Course content

To move towards a sustainable future, new types of innovation are called for – innovations that address the "grand challenges" while also taking into account the environmental and social consequences of new innovations. Can we innovate our way to a diverse, low-carbon, green society? This course will explore the relationship between innovation and the environment, including the potential to move toward a "green economy". The role of both technological and social innovations in response to problems such as climate change, biodiversity loss, and land use change will be critically assessed. The **first module** of the course presents the context for innovation in the 21st Century, providing the historical and scientific background of the serious environmental challenges facing society. Diverse perspectives will be presented on the role of new technologies and green innovations as a response to environmental problems. The **second module** will introduce the major approaches to innovation studies. The institutionalization of innovation will also be discussed, with an emphasis on the role of learning, knowledge, and policy. The **third module** looks at empirical studies of green innovations, including new energy technologies such as wind and solar power. New transportation technologies, "smart cities", and innovations in the bio economy, including bio mimicry, will be discussed. Finally, the **fourth module** will critically assess the potentials and limits of innovations as a response to environmental problems, and discuss the role of social innovation in transformations to sustainability. The course will consist of ten lectures and four seminars. In the seminars, each student will choose an example of an innovation in Norway and assess it from the perspective of its environmental and social impacts, leading to a short paper and presentation. The literature will consist of both articles and book chapters. It is recommended that students have taken either SGO2301 Environment and Society or SGO2200 Economic Globalization and Regional Development, or ideally both courses.

Learning outcome

Knowledge

- A critical understanding of concepts and theories related to ecological modernization, innovation, and sustainability;
- Understanding new drivers of innovation in the context of global environmental challenges;
- Recognize the features and characteristics of both technological and social innovation;
- An ability to assess the positive and negative social, economic and environmental aspects of innovation;
- A critical understanding of the challenges and opportunities associated with sustainable development.

Skills and Competencies

- Ability to discuss diverse approaches to innovation;
- Critical understandings of examples of contemporary innovation;
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