GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2024-2025

Ecosystem Management and Services (C003327)

Course size *(nominal values; actual values may depend on programme)*

Credits 7.0 **Study time 210 h**

Course offerings and teaching methods in academic year 2024-2025

A (Year)	English	Gent	peer teaching
			lecture

Lecturers in academic year 2024-2025

Jacobs, Sander		lecturer-in-charge
Cliquet, An	RE22	co-lecturer

Offered in the following programmes in 2024-2025	crdts	offering
Master of Science in Teaching in Science and Technology(main subject Biology)	7	A
Master of Science in Biology	7	A
Exchange Programme in Biology (master's level)	7	A

Teaching languages

English

Keywords

Course title: **Human and political ecology II: global perspective**
Ecosystem services, synergies and trade-offs, plural values, stakeholders, stakeholder analysis, environmental conflicts, inter- and intra-generational sustainability, environmental justice, environmental law, procedural justice, policy, international and regional assessments and political processes, activism and positionality of the scientist.
Remark concerning language: a number of lessons (of some of the guest lecturers) will be given in Dutch, though slides will always be in English; in case of participating students that do not speak Dutch, lessons (slides and discussion) will be given in English.

Position of the course

The global biodiversity crisis calls for urgent transformations. The impact is not only ecological, but also political, economic and social. The role of (natural) scientists is being politicized as a result. => Objective: Scientists can provide robust and legitimate information on the biodiversity crisis and are aware of political aspects in science communication and science-policy interactions at regional, national and international levels.

- Society: Biodiversity crisis has a major social and economic impact, and requires policies that also have a major impact on various social groups. The role of science/scientists is highly politicised. *=> Objective: Scientists are aware of the challenges of scientific policy work on sustainability.*
- Professional: Biologists are involved in complex discussions about climate policy, biodiversity policy, political and economic instruments, estimating the ecological, political, social and economic impact of policy scenarios, and interacting with political players. *=> Objective: Scientists are able to support political decisions about open space/nature together with experts from other disciplines, and non-academic local knowledge, and to provide the relevant and robust ecological knowledge for this.*
- Research: Ecological science needs reflective research on the positioning of the field, and of the societal impact of ecology/ecologists, in order to contribute more effectively to sustainability challenges, to better conduct policy-supporting

research, and to complement fundamental ecological research with an applied political branch. *=> Objective: Scientists critically investigate the interaction between political, economic and social systems and ecosystems.*

Contents

Lectures by the lecturer, co-lecturers and guest speakers; plenary debate, seminars and serious game. Empathizing with different perspectives, experiencing conflicts and power, insight into political aspects of nature conservation, sustainability, transformation from a policy, citizen and scientific perspective. Approx. 15-20 live sessions (10*2 lesson blocks) with topics (among others, and to be confirmed):

- IPBES assessments
- Legal and justice aspects
- Agriculture & Nature
- Business & Entrepreneurs
- Urbanization & Nature
- Participatory Planning Stakeholders,
- Governance and policy instruments
- Transformative change
- The role of activism in transformative change
- Positionality of the scientist

Exercise: Essay or Symposium Organization:

1. write a personal essay scientifically substantiating and defending an opinion related to biodiversity, nature conservation, environmental management, ecosystem management or ecosystem services (equivalent to a 3-week internship),

OR

2. organizing a symposium in group on the theme of Global Change Ecology with attention to the social context

Initial competences

General ecological and biological knowledge, specific knowledge on nature management, biodiversity politics, societal involvement in biodiversity conservation

Final competences

1 Students are aware of the challenges of scientific policy work on sustainability.
2 Students are able to support political decisions about open space/nature together with experts from other disciplines, and non-academic local knowledge, and to provide the relevant and robust ecological knowledge for this.
3 Students critically investigate the interaction between political, economic and social systems and ecosystems.

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Group work, Seminar, Lecture, Independent work, Peer teaching

Study material

Type: Other

Name: no material required
Indicative price: Free or paid by faculty
Optional: no

References

- Anguelovski, I. et al. Expanding the Boundaries of Justice in Urban Greening Scholarship: Toward an Emancipatory, Antisubordination, Intersectional, and Relational Approach. Annals of the American Association of Geographers110:6, 1743-1769 (2020)
- Amorim-Maia, A.T., Anguelovski, I., Chu, Eric & Conolly, J. Intersectional climate justice: conceptual pathway for bridging adaptation planning, transformative action, and social equity. Urban Climate41, 101053 (2022).
- Aragao, A., Jacobs, S., & Cliquet, A. What's law got to do with it? Why

environmental justice is essential to ecosystem service valuation. Ecosystem Services, 22, 221-227 (2016).
- Balvanera, P. et al. Key features for more successful place-based sustainability research on socio-ecological systems: a Programme on Ecosystem Change and Society (PECS) perspective. Ecology and Society 22 (2017).
- Patricia Balvanera, Rafael Calderón-Contreras, Antonio J. Castro, María R. Felipe-Lucia, Ilse R. Geijzendorffer, Sander Jacobs, Berta Martín-López, Ugo Arbieu, Chinwe Ifejika Speranza, Bruno Locatelli, Natalia Pérez Harguindeguy, Ilse Ruiz Mercado, Marja, L. G. Interconnected place-based social–ecological research can inform global sustainability. Current Opinion in Environmental Sustainability29, 1–7 (2017).
- Fortnam, M. et al. The Gendered Nature of Ecosystem Services. Ecological Economics159, 312-325 (2019).
- Harrison, P. A. et al. Selecting methods for ecosystem service assessment: A decision tree approach. Ecosystem Services 29, 481–498 (2018).
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- Jacobs, S. et al. The means determine the end–Pursuing integrated valuation in practice. Ecosystem Services 29, 515-528 (2018)
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- Kabisch, N. & Haase, D. Green justice or just green? Provision of urban green spaces in Berlin, Germany. Landscape and Urban Planning122, 129-139 (2014)
- Kronenberg, J. et al. The thorny path toward greening: unintended consequences, trade-offs, ad constraints in green and blue infrastructure planning, implementation, and management. Ecology and Society26:2 (2021).
- Maes, J. & Jacobs, S. Nature-Based Solutions for Europe's Sustainable Development. Conservation Letters 10, 121-124 (2015).
- Pereira, L., Sitas, N., Ravera, F., Jimenez Aceituno, A. & Merrie A. Building capacities for transformative change towards sustainability: Imagination in Intergovernmental Science-Policy Scenario Processes. Elementa 7, 35 (2019).
- van Oudenhoven, A. P. E. et al. Key criteria for developing ecosystem service indicators to inform decision making. Ecological Indicators95, 417–426 (2018).
- Zafra-Calvo, N. et al. Plural valuation of nature for equity and sustainability: Insights from the Global South. Global Environmental Change 63, 102-115 (2020)

Course content-related study coaching

Interactive support using Ufora, email and lectures, individual contact moments (appointment necessary)

Assessment moments

end-of-term assessment

Examination methods in case of periodic assessment during the first examination period

Oral assessment, Participation, Peer and/or self assessment, Presentation, Assignment

Examination methods in case of periodic assessment during the second examination period

Examination methods in case of permanent assessment

Possibilities of retake in case of permanent assessment

not applicable

Calculation of the examination mark

Participation, presentation /10
essay or symposium /10
total /20

Facilities for Working Students

to be agreed case by case with involved students