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Thesis projects brochure

Environmental Policy Group
WAGENINGEN UNIVERSITY
Address: Hollandseweg 1, 6706 KN Wageningen, The Netherlands
Telephone: +31.317.484.452 Fax: +31.317.483.990

Website: http://www.wur.eu/enp
Facebook: https://www.facebook.com/Environmental.Policy

Table of Contents

Introduction

This brochure
This brochure presents a list of thesis projects for students who wish to pursue their thesis at the Environmental Policy Group (ENP). ENP motivates students to align their BSc or MSc thesis with one of the thesis projects outlined in the brochure. Alternatively, there is the possibility for students to do something different and to develop their own idea for the thesis in Environmental Policy. In that case the student is strongly encouraged to come up with a one-page proposal to the thesis coordinators.

The thesis projects are organized around the five research themes of ENP: Sustainable Food Transformations; Sustainable Urban Infrastructures; Governing Environmental Mobilities; Marine Governance; and Governing Climate Futures. The thesis projects are often linked to research lines and running projects of staff members. Further information on the content and running projects under each of these research areas, please check out the ENP website: http://www.wur.nl/en/Expertise-Services/Chair-groups/Social-Sciences/Environmental-Policy-Group/Research.htm/research

Besides listing potential thesis projects and laying out the ENP research themes, this brochure includes a list of recently completed ENP theses, and a list of companies and organisations where ENP MSc students have performed internships in the past.

Internship possibilities are also published on the ENP Facebook page: https://www.facebook.com/Environmental.Policy. For inspiration or more information you can also check the information for students pages of the ENP website: http://www.wur.nl/en/Expertise-Services/Chair-groups/Social-Sciences/Environmental-Policy-Group/Information-for-students.htm

How to get started…

Exploring research topics
If you intend to do an ENP thesis, please explore in this brochure which research themes and thesis projects you want to address. Also browse through previous thesis titles: List of ENP Theses or access full theses via https://www.wur.nl/en/Library/Students/MSc-theses-online.htm (select Environmental Policy as 'chairgroup').

Intake meeting with your thesis coordinator at ENP
Students who would like to do their MSc thesis at ENP should contact Erna van Ludevelde (**erna,vanludevelde@wur.nl**) to make an appointment for an intake with a thesis coordinator in our group. Students are expected to prepare themselves for the intake meeting by selecting one of the five research themes to do their research in and one or two thesis projects of interest that fall under that theme. Alternatively, there is the possibility for students to do something different and develop their own idea for a thesis in Environmental Policy. In that case the student is strongly encouraged to come up with a one-page proposal to the thesis coordinators.

At the intake meeting, the thesis coordinator will discuss the possible supervisors for your thesis topic within the ENP group. Note that students are only allowed to start a thesis when they have completed their Bachelors and the required ENP thesis preparation courses according to their Masters programme (see study handbook).

First meeting with supervisor
Once you have made contact with a potential supervisor, you will further select and demarcate the research subject. After you agreed on the exact research subject, you should register as a thesis student. During the first meeting with your supervisor, you will obtain further information about the thesis trajectory and requirements. Important to know is that the proposal trajectory entails a maximum of three meetings for the proposal writing. During the remaining thesis trajectory, every text will only be read

twice: in part (e.g. chapter or section) and in the context of the full draft thesis.

Registration as a thesis student
Once you have a supervisor assigned to you, you need to register as a thesis student at the ENP group. You do so by submitting the thesis registration form to your supervisor, including the following information: your name, and address, thesis topic, and thesis period. The supervisor will check the information and forward it to the group's administration. After registration you will obtain a 30 Euro contribution for covering printing costs and you may use the research facilities of the group. For further steps and information check the Student's Guidelines for Thesis Research at the ENP Group: http://www.wur.nl/en/Expertise-Services/Chair-groups/Social-Sciences/Environmental-Policy-Group/Information-for-students.htm

Thesis Café
As soon as you are registered as a thesis student (MSc only) you will be added to the Thesis Café initiative organised by the cluster of ENP, FNP, LAW and PAP chair groups. Thesis Café sessions are organised regularly to provide a (social) space for students to meet and share thesis experiences and challenges, followed by drinks. In addition, there is the possibility to continue meeting on- and offline through the dedicated Brightspace site. The Thesis Café meetings are not obligatory but highly recommended. The feedback and learning obtained tend to reduce the time spent on thesis writing and to improve their quality.
Contact: Maartje van der Knaap (maartje.vanderknaap@wur.nl)

Research programme of the Environmental Policy Group

The mission of the Environmental Policy chair group (ENP) is to *develop innovative ways of analysing and understanding social and political transformations of the environment*. Core to this mission is the analysis of how and to what extent environmental considerations become incorporated into and change modernisation and globalisation processes, and the design of environmental governance arrangements that extend across multiple levels and spatial scales.

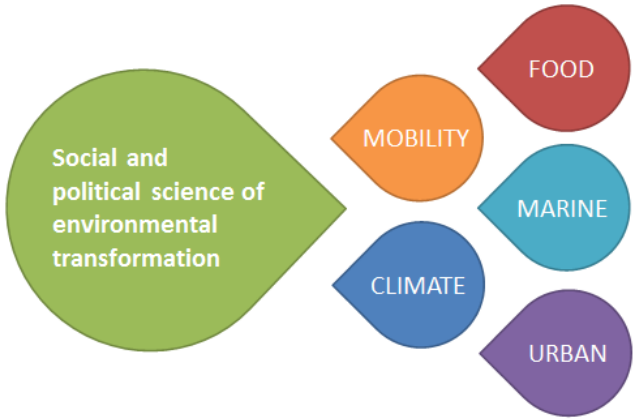
The core objectives of the research programme are threefold:

1. Analyse and understand transformations in local, national and global environmental governance arrangements, against the back-ground of a rapidly changing cultural, political and economic global order;
2. Analyse how individuals, groups and organisations deal with, and respond to, the environmental and health risks and uncertainties that emerge as side effects of modernisation/globalisation.
3. Contribute to the institutionalisation of fair and equitable environmental and sustainability standards, requirements and criteria in (international) processes, networks and practices of production, consumption and governance.

ENP research focuses on theoretical development for understanding and critical analysis of social and political transformations of the environment. Theoretical diversity characterises the group, but it subsumes two clear lines of inquiry. First, the group continues to develop an eco-modernist perspective to environmental change, drawing on a combination of macro-sociological theories of global risk and network society, micro-sociological perspectives focused on social practices, and institutional perspectives of political modernisation and transition theory. Second, the group develops critical social science perspectives drawing on international political economy, political ecology, and global production chains and networks. Bringing these eco-modernist and eco-critical perspectives together will

enable the group to explore the tension between social innovations (e.g. policy instruments and governance arrangements) and social consequences (e.g. inequality, control and exploitation) inherent in environmental change processes.

The research programme of ENP is divided into five parallel thematic areas representing key, contemporary global environmental challenges. First, reflecting the challenges of ongoing population growth and distributive challenges of global nutrition, ENP explores the governance and practices of *sustainable food transformations*. Second, the design and governance of sustainable *urban infrastructures*, exploring the emergence of new social practices and institutions in the reconfiguration of urban infrastructures and cities at large, as well as their local and global environmental impacts. Third, the challenges involved in *governing environmental mobilities* associated with tourism, migration and transport. Fourth, the *marine governance* theme incorporates research on the planet's single largest global environ-mental resource, exploring issues related to spatial planning, fisheries, ecosystem conservation, shipping, and offshore infrastructures. Fifth, *governing climate futures* subsumes research on global and sub-global climate policy, including societal responses and intersections with strategies for renewable energy provision or adaptation policies.



Thesis projects

Sustainable Food Transformations

Food is an essential part of everyday life for all human beings but involves critical sustainability challenges as well. Food-related environmental impacts occur along the complete supply chain from production through to processing and trade, and consumption and waste and include biodiversity loss, climate change and social equity challenges. Critical sociological and political analysis can contribute to reducing these negative impacts. Building on social practice theories, ecological modernisation theory and transition theory, as well as theories on global value chains, production networks and food systems, ENP addresses these challenges by researching the ways in which sustainability considerations are included in food production and consumption, and by studying how different social actors, organizations and institutions engage with innovative governance arrangements and socio-technical innovations. We study everyday practices of food consumption, consumer access to sustainable, safe and healthy food, and consumer-retailer interactions. We also study the institutional structures of globalising food networks, including labelling and certification schemes addressing sustainability-related food risks. By analysing the connections between different actors within food production and consumption networks we aim to offer innovative perspectives on strategies for environmental transformation. A global perspective is central to our approach and we pay particular attention to social (inequality) impacts which come along with and result from these transformations. The research aims for societal impact through the identification of promising ways to advance environmental transformations in the domain of food in an equitable manner.

Possible MSc thesis projects under this theme are the following:

Increasing fruit and vegetable intake of low-income populations in Vietnam and Nigeria through food system innovations

Food systems should be transformed to become more nutrition-sensitive and sustainable. The so-called triple burden of malnutrition encompasses undernutrition, micronutrient deficiencies and overweight/obesity, and is increasingly observed in developing economies. This project addresses the problem of the triple burden of malnutrition among low-income urban populations in Nigeria and Vietnam by increasing their intake of fruits and vegetables (F&V) through food system interventions that improve access through diversification of retail outlets, enhance affordability through a client-specific coupon system, and boost acceptability of fruits and vegetables through promotional campaigns. The project is implemented in a central and a more peripheral urban area in Ibadan, Nigeria and Hanoi, Vietnam, offering different contextual situations. To inform the interventions a cross disciplinary mix-method analysis is required on readily available quantitative-qualitative mixed method data sets. The data sets include: (i) household survey data on F&V consumption practices, (ii) F&V market level assessment data, (iii) focus group data on household F&V consumption barriers, (iv) 24hour dietary recall data, and (v) F&V seasonality data. Each data set has been analysed separately. The aim of this assignment is to harvest more comprehensive understandings on the interrelation of food intake, food environment and food consumption barriers by deploying an integrated sociological and nutritional perspective. The project offers the opportunity for two students, one with a background in Nutritional Sciences and one with a background in Sociology, to collaborate. Note: Country visits can be arranged but are on own expenses.

Supervision: Sigrid Wertheim-Heck and Elise Talsma (Human Nutrition and Health Department)

Food shopping practice among the international and national residential students of the WUR

International migration plays an important role in a person's social life and food consumption. The relocation alters ones social trajectories. Food consumption pattern also changes since migration imposes new culture, weather, and study/work environment. The research will explore the food shopping practices according to international ethnicity and, how has it been changed due to migration? It should produce a proxy estimation for the differences in food shopping pattern in other countries compared to the Netherlands.

Supervision: Latiful Haque

Public Perception of Palm Oil in Malaysia

Palm oil is a topic of controversy in public and political debates in Europe and the US. Social and environmental concerns related to the impact of oil palm cultivation are expressed in this debate. These criticisms may also have an effect on public opinion in producing countries such as Malaysia. Interesting questions then are: what is the public perception of palm oil in Malaysia and what different categories can be identified within the Malaysian population. This research is organised in collaboration with the National University of Malaysia (UKM).

Supervision: Peter Oosterveer

The impact of regional policies on the sustainability of livestock production

Several regulatory instruments are put forward to address environmental concerns of livestock production, including in the Netherlands. What different instruments are used at the regional level and what is their impact? This thesis looks at the instruments, their targets and indicators developed at regional level.

Supervision: Peter Oosterveer and Evelien de Olde (Animal Production Systems)

Sustainability performances in governing internationally traded food/agricultural commodities

Multi-stakeholder non-state organizations promoting sustainability are nowadays an integrated part of the political landscape in the governance of global value chains. Examples are independent certification schemes (FSC, MSC, UTZ certified, RSPO, Rainforest Alliance) and convening/bridging organizations (IDH/Sustainable Trade Initiative, GIZ) . These schemes and organizations come about in different forms and constellations, have different strategies and visions, but are without exception confronted with questions about their performances/impact. They need to show whether they are relevant, effective, efficient, and the extent to which they live up to their sustainability promises. MSc-students choosing this theme can work from different angles. Focus could be on a comparison between different organizations in how they deal with pressing demands to prove their impact. This links up to our Next Generation Governance research program. Another angle is to explore an organization's contribution to a key impact area, such as smallholders, deforestation, living wages, toxic loading.

Possible supervisors: Peter Oosterveer, Hilde Toonen

Globalizing green consumption: developing the international SCP-agenda

Sustainable consumption is no longer restricted to OECD-countries and developed economies. In this project students look at the role and impact of new middleclass-consumers in transition economies in Asia in particular. What strategies for the greening of consumption are used in countries like China, India or Brazil? In what respects do they differ from the strategies applied in OECD-countries when looking at the role of (retail)companies, NGO's, governments and organized citizen-consumers?

Supervisor: Peter Oosterveer

Sustainable Urban Infrastructures

Sustainability solutions on a metropolitan level change the lay-out and operation of infrastructures and the consumption of their services. They are fueled by societal demands for climate neutrality, for creating a circular economy and new forms of citizen involvement. In response a range of innovative modes of urban governance are emerging, with new actor configurations, policy arrangements and social practices.

The research of the Environmental Policy Group explores the emergence of new social practices and institutions in the reconfiguration of urban infrastructures for the provision of energy, water, food, transport and waste services. Our researchers do this by conducting research on urban infrastructures and its governance in both developing and developed countries. Applying social practice theory, a major part of the research focuses on both domestic and management practices in 'smart' systems and cities at large. We further explore infrastructures through what is referred to as the 'urban nexus', bringing networks and flows of energy, water and food together in user practice and governance arrangements and how they become integrated in circular systems of consumption and provision. We also critically explore processes of technology-society relations and system innovation through theories related to social construction of technology and transition theory.

Possible MSc thesis projects under this theme are the following:

Citizen-consumers in circular economy transitions
There is little doubt that current linear systems of production-consumption-disposal require widespread and systematic change to achieve environmental sustainability. Radical interventions that challenge prevailing socio-economic practices are required. One such key intervention that has recently gained traction is the circular economy (CE). The basic premise of CE is that current linear resource and energy use systems can and should be reconfigured into circular loops of re-use,

repair, refurbishment, and recycling, to alter established modes of primary production and reducing greenhouse gas emissions in the process. New innovative business models as well as urban initiatives to promote circular food and energy systems are emerging in response. The CE agenda has potentially significant implications for daily social practices. However, to date, little attention has been paid, both politically and in research, to how the CE does and will interact with everyday routines, norms and meanings. Furthermore, little work has reflected on the normative and social implications of the CE in terms of the role and experiences of citizen-consumers and broader dynamics of equity, power and participation. Much CE scholarship has remained disconnected from critical theories of social action and change, centring primarily on up stream, production and service-focused aspects of the CE. This research theme focuses on unpacking the role of citizen-consumers and dynamics of social practices in CE transitions in urbanising contexts. Key questions guiding analysis include: Who is the new 'circular' citizen and how do issues of equity, social inclusion/exclusion, power and participation shape citizen engagement with the CE? What role do consumer-focused, urban circular spaces (grassroots and more mainstream initiatives) have for engaging consumers in the CE? What socio-political and normative visions abound in relation to the CE/society and daily life? What are the implications of CE transitions for dynamics of everyday social practices (in relation to household consumption, food, mobility and energy)? How can the CE be conceptualised and studied at a household level? How does the CE interact with everyday routines, norms and meanings? What is the role and experiences of citizen-consumers in taking up new CE consumption practices and resource efficient business models?
Supervisor: Mary Greene

Consumption and urban life-courses
Understanding how social change has intersected with transformations in key resource-intensive domestic consumption practices that comprise part of the fabric and experience of daily living (e.g. mobility, food and energy practices) is of central relevance to questions of sustainable development. There is little sustained work, however, which explores how, when and

why mundane aspects of everyday life change as people move through the lifecourse as well as how lifecourse dynamics in consumption are shaped by wider social changes in urbanising consumption contexts and norms. Existing studies within the field of consumption tend to adopt temporally limited research designs that focus on understanding people's current or ongoing practice. As a result, they rarely consider how consumption practices develop over longer timescales, such as the biographic lifecourse or across generational cohorts in diverse societies. This research theme focuses on exploring the intersections between urbanising lifecourse dynamics and mundane consumption. Some examples of questions include: How and why do daily consumption practices develop and change over individuals lives in different urbanising contexts? How are daily consumption practices shaped by changing lifecourse roles? How do daily social practices and household consumption change during significant lifecourse transitions (e.g. transition to university/ becoming a parent/retiring)? What lifecourse transitions may offer windows of change toward more sustainable consumption practices? Is it possible to observe generational changes in consumption meanings and practices across different urban contexts? In what ways are daily consumption practices shaped over time by wider societal changes (e.g. in relation to governance, socio-technical transitions, systems of provision and changing social identities and lifecourse roles)?
Supervisor: Mary Greene

Nexus at home
This theme seeks to ground recent research on the 'urban nexus' in domestic and everyday consumption practices. It focuses on exploring how flows of resources, including energy, food and water, shaped by urban infrastructures, come together in citizens consumption in domestic contexts. Applying social practice theoretical perspectives, it adopts the position that people don't consume resources for their own sake but rather in accomplishing social practices such as fulfilling family, caring and other social roles. This theme seeks to explore the ways in which everyday resource consumption can be explored through a nexus lens, to shed light on the connections of urban infrastructures with resource use in

householder routines and daily practices, such as those relating to food, laundry and mobility. Specific focal points for analysis include studying how diverse urban infrastructural contexts shape different configurations of nexus of practices in home contexts. Studying the Nexus at home from a social practice perspective is a relative new field in both fields of Nexus and Social Practices. Various contexts may suit for such studies, but there is some initial work done in urban households in Netherlands, China and East Africa to which your thesis can relate.
Supervisors: Mary Greene; Bas Van Vliet

Engaging with renewable energy technology and landscapes
To reach the Paris climate agreement and national sustainability targets, the energy portfolios and landscapes of many countries will (need to) change dramatically towards more renewable energy. More than just a technical challenge, there are policy and societal challenges associated with transition. Notably, more and more people will be confronted with solar panels, wind turbines and other technologies in their 'back yard' in rural and urban areas, and both on- and off-shore. To address possible concerns and facilitate co-production of renewable energy projects, there is a need to go beyond 'organised participation' (informing local stakeholders about renewable energy projects to gain acceptance). This shift will require (new) forms of engagement with renewable energy projects at various stages of development. Moreover, this engagement may touch upon combinations of landscape and technological aspects. A useful distinction may be to differentiate between local, collective and virtual (e.g. through apps and other digital platforms) modes of engagement. This topic is related to two EU wind energy projects at ENP, but is also relevant for other geographical areas and other types of renewable energy.
Supervisors: Mattijs Smits, Helena Solman

Citizen participation in Urban Greenhouse Food production
Organized in 2018, the first Wageningen Green Challenge was to "Design a Smart Grid embedded Urban Greenhouse" that engages urban citizen-consumers with a range of food products that are produced in a circular,

resource efficient and low-carbon manner. Next year international student teams will again be challenged to design such a greenhouse by simultaneously taking into account socio-cultural, (ICT) technical, spatial and environmental factors in a balanced way.
The greenhouse will bring professional food production (back) into urban neighbourhoods in such a way that local citizen-consumers are triggered to actively engage with the process of producing and consuming fresh and healthy food products in sustainable ways e.g. by making use of the latest knowledge on resource use efficiency, circularity, and the climate impact of food. A thesis project may emphasise citizens seeking to enrol and participate in the practices of food growing in urban Greenhouses. The thesis could generate new knowledge on i) the role of ICT in connecting citizens to the urban greenhouse practices and ii) the division of tasks between horticulture/food experts and citizens in the context of urban greenhouse practices. Data will be generated with the help of desk research, interviews with (potential) citizen-participants, and with greenhouse experts.
Supervisors: Sigrid Wertheim-Heck, Peter Oosterveer

Mobile apps and digital platforms for sustainable consumption
In recent years, many digital tools, apps, and platforms have been developed with the aim of increasing the accessibility and convenience of new, more sustainable consumption practices and lifestyles. Examples of these are car-sharing or bicycle apps (e.g. MyWheels, RINGRING), food apps (e.g. Too good to go, Questionmark) and green energy tools and platforms (e.g. Toon, Powerpeers). Where some of these digital tools aim at assisting consumers to make greener choices during shopping (e.g. Questionmark), other tools are aimed at fostering reflexivity about the sustainability impact of people's current practices. Another type of tools are digital platforms that connect providers and users of food, energy or mobility (e.g. MyWheels), often with the aim of fostering collaborative consumption and peer-to-peer exchange. In this project, you build on theories of social practice (e.g. Spaargaren, Shove, Giddens) to investigate how digital tools and apps can facilitate the emergence and embedding of sustainable practices in the domain of food, energy, or mobility. You could

for example do a comparative study of two or three apps in a particular domain (food, energy, or mobility), based on qualitative research among users of the app and/or participatory observation.
Supervisor: Sanneke Kloppenburg

Urban water management
Water management in many global metropolitan centers is under stress due to rising sea levels, draughts or extreme weather events, while the available infrastructures of drainage, drinking water and sanitation are still based on past modernist technological ideals of draining, flushing and central treatment. Models of urban water governance that have co-evolved with the development of central water infrastructures, lead to centralised top-down modes of governance by public or private city wide water companies. With the development of alternative infrastructures for sustainable delivery of water services: drinking water, sanitation, transport and purification of sewage water, also new modes of governance emerge or need to be developed. An example of such development is the Knowledge Action programme on Water Governance at Waternet in Amsterdam. The research aim of this thesis topic is to analyze the provision and development of urban water infrastructures and services in terms of management, access and use by diverse groups in urban societies, for instance by comparative case study research within Amsterdam or between various cities in North and South.
Supervisor: Bas van Vliet

Everyday practice of urban agriculture: case of Oosterwold
Concerns about the future of our food system evokes the emergence of urban agriculture initiatives in many cities around the world. However urban agriculture competes for space in the (peri-) urban fabric and that presents a challenge to urban planning. The city of Almere developed in Oosterwold a hybrid planning practice that conflate agriculture with urban development. One of the key elements of the Oosterwold planning approach is that 50% of the future urban land is earmarked to urban agriculture. This pivotal role of urban agriculture is confirmed in the areas' masterplan with the rule that each home parcel in Oosterwold have to

contain 50% urban agriculture. The rule is captured in a so-called parcel passport that each new settler has to subscribe before licensed to purchase land to develop. The first pioneers started to develop and live in the area since late 2016. Today about 700 people live and farm in Oosterwold, although most residents have an urban background and little experience with (urban) agriculture. The research aim is to unravel how the people perform this living rule of Oosterwold at their property, in their daily routine? How does an urbanist practice farming when planning asks for?

Supervisor: Sigrid Wertheim-Heck, Jan Eelco Jansma

Governing Environmental Mobilities

In a globalized world, we are facing a continuous growth of movements of people, goods, materials, and information. These movements, analytically termed mobilities, actively intersect with processes of environmental change. We coin the term environmental mobilities to refer to the movements of human and nonhuman entities and the environmental factors and impacts associated with these. For example, some mobilities (such as hazardous waste) are inherently harmful to the environment, while other mobilities (such as migration) are set in motion by the impacts of environmental change. Our research centers on the governance of these environmental mobilities. In particular, a mobilities lens helps to understand and capture environmental issues that move, change form, and fluctuate in their central problematique and whose governance is not (yet) highly or centrally institutionalized.

For further information, watch this short animation video:
https://www.youtube.com/watch?v=9h7GSy8paLQ

Possible MSc thesis projects under this theme are the following:

Climate resilience in a digital society
Communities around the world are experiencing climate impacts, ranging from droughts to extreme storms, damaging basic services and putting additional pressure on communities' livelihoods and resilience. Strengthening societal resilience – of marginalized communities but also of businesses and other actors – is crucial in order to address and adapt to a changing climate.
Up-to-date information and information exchange is vital for societies to prepare for and adapt to increased climate risk. Nonetheless, little is known as to how information shapes climate resilience and what role information and communication technologies (ICTs) can play in that regard. Research into this topic involves the analysis of who produces climate information (top-down/bottom-up/co-production); who decides what is done with the information; how information is interpreted and how it interacts with more traditional coping strategies to environmental change.
Possible supervisors: Machiel Lamers, Ingrid Boas, Sanneke Kloppenburg, Berill Blair (Topic cross-cutting climate futures theme)

Adaptation in vulnerable marine tourism destinations
Coastal regions and islands are among the most popular tourist destinations. They are also highly vulnerable to global environmental change. The literature on vulnerability and adaption of tourism destination is still scarce. There is still a dearth of knowledge on what vulnerable tourism destinations can do to decrease their vulnerability, and how various adaptive measures relate and interact. What adaptation measures or policies contribute to reducing environmental vulnerabilities, and how do such measures affect other societal or environmental interests, including cultural heritage, marine protected areas or coastal livelihoods? Thesis research can take the form on in depth case studies of

Mediterranean, Caribbean or South East Asia islands, or comparing insights from a range of destinations.
Supervisor: Machiel Lamers

Energy tourism: a new frontier in sustainable tourism?
There are many different types of tourism. One relatively new type is energy tourism, which falls more broadly under sustainable or eco-tourism. Examples are tours to islands in Indonesia that want to switch to 100% renewable energy sources or day trips to villages in Thailand that generate their own electricity through hydropower. There are more questions than answers in this field. What is energy tourism exactly and how 'big' is it? What types of people are attracted to this type of tourism? What is the role of tourists, NGOs, tour operators and local people in these projects? Does this type of tourism help to support more sustainable forms of energy production and consumption or does it rather do the opposite, for example by encouraging people to undertake long-distance travels? Student choosing this topic have the opportunity to delve into this uncharted territory, both theoretically and empirically.
Possible supervisors: Machiel Lamers and Mattijs Smits

Tourism and water
Fresh water is crucial for life and livelihood, but its limited availability is threatened by population growth, climate change and irreversible use. Tourism is the largest service industry on the planet and therefore among the largest consumers of water. To reduce tourism-related water use, a better understanding of the behaviour surrounding its use is needed. Social practices theory provides a relevant and fitting framework for analysing tourism activity as a collection of 'water-use practices'. By focusing on one or relating more of these tourism-related water use practices our understanding of the behavioural dynamics of water uses can be enlarged. In addition, the research can focus on innovative measures suggested by providers of water and tourism services and assess their effectiveness in relation to the dynamics of the tourism related water use practices, such as smart water meters, rainwater harvesting, recycle

showers, etc. An in-depth case study in one of many water scarce tourism destinations (for example islands) forms the empirical basis of your thesis.
Supervisor: Machiel Lamers

Closing plastic resource cycles
Industrial ecology, Cradle-to-cradle, circular economy: these are all models that aim at moving from 'linear' to 'circular' modes of production and consumption. Particularly Cradle-to-cradle and circular economy have a wide appeal to companies, designers, and policy makers. Both aim to close material and resource loops as a solution to simultaneously deal with wasting waste as well as with growing scarcity of natural resources. Closing these loops requires the forming of new networks through collaboration between designers, production companies as well as waste and recycling companies. In addition, policy makers seek ways to steer society and companies in particular towards circular ways of production. Little experience and social scientific understanding exists about how transformation of linear to circular networks related to production, use and end-of-life of products and materials nor how this transformation is governed. By taking particular resource flows as a starting point, i.e. plastics, MSc-thesis research can contribute to generating more understanding about networks through which plastic flows become circular. What (successful) governmental or industry initiatives exist to increase re-use and recycling of plastic? How does collaboration emerge between companies and between companies and governmental or civil society actors in making plastic resource flows more circular? Who are included and excluded in such networks? How are resources and knowledge shared between actors within these networks? And what does this mean for the power relations between actors and between companies and government?
Supervisor: Judith van Leeuwen
(Topic cross-cutting with the marine theme)

Sustainability transitions in international shipping
International shipping is vital to our global economy and one of the most global industrial sectors that exist. In terms of environmental

management, however, it is lacking behind more land-based (transport) sectors. The shipping sector is still reactive and crisis-oriented when it comes to environmental issues. Some frontrunners have emerged in container shipping, but most of the other segments within shipping still see environmental regulation as a cost and additional burden. At the same time, civil society is increasing its pressure on the shipping sector to become more environmentally friendly and is developing partnerships as well as information-based governance mechanism to push the industry ahead. In addition, the need to decarbonize is putting unprecedented external pressure onto the International Maritime Organization (as main regulator of shipping) and the shipping industry. Recently, new private standards and information-based initiatives have emerged to stimulate decarbonization efforts. But how does the reactive nature of the sector affect possibilities for such partnerships or information-based mechanisms to become a success? And why is the container industry ahead? How do shipping companies deal with implementing environmental regulation and what is needed to advance their environmental management? And how do the new information-based governance mechanisms relate to existing environmental regulation of shipping developed by the International Maritime Organization? Who is involved in these information-based initiatives and what is the potential of such mechanisms accelerate sustainability transitions in shipping?
Supervisor: Judith van Leeuwen
(Topic cross-cutting with the marine theme)

Governing marine litter
Recent studies have made clear how extensive the pollution of the marine environment by litter is. While global in scope, there is no international treaty that governs marine litter pollution. At the same time, a plethora of regional conventions (i.e. the OSPAR convention) do, but seem to be ineffective. We also see a lot of initiatives from civil society and industry actors to prevent or mitigate marine litter. For example, there are multiple examples of beach clean-ups that are organized by eNGOs. But also companies have engaged in this issue, by developing products from marine plastics (e.g. Method, Addidas, Interface) or adopting ambitions for

reducing and recycling their plastic products (e.g. Unilever, Coca Cola). In the meantime, the EU has adopted a large circular economy program around plastics including a Single Use Plastic Directive. Do these initiatives and regulation indeed provide an effective alternative to international environmental regulation? Are there trends we can observe in these initiatives? Who initiated these initiatives and with what motivation? How does collaboration between government, civil society and businesses take place? To what extent are these initiatives greenwashing or are they able to generate a positive effect? Is there any coordination taking place to avoid conflict and overlap between initiatives or to enhance a combine effect?
Supervisor: Judith van Leeuwen
(Topic cross-cutting with the marine theme)

Governing plastic flows in China
China produces nearly one third of the plastic wastes polluting the ocean. In 2017, China banned imports of plastic wastes, along with a number of other scrap and waste materials sent overseas for recycling. In the aftermath of the ban, China is restructuring domestic plastic waste governance with great implications for marine pollution and the international community. How is China's plastic waste import ban and internal restructuring affecting plastic flows in China and globally? This thesis may take a more international approach, focusing on how global plastic flows are shifting in light of the ban, or it may focus on the restructuring of plastic waste flows within China and the consequences for marine pollution.
Possible supervisors: Annah Zhu, Judith van Leeuwen (see also: Marine)

Reforestation/afforestation in China and abroad
China plants more trees than the rest of the world combined. Massive reforestation projects have made the country the leading contributor to "global greening" trends, leaving China with far more planted forests than any other country in the world. This type of large-scale tree planting has recently been said to have "mind-blowing potential" to tackle climate change and is, according to models, "overwhelmingly more powerful than

all other climate change solutions proposed." China is steadily planting billions of trees, domestically and now abroad. This research explores China's large-scale global reforestation investments in order to better understand the unique role China will play in forestry and climate governance in the 21st Century.
Supervisors: Annah Zhu
(topic cross-cutting with climate theme)

Environmental mobilities through the Belt and Road Initiative
The Belt and Road Initiative (BRI) is a multi-trillion dollar global investment plan led by China to be carried out in more than 150 countries worldwide. Referred to as "globalization 2.0," the "new WTO," and the beginning of a new "Chinese world order," the BRI will reshape global sea, rail, and road infrastructure. What are the consequences of the BRI for governing environmental mobilities in the 21st Century? How will BRI investments consider environmental impacts in a transnational arena? This thesis may research one particular sector within the BRI and its associated environmental mobilities (e.g., forestry, shipping, highspeed rail), or may focus on a diverse set of environmental mobilities overlapping within a specific geography (e.g., East Africa, Southeast Asia, the "Polar Silk Road").
Supervisor: Annah Zhu

Environmental change, migration, and im/mobilities
Environmental change, and climate change in particular, is amongst the causes of human mobility (in the form of displacement, rural-urban migration, long-term movements, etc.). While research on this topic has been conducted, many questions remain. For instance: Which groups tend to move (the vulnerable, those that are relatively well-off)? Who may be forced to stay behind or become less mobile because of climate change? Where do people go (to cities, to neighbouring countries, do people remain close to their original habitats)? Is mobility a new phenomenon for these populations or do they see it as a normal coping strategy just as seasonal migration has been in several countries?
This research will analyse these questions through a social network or translocal perspective. Mobility is shaped by social networks (e.g. family

ties, friends, work connections, connections in nearby towns, etc.) and levels of support, exchange of resources and information generated through these networks. An analysis of the everyday dynamics of social networking can provide detailed insight into questions of vulnerability and mobility and into particularities of mobility trajectories; e.g., as to who moves, when, how and where. A better understanding of the daily reality of climate mobility may also inform better governance strategies to protect these populations.
Possible supervisors: Ingrid Boas (possibly Hanne Wiegel)
(Topic cross-cutting with the climate theme)

Climate change and displacement in Europe/US/Australia
The subject of climate change-induced human mobility (in the form of displacement, rural-urban migration, long-term movements, etc.) has become a primary subject of research. Still, most research is done in the global south. This ignores vulnerabilities in the global north. How vulnerable is for instance Europe to climate change and how do they see the risk of having to move (or to become immobile) themselves in the context of climate change. This research could focus on the Netherlands or on other European countries (or on the US/Australia etc, if you are able to conduct research there). This could focus on the impact of floods, sea-level rise, but also on the increasing role of heat waves, droughts and forest fires. The thesis could either focus on the policy side or on the perceptions and mobilities of citizens, or on a combination of both; also paying attention to uneven mobilities when comparing movements by the rich elite and those with lesser resources.
Possible supervisors: Ingrid Boas (possibly Hanne Wiegel)
(Topic cross-cutting with the climate theme)

Governing Marine Futures

The 'marine (governance)' research theme of the Environmental Policy Group addresses the institutional dynamics of several maritime and coastal activities (including fishing, aquaculture, oil and gas production, offshore wind energy, shipping, and tourism) and the enabling and constraining conditions for their governance. Key questions of our research include: How are public and private marine governance arrangements institutionalised? How can we assess the quality of marine governance structures and processes? How to design effective and equitable (state-based or market-based) governance arrangements to achieve sustainable marine management? How can stakeholders in marine governance processes be meaningfully involved?

Building on the policy arrangement approach, political modernization, institutional theories, informational governance, as well as theories on global value chains and global production networks, our empirical research addresses the development, evaluation and design of public and private marine (sectoral and cross-sectoral/integrated) governance arrangements, and the role of knowledge and information in marine governance (such as labelling and certification schemes and forms of participatory knowledge production)

Our research contributes to the development of innovative and legitimate marine governance arrangements. A more sustainable and equitable future for the largest commons in the world will benefit from a better understanding about the ways decision-making processes in the marine context are (and could be) organized.

Possible MSc thesis projects under this theme are the following:

Transparency and traceability in global seafood trade
Illegal, unreported or unregulated fisheries (IUU) is thought to contribute to unsustainable fisheries. One way to combat the global trade of IUU fish is to enhance the transparency in value chains. Transparency can either be driven by public policy, i.e., government regulation, or can be driven by value chain actors. One way to operationalize transparency is through traceable seafood, whereby information about the origin and processing path of fish or seafood items is communicated. A wide range of traceability systems are rapidly being developed and implemented in seafood value chains, often with different goals, technologies, requirements and users. How do traceability systems become embedded at various nodes of seafood value chains? How do various stakeholders define traceability? And how do traceability systems transform fisheries management and global seafood trade? Field work is focussed on producers and traders in the Philippines or buyers and retailers in Europe or the United States.
Possible supervisor: Simon Bush

Bottom up sustainability standards for SE Asian aquaculture?
SEASIP is a collaborative of Southeast Asian partners developing a set of standards specifically designed to develop more inclusive market-based eco-standards for shrimp production in the region. There are a few opportunities under this programme – including: 1. Testing their protocols and standards on farms in Vietnam, Thailand and Indonesia. 2. Researching the possibility for small-holder group certification using SEASIP. 3. Assessing the programme itself to determine how SEASIP can better impact small holder inclusion into the US certified market, while maintaining a necessary level of impact as measured by Seafood Watch. The position also comes with funding, the level of which will be determined by the design of the specific project.
Possible supervisor: Simon Bush

Social dynamics of technological innovations in fisheries
Environmental concerns in fisheries and challenges in fisheries management have led to a focus on technological fixes to solve a range of sustainability issues. Examples include trackers for Fish Aggregating

Devices (FADs) but also wider gear transitions driven by goal to reduce the environmental impact and use of mobile applications to collect data to verify fisheries are operating legally. Whilst technologies offer new opportunities, there are often gaps between what is prescribed and what is done in reality. This brings along various questions about the evolution of technologies and social uptake which is key to understanding the potential and thus the implications of technological innovations in fisheries.
Possible supervisors: Simon Bush, Hilde Toonen

Understanding aquaculture governance in Southeast Asia
The region of Southeast Asia is the second largest producer of aquaculture in the world (13 million tonnes, live weight). As such, understanding and improving governance of this sector is vital to supporting responsible (and sustainable) aquaculture production and management. However, a wholistic understanding of aquaculture governance for this region is lacking. Using data gathered from the Aquaculture Governance Indicators (AGI) project on four Southeast Asian countries (Thailand; Vietnam; Myanmar; and Indonesia), the student will analyze, compare/contrast, and synthesize findings on aquaculture governance for this region. In doing so, they will not only build on existing knowledge but also contribute to a better understanding of governance trends, challenges, and opportunities for action to improve sustainability and management of aquaculture. Depending on time and resources available, there is also a possibility for the student to conduct an AGI assessment for specific country (e.g. Cambodia) (to be discussed).
Possible supervisors: Furqan Asif, Hilde Toonen

Circular 'blue food' from the North Sea
'Blue' food, including all fish, invertebrates, plants and algae, has enormous potential to contribute to sustainable human nutrition in both local and global food systems. This is in particular through low trophic aquaculture (LTA), such as mussel and seaweed culture, in coastal and

offshore regions. In the North Sea, the mussel and seaweed sectors could develop into world leading examples of circular 'blue' food production systems, on a regional scale. However, knowledge is lacking on the current and potential role and contribution of these sectors to circular food regions. We are looking for two MSc students to analyse the governance challenges of expanding circular LTA in the North Sea. These challenges include the development of knowledge on production systems that allow producers to transition to circular production practices and policy makers and NGOs to advance multi-sector marine spatial planning.
Possible supervisors: Simon Bush, Hilde Toonen

Big data in ocean governance
Technological innovations designed to collect spatially referenced data are becoming formative forces in ocean governance. Satellite-related tracking systems for (fishing) vessel activity for example are indispensable in informational processes that support policy-making, monitoring and auditing. More and more, big data technology platforms, often open-access and led by non-state actors, are used to map out multiple uses of the sea. Topics for thesis research include explaining how open-access information systems facilitates transparency and democratization in ocean governance, for whom and why? Focus could also be on analysing the extent to which technological innovations induced by non-state actors enable or hinder state-based governance.
Possible supervisors: Hilde Toonen, Simon Bush

Sustainability transitions in international shipping
International shipping is vital to our global economy and one of the most global industrial sectors that exist. In terms of environmental management, however, it is lacking behind more land-based (transport) sectors. The shipping sector is still reactive and crisis-oriented when it comes to environmental issues. Some frontrunners have emerged in container shipping, but most of the other segments within shipping still see environmental regulation as a cost and additional burden. At the same time, civil society is increasing its pressure on the shipping sector to become more environmentally friendly and is developing partnerships as

well as information-based governance mechanism to push the industry ahead. In addition, the need to decarbonize is putting unprecedented external pressure onto the International Maritime Organization (as main regulator of shipping) and the shipping industry. Recently, new private standards and information-based initiatives have emerged to stimulate decarbonization efforts. But how does the reactive nature of the sector affect possibilities for such partnerships or information-based mechanisms to become a success? And why is the container industry ahead? How do shipping companies deal with implementing environmental regulation and what is needed to advance their environmental management? And how do the new information-based governance mechanisms relate to existing environmental regulation of shipping developed by the International Maritime Organization? Who is involved in these information-based initiatives and what is the potential of such mechanisms accelerate sustainability transitions in shipping?
Possible supervisor: Judith van Leeuwen (Topic cross-cutting with the climate theme)

Governing marine litter
Recent studies have made clear how extensive the pollution of the marine environment by litter is. While global in scope, there is no international treaty that governs marine litter pollution. At the same time, a plethora of regional conventions (i.e. the OSPAR convention) do, but seem to be ineffective. We also see a lot of initiatives from civil society and industry actors to prevent or mitigate marine litter. For example, there are multiple examples of beach clean-ups that are organized by eNGOs. But also companies have engaged in this issue, by developing products from marine plastics (e.g. Method, Addidas, Interface) or adopting ambitions for reducing and recycling their plastic products (e.g. Unilever, Coca Cola). In the meantime, the EU has adopted a large circular economy program around plastics including a Single Use Plastic Directive. Do these initiatives and regulation indeed provide an effective alternative to international environmental regulation? Are there trends we can observe in these initiatives? Who initiated these initiatives and with what motivation? How

does collaboration between government, civil society and businesses take place? To what extent are these initiatives greenwashing or are they able to generate a positive effect? Is there any coordination taking place to avoid conflict and overlap between initiatives or to enhance a combine effect?
Possible supervisor: Judith van Leeuwen (Topic cross-cutting with the climate theme)

Governing plastic flows in China
China produces nearly one third of the plastic wastes polluting the ocean. In 2017, China banned imports of plastic wastes, along with a number of other scrap and waste materials sent overseas for recycling. In the aftermath of the ban, China is restructuring domestic plastic waste governance with great implications for marine pollution and the international community. How is China's plastic waste import ban and internal restructuring affecting plastic flows in China and globally? This thesis may take a more international approach, focusing on how global plastic flows are shifting in light of the ban, or it may focus on the restructuring of plastic waste flows within China and the consequences for marine pollution.
Possible supervisors: Annah Zhu, Judith van Leeuwen (see also: Marine)

Marine Spatial Planning (MSP) in the tropical Atlantic
Oceans and seas provide for economic growth and employment, yet new frameworks will have to be set in place in order to regulate and optimize the range of feasible uses of the marine environment. At the same time, its natural values should be conserved and protected. Marine Spatial Planning (MSP) aims at reconciling human uses and conservation, and is becoming integral part of the policy toolbox in the Global North, especially in the European Union (EU) in particular. However, ocean space all around the world, including EU bordering marine areas like the tropical Atlantic, are in need of planning and balancing economic use and marine conservation. There is a pressing need to build theory and methods for MSP in tropical areas, whereas earning from European experience is useful. But research should also critically address the fact that the policy framework originally

designed for the EU may not fit the specificities of Southern countries. Thesis studies will address opportunities and limits of tropical MSP and contributing to designing innovative approaches to MSP in the tropical Atlantic (highlighting Senegal, Cape Verde and/or Brazil). Students can for example focus on conducting a (comparative) policy analysis, stakeholder analysis, study of community commitment and capacity building. They may choose a multi-level approach or limit their research to the local or national level. Thesis studies fit in to our research related to the PADDLE project.
Possible supervisor: Hilde Toonen

Deliberate governance in European coastal and marine cultural heritage
European maritime and coastal regions are at the crossroads of connections and movement of diverse peoples and cultures. These coastal zones are also historically rich with unique land/seascapes, tangible artefacts, and intangible cultural heritage. Realising the potential of CH in these terms can generate prosperity, bring new jobs and improve environments in ways comparable to Blue Growth initiatives. Yet, coastal cultural landscapes face risks from climate change, pollution, urbanisation, mass tourism, demographic challenges in remote regions, the fundamental transformation of the European fishing industry, and inconsistent policies of sea and shore conservation across governance scales and between regions. In a thesis project, the student can apply a multi-actor scope, and focus on whether and how deliberations will effectively link different stakeholders and decision-makers, will enable co-production of knowledge across sectors and interests and ensure improved integration of cultural and environmental policy arenas. Also, emphasis can (additionally) be put on the design of deliberative tools for social learning, in the sense of a change in understanding, which goes beyond individuals to become situated in wider social groups or communities, where social processes are a catalyst to changes in values, beliefs and understanding and better

recognition of each other's perspectives and concerns across sectors. Students Thesis studies fit in to our research related to the PERICLES project (Preserving and sustainably governing Cultural Heritage through deliberation and Participation). Our case regions are Malta and the Wadden Sea, but students are welcome to explore other regions.

Possible supervisors: Hilde Toonen, Machiel Lamers

Marine ecosystem restoration

Faced with increasing loss of biodiversity and persistent ecosystem degradation, a paradigm shift in global biodiversity policy is unfolding. We are witnessing a move from the traditional 'preservation paradigm' or a hands-off stance to conservation, towards more active forms of intervention in nature through ecosystem restoration. Restoration is defined as "the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed." The goal is to steer the process of recovery towards a desired state of the ecosystem. This definition by the Society of Ecological Restoration is widely accepted and used in the academic literature. However, divergent interpretations exist of what the process of assisting the recovery of a degraded ecosystem means in science and in practice. Multiple visions are often articulated of the desired state of the ecosystem to be pursued, based on different underlying motivations for restoration, understandings of ecological baselines, ways of knowing and acceptable levels of human intervention in nature. Various framings and discourses of restoration thus structure how actors and coalitions define problems and their approaches to solutions. Students may explore topics ranging from how marine ecological restoration is defined and restoration goals are implemented in a specific case; development of evaluation frameworks for ecological restoration; the role of citizen science in restoration; or the science-policy interface in restoration governance of various ecosystem types in diverse geographical locations.

Possible supervisor: Eira Carballo-Cárdenas

Climate engineering in the oceans
Coral reefs are among the most productive and biologically diverse ecosystems worldwide, and also highly vulnerable to global environmental change. Geoengineering technologies being proposed to protect the Great Barrier Reef in Australia from coral bleaching are highly controversial, generating calls for geoengineering governance with robust rules to ensure critical review of such new technologies. Geoengineering proposals include 'shading' the reef by spreading biodegradable polymer film on the water, as well as cloud brightening, a type of local solar radiation management. In addition, some propose cooling shallow water reefs by mixing it with cooler water pumped up from deeper ocean layers. Research questions to be explored by students around these novel and controversial technologies may revolve around science-society relations, stakeholder and power relations, public acceptability and political accountability.
Possible supervisors: Eira Carballo-Cárdenas, Aarti Gupta, Ina Moller (topic cross-cutting with climate theme)

Coastal/marine indigenous knowledge and the global biodiversity regime
The global biodiversity agenda post 2020 is being negotiated within parties to the Convention on Biological Diversity (CBD). Knowledge plays an important role in defining policy problems and solutions regarding persistent biodiversity loss, however, local and indigenous knowledge are often relegated or ignored in global assessments and negotiations. Students are invited to investigate the topic of coastal and marine indigenous knowledge on biodiversity in one of the following lines of enquiry: i) a case study examining how the participatory processes within IPBES that encourage more inclusive knowledge production for global assessments have played out in practice, or ii) how has local and indigenous knowledge being used in defining the CBD's agenda to 2050, in particular regarding coastal or marine issues.
Other topics are also possible, based on students' own interests
Possible supervisors: Eira Carballo-Cárdenas, Sylvia Karlsson-Vynkhuyzen (PAP) and Bas Verschuuren (FNP)

Content or discourse analysis about the mesopelagic zone: What do NGOs, conservation groups, and the general public think and say about the deep sea?

The mesopelagic zone (200m-1000m deep in the ocean) is the focus of several new research projects in the Northern Hemisphere. There are several reasons for this: commercial fisheries interest in the species that live there; the importance of carbon sequestration in climate regulation; and conservation concerns related to ocean acidification and climate change. Because this ecosystem is so remote and understudied, there are many different ways to imagine it, and competing interests in framing it. This project would involve investigating the different ways the mesopelagic zone is imagined or framed by various groups. Depending on the interests of the student, this could be done via discourse analysis (what do different groups say about the mesopelagic?) or another form of content analysis (which images are used to represent the mesopelagic and how do they relate to one another?) or by survey or interview methods. The student would be free to negotiate the method and even the target groups (NGOs, conservation groups, scientists) based on their interests. Other topics that students could explore include 'Potential extreme outcomes of a mesopelagic fishery' and 'Deep uncertainties in the mesopelagic zone'.

NB: It is possible, in consultation with the supervisor(s), to conduct this work as part of a research practice. Please contact the supervisor listed below for more information.

Possible supervisors: Amanda Schadeberg (ENP/ENR), Marloes Kraan (ENP), Eira Carballo-Cárdenas (ENP) and Rolf Groeneveld (ENR).

Governing Climate Futures

Climate change is one of the most profound, complex transboundary and transdisciplinary sustainability challenges facing us today. Governance of climate change requires action at all levels and from all actors, as well as multiple governance strategies and approaches. Increasingly, the key challenge is how to collectively imagine, anticipate and govern climate futures, which are characterized by extreme uncertainty and potentially highly unequal spatial and temporal distributional impacts. ENP research explores and assesses key aspects of this anticipatory climate governance challenge. These include the role of *science, knowledge, information and transparency* in public understanding of challenges and solutions and in national and multilateral governance arrangements, including those under the United Nations. We also examine governance challenges associated with needed, large-scale dietary shifts, as well as controversial new options such as *climate engineering*; as well as the functioning of *carbon markets and carbon trading* in the Global South; the role of new ICT technologies in responding to *climate migration*; and the role and functioning of key tools of *anticipation* (such as foresight, modelling and scenario building) in designing anticipatory climate governance arrangements.

Possible MSc thesis projects under this theme are the following:

Transparency in the Paris Agreement: Furthering Effective and Equitable Climate Action?
Transparency is one of the most widely heard concepts of our age, resonating across diverse global policy domains, including in the domain of sustainability. The driving force behind a transparency turn in global environmental governance is the belief that it will result in more accountable, democratic and effective sustainability actions and outcomes. Yet does transparency fulfil these promises? This project explores whether transparency is indeed a transformative force, including in multilateral climate governance. The climate agreement adopted in

Paris in December 2015 calls for a bottom-up 'pledge-and-review' approach to climate action, with an 'enhanced transparency framework' applicable to all countries. Through *making visible* who is doing what, transparency is expected to help with holding countries to account for meeting their obligations, enhancing trust, and furthering fair and ambitious climate action. Yet is transparency contributing to these objectives? An MSc thesis project on this topic can focus on a number of aspects: first, negotiations of the Paris Agreement's transparency framework, including the information provided by countries relating to their Nationally Determined Contributions (NDCs); second, how the existing transparency framework is functioning, and lessons learned about the conditions under which transparency can actually increase ambition or fairness of outcomes. An overarching question is how the transparency framework operationalizes the climate regime's principle of "common but differentiated responsibilities," which requires burden sharing based on different historical responsibilities and capacities to act of different countries. Is there a trade-off between equity and ambition?
Possible supervisors: Aarti Gupta, Nila Kamil Ina Moller, Robert Bergsvik

Contemplating Climate Engineering Governance: Key Challenges
Climate engineering (CE), or geoengineering, refers to novel technologies now being contemplated to make large scale intentional interventions into the Earth's climate system to attempt to counteract the effects of anthropogenic climate change. They include large-scale approaches to removing carbon dioxide from the atmosphere, as well as large-scale approaches to reflecting incoming sunlight back into space. MSc thesis projects can contribute to ongoing ENP research on this topic, including: (a) the geopolitics of climate engineering governance debates, e.g., the (minimal) involvement to date of developing countries; (b) the role of scientific experts in shaping the climate engineering governance debate and directions; (c) the types of governance mechanisms that are or should be in place to shape decision making regarding testing and deployment of these

technologies; and d) the arrival of climate engineering technologies in political or industrial contexts and its governance implications.
Possible supervisor: Aarti Gupta, Ina Moller

Climate engineering in the oceans

Coral reefs are among the most productive and biologically diverse ecosystems worldwide, and also highly vulnerable to global environmental change. Geoengineering technologies being proposed to protect the Great Barrier Reef in Australia from coral bleaching are highly controversial, generating calls for geoengineering governance with robust rules to ensure critical review of such new technologies. Geoengineering proposals include 'shading' the reef by spreading biodegradable polymer film on the water, as well as cloud brightening, a type of local solar radiation management. In addition, some propose cooling shallow water reefs by mixing it with cooler water pumped up from deeper ocean layers. Research questions to be explored by students around these novel and controversial technologies may revolve around science-society relations, stakeholder and power relations, public acceptability and political accountability.
Possible supervisors: Eira Carballo-Cárdenas, Aarti Gupta, Ina Moller (topic cross-cutting with marine theme)

Municipal climate governance in the Netherlands

Municipalities play a key role in meeting Dutch climate change commitments. Many of them have formulated ambitious climate policies for the coming years, but face challenges in realizing them. To what extent can municipalities set out their own policies – spatial planning, taxes, subsidies, and 'creative' application of national regulation – towards climate neutrality? How can they optimally facilitate energy initiatives of citizens and companies without losing their legitimacy and impartiality? How is municipal council politics playing out in this? These highly actual questions can be investigated in one or more municipalities.

Possible supervisors: Bas van Vliet, Kris van Koppen

The politics and practices of carbon market mechanisms in a post-Paris world

Market-based mechanisms have taken up a prominent role in the mitigation of climate change. Carbon markets and carbon market mechanisms could prove instrumental to achieve these goals by increasing the amount of sustainable energy while reducing greenhouse gas emissions. An increasing number of these carbon markets are emerging at global, regional, national, and even local scales worldwide, including in the Global South. However, their function, mutual interaction, and contribution to sustainable energy development remain poorly understood. What are these different markets and mechanisms? What is their role in the broader context of climate (and energy) policies and politics? What are the main stakeholders involved (and who are excluded)? What is their relation to sustainable development (goals)? How do they influence local practices? This exciting and rapidly changing field requires novel theoretical and empirical approaches. Students can link up with existing research (in Southeast Asia), target other geographical regions, or study specific instruments.

Possible supervisor: Mattijs Smits

NGOs and environmental movements in climate and energy transitions

Climate and energy issues increasingly become the site of heated controversies. Examples are climate mitigation and adaptation policies and projects, the siting of coal-fired or nuclear power stations, and even renewable energy projects. In these controversies, environmental movements can play a central role, highlighting what is at stake in these developments. Often, these movements are not merely 'local' phenomena, but link different actors, issues and policies at various scales. Sometimes, they 'fail' and move quietly to the background, but sometimes, they lead to lasting changes at national or even international level. How can we study these environmental movements and their practices? How do they transform something into a 'matter of concern'? What is the influence of movements on local, national and global climate

and energy policy and vice versa? Students are encouraged to explore these questions through existing research and networks in Southeast Asia, or in other parts of the world.
Possible supervisor: Mattijs Smits

Climate resilience in a digital society

Communities around the world are experiencing climate impacts, ranging from droughts to extreme storms, damaging basic services and putting additional pressure on communities' livelihoods and resilience. Strengthening societal resilience – of marginalized communities but also of businesses and other actors – is crucial in order to address and adapt to a changing climate. Up-to-date information and information exchange is vital for societies to prepare for and adapt to increased climate risk. Nonetheless, little is known as to how information shapes climate resilience and what role information and communication technologies (ICTs) can play in that regard. Research into this topic involves the analysis of who produces climate information (top-down/bottom-up/co-production); who decides what is done with the information; how information is interpreted and how it interacts with more traditional coping strategies to environmental change.
Possible supervisors: Machiel Lamers, Sanneke Kloppenburg, Berill Blair. Ingrid Boas (Topic cross-cutting environmental mobilities theme)

Climate change and displacement in Europe/US/Australia
The subject of climate change-induced human mobility (in the form of displacement, rural-urban migration, long-term movements, etc.) has become a primary subject of research. Still, most research is done in the global south. This ignores vulnerabilities in the global north. How vulnerable is for instance Europe to climate change and how do they see the risk of having to move (or to become immobile) themselves in the context of climate change. This research could focus on the Netherlands or on other European countries (or on the US/Australia etc, if you are able to conduct research there). This could focus on the impact of floods, sea-level

rise, but also on the increasing role of heat waves, droughts and forest fires. The thesis could either focus on the policy side or on the perceptions and mobilities of citizens, or on a combination of both; also paying attention to uneven mobilities when comparing movements by the rich elite and those with lesser resources.
Possible supervisors: Ingrid Boas (possibly Hanne Wiegel)
Cross-cutting with environmental mobilities

Internships

Another possibility for formulating a thesis topic is to link it to an internship. Recent developments at public or private organizations where students perform their internship might provide an excellent case study to be worked out in a MSc thesis on environmental policy. If you would opt for a thesis research opportunity associated to an internship, thorough consultation with the ENP thesis coordinator is needed.

The following selection of organizations and firms recently acted as internship providers for MSc environmental policy students:

- Akzo Nobel, Amsterdam
- Alliander (Grid administrator) Arnhem
- Amsterdam Smart City, Amsterdam
- Arcadis (consultancy firm) Apeldoorn
- Arnika (Environmental NGO), Prague, Czech Republic
- Bankwatch, Sofia
- Beerenschot, Utrecht
- Bin Bang, Utrecht
- Both Ends, Amsterdam
- Centrum Landbouw en Milieu, Culemborg
- Climex, Naarden
- Collaborating Centre of Sustainable Consumption and Production, Wuppertal
- CREM, Amsterdam
- Dynniq, UK
- DuurzaamBedrijfsleven.nl, Amsterdam
- ECN (part of TNO), Amsterdam
- Ecofys, Utrecht
- EarthRights International, Myanmar
- Embassy of Germany, Dhaka, Bangladesh
- Embassy of the Netherlands, Sydney, Australia
- Enexis, Den Bosch

- E-On Benelux Rotterdam
- European Union delegation to Timor-Leste
- European Centre for Nature Conservation, Tilburg
- Evert Vermeerstichting, Amsterdam
- Fair Politics, Brussel, Belgium
- Gemeente Arnhem
- Gemeente Den Bosch
- Gemeente Rotterdam
- Ghana Urban Water Limited
- GIZ, Thailand and Germany
- Greenvis, Utrecht
- GRID Arendal, Norway
- Haskoning, Nijmegen
- ICCTF, Indonesia
- IFOAM EU Group, Brussels, Belgium
- IMARES, Den Helder
- Institute for Housing and Urban Development Studies (IHS), Rotterdam
- Jones & Wagener, Engineering & Environmental Consultants, S-Africa
- KWR (Water Research Institute), Nieuwegein
- Lisode (water management consultancy), Montpellier, France
- Milieuloket, Utrecht
- Ministry of Agriculture, Nature and Food Quality, The Hague
- Ministry of Environmental Protection, Beijing, China
- Ministry of Foreign Affairs ,Water and Environment Dpt., The Hague
- Ministry of Intrastructure and Environment (The Hague)
- Nederlands Normalisatie Instituut, Delft
- Oeko Institut, Berlin, Germany
- PBL, Netherlands Environmental Assessment Agency
- Primium, Amersfoort
- RET Rotterdam
- Rotterdam Municipality, Urban Planning Dpt., Rotterdam
- Spring House, Amsterdam
- Stichting de Noordzee, Utrecht

- Stimular, Rotterdam
- Squarewise, Amsterdam
- SYKE Finnish Environment Institute, Finland
- Taste before you Waste, Amsterdam
- Tauw, Enschede
- The Hague Centre for Strategic Studies, The Hague
- Triodos, Zeist
- UNEP, Geneva
- UNFCCC, Bonn
- UNIDO, Vienna
- United Nations Volunteers, Bonn, Germany
- World Business Council for Sustainable Development, Geneva
- World Future Council, Germany
- World Wind Energy Association
- WWF, Zeist