field Methods in Environmental Sustainability

The course introduces students to field methods and techniques used in environmental sciences such as making qualified field observations, using field equipment, collecting, analyzing and presenting various kinds of environmental data.

Amongst others, students record and reconstruct past peak flood flows using field evidence from gleaned, from observing sediments, measuring channel shape, and identifying overbank flood impacts.

For this, the course uses the example of the spectacular high-mountain environment in the Kleinwalsertal (northern Alps, Austria).

The setting is also perfect to train students in systems thinking while exploring the non-linear system working and spatial complexity of interlinked debris flow and flood activity.



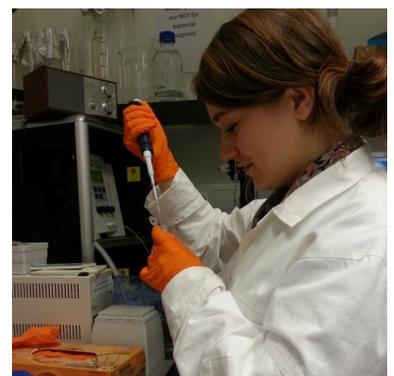
Students Hydrologic Surveying

Career in Earth, Energy and Sustainability

Choosing this Major is a great place to start your career in this highly dynamic and fast moving field. We prepare you for the next steps, whether graduate school or a professional career. Graduates proceeded in master programs such as:

- > environmental science
- > earth science
- > sustainable policy

Some examples of what students have pursued after LUC include an MSc in Climate Change at University College London, MSc in Creative Sustainability at Aalto University Helsinki in Finland and an MSc in Climate Studies at Wageningen University in The Netherlands. Additionally, students have done research and internships in multiple fields and organisations.



Testing toxicity of copper-salt in egg yolks of Zebra fish