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COURSE BOOK 4

Environmental challenges in the Baltic-Nordic context

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Contents

Course description

This is a master level 10 ECTS course comprising three sub-courses. In this document, you will find information regarding the aim and learning outcomes of each sub-course, lecture descriptions, the main points for each topic as well as a list of readings.

Course coordinator

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Tapio Litmanen *University of Jyväskylä;*
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Student expectations

Bachelor's degree in an applicable field (various)

4.1. Environment & Society (5 ECTS)

Aim

The course provides a critical overview of the interweaving of the natural environment and the functioning of societies. The course follows the principles of incorporating long-term environmental and social risks to understand the challenges the Baltic-Nordic region faces in the Anthropocene.

Learning outcomes

After successful completion of the course, the student is able to

- Identify and examine key human activity (root causes) and recognize the complexity of mechanisms causing environmental problems
- Critically assess (global) environmental risks with respect to (regional, local) particularities concerning the Baltic-Nordic region
- Appraise the complexity of environmental challenges and analyse society-environment relations from sociological, ethical and political perspectives
- Interrogate the definition, framing and analysis of socio-environmental problems; environmental and risk management policies; issues of fairness related to environmental risks.

Content

This sub-course consists of 12 lectures, each two academic hours (90 min) long.

Assessment

This course is assessed through

- Lecture-specific assignments (tests/quizzes, case analyses, elaboration tasks)
- Final assignment: lecture diary

Grades

According to ECTS

4.1.1. Environment and society: a critical introduction

Developed by Tapio Litmanen

Lecture description

The first part of the lecture discusses the current alarming news on global environmental transformation. *Living Planet Report 2016* was released in October 2016, triggering a global news flow and presenting worrying news on humanity's influence on the environment. The main message of the report was that a growing body of research shows how humanity is intensifying its effects on the natural environment. This news is contrasted by a discussion about a possible epochal change in the history of Earth. Natural scientists and geologists have begun discussing about humanity as a global geophysical force. Recently, environmental sociologists have joined the discussion on whether we have moved from the Holocene to the Anthropocene and how applicable the concept of the Anthropocene is for social scientists. The second part of the lecture deals with so-called root causes. Important questions stemming already from the 1960s include whom or what is to blame and what the causes of environmental degradation and destruction are. Both mono-causal and multi-causal explanations are discussed.

Main themes

- The current global environmental transformation: epochal change?
- Anthropocene as a conceptual innovation
- Anthropocene as a narrative
- Anthropocene as a way to understand the current evolutionary phase of humanity
- Root causes: mono-causal vs. multi-causal explanations.

Planned learning method

Pre-assignment (video) + Lecture and slides + Reading materials

Self-evaluation questions for students

- What is the Anthropocene and what does it tell us about humanity's relationship with the environment?
- What kind of an epochal change are we witnessing and what are the indicators of the change?

Mandatory reading

Lidskog, R. & Waterton, C. (2016). Anthropocene – a cautious welcome from environmental sociology? Environmental Sociology, doi: 10.1080/23251042.2016.1210841

Optional reading

Hamilton, C. (2016). The Anthropocene as rupture. The Anthropocene Review August 2016, 3(2), 93–106. doi:10.1177/2053019616634741.

Zinn, J. O. (2016). Living in the Anthropocene: towards a risk-taking society, Environmental Sociology. doi: 10.1080/23251042.2016.1233605

4.1.2. Environment and sustainability related megatrends and risks

Developed by Gintaras Labutis

Lecture description

This lecture is devoted to the megatrends that are crucial for future anticipation and future modelling. Megatrends can be defined as global forces that drive change and impact on all key areas of human lives and human activities, such as the environment, economy, society, and even values. The majority of foresight and futures exercises are based on megatrend analysis. Based on selected feasible, desirable and sustainable future scenarios, countries, states and businesses can design long-term plans and elaborate how they will be carried out. From a sustainability perspective, the majority of megatrends involve risks that affect the sustainable future. Thus, the megatrend analysis is inseparable from risk analysis and risk management.

Main themes

- Megatrends and their role in future design
- The classification and description of megatrends and risks
- Megatrends and the Nordic-Baltic region: are we special in the global context?

Planned learning method

Video lectures and slides + Lecture assignments + Reading materials

Self-evaluation questions for students

- How would you describe the concept of megatrend?
- What are the key differences between trends and megatrends?
- Can we change any of the megatrends?

Mandatory reading

EEA (2015). The European environment – state and outlook 2015: assessment of global megatrends. European Environment Agency, Copenhagen. Available at: http://www.eea.europa.eu/soer-2015/global/action-download-pdf

The Global Risks Report 2016 (2016). 11th Edition. Available at: http://www3.weforum.org/docs/Media/TheGlobalRisksReport2016.pdf (pp. 1–22).

Optional reading

United nations global issues overview. Available at: http://www.un.org/en/sections/issues-depth/global-issues-overview/

United Nations sustainable development goals. Available at: http://www.un.org/sustainabledevelopment/sustainable-development-goals/

Global Trends 2030: Alternative Worlds: a publication of the National Intelligence Council. Available at: https://globaltrends2030.files.wordpress.com/2012/11/global-trends-2030-november2012.pdf

Five Megatrends and Their Implications for Global Defense & Security. PWC Publication. Available at: http://www.pwc.com/gx/en/industries/government-public-services/public-sector-research-centre/publications/five-megatrends.html

4.1.3. Environmental risk perception

Developed by Aistė Balžekienė

Lecture description

This lecture looks into the concepts of environmental risk and hazards. It analyses the illustrated theoretical approaches with empirical examples of how environmental risk is perceived by the public. Students are encouraged to discuss the relation between risk perceptions and objective environmental conditions (subjective vs. objective risks). The risk perception differences at individual, national and region levels will be analysed in relation to the social theories of risk. The role of culture, values and worldviews in relation to environmental risk perception will also be introduced. Several ways and methodologies about the measurement of risk perception will be reviewed in the lecture. The trends of environmental risk perception in Baltic-Nordic countries will be illustrated and discussed using public opinion data from the International Social Survey Programme (ISSP) module "Environment".

Main themes

- Introduction of theoretical concepts of environmental risk, hazard, uncertainty
- Discussion of theoretical approaches to environmental risk perception
- Short survey in class: rating of most urgent environmental problems for students' countries, for Nordic-Baltic region and for the world
- Comparison of these results with the results of ISSP survey on environmental problems
- Presenting and discussing the differences in public opinions on risk perception (regional, national differences, differences by age, gender, education etc.)

Planned learning method

Lecture and slides + Mini-seminar or lecture assignment

Self-evaluation questions for students

- What are the main individual and macro level factors that determine the differences in environmental risk perceptions? In addition, reflect on the relation of risk perception to objective conditions of the environment. Are they always correlated?
- What are the main regional differences in environmental risk perceptions (comparing the Baltic-Nordic region and Western Europe)? Relate your findings to broader theoretical approaches from the theories of environmental sociology.

Mandatory reading

Robbins, P., Hintz, J. & Moore, S.A. (2010). Risks and Hazards, In: Environment and Society. A critical introduction, Chichester, UK: Blackwell publishing (pp. 79−95).

Slimak, M. W & Dietz, T. (2006). Personal values, beliefs, and ecological risk perception. Risk analysis, 26(6), 1689−1705.

Optional reading

Balzekiene A. & Telesiene A. 2017. Vulnerable and Insecure? Environmental and Technological Risk Perception in Europe, In: Telesiene A. & Gross, M. (eds.) Green European: Environmental Behaviour and Attitudes in Europe in a Historical and Cross-Cultural Comparative Perspective, New York: Routledge.

Cummings, C. L., Berube, D. M., & Lavelle, M. E. (2013). Influences of individual-level characteristics on risk perceptions to various categories of environmental health and safety risks. Journal of Risk

Research, 16(10), 1277−1295.

Weber, J. M., Hair Jr, J. F., & Fowler, C. R. (2000). Developing a measure of perceived environmental risk. The Journal of Environmental Education, 32(1), 28−35.

4.1.4. Managing the ethical aspects of environmental problems

Developed by Teea Kortetmäki

Lecture description

This topic provides an introduction to the ethical aspects related to environmental problems and risks, with focus on risks relevant to the Baltic-Nordic region. Managing wicked environmental problems always involves value choices and ethical deliberation. Environmental management often involves trade-offs and requires a careful evaluation of acceptable costs of various policies, as well as a concern of how to fairly distribute environmental benefits and burdens. A good understanding of the ethical aspects of environmental problems is a prerequisite for becoming a competent evaluator or participant in discussions regarding environmental policies.

Main themes

- Introduction to the emergence and nature of environmental ethics
- Ethical aspects of environmental problems: a general overview
- Ethical aspects of environmental problems in the Nordic-Baltic region

Planned learning method

Lecture and slides + Reading materials + Assignment based on lecture and readings

Self-evaluation questions for students

- What does the nature/culture binary mean and how might it be problematic/unsustainable?
- What are the main points of structural critique made by ecofeminist movements and theorists?
- What is meant by environmental justice and by its substantive and procedural dimensions?

Mandatory reading

Hourdequin, M. (2015). The social dimensions of environmental problems. In Hourdequin, M Environmental ethics: from theory to practice. London & New York: Bloomsbury.

Optional reading

Hourdequin, M. (2015). Chapters 2 & 3. In: Hourdequin, M. Environmental ethics: from theory to practice. London & New York: Bloomsbury.

4.1.5. Environmental sociology I: theoretical approaches to the nature-society relationship

Developed by Tapio Litmanen

Lecture description

This lecture introduces environmental sociology as a special field in sociology and also as a general term covering a large field of environmental social sciences. Environmental sociology can be regarded as a research field and a subject focusing on the study of the complex interactional relations between societies and their physical environment. The task of environmental sociology is to study how economy, technology, politics, social movements, societal structures and value systems are in interaction with the biophysical environment. Major theoretical perspectives on the relationship between the environment and society are introduced. The philosophical underpinnings of theoretical approaches are discussed, with the major controversy over realism vs. social constructionism being dealt with in particular. The earliest attempts to theorize the environment–society relationship were human ecology and political economy perspectives. Researchers tried to answer to the questions of environmental degradation and destruction. More recent theoretical approaches addressed in the lecture include ecological modernization theory and reflexive modernization theory.

Main themes

- What is environmental sociology?
- How can we characterize environmental sociology?
- Why are nature and the environment societal issues?
- How to understand the relationship between the environment and society?
- What are the key theoretical approaches applied to the study of the relationship between the environment and society?

Planned learning method

A pre-assignment: Prior to the lecture, watch the video lecture by Professor R. E. Dunlap and answer the provided questions + Lecture and slides + Reading materials

Self-evaluation questions for students

- How has environmental sociology developed?
- What are the main reasons for sociologists' sluggish interest in environmental issues?
- What are the main contemporary theoretical approaches in environmental sociology?

Mandatory reading

Lockie, S. (2015). Why Environmental Sociology. Environmental Sociology, 1(1), doi: 10.1080/23251042.2015.1022983

Hannigan, J. (1995/2006). Chapter 2: "Contemporary theoretical approaches to environmental sociology. In: Environmental Sociology, 2nd edition. Xxx: Routledge (pp. 16–35).

Dunlap, R. E. (2010). The maturation and diversification of environmental sociology: From constructivism and realism to agnosticism and pragmatism. In: Redclift, M.R. & Woodgate, G. (eds). The International Handbook of Environmental Sociology, 2nd edition. Cheltenham, UK: Edward Elgar (pp. 15–32).

Optional reading

Buttel, F.H., Dickens, P., Dunlap, R.E., & Gijswijt, A. (2002). Sociological Theory and the Environment. An Overview and Introduction. In: Dunlap, R.E., Buttel, F.H., Dickens, P. & Gijswijt, A. (eds.) Sociological Theory and the Environment. Classical Foundations, Contemporary Insights. Lanham, USA: Rowman & Littlefield (pp. 3–32).

4.1.6. Environmental attitudes, concern and behaviours

Developed by Aiste Balzekiene

Lecture description

This lecture analyses the relations between people's attitudes towards nature and how these attitudes are transformed into environmentally friendly behaviours. The definition of the relationship between attitude and behaviour, however, is ambiguous because (1) it raises the problem of causality between these two concepts, and (2) there is a variety of models explaining environmental attitudes and behaviours (e.g. theory of reasoned action, value–belief–norm theory, biographical availability and others). Environmental concern is related to environmental risk perceptions, but it does not necessarily transfer into environmental behaviours. Environmental behaviour can be classified into the private and public sphere, and there are different rationales behind each type of environmental activism. The attempts to measure environmental behaviours resulted in the development of different scales, integrated approaches and models that are reviewed in this lecture. The research on the relation between environmental attitudes and behaviours is important for the identification of socio-psychological, cultural, political or other constraints on sound environmental behaviour. The lecture also provides empirical data on public concern about environmental issues in the Baltic-Nordic countries, which enable a discussion of the differences and dominant patterns to be identified.

Main themes

- Defining environmental attitudes and behaviours
- Theoretical approaches and models regarding environmental attitudes and behaviours, influencing socio-psychological and environment-related factors
- Types of environmental activism (in public and private spheres)
- Measuring environmental attitudes and behaviours
- Environmental attitudes and behaviours in the Baltic-Nordic countries

Planned learning method

Lecture and slides + Lecture assignment or a mini-seminar + Reading materials

Self-evaluation questions for students

- What are external and internal factors that cause the differences in the level of individual environmental behaviours?
- What are socio-psychological, cultural and political constraints on environmental behaviours? Considering your country, comment on the possible means to remove these constraints (applying the theoretical discussions from the lecture).

Mandatory reading

Whitmarsh, L & O'Neill, S. (2010). Green identity, green living? The role of pro-environmental self-identity in determining consistency across diverse pro-environmental behaviours. Journal of Environmental Psychology, 305–314.

Stern, P. C. (2000). Toward a Coherent Theory of Environmentally Significant Behavior. Journal of Social Issues, 56(3), 407–424.

Optional reading

Eilam, E., & Trop, T. (2012). Environmental Attitudes and Environmental Behavior – Which Is the Horse and Which Is the Cart? Sustainability, 4, 2210–2246.

4.1.7. Environmental policy and (multi-level) risk governance

Developed by Marja Järvelä

Lecture description

In response to the perception of emerging environmental risks and the incipient apprehension of the global risk society (Beck) environmental policy has been institutionalized in many countries vividly since 1980's. This development was strongly supported by the environmental World Summit in Rio de Janeiro 1992, which established the main cornerstones for the environmental policy. This happened not only at a global level, since even the national governments were pushed to raise their level of ambition in protecting the environment and creating innovative steps towards sustainable development. Simultaneously, abundant local initiatives were proposed and exposed in response to the growing awareness of environmental risks regarding industrial pollution and the multiple stresses on natural resources and local environments undeniably caused by human activities. As a consequence of this double dynamics of top-down governance and bottom-up initiatives, it has been repeatedly asked what in fact is or should be the main pattern and direction of social and political dynamics in order to make environmental policy both efficient and legitimate. Presently, environmental policy is often described as an agenda of multilevel risk governance. This characterization aptly describes the challenge for the future, but actually not so much the current level of the institutional state of art.

In any case, since Rio 1992 we have witnessed an enormous process of building environmental policy at different levels of political activities. This process has increased the complexity of regulation, even perhaps at the expense of its own transparency and effectiveness. The aim of the course is to provide a critical overview of the development of environmental policy since the Rio Summit 1992 and review some of the main turning points, such as the institutionalization of the UN Millennium goals, and later the intensified infrastructure and climate policy leading to the Paris summit in 2015. The examples of national case studies will be taken mainly from Northern Europe.

Main themes

- Environment, society and risk
- Multilevel risk governance
- Local players and the issue of participation
- Biodiversity, natural resources and environmental policy
- Globalization of risk, challenging priorities.

Planned learning method

Lecture and slides + Assignment + Reading materials

Self-evaluation questions for students

- Why did energy provision become important in environmental policy?
- Who should take the lead in environmental policy?
- What does multilevel governance mean in environmental policy?

Mandatory reading

Jordan, A. & Lenschow, A. (2010). Environmental policy integration: a state of the art review, Environmental Policy and Governance, 20(3), 147–158.

Renn, O. & Schweizer, P-J. (2009). Inclusive risk governance: concepts and application to environmental policy making, Environmental Policy and Governance, 19(3), 174–185.

Optional reading

Buzogany, A. & Börzel, T. (2011). Environmental Organisations and the Europeanisation of Public Policy in Central and Eastern Europe: The Case of Biodiversity Governance. Environmental Politics, 19(5), 708-735.

Connelly, J., Smith, G., Benson, D. & Saunders, C. (2012). Politics and the Environment, From theory to practice, 3rd edition, London: Routledge.

EEA, European Environmental Agency (2013). Towards a green economy in Europe, EU environmental policy targets and objectives 2010–2050, EEA Report No 8/2013.
Available at: https://www.eea.europa.eu/publications/towards-a-green-economy-in-europe/at_download/file

4.1.8. Sustainable development: attempts to govern environmental problems

Developed by Antti Puupponen & Riikka Aro

Lecture description

This lecture provides an overview of sustainable development governance. The course presents the history and background of the concept of sustainable development, which was officially launched in 1987 by the commission of Gro Harlem Brundtland. Three dimensions of sustainability and key theories such as ecological modernization are also addressed. The governing of sustainable development includes different levels of implementation: global, national, regional and local. Within this context, the empowerment of citizens and civic organizations is presented. At the global level, UN's Agenda 2030 and its goals related to poverty reduction and inequality challenges are also discussed. Furthermore, the strong and weak sustainable consumption governance are presented as distinct approaches in pursuing sustainable development.

Main themes

- Sustainability interpretations as attempts to govern environmental problems: history of the concept, dimensions of sustainability, levels of governance (global to local)
- Interpretations and implications: strong and weak sustainability, sustainable development and/or green growth, ecological modernization
- Describing and approaching the problem of unsustainability
- Questions of actors and interests
- Distribution of authority, responsibility and resources
- Sustainable consumption governance

Planned learning method

Lecture and slides + Deliberative assignment + Reading materials

Self-evaluation questions for students

- What are the dynamics between different levels in the governing of sustainable development?
- What is the significance of different dimensions from the viewpoint of sustainability governance?
- What are the core challenges in pursuing sustainable development in the weak sustainable consumption approach and the strong sustainable consumption approach, respectively?

Mandatory reading

Fuchs, D. & Lorek, S. (2005). Sustainable consumption governance – a history of promises and failures. Journal of Consumer Policy, 28(3), 261–288.

Kemp R. & Parto S.& Gibson R.B. (2015). Governance for sustainable development: moving from theory to practice. International Journal of Sustainable Development, 8(1/2), 12–30.

Pogge, T.W. & Sengupta, M. (2016). Assessing the sustainable development goals from a human rights perspective. Journal of International and Comparative Social Policy, 83–97.

Optional reading

Bartelmus, P. (2013). The future we want: Green Growth or sustainable development? Environmental Development, 7, 165–170.

Burns, T. (2016). Sustainable Development: Agents, systems and the environment. Available at: http://csi.sagepub.com/content/64/6/875.full.pdf+html.

Hobson, K. (2013). 'Weak' and 'strong' sustainable consumption? Efficiency, degrowth, and the 10 Year Framework of Programmes. Environment and Planning C: Government and Policy, 31, 1082–1098.

Lockie, S. (2016). Sustainability and the future of environmental sociology. Environmental Sociology 2(1), 1–4.

Lorek, S. & Fuchs, D. (2013). Strong sustainable consumption governance–precondition for a degrowth path? Journal of Cleaner Production, 38, 36–43.

Princen, T. (2010). Logics of Sufficiency. Boston: The MIT press.

Shove, E. & Walker, G. (2010). Governing transitions in the sustainability of everyday life. Research Policy, 39(4), 471–476.

4.1.9. Green political theory: challenges to decision-making

Developed by Teea Kortetmäki

Lecture description

The topic provides an introduction to how green political theory can be used as a framework for evaluating and advancing fair and effective environmental decision-making. Conflicting interests, complexities, and uncertainties about the actual impacts of environmental problems (as well as related policies) are characteristic of environmental politics. In this topic, students are provided an understanding on how political processes and their legitimacy and justifiability can be approached. Theory is in this lecture linked with particular examples of cases and problems pertinent in the Nordic-Baltic region.

Main themes

- A brief introduction of green political theory as an academic discipline
- Against democracy: problems of democratic decision-making in an environmental context
- For democracy: reasons for employing democratic procedures
- Addressing tensions between what is fair and what is effective
- Evaluating various forms of participation and inclusion

Planned learning method

Lecture and slides + Reading materials + A forum discussion exercise on deliberation

Self-evaluation questions for students

- What kind of challenges are involved in addressing environmental issues with more democracy?
- What makes legitimacy important in the context of managing environmental problems and risks?

Mandatory reading

Kyllönen, S. (2011). Public Participation and the Legitimacy of Climate Policies: Efficacy Versus Democracy? In: Loukola, O. & Gasparski, W. W. (eds.) Environmental Political Philosophy. New Brunswick & London: Transaction Publishers (pp. 113–137).

Optional reading

Few, R., Brown, K. & Tompsins, E. L. (2007). Public participation and climate change adaptation: Avoiding the illusion of inclusion. Climate Policy, 7(1), 46–59.

Hourdequin, M. (2015). Chapter 8: Engaging environmental concern, promoting change. In: Environmental Ethics: from Theory to Practice. London & New York: Bloomsbury.

4.1.10. Sociology of energy: solar energy – democratization of energy systems?

Developed by Miikka Salo, Tapio Litmanen

Lecture description

This lecture provides a short introduction to the idea of the sociology of energy before turning its attention to the case of solar energy. The fundamental starting point is the co-evolution of energy, energy technology and society. Both the availability of energy and the development of energy technology are closely related to the development of societies and societal structures.

Main themes

Part I: Sociology of Energy

- The relationship between energy and society is looked at from historical and sociological perspectives.

Part II: Solar Energy

- Energy is a vital factor for the socioeconomic development of any country. Global energy demand, the depletion of fossil fuels and environmental concerns are the driving forces for the use of alternative sustainable energy sources. Solar energy is the inexhaustible and CO2-emissions–free energy source worldwide.
- Solar photovoltaic (PV) energy has been of crucial applicative relevance since its very inception in the mid-1950s, specifically for the powering of communication satellites. However, due to its high cost, solar PV had marginal importance in global energy production for decades. All this changed after 2000 as Germany introduced a new programme subsidizing renewable energy production (a feed-in tariff programme). After massive investments by the PV module manufactures in China and Taiwan the price of solar modules started to fall at an unprecedented rate.
- As a consequence, Solar PV global capacity was 45 times the capacity 10 years earlier and the annual solar PV market in 2015 was nearly 10 times the world's cumulative solar PV capacity of a decade earlier. The market expansion in most of the world is largely due to the increasing competitiveness of solar PV, new government programmes, rising demand for electricity and improved awareness of solar PV's potential.
- The aim of the lecture is to provide an overview of the development of solar photovoltaics globally and more specifically in Europe. Which policies have been successful and what kinds of barriers still remain for solar energy diffusion? What motivates and what matters in the adoption of solar electricity?

Planned learning method

Reading materials + Assignment (parts I & II) + Lecture and slides

Self-evaluation questions for students

- How do sociologists look at the energy issues?
- What is meant by the idea of the co-evolution of energy technologies and societies?
- What is the role of solar energy as a source of energy from a global perspective?
- What are the main drivers and barriers for the advancement solar energy technology?
- Which policies have been successful and what kinds of barriers still remain for solar energy diffusion?

Mandatory reading

Rosa, E.A., Machlis, G.E. & Keating. K.M. (1988). Energy and Society, Annual Review of Sociology, 14, 149–172. doi: 10.1146/annurev.so.14.080188.001053

Stirling, A. (2014). Transforming power: Social science and the politics of energy choices. Energy Research & Social science, 1, 83–95.

Optional reading

REN21 (2016). Renewables 2016 Global Status Report. Paris: REN21 Secretariat. Available at: http://www.ren21.net/status-of-renewables/global-status-report/

Kitzing, L., Mitchell, C. & Morthorst, P. E. (2012). Renewable energy policies in Europe: converging or diverging? Energy Policy, 51, 192–201.

Schaffer, A. & Brun, S. (2015). Beyond the sun – Socioeconomic drivers of the adoption of small-scale photovoltaic installations in Germany. Energy research & Social Science, 10, 220–227.

Stewart, J. (2014). Sociology, Culture and Energy: The Case of Wilhelm Ostwald's 'Sociological Energetics' – A Translation and Exposition of a Classic Text. Cultural Sociology, 8(3), doi: 10.1177/1749975514523937.

Karakaya, E. & Sriwannawit, P. (2015). Barriers to the adoption of photovoltaic systems: The state of the art. Renewable and Sustainable Energy Reviews, 49, 60–66.

Sovacool, B. (2014). What are we doing here? Analyzing fifteen years of energy scholarship and proposing a social science research agenda. Energy Research & Social Science, 1, 1–29.

4.1.11. Food and sustainability: sustainable diets

Developed by Ari Paloviita, Teea Kortetmäki, Antti Puupponen & Tiina Silvasti

Lecture description

This lecture addresses the issue of sustainable food production and related risks from the viewpoint of environmental sociology and food system research in social sciences.
The course provides an overview of the multiple interlinkages between food production, food-related risks, and environmental problems, especially with regard to climate change. Food system and food chain approaches are introduced and the notion of sustainable diets is addressed from the consumer viewpoint.

A practical application of the introduced concepts is provided by an introduction to research on the sustainability of protein supply chains. This section of the lecture explains the relationship between protein production, environmental problems and health risks, and presents research results on the sustainability of various protein supply chains.

Main themes

- Introduction to the food system and food supply chains
- What does sustainability mean regarding diets?
- Protein sources as examples: (1) Domesticated animals (2) Alternative animal protein (3) Fish (4) Plant proteins

Planned learning method

Lecture and slides + Reading materials +Assignment on the national nutrition recommendations and sustainability

Self-evaluation questions for students

- What does sustainability mean regarding diets?
- What are the six values of a sustainable food system?

Mandatory reading

Lang, T. & Barling, D. (2012). Food security and food sustainability: reformulating the debate. The Geographical Journal, 178(4), 313–326.

Aiking, H. (2014). Protein production: planet, profit, plus people? The American Journal of Clinical Nutrition, 100(Suppl.1), 483S–489S.

4.1.12. Environmental movements: challenging environmental governance

Developed by Esa Konttinen

Lecture description

Although impossible to specify in exact numbers, it is safe to say that environmental movements have contributed significantly to introducing environmental problems into broader public and political agendas. The movements have played their role by acting as avant garde groups awakening the public and political powers to the serious threats humanity has generated through continuous economic expansion and developed technologies. Thus, the most characteristic quality of the environmental movement, like that of many others social movements, is challenging those in decision-making positions in society. In this respect, a decisive turning point occurred in the 1960s, when Rachel Carson's Silent Spring (1962) opened eyes and demanded that society become aware of the threats poisons post to nature. The modern environmental movement was born, and at its core was a conception of the natural environment as a system in which one damaged part often weakens the vitality of the other parts.

For the movement, it has not been enough to use only conventional means of influencing, such as participating in the activities of established political parties and making proposals to governing bodies. In addition, using one's voice and gaining public attention is seen as indispensable. The movement organizations have developed their methods to attract attention, including making their case through their own media, public demonstrations and, for example, targeted publicity campaigns, a characteristic approach of Greenpeace.

Instead of broad suspicions in their earlier days, the environmental movements have generally become accepted and even acknowledged parts of the political activities in Western democracies, today broadly co-operating with national and transnational planning and decision-making bodies. If some parts have, to some extent, been institutionalized as conventional decision-making systems, new challengers have emerged, such as the animal rights movement and a number of new local environmental movements. The principle of justice is today often the core of these movements, as is the case in the climate movement and animal rights movement.

Main themes

- Overview of the modern environmental movement, characteristics of the development from 1960s onward
- Key substance matters for each era (e.g. environmental poisons, industrial wastes, economic growth, anti-nuclear etc.)
- Key forms of action, and significance and contribution in each period
- Key concepts: protest cycle, frame concepts
- Special characteristics of the waves of the environmental movement (using Finland as a case)
- Cases of animal rights, climate change and Päijänne movements.

Planned learning method

Lecture and slides + Reading materials

Self-evaluation questions for students

- How does modern environmentalism differ from old conservationism?
- What means of influencing do environmental movements use?
- What are environmental protest waves?
- What kind of framing tasks do movements have to solve?
- The principle of justice in environmental movements

- How did the Clean Lake Päijänne movement contribute to the Finnish industrial waste water policy? Why did it prove to be effective?
- How viable is the environmental movement for climate work?

Mandatory reading

della Porta, D. & Parks, L. (2014). Framing Processes in the Climate Movement. From climate change to climate justice. In: Routledge Handbook of the Climate Change Movement. New York: Routledge (pp. 19–30).

Konttinen, E. (1998). From industrial consensus to environmental regulation: the coming of the Finnish industrial waste-water policy. Water Policy, 1(3), 305–320.

Benford, R.D. and Snow, D.A. (2000). Framing Processes and Social Movements: An Overview and Assessment. Annual Review of Sociology, 26, 611–639.

4.2. Climate Change Adaptation and Mitigation (2.5 ECTS)

Aim

The course investigates the risks induced by climate change, taking a critical adaptive approach and looking at challenges of and possibilities for adaptation and mitigation, with a specific focus on the Baltic-Nordic region.

Learning outcomes

After successful completion of the course, the student is able to

- Analyse the multiple ways in which climate mitigation and adaptation activities are entangled with the broader societal context in the Baltic-Nordic region
- Critically assess climate change strategies, policies and policymaking within the Baltic-Nordic context
- Elaborate on the challenges related to climate change from sociological, ethical and political perspectives.

Content

This sub-course consists of six lectures, each two academic hours (90 min) long.

4.2.1. Understanding climate change induced risks within the region: comprehensive overview of risks and threats

Developed by Audronė Telešienė

Lecture description

The aim is to make the students aware of the relevance and global distribution of risks related to climate change. The focus is on Baltic-Nordic countries. Students will also be able to discuss the non-linear and systemic nature of various risks induced by climate change in the region. Students will assess the risks and the decisions needed, relying on a holistic understanding of the complex interrelations among climate and human systems. The lecture starts by discussing global and historical facts and figures on climate change. This part is evidence driven and discussion should heavily rely on data and accurate interpretations. The lecturer should allow students to make their own judgements, to provide additional data and knowledge, and to discuss any possible conflicting data. A comparative regional approach is very welcome. Discussions should finally put the focus on the Baltic-Nordic region and its special standing in terms of vulnerability to climate change. The lecture should proceed by making some more conceptual notes on the nature of climate change risks. Namely, discuss the non-linear, cumulative and systemic/complex nature of the risks. The lecturer should try to develop a collective concept map, indicating an understanding of how climate systems might be interrelated with complex human systems. A comprehensive understanding of CC risks should further go into analysing risk classification. The whole classification should be presented first. The two groups of CC risks should be emphasized and discussed in more detail, such as making links between two types of risks (extreme weather events and long-term changes in average conditions) with risk assessment knowledge (high/low probability; high/low impact; possible approaches of managing different risks). The discussion should end by listing the risks that, in the students' opinion, are most relevant to the Baltic-Nordic region.

The second part of the lecture should be devoted to a detailed analysis of the direct and systemic risks posed by climate change that are the most relevant to Baltic-Nordic region. The risks should be analysed one by one as presented in the slides. Data interpretation needs accuracy.

While presenting the systemic risks of climate change, the lecturer should allow for deep discussion and reflection, making connections between the complex interrelated systems causing (and coping with) the risk. Broader knowledge of social science can be solicited in explaining how various social structures, systems and processes might strengthen or weaken climate impacts.

Main themes

- Global and historical facts and figures on climate change
- Defining how climate change risks are specific
- Classifying climate change global risks
- Climate change direct and systemic risks most relevant to Baltic-Nordic region

Planned learning method

Lecture and slides + Class discussions

Self-evaluation questions for students

- Can you discuss the importance of risks related to climate change as compared to other risks globally?
- Can you discuss the susceptibility, coping capacities and adaptive capacities to climate change in the Baltic-Nordic region?

- Explain why climate change is treated as a non-linear risk.
- Provide examples of direct risks related to climate change.
- Provide examples of systemic risks related to climate change.
- Explain why climate change is treated as a systemic risk.
- How will exposure to water stress change in the future within the region?
- How will exposure to heat stress change in the future within the region?
- How will CC impact agriculture and crop yields within the region?
- How will drought likelihood change in the region?
- How will flood likelihood change in the region?

Mandatory reading

King, D., Schrag, D., Dadi, Z., Ye, Q. & Ghosh, A. (2015). Climate change: a risk assessment. Centre for Science and Policy. Available at: http://www.csap.cam.ac.uk/media/uploads/files/1/climate-change--a-risk-assessment-v9-spreads.pdf (pp. 8–10 & 110–129).

Global Risks Report 2016 (2016). World Economic Forum, published within the framework of The Global Competitiveness and Risks Team. Available through: http://www3.weforum.org/docs/Media/TheGlobalRisksReport2016.pdf (pp. 12–14).

Optional reading

Arctic Warming Overtakes 2,000 years of Natural Cooling (September 3, 2009). National Centre for Atmospheric Research. Available at: https://www2.ucar.edu/atmosnews/news/846/arctic-warming-overtakes-2000-years-natural-cooling.

Beck, M. W., Shepard, C. C., Birkmann, J., Rhyner, J., Welle, T., Witting, M. & Radtke, K. (2012). World risk report 2012. Berlin: Alliance Development Works.

Blauhut, V. & Stahl, K. (2015). Mapping Drought Risk in Europe: Technical Report No. 27. DROUGHT-R&SPI project. Available at: http://www.eu-drought.org/technicalreports/10859974/DROUGHT-R-SPI-Technical-Report-No-27-Mapping-Drought-Risk-in-Europe

EEA, European Environmental Agency (2014). Water-limited crop productivity. Available at: http://www.eea.europa.eu/data-and-maps/indicators/crop-yield-variability-1/assessment-1Mapping+Drought+Risk+in+Europe.pdf.

Kundzewicz, Z. W., Lugeri, N., Dankers, R., Hirabayashi, Y., Döll, P., Pińskwar, I. & Matczak, P. (2010). Assessing river flood risk and adaptation in Europe—review of projections for the future. Mitigation and Adaptation Strategies for Global Change, 15(7), 641–656.
Ranganathan, J. (2013). The Global Food Challenge Explained in 18 Graphics. World Resource Institute. Available at: http://www.wri.org/blog/global-food-challenge-explained-18-graphics.

Young, O. R., & Steffen, W. (2009). The earth system: sustaining planetary life-support systems. In: Principles of ecosystem stewardship. New York: Springer (pp. 295–315).

4.2.2. Understanding climate change-induced risks within the region: special focus on climate change and social policy

Developed by Marja Järvelä

Lecture description

Climate change has been recognized as a threat globally. In general terms, the threat has been increasingly conceived not only as a risk to nature but also as a risk to human wellbeing. However, since the physical impacts and circumstances vary a great deal and it is very difficult to make a reliable assessment of future local impacts of climate change, it is clear that we are dealing with an issue of high complexity with regards to the potential tools of mitigating climate change simultaneously adapting and consolidating social policy with climate policy.

In modern industrial societies, social policy has often been understood in terms of public management of risks. Therefore, the concept of risk is one cornerstone in attempts to build conceptual bridges between social policy and climate policy. Thus, we should first look into how the concept of risk may connect public management of climate risk with the more traditional social policy which has been embodied, for example, in poverty eradication strategies.

Until today, climate policy has been acknowledged mainly as the mitigation of greenhouse gases, implying initiatives and innovation in public energy policy and policies of infrastructure rather than social policies. The more climate change has direct or indirect impacts on the wellbeing of people, the more there is a case for activating social policy as a means to finding measures to secure livelihood and wellbeing. In climate policy language, the focus is then shifted from mitigation to adaptation, because adaptation to climate change seems to be much more sensitive to issues of human wellbeing and social equality than mitigation.

Main themes

- Toward climate change-induced social policy
- Climate change impacts and climate policy impacts
- Mitigation and adaptation from a social policy perspective
- Participation, climate change and social policy

Planned learning method

Lecture and slides + Reading material

Self-evaluation questions for students

- What makes climate change a social justice issue?
- Who are the target groups in developing climate change sensitive social policy?
- Can the welfare state take a leading role in transforming social policy to make a stronger contribution to climate policy?

Mandatory reading

Gough, I., Meadowcroft, J., Dryzek, J., Gerhards, J., Lengfeld, H., Markandya, A. & Ortiz, R. (2008). JESP symposium: climate change and social policy. Journal of European Social Policy, 18(4), doi: 10.1177/0958928708094890

Harlan, S.L., Pellow, D. N. & Roberts, J.T. (2015). Climate Justice and Inequality, In: Riley E. Dunlap & R.J. Brulle (eds.) Climate Change and Society: Sociological Perspectives, Report of the American Sociological Association's Task Force on Sociology and Global Climate Change. Oxford: University Press (pp. 127–163).

Optional reading

Beck, U. (2010). Climate for Change, or How to Create a Green Modernity? Theory, Culture & Society, 27(2-3), 254–266.

Gough, I. (2013). The Challenge of Climate Change for Social Policy. A plenary lecture delivered at the Social Policy Association annual conference at Sheffield University, July 10 2013.

4.2.3. Understanding climate change-induced risks within the region: special focus on food security and climate change

Developed by Teea Kortetmäki & Tiina Silvasti & Ari Paloviita

Lecture description

The direct climate change risks faced by the agricultural sector are also risks to businesses and food supply chains. Hence the importance of resilience at the farm level, community level and business level when looking at food supply chain policy and management. This lecture provides an introduction to climate change adaptation and the food supply chain.

Within this topic, students learn to understand climate change-induced risks to food security within the Nordic-Baltic-Nordic region Identify and examine the impact of climate change on food system activities. Assess the vulnerability of food system activities to climate-induced risks on the supply chain level.

Main themes

- Introduction to food system vulnerability and resilience
- An overview of climate change adaptation and food supply management
- Assessing food system vulnerability: meat-based vs. plant-based supply chains

Planned learning method

Lecture and slides + Online discussion

Self-evaluation questions for students

- What is meant by the terms vulnerability and resilience in the context of food supply chains?
- Why does climate change matter in the context of food security?

Mandatory reading

Paloviita, A. & Järvelä. M. (2016) Chapter 1: “Introduction”. In: Paloviita, A. & Järvelä. M. (eds.) Climate Change Adaptation and Food Supply Chain Management. London: Routledge (pp. 1–14).

Beermann, M. (2011). Linking corporate climate adaptation strategies with resilience thinking. Journal of Cleaner Production, 19(8): 836–842. doi: 10.1016/j.jclepro.2010.10.017

4.2.4. Climate change policy framework

Developed by Audronė Telešienė & Marja Järvelä

Lecture description

The aim is to foster discussion on the currently available legislative resources / regulations / policy documents on climate change. The focus is on EU member countries. Students will localize climate change issue and policies within the general legislative system of the EU, evaluate the challenges climate change (CC) policy creates for regular policy making, and discuss how CC policy and its implementation is different from other regular policy areas. The lecture starts by discussing the scope and scientific rationale of CC policy. It proceeds with a discussion of CC policy as a global public policy area and by evaluating the existing global CC policy agreements.

The second part of the lecture is devoted to EU regulation on CC. This part is evidence driven and discussion should rely heavily on data and accurate interpretations. The lecturer should allow students to make their own judgments, provide additional data and knowledge, discuss any possible conflicting data. A comparative regional approach is very welcome. Discussions should finally put focus on the Baltic-Nordic region and its special standing in achieving the EU climate change targets.

Main themes

- What kind of policy issue is climate change?
- Where are we now?
- Climate change as a public policy issue
- EU priorities and targets related to climate change
- Evidence-informed CC policy: overview of EU data in the field of climate change and energy [with discussions focusing also on Baltic-Nordic countries]
- Implications of climate change policies in the EU in a global context

Planned learning method

Lecture and slides + Assignment that applies learned concepts to a national/regional example case

Self-evaluation questions for students

- What key questions of justice does climate change pose?
- What does it mean that the impacts of climate policies are often disproportionately shared?
- In the Nordic-Baltic context, would an equal per capita emissions approach be fair for setting national emission limits?

Mandatory reading

Reckien, D., Flacke, J., Dawson. R. J., Heidrich, O., Olazabal, M., Foley, A., Hamann, J. J.-P., Orru. H., Salvia, M., De Gregorio Hurtado, S., Geneletti, D. & Pietrapertosa, F. (2014). Climate change response in Europe: what's the reality? Analysis of adaptation and mitigation plans from 200 urban areas in 11 countries. Climatic Change, 122, doi: 10.1007/s10584-013-0989-8

Jordan, A, Huitema, D. & van Asselt, H. (2010). Climate Change Policy in the European Union: An Introduction. In: A Jordan, D. Huitema and H. van Asselt (eds.) Climate Change Policy in the European Union: Confronting the Dilemmas of Mitigation and Adaptation? Cambridge: Cambridge University Press (pp. 3–26).

Optional reading

EC, European Commission (2018). 2020 Climate and Energy Package. Available at: https://ec.europa.eu/clima/policies/strategies/2020_en#tab-0-0

4.2.5. Justice and climate change

Developed by Teea Kortetmäki

Lecture description

Climate change and climate policies may have disproportionate effects on different geographical areas, communities, and demographic groups. This lecture provides an introduction to these themes from the viewpoint of climate justice. The topic consists of a theoretical introduction to various aspects of climate justice and demonstrates how it can be applied in the Baltic-Nordic context.

Within this topic, students learn to:

- Understand and identify different aspects of climate justice
- Classify various aspects of climate policies regarding their relation to procedural and substantive climate justice.
- Assess the fairness of how climate-related benefits and burdens are shared in their own national/regional context.

Main themes

- Basic introduction to climate justice theorizing and movements
- Conceptual tools for addressing the fairness of climate impacts and climate policies
- Climate justice in the Baltic-Nordic context

Planned learning method

Lecture (slides with voice + video) + Assignment that applies learned concepts to a national/regional example case

Self-evaluation questions for students

- What key questions of justice does climate change pose?
- What does it mean that the impacts of climate policies are often disproportionately shared?
- In the Baltic-Nordic context, would an equal per capita emissions approach be fair for setting national emission limits?

Mandatory reading

Hourdequin, M. (2015). Global climate change. In: Hourdequin, M. Environmental ethics: from theory to practice. New York & London: Bloomsbury.

4.2.6. Public perception and discourses on climate change

Developed by Teea Kortetmäki & Audronė Telešienė

Lecture description

The lecture gives students insights into public perceptions and discourses related to climate change in the Nordic-Baltic context. These perceptions are constituted by social processes where different actors contribute to the formation of 'public opinion' and contestation occurs between competing views and interpretations. Public comprehension about climate change and attitudes related to climate risks are essential for the social acceptance of climate change mitigation and climate risk management through adaptation policies. Hence, understanding them is a key constituent of climate-related risk management.

Within this topic, students learn to:

- Understand the connections between climate change perceptions, social acceptance, and legitimate climate risk management.
- Identify various features of public discourses on climate change and areas of contestation.
- Examine and analyse public perceptions and discourses on climate change using the concepts provided in the lecture (and other related topics).

Main themes

- Specific features of climate change perceptions in Baltic-Nordic countries (ESS, ISSP, etc.)
- Climate perceptions and discourses in Lithuania
- Climate discourses and social acceptance
- Climate perceptions and discourses in Finland

Planned learning method

Lecture and slides + Case study based on lecture and readings

Self-evaluation questions for students

- What are the specific features of climate perceptions in the Baltic-Nordic countries?
- What are the main factors influencing climate change perceptions?
- What is the media's role in shaping public opinion on climate change?
- What kind of relationship is there between scientific and public discourse on climate change?
- What is meant by identification and why does it matter in public climate discourse?

Mandatory reading

Shwom, R. L., McCright, A. M., Marquart-Pyatt, S. T., & Hamilton, L. C. (2015). Public Opinion on Climate Change. Climate Change and Society: Sociological Perspectives, 269, 269–299

4.3. Energy Security and Policies (2.5 ECTS)

Aim

This course is framed by socio-environmental challenges and geopolitical circumstances. The course's key objective is to form a holistic understanding of how global energy and energy security issues and megatrends are translated into regional and local strategies, policies and actions.

Learning outcomes

After successful completion of the course, the student is able to

- Identify key energy security and policy challenges particularly within the Baltic-Nordic region
- Compare different theoretical and methodological perspectives of energy and energy security strategies and their translation into regional and local policies and actions
- Critically assess energy security issues within different policy frames and to analyse and interpret complex information related societal, sustainability and energy issues (society–energy–sustainability nexus).
- Discuss key energy security challenges concerning energy supply and reliability, old and new energy sources, and energy transitions.

Content

This sub-course consists of six lectures, each two academic hours (90 min) long.

Grades

According to ECTS

4.3.1. Introduction to energy policies, security and sustainability

Developed by Miikka Salo

Lecture description

Energy policies all around the world are mostly driven by three main objectives. Governments try (1) to secure energy supplies for reliable provision of energy and (2) to ensure affordable prices while (3) lowering greenhouse gas emissions and pollution, which in most cases means lowering the dependence on fossil fuels.

Regardless of the ongoing permanent expansion of renewable energies, the world's consumption of fossil fuels is also expected to grow due to the overall growth of energy consumption. However, from a geopolitical point of view, renewable energies have the potential to modify traditional energy dependencies since it allows the substitution of fossil energy imports. In Baltic-Nordic region this is particularly important because of the traditional heavy dependence on Russian fossil fuels.

Main themes

- Fundamentals of energy policies and security
- Theoretical approaches,
- Introduction to geopolitical circumstances and environmental challenges regarding energy; the society–energy–sustainability nexus

Planned learning method

Lecture and slides + Reading materials + Lecture assignment

Self-evaluation questions for students

- How would you characterize energy security?
- What are the key challenges in the Baltic-Nordic region concerning energy security in current geopolitical circumstances?
- How could energy be used as a tool in geopolitics? Think of examples.

Mandatory reading

Winzer, C. (2012). Conceptualizing energy security. Energy Policy, 46, 36–48.

Nance, M., T & Boettcher III, W.A. (2017). Conflict, cooperation, and change in the politics of energy interdependence: An introduction. Energy Research & Social Science, 24, 1–5.

Pollitt, M., G. (2012). The role of policy in energy transitions. Lessons from the energy liberalisation era. Energy Policy, 50, 128–137.

Optional reading

Scholten, D & Bosman, R. (2014). The Geopolitics of renewables: exploring the geopolitical implications of renewable energy systems. Technological Forecasting and Social Change, 103, 273–283.

Dhaka, A. (2009). The Geopolitics of Energy Security and the Response to its Challenges by India and Germany. Geopolitics, 14(2), 278–299.

Brown, M.A., Wang, Y., Sovacool, B.K., D'Agostino, A.L. (2014). Forty years of energy security trends: A comparative assessment of 22 industrialized countries. Energy Research & Social Science, 4, 64–77.

Cherp, A. & Jewell, J. (2011). The three perspectives on energy security: intellectual history, disciplinary roots and the potential for integration. Current Opinion in Environmental Sustainability, 3(4), 202–212.

4.3.2. Megatrends in energy and energy security

Developed by Gintaras Labutis

Lecture description

This lecture is devoted to energy and energy security megatrends analysis. Energy is at a crossroads. Energy megatrends are the global forces that affect the approach of society and the business to energy generation and energy consumption. A megatrend is occurring regardless of efforts to change its outcome and no amount of "will" or "desire" can prevent it from happening. It should be noted that most of the energy megatrends are derived from the other key megatrends, would it be a sustainability, population transition, or technology megatrend. By knowing those energy megatrends and underlying forces, countries and states can better prepare for and adapt to the feasible and desirable future.

Main themes

- Megatrends and their role in future planning and execution
- Megatrends in energy and energy security
- Global future vision for energy and energy security
- Issues related to the transition from the present energy status to the future one

Planned learning method

Lecture + Reading materials + Lecture assignment

Self-evaluation questions for students

- How would you describe the concept of megatrend?
- List some energy-related megatrends.
- How effective is your country of origin in reacting to the megatrends you have listed above?

Mandatory reading

Rosenkranz, G. (2015). Megatrends in the global energy transition, WWF Germany and LichtBlick SE (pp. 4–5, 10–15 & 19–65).

Optional reading

Luft, G. & Korin, A. (2009). Energy security challenges for the 21st Century, Oxford: Greenwood (pp. 1–18).

4.3.3. Future scenarios and roadmaps: EU policies towards energy and energy security as feasible and desirable options

Developed by Gintaras Labutis

Lecture description

This lecture is devoted to energy and energy security futures globally and particularly in the EU. People's wellbeing, industrial competitiveness and the overall functioning of society are dependent on safe, secure, sustainable and affordable energy.

The energy powers citizens' homes, industry and services as well as the buildings which people use. The EU is committed to reducing greenhouse gas emissions to 80–95% below 1990 levels by 2050 in the context of necessary reductions by developed countries as a group. However, all strategies require the alignment among EU member states and focused investments. These topics are explored in this lecture.

It is understandable that all the energy that there ever will be exists today. However, future energy has to be aligned to societal sustainability and energy security needs. Future European Union energy and energy security scenarios and the execution of selected scenarios require efforts and resources that have to be allocated at maximum effectiveness.

Main themes

- EU strategies on energy and energy security
- EU policies on energy and energy security
- EU roadmaps on energy and energy security

Planned learning method

Lecture and slides + Reading materials + Assignment

Self-evaluation questions for students

- What is meant by a feasible option in strategic foresight?
- What is meant by a desirable option in strategic foresight?
- Think about how the EU, as a union of states with different levels of maturity in energy and different stages in energy transition, can design policies on energy and energy security that are applicable for all member states.
- Why is an energy security strategy needed at the EU level?
- Are EU energy security strategies mandatory for EU member states?
- Think about possible strategic directions in the EU energy security strategies. What are they?

Mandatory reading

2020 Energy Strategy. A strategy for competitive, sustainable and secure energy. COM (2010) 639 final, 2010, (pp. 2–20).

Energy Roadmap 2050. COM (2011) 885 final, 2011, (pp. 2–20).

Optional reading

A policy framework for climate and energy in the period from 2020 to 2030. COM (2014) 15 final. 2014, (pp. 2–18).

European Energy Security Strategy, COM (2014). 330 final, 2014, (pp. 2–24).

4.3.4. Energy transitions: past, present and future energy

Developed by Miikka Salo

Lecture description

Energy transition – transitioning away from our current global energy system – is of paramount importance due to climate change and the depletion of fossil fuels. The future energy system ought to be environmentally, socially and economically more sustainable. The world has gone through energy transitions before, such as from wood to coal and from coal to oil. There are many ways of defining energy transitions, but the mainstream view of them is as protracted affairs taking decades (from technological innovation to niche market to dominance) or centuries (involving entire economies) to occur.

It is disputable whether it is possible to learn anything at all from past transitions. However, energy research has provided valuable insights such as the importance of energy end-use and patterns in successful scaling-up of technology systems. It is also widely agreed that the rate of change in next energy transition has to be faster than it has been in the previous transitions. This raises the question of what role is played by governments and energy policies in energy transitions.

Probably the best known example is the German energy transition – often referred to as Energiewende in English-language studies as well. It is a complex, multilevel process including exceptional historical circumstances and government as well as grassroots action. The aim of this lecture is to provide an overview of the key elements of energy transitions. The German energy transition is offered as an example of an ongoing transition.

Main themes

- Definition of energy transition
- Historical perspectives on energy transitions
- Theoretical perspectives on energy transitions

Planned learning method

Lecture and slides + Reading materials + Assignment

Self-evaluation questions for students

- What is meant by energy transitions?
- What kind of changes in energy systems are expected in the near future?

Mandatory reading

Solomon, B.D. & Krishna, K. (2010). The coming sustainable energy transition: History, strategies, and outlook. Energy Policy, 39, 7422–7431.

Stefes, C.H. (2010). Bypassing Germany's Reformstau: The Remarkable Rise of Renewable Energy. German Politics, 19(2), 148–163.

Optional reading

Sovacool. B.K. (2016). How long does it take? Conceptualizing the temporal dynamics of energy transitions. Energy Research & Social Science, 13, 2020–2215.

Jacobsson, S. & Lauber, V. (2006). The politics and policy of energy system transformation – Explaining the German diffusion of renewable energy technology. Energy Policy, 34, 256–276.

Hager, C. & Stefes, C. H. (2016). Germany's Energy Transition. A Comparative Perspective. Palgrave Macmillan. New York.

4.3.5. Energy policies and energy security (I): Nordic cases

Developed by Miikka Salo & Evangelia Petridou

Lecture description

Each partner country presents country specifics and particularities concerning energy policy, security and development paths.

Main themes:

- Why do crises lead to policy change?
- What is the role of political interests in potential change?
- How is the shift in Swedish nuclear policy explained?

Case Sweden (Evangelia Petridou, MIUN): Nuclear policy in the Swedish context

Self-evaluation questions for students

- Why might a crisis lead to policy change?
- Why might a crisis not lead to policy change?
- What was the purpose of the referendum in Sweden in 1980?
- What does nuclear energy policy look like in Sweden after 2010?
-

Case Finland (Miikka Salo, JYU): Finnish energy policymaking

Main themes:

- Historical perspectives on Finnish energy policymaking
- Core group of actors influencing energy policymaking in Finland
- Implementation of feed-in tariffs in Finland

Self-evaluation questions for students

- Which actors affect energy policy decision-making?
- What do you consider the main differences in energy policy decision-making between the Nordic countries?

Planned learning method

Lectures and slides + Reading materials + Deliberation tasks

Mandatory reading

Case Sweden: Nohrstedt, D. (2005). External shocks and policy change: Three Mile Island and Swedish nuclear energy policy, Journal of European Public Policy, 12(6), 1041–1059. doi: 10.1080/13501760500270729

Case Finland: Ruostetsaari, I. (2010). Changing regulation and governance of Finnish energy policymaking: New rules but old elites. Review of Policy Research, 27, 273–297.

Optional reading

Weber, R. & Smith, B.D. (2016). The Future of Nordic Climate and Energy. In: J. Rispling, G. & Norlén, G. (eds). The Nordic Region 2016. Stockholm: NordRegio (pp. 106–121).

Sabatier, P.A. (2007). The need for better theories. In: P.A. Sabatier (Ed.), Theories of the policy process. Cambridge, MA: Westview Press (pp. 3–17).

Sabatier, P.A. & Weible, C.M. (2007). The advocacy coalition framework: innovations and clarifications. In P.A. Sabatier (Ed.), Theories of the policy process. Cambridge, MA: Westview Press (pp.189–220).

Weible, C.M., Sabatier, P.A., Jenkins-Smith H.C., Nohrstedt, D., Henry, A.D., & deLeon, P. (2011). A quarter century of the Advocacy Coalition Framework: an introduction to the special issue. Policy Studies Journal, 39(3), 349–360.

World Nuclear Association (2017). Nuclear Power in Sweden. Accessed 31 January, 2017. Available at: http://www.world-nuclear.org/information-library/country-profiles/countries-o-s/sweden.aspx

4.3.6. Energy policies and energy security (II): Baltic Cases

Developed by Gintaras Labutis, Henn Tosso & Piia Tint

Lecture description

Each partner country presents country specifics and particularities concerning energy policy, security and development paths.

Case Lithuania (Gintaras Labutis, LKA): Lithuanian energy policies and strategies

Main themes

- Energy strategy, energy mix, energy independence: what is the perceived price of independence in energy?
- What is the desirable level of energy independence?
- Energy security and national security

Self-evaluation questions for students

- What sources of energy are used in Lithuania?
- Explain, how the concept of energy independence can be applied to Lithuania
- Should Lithuania develop its energy sources independently or in cooperation with Latvia and Estonia?

Planned learning method

Lecture and slides + Case study based on lecture and readings

Case Estonia (Henn Tosso & Piia Tint, TUT): Energy security risks in Estonia

This lecture makes an overview of the energy policies and security in Estonia now and in the future until 2030.

Main themes

- Energy sources in Estonia
- Energy dependence of Estonia
- Energy policy of Estonia
- Influence of neighbouring countries for energy security of Estonia.

Self-evaluation questions for students

- What sources of energy are used in Estonia and what social, economic and environmental threats might these sources entail?
- How do neighbouring countries impact the energy security of Estonia?
- Analyse how to improve the energy security of Estonia.

Planned learning method

Lecture and slides + Case study based on lecture and readings

Mandatory reading

Case Lithuania: Lithuanian Energy Security Annual Review 2015–2016 (2017). Vytautas Magnus University (pp. 8–30).

Case Estonia: Bulakh, A. & Tuohy, E. (2016). Impacts of climate policy on Estonian energy security. World Energy Council Estonia. Available at: http://envir.ee/sites/default/files/kpp_energiajulgeoleku_uuring_icds.pdf

Optional reading

Case Lithuania: Ministry of Energy of the Republic of Lithuania. Recommended key guidelines of the national energy strategy of Lithuania. APPROVED by the order of the Minister of Energy of the Republic of Lithuania of 24 November 2016 No. 1–314. 2016 (pp. 1–7).