

# POLICY FOR GREEN GROWTH AND SYSTEM INNOVATION

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## CONTEXT

The Nordic countries are among the forerunners in the transition to sustainable and prosperous societies, however, the severity of global warming and other grand challenges such as the biodiversity crisis makes it essential to maintain and strengthen current efforts. This course builds on the latest knowledge on policy and its role in facilitating changes towards greater sustainability in the systems that deliver core services such as electricity and nutrition. The course aims to connect this knowledge to the ongoing tasks of participants in their everyday work, in order to bridge the gap between theory to practice. The long-term objective is to allow participants to formulate and implement better policies for green growth and system innovation.

## JOINT NORDIC RESEARCH AND EDUCATION

The course is offered by a consortium of Nordic universities and research institutes engaged in cutting-edge research on innovation, sustainability, economic development and policy. The course is based on accumulated research from multiple projects on these topics, but formally part of the Green Growth Policy Mixes project financed by NordForsk. The course is offered to professionals working with policy formulation or implementation connecting to topics such as green growth and sustainability transitions.

## LEARNING OBJECTIVES

Following course completion, participants will have strengthened their ability to:

- Understand the functions of and relations between different organisations in promoting green growth and system innovation.
- Analyse challenges and opportunities for formulating and implementing policies stimulating green growth and system innovation.
- Implement system innovation thinking in their everyday work



***Accelerating the transition towards  
a sustainable Nordic society***



## COURSE DESIGN

The course consists of a total of four modules that cover core areas of policy for green growth and system innovation. In parallel to the four modules with lectures and discussions, participants will work on a project that is linked to an identified challenge or case in their organizations in order to directly apply knowledge and skills that are imparted. The course structure enables and facilitates studies with work activities. Moreover, the course focuses on understanding, explaining and improving different parts of participant's own activities with the help of literature, (filmed) lectures, reflection questions, peer review and seminars with a focus on dialogue and exchange of experience with teachers and other course participants.

### MODULE 1: Public sector competences for system innovation

The role of public sector organisations changes significantly when the goal of innovation policy is not 'merely' facilitating new products or processes, but rather system innovation, i.e., radical changes in entire systems delivering, e.g. mobility, food, or energy. With the changing role comes new competence requirements for the people employed in the public sector – both those directly involved in formulating innovation policy and those playing central roles on the implementation side. There is a need to enhance both system-level generic competencies and individual-level capabilities.

The main aim of this module is (a) to identify and specify the kind of competencies and capabilities that are called for in systemic transition and (b) to support individual-level learning by discussing capabilities that champions of green growth are required to learn not only to administrate resources and formulate new policies, but to pool scattered knowledge and resources to serve a common purpose.

- What are the characteristics of system innovation competence sets?
- How do system innovation competence sets differ between organisations with different roles in the policy system? E.g. funders of research and innovation, departments and ministries, intermediaries and regions.
- How can system innovation competence sets be nurtured?

Module is given by Sotarauta and Hansen.

## **MODULE 2: Making green growth happen: place leadership for transition**

The transition to a green economy depends on the engagement of actors from different sectors and multiple scales from the local to the global. Such a diverse set of actors is embedded, constrained, and enabled by the structural conditions such as dependencies in global value chains, regulations, laws, tax, or innovation incentives. Yet, actors can also intentionally work towards / or against the realization of a green economy. From a policy perspective, it is important to identify what makes actors to actively engage in a green growth agenda, what enables and constrains them. It is hard to see green growth reaching beyond rhetoric without actors that are capable of assuming leadership positions for the creation of a collective understanding of transformation, potentially leading to a new development agenda and its execution.

In this module, we focus on sub-national level leadership, using the concept of place leadership. Importantly, place leadership may be assumed by different types of actors, including managerial, political, civic, academic and business actors. Moreover, place leadership may have many manifestations (Sotarauta & Beer, 2021). The main premise is that leadership is not about office-holding or high prestige or authority or decision-making. We are not identifying leadership with whatever is done by people in high places but with mobilization and coordination of diverse groups of actors to achieve collective effort. Place leaders work across institutional, organizational, geographical and/or sectoral boundaries to amplify the local power base for strengthening the capacity to influence those with great powers' (Sotarauta & Beer, 2021).

This theme will discuss:

- How do actors make a change, how do they influence?
- Who are the place leaders in different situations?
- How do context facilitate and/or hamper place leadership, and how do place leaders work to change the very same institutional arrangements in which they are embedded?
- How do leaders aim to accomplish their ambitions; from where the ambitions emerge; how do they establish new governance and power systems; how do they deploy the existing systems of power and governance as resources in their endeavors
- What kinds of power do place leaders have, and how do they exercise influence?

Module is given by Grillitsch, Sotarauta and Suvinen

## **MODULE 3: Policy instruments for green growth and innovation**

The Porter hypothesis states that stringent environmental regulations may enhance product and process innovations. It is argued, that supply-pull policies are required to affect the early stages of technology innovation, while demand-push policies will affect the later stages (Grubb, 2003). Yet, what are the principal properties of the various types of policy instruments, ranging from sermons to sticks and carrots? Two types of carbon pricing are at the forefront of climate policies; emissions trading and carbon taxation – and they are widely considered key to successful decarbonisation. However, will they manage to perform as well supply-pull as demand-push functions? Their theoretical properties in terms of the abilities to induce technological innovations are not the same. Moreover, how can other policy instruments be expected to underpin both incremental and radical technological changes.

Important questions that arise are the following

- What are the core incentives to innovators and investors from various policy instruments ?
- Is there a 'double dividend' from carbon pricing, spurring growth and decarbonisation?
- What can we learn from the ex-post evidence on green growth and innovation?

Module is given by Andersen.

## **MODULE 4: Implementing transformative (or mission-oriented) innovation policy at the national & regional level**

The increasing attention to grand societal challenges (climate change, ageing, loss of biodiversity etc.) has brought about a broad range of suggestions for policy response strategies. Various labels 3rd generation, transformative, or mission-oriented, these views on the need for radical change in innovation policy thinking highlight the need for directionality, alignment and coherence across policy areas and scales, and the importance of addressing a much broader set of failures (systemic, transformational) in innovation and how innovation should be fostered. Despite a rich theoretical discussion, however, there is a lack of insight into the actual implementation and operationalisation of transformative innovation policy within (public) organisations and agencies (Robinson and Mazzucato 2019; Grillitsch et al. 2019; Wittman et al. 2020).

This theme will discuss:

- What lessons have been learned thus far on the implementation of 3rd generation innovation policy (considering both broad and narrow policy/policy instruments)?
  - Which lessons learned about transformative innovation policy are relevant for smart specialization?
  - What could be effective ways of policy learning across policy domains and agencies – also in an international perspective?
- This theme will to large extent be based on participants' experiences (with actual implementation/operationalisation, or strategy development).

Module is given by Steen, Græsleie and Grillitsch.

## TARGET GROUP

The course targets policymakers and practitioners working with policy formulation or implementation connecting to topics such as green growth and sustainability transitions. Participants may be working with innovation policy or with sectoral policy, but with a clear focus on transitioning to sustainability.

The course emphasises opportunities for cross-national exchange, as well as exchange between participants from different types of organisations, such as national and regional authorities, research and innovation funders, and cluster organisations and other types of intermediaries.

***The course is free of charge. Financial support from NordForsk through the project Green Growth Policy Mixes is gratefully acknowledged.***

## PREREQUISITES

At least four years' experience with policy formulation or implementation of relevance for the topic of the current course.

## COURSE TEAM

The course is interdisciplinary with lecturers from across the Nordic countries. Faculty include Mikael Skou Andersen, Department of Environmental Science, Aarhus University; Markus Grillitsch, Department of Human Geography and CIRCLE, Lund University; Teis Hansen, Department of Food and Resource Economics, University of Copenhagen; Markku Sotarauta & Nina Suvinen, Faculty of Management and Business, Tampere University; Lisa Græsle & Markus Steen, Department of Technology Management, SINTEF.

## PRACTICAL INFORMATION

**Course period:** Autumn 2021 with a final conference in December. The course starts with a introduction seminar in week 36. Each module expands over two weeks with one week break in between. The estimated workload per week is 5h.

**Number of seats available:** The course have limited number of seats. This course round is open for 30 participants.

**Place:** Online and one day physical meeting in Lund.

**Course fee:** Free of charge for policymakers and practitioners working with policy formulation or implementation connecting to topics such as green growth and sustainability transitions.

**Apply to the course here:** <https://dinkurs.se/greengrowth>

## CONTACT INFORMATION

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