Land-use systems in the EU – science, management and policy

- **Landscape Planning – EU experience**
- **Land-use science, management and governance – EU experience**
- **Forestry governance – EU experience**

Minsk, Belarusian State Technological University, 2015

Land-use systems in the EU – science, management and policy

Introduction to the module

This module consisting of three courses is developed by a team of international faculty under the Erasmus+ Jean-Monnet Modules programme *LUSY - Land-use systems in the EU - science, management and policy*. This the pilot session of the module; it will be run at Belarusian State Technological University from October 16 to November 20, 2015. The teaching and administrative team includes:

- Dr. Aliaksandar Niaverau, head of the Department of Management and Environmental Economics, Belarusian State Technological University (Minsk, Belarus), neverov2007@tut.by
- Dr. Anton Shkaruba, researcher at Central European University (Budapest, Hungary) – the academic director of the module, shkarubaa@ceu.edu
- Dr. Peter Edwards, researcher at Lincoln University (Christchurch, New Zealand), Peter.Edwards@lincoln.ac.nz
- Dr. Viktar Kireyeu, researcher at Erda RTE (Rijswijk, the Netherlands), kirejeu@yahoo.com
- Dr. Natallia Lukashuk, associate professor at Belarusian State Technological University (Minsk, Belarus) – project coordinator, acumca@mail.ru
- Dr. Alla Ravino, associate professor at Belarusian State Technological University (Minsk, Belarus), av_ravino@tut.by

The module is organised as a sequence of the three courses:

- Landscape Planning – EU experience
- Land-use science, management and governance – EU experience
- Forestry governance – EU experience

The module will open with the course on Landscape planning; this course will explain what tools and concepts for land- and forest management are in use in the EU. Building on this, the courses of land-use and forestry governance will provide a broader overview of relevant policies and institutions in the EU, and discuss the EU experience in Belarus. The key course deliverable is an individual research paper encompassing issues of land-use and forestry governance in Belarus and analysing them in the context of EU policies or transboundary cooperation initiatives.

The target audience are MSc students of Belarusian State University; the languages of instruction are Belarusian, English and Russian; in case if English commands of the enrolled students appear below the expected level, we will provide on-spot translation of key definitions and terminology.

Good luck with the course!

Aliaksandar Niaverau

Anton Shkaruba

Minsk-Budapest, September 15, 2015

Landscape Planning – EU experience

Co-ordinators	Ala Ravino, Anton Shkaruba
ECTS equivalents / in-class academic hours	3 (optional course) / 40
Lecturers	Ala Ravino, Anton Shkaruba, Viktar Kireyeu, Aliaksandar Niaverau, Natallia Lukashuk
Academic year and semester of the enrolment	2015/16, fall semester

Summary

This course takes landscape planning in a broad sense, and provides an overview of specific management and analytical tools and methods, such as adaptation, ecosystem services and their vulnerability modelling and analysis, communication tools and strategies, participatory approaches; another focus will be on European and Belarusian policy and management frameworks for landscape management, including the Florence Convention and modelling forests, and a dedicated session will be on policies and practices related to the physical planning in the EU, and on urbanisation issues (and their management) in the EU and Belarus. The modes of teaching will include lectures, workshops, role plays moderated group work. The final grade will be based on evaluation of in-class participation and group projects.

Prerequisites

In order to follow the course, the studentы need some background in the following academic disciplines or issues: economic theory, ecology, environmental management, environmental law, sustainable development.

As long as some of the sessions and most of the readings will be in English, the course participant will also need to possess reasonable English commands. Other transferrable skills reburied (and further developed) by the course are team work, evaluation and analysis of diverse sources of information.

Aims and objectives

The course provides students with understanding of principles and instruments of landscape ecology in spatial planning, analysis of landscape management contexts in the EU and Belarus, and known issues and challenges, with particular emphasis on the experiences of newer EU members in adapting their national spatial planning systems to the requirements of the European Landscape Convention and on the role of non-governmental actors in this process, with discussions on how this experience can be relevant to Belarusian context.

General learning outcomes:

By the end of the course, successful students will:

- understand concepts and instruments of landscape planning at international, regional (EU), national and local levels (including objectives and principles of the European Landscape Convention and Belarusian legislation)
- be aware of EU policies and legislation regulating spatial planning and implementation practices

- be able to reflect on Belarusian legislation, policies and implementation practices from the perspectives of EU practices, and on options for transboundary cooperation
- be familiar with the principles of development and operation of land monitoring systems, and EU experience in creating information tools for communicating monitoring results to decision-makers and broader public
- identify, develop and support new governance arrangements at landscape level, and assess the institutional capacity they need to be effective
- be aware of the concepts of environmental flow, landscape services and their vulnerability and adaptation
- be able to work in groups and effectively distribute responsibilities and deliverables
- be able to collect, evaluate and synthesise information from different sources
- be able to use internationally accepted terminology from the field

Teaching methods

The course will make most of interactive and self-reflective methods of teaching and learning and, where possible, avoid standing lectures and presentations. Most of the learning process will be channelized through supervised group work and group research assignments. The course will start with an overview of concepts and tools used for researching landscape ecology and land-use drivers. A particular focus will be on concepts of adaptation and vulnerability, and on modelling tools for analysing ecosystem vulnerability in the context of various land management options. This part of the course will include lectures and an in-class modelling exercise followed by testing and analysis of modelling outputs, and their discussion between the modelling groups.

Further sessions will be mostly on policy and legal frameworks for landscape management in the EU and Belarus, on model forests as a landscape planning tool, and on physical planning and urbanisation in the EU; this course component will be conveyed through lectures, short in-lecture discussions and moderated group work with panel discussions. Most of the discussions will be in the context of the applicability of the EU experience in the Belarusian context.

Course workload

Activities	Learning outcomes	Assessment	Estimated workload (hours)
Lectures with discussions or/and short workshops (in-class)	- understanding the concepts and instruments of landscape planning at international, regional, national and local levels - understanding the EU and BY policies and legislation regulating spatial planning and implementation practices - familiarity with the principles of development and operation of land monitoring systems, and EU experience in creating information tools - awareness of the concepts of environmental flow, landscape services and their vulnerability and adaptation	Class participation	28
Practical exercises (in-	- ability to reflect on BY legislation, policies and implementation practices from the	Class participation and preparedness	4

class)	perspectives of EU practices - identifying, developing and supporting new governance arrangements at landscape level, and assess the institutional capacity they need to be effective	for discussions	
Moderated group work (in-class)	- ability to work in groups and effectively distribute responsibilities and deliverables - ability to collect, evaluate and synthesise information from different sources - ability to use internationally accepted terminology from the field	Nuanced understanding and clear representation of a selected topic, identification of contestable aspects, representation of different interests, ability to formulate and represent own position	8
Reading and preparation to the classes	Familiarity with and ability to critically and creatively discuss key concepts, tools and methods as presented in the literature	Class participation, creative and active contribution to discussion	40

Grading

The students' performance will be based on the following:

- Level of preparedness for participation in class discussions and seminars (20 %) (from 100 % for active participation and demonstrated familiarity with the course readings to 0 % for completely ignoring in-class discussions);
- Contribution to group assignments (30 %) (from 100% for clearly demonstrated input to 0 % for non-participation);
- Quality of the individual assignment (50%)
    - +20% if done in comprehensible English
    - -20% if done in incomprehensible Russian

Key topics and the course schedule

Alla Ravino	AR
Aliaksandar Niaverau	AN
Anton Shkaruba	AS
Viktar Kireyeu	VK
Natallia Lukashuk	NL

Slots	**Topic, contents**	**Faculty involved**	**Academic hours**
October 16, Friday			
9:50-11:25	*Landscape* General introduction, management level of land-use dynamics – lecture and discussion *Landscape*	(NL, AR, AN) VK	2

	Landscape planning and global environmental change at the local scale – lecture and discussion		
11:40-13:15	*Landscape* Concepts of common pool resources, socio-ecological systems, ecosystem services – lecture and workshop	VK	2
13:50-15:25	*Landscape* Concepts of vulnerability, adaptation, resilience, adaptive capacity, adaptation deficits – lecture and discussion	VK	2
October 17, Saturday			
9:50-11:25	*Landscape* Landscape management: modelling tools for the analysis of vulnerability of ecosystem services (modelling of carbon pools in LPJ-GUESS and discussing the management implications) – lecture and discussion	VK	2
11:40-13:15	*Landscape* Landscape management: modelling tools for the analysis of vulnerability of ecosystem services (modelling of carbon pools in LPJ-GUESS and discussing the management implications) – practical in-class exercise	VK	2
13:50-15:25	*Landscape* Landscape management: modelling tools for the analysis of vulnerability of ecosystem services (modelling of carbon pools in LPJ-GUESS and discussing the management implications) – practical in-class exercise	VK	2
October 19, Monday			
9:50-11:25	*Landscape* Context and policy framework for landscape planning in Belarus: land resources and their state, legislation, management practices, public participation – lecture and discussion	NL	2
11:40-13:15	*Landscape* Context and policy framework for landscape planning in Belarus: land resources and their state, legislation, management practices, public participation – moderated group work and discussion	NL	2
October 23, Friday			
9:50-11:25	*Landscape* Sustainable land-use and organic farming - lecture	AR	2
11:40-13:15	*Landscape* Sustainable land-use and organic farming – moderated group work and discussion	AR	2
October 24, Saturday			
9:50-11:25	*Landscape* Context and policy framework for landscape planning in Belarus: land resources and their state, legislation, management practices, public participation – moderated group work and discussion	NL	2
11:40-13:15	*Landscape* Baltic landscape: research and practical issues – lecture and discussion	NL	2
13:50-15:25	*Landscape* Baltic landscape: research and practical issues – moderated group work and discussion	NL	2
October 26, Monday			
9:50-11:25	*Landscape* European Landscape Convention: background, history and issues of implementation in Belarus and the EU – lecture and discussion	AR	2
11:40-13:15	*Landscape* European Landscape Convention: background, history and issues of implementation in Belarus and the EU – lecture and discussion Lessons learned from the project “Transformation of the Baltic landscape” – moderated group work and discussion	AR	2
October 30, Friday			

11:40-13:15	*Landscape* Landscape planning and ecosystem services: valuation, problems of application – lecture and discussion	AN	2
13:50-15:25	*Landscape* Concepts of forest management; ecosystem services and forestry	AN	2
November 9, Monday			
8:00-9:35	*Landscape* Spatial planning in the EU: introduction - lecture	AS	2
9:50-11:25	*Landscape* Spatial planning in the EU: introduction – lecture and group work	AS	2
11:40-13:15	*Landscape* Spatial planning in the EU: introduction – lecture and group work	AS	2

Literature

Angelstam, P., M. Grodzynskyi, K. Andersson, R. Axelsson, M. Elbakidze, A. Khoroshev, I. Kruhlov, and V. Naumov. 2013. Measurement, collaborative learning and research for sustainable use of ecosystem services: Landscape concepts and Europe as laboratory. *AMBIO* 42(2): 129–145.

EEA 2012. Environmental indicator report 2012 — Ecosystem resilience and resource efficiency in a green economy in Europe, European Environment Agency, Copenhagen, Denmark.

Beunen, R. 2006. European Nature Conservation Legislation and Spatial Planning: For Better or for Worse? *Journal of Environmental Planning and Management* 49 (4): 605 - 619.

Stobbelaar, D.J. and B. Pedroli 2011. Perspectives on landscape identity, a conceptual challenge. *Landscape Research* 36 (3) 321-339.

Angelstam, P., K. Andersson, M. Isacson, D.V. Gavrilov, R. Axelsson, M. Bäckström, E. Degerman, M. Elbakidze, E. Yu. Kazakova-Apkarimova, L. Sartz, S. Sädbom, J. Törnblom. 2013. Learning about the history of landscape use for the future: consequences for ecological and social systems in Swedish Bergslagen. *AMBIO* 42(2): 146-159.

Buijs, A.E., B. Pedroli & Y. Luginbühl 2006. From hiking through farmland to farming in a leisure landscape. Changing social perceptions of the European landscape. *Landscape Ecology* 21(3): 375–389.

Land-use science, management and governance – EU experience

Co-ordinators	Viktar Kireyeu
ECTS equivalents / in-class academic hours	3 (optional course) / 40
Lecturers	Ala Ravino, Anton Shkaruba, Viktar Kireyeu, Aliaksandar Niaverau, Peter Edwards, Natallia Lukashuk
Academic year and semester of the enrolment	2015/16, fall semester

Summary

This course looks at various issues related to land-use and land-cover dynamic in the EU, including policy frameworks and impacts of related policies, application of specific policy tools, management of specific issues, and methodological frameworks used for analysis of land-use dynamics. The EU experience will be discussed with a reference to Belarusian policy context. The modes of teaching will include lectures, workshops, role plays moderated group work. The final grade will be based on evaluation of in-class participation and group projects.

Prerequisites

In order to follow the course, the studentы need some background in the following academic disciplines or issues: economic theory, ecology, environmental management, environmental law, sustainable development. It is also expected that by the start of this course, the students will have attended most of the Jean-Monnet course on landscape planning.

As long as some of the sessions and most of the readings will be in English, the course participant will also need to possess reasonable English commands. Other transferrable skills reburied (and further developed) by the course are team work, evaluation and analysis of diverse sources of information.

Aims and objectives

The course provides the students with broader understanding of basic concepts and tools of land use (including institutions, actor networks, social justice and environmental conflicts, functions of land-use governance systems, stakeholders and their identification), EU land use actors and institutions (both state/formal and non-state/informal, and including neighbourhood policies), where the EU is not directly concerned, all explanations are based on the examples from the EU and, where applicable, and reflect on options for Belarus, in particular for the regions bordering with EU. The course also includes sessions on land-cover modelling and a role play simulating stakeholder talks in the transboundary BY/PL context. Two core components of the course are (1) interactive theory, methodology and skills sessions, and (2) moderated independent work that includes group field research and development of individual papers covering issues of land-use and forestry governance.

General learning outcomes:

By the end of the course, successful students will:

- have understanding of a governance context of land-use issues, and conceptual frameworks developed to explain its complexity;
- be aware of biophysical and socio-economic (including institutional and infrastructural) dimensions of land-use and land-cover changes (LUCC), and of methodologies used to analyse their interactions;
- have general understanding of EU land use governance, its actors and institutions
- critically reflect on applicability of EU practices in the local and broader Belarusian setup
- understand basic principles, concepts and tools of land-use governance, in particular the practical value of transparent and just governance systems
- understand policy process and perform its structured analysis, policy transition and innovation, implementation deficits
- be aware of social-ecological systems and diagnostic frameworks developed for their analysis;
- be able to identify and map major stakeholders and analyse their stakes and interactions;
- understand the principles of land-use policy making at different scales and use this understanding in analytical deliberation;
- understand qualitative methods of research inquiry, and be able to apply them in the analysis of land-use issues;
- be aware of scenario development tools and methods.

Teaching methods

The course will make most of interactive and self-reflective methods of teaching and learning and, where possible, avoid standing lectures and presentations. Most of the learning process will be channelized through supervised group work and group research assignments.

The course will start with introductory lectures on key concepts and approaches of land use governance and their applications for LUCC issues in Europe, complemented by short moderated discussions. Subsequent sessions will combine lectures, moderated role-play exercises, and short practical case studies. This section of the course will give a broader perspective of governance context of LUCC structured according to major types of land use. The focus will be mainly on EU context. The third section of the course includes group in-field assignments to prepare a short individual paper addressing the analysis of a particular issue of land-use and forest governance in a trans-boundary or bordering with EU areas of Belarus. Most of the discussions will be in the context of the applicability of the EU experience in the Belarusian context.

Course workload

Activities	Learning outcomes	Assessment	Estimated workload (hours)
Lectures with discussions or/and short workshops (in-class)	- understanding of a governance context of land-use issues, and conceptual frameworks developed to explain its complexity; - awareness of biophysical and socio-economic (including institutional and infrastructural) dimensions of land-use and land-cover changes (LUCC) - general understanding of EU land use governance, its actors and institutions	Class participation	8

	- reflecting on applicability of EU practices in the local and broader Belarusian setup - understanding basic principles, concepts and tools of land-use governance, in particular the practical value of transparent and just governance systems - understand the principles of land-use policy making at different scales and use this understanding in analytical deliberation		
Moderated group work (in-class)	- understand qualitative methods of research inquiry, and be able to apply them in the analysis of land-use issues; - awareness of social-ecological systems and diagnostic frameworks developed for their analysis; - ability to reflect on BY legislation, policies and implementation practices from the perspectives of EU practices - ability to work in groups and effectively distribute responsibilities and deliverables - ability to collect, evaluate and synthesise information from different sources - ability to use internationally accepted terminology from the field	Class participation and preparedness for discussions	4
Role play	- be able to identify and map major stakeholders and analyse their stakes and interactions - be aware of scenario development tools and methods - ability to reflect on BY legislation, policies and implementation practices from the perspectives of EU practices - ability to work in groups and effectively distribute responsibilities and deliverables - ability to collect, evaluate and synthesise information from different sources - ability to use internationally accepted terminology from the field - effectively communicating information to a target audience	Nuanced understanding and clear representation of a selected topic, identification of contestable aspects, representation of different interests, ability to formulate and represent own position	14
Research consultations and presentations	- ability to collect, evaluate and synthesise information from different sources - ability to use internationally accepted terminology from the field - effectively communicating information to a target audience	Class participation and preparedness for discussions	10
Reading and preparation to the classes	Familiarity with and ability to critically and creatively discuss key concepts, tools and methods as presented in the literature	Class participation, creative and active contribution to discussion	40

Grading

The students' performance will be based on the following:

- Level of preparedness for participation in class discussions and seminars (20 %) (from 100 % for active participation and demonstrated familiarity with the course readings to 0 % for completely ignoring in-class discussions);
- Contribution to group assignments (30 %) (from 100% for clearly demonstrated input to 0 % for non-participation);
- Quality of the individual assignment (50%)
    - +20% if done in comprehensible English
    - -20% if done in incomprehensible Russian

Key topics and the course schedule

Alla Ravino	AR
Aliaksandar Niaverau	AN
Anton Shkaruba	AS
Viktar Kireyeu	VK
Peter Edwards	PE
Natallia Lukashuk	NL

Slots	Topic, contents	Faculty involved	Academic hours
November 2, Monday			
11:40-13:15	*Land-use* Presentation of group research proposals	AS (+VK, PE, AN, AR, NL)	2
November 3, Tuesday			
8:00-9:35	*Land-use* EU and BY forestry in the context of land-use – moderated group work and discussion	AS	2
November 6, Friday			
8:00-9:35	*Land-use* Stakeholder talks in the transboundary context - Role play / group project	PE	2
9:50-11:25	*Land-use* Stakeholder talks in the transboundary context - Role play / group project	PE	2
11:40-13:15	*Land-use* Stakeholder talks in the transboundary context - Role play / group project	PE	2
13:50-15:25	*Land-use* Stakeholder talks in the transboundary context - Role play / group project	AS	2
15:40-17:15	*Land-use* Stakeholder talks in the transboundary context - Role play / group project	AS	2
November 10, Tuesday			
8:00-9:35	*Land-use* Baltic landscapes programme and model forests - lecture	PE	2
13:50-15:25	*Land-use* How Baltic landscapes and model forests can bring about EU/BY transboundary cooperation -Vilhelmina model forest example – lecture and discussion	PE	2
15:40-17:15	*Land-use* How Baltic landscapes and model forests can bring about EU/BY transboundary cooperation -Vilhelmina model forest example – lecture and	PE	2

	discussion		
November 12, Thursday			
9:50-11:25	*Land-use* Planning on the edge: land-use policies for urban containment – lecture and discussion	AS	2
November 13, Friday			
8:00-9:35	*Land-use* Institutional diagnostic framework - lecture	AS	2
9:50-11:25	*Land-use* Institutional diagnostic framework – moderated group work and discussion	AS	2
11:40-13:15	*Land-use* Course assignment - consultations	AS	2
November 17, Tuesday			
13:50-15:25	*Land-use* Emerald / Natura 2000 biogeographical seminar – role play and discussion	VK	2
15:40-17:15	*Land-use* Emerald / Natura 2000 biogeographical seminar – role play and discussion	VK	2
November 19, Thursday			
9:50-11:25	*Land-use* Scenarios for the development of land-use policies and conflict resolution – lecture and discussion	VK	2
November 20, Friday			
9:50-11:25	*Land-use* Group work presentations	VK (all the faculty)	2
11:40-13:15	*Land-use* Group work presentations	VK (all the faculty)	2
13:50-15:25	*Land-use* Group work presentations	VK (all the faculty)	2

Literature

Rounsevell, M.D.A., Pedroli, B., Erb, K.-H., Gramberger, M., Busck, A.G., Haberl, H., Kristensen, S., Kuemmerle, T., Lavorel, S., Lindner, M., Lotze-Campen, H., Metzger, M.J., Murray-Rust, D., Popp, A., Pérez-Soba, M., Reenberg, A., Vadineanu, A., Verburg, P.H., Wolfslehner, B., 2012. Challenges for land system science: a European perspective. *Land Use Policy* 29, 899-910.

Erb, K.-H., Haberl, H., Jepsen, M.R., Kuemmerle, T., Lindner, M., Müller, D., Verburg, P.H., Reenberg, A., 2013. A conceptual framework for analysing and measuring land-use intensity. *Current Opinion in Environmental Sustainability*: http://dx.doi.org/10.1016/j.cosust.2013.07.010.

Metzger, M.J., Rounsevell, M.D.A., Acosta-Michlik, L., Leemans, R., Schröter, D.S. 2006. The vulnerability of ecosystem services to land use change. *Agriculture, Ecosystems and Environment* 114: 69–85.

Rounsevell, M.D.A., Reginster, I., Araujo, M.B., Carter, T.R., Dendoncker, N., Ewert, F., House, J.I., Kankaanpaa, S., Leemans, R., Metzger, M.J., Schmit, C., Smith, P., Tuck, G. 2006. A coherent set of future land use change scenarios for Europe. *Agriculture, Ecosystems and Environment* 114: 57–68.

Forestry governance – EU experience

Co-ordinators	Alexander Niaverau, Peter Edwards
ECTS equivalents / in-class academic hours	3 (optional course) / 40
Lecturers	Ala Ravino, Anton Shkaruba, Viktar Kireyeu, Aliaksandar Niaverau, Peter Edwards, Natallia Lukashuk
Academic year and semester of the enrolment	2015/16, fall semester

Summary

This course looks at various issues related to land-use and land-cover dynamic in the EU, including policy frameworks and impacts of related policies, application of specific policy tools, management of specific issues, and methodological frameworks used for analysis of land-use dynamics. The EU experience will be discussed with a reference to Belarusian policy context. The modes of teaching will include lectures, workshops, role plays moderated group work. The final grade will be based on evaluation of in-class participation and group projects.

Prerequisites

In order to follow the course, the studentы need some background in the following academic disciplines or issues: economic theory, ecology, environmental management, environmental law, sustainable development, introduction to forestry. It is also expected that by the start of this course, the students will have attended most of the Jean-Monnet course on landscape planning.

As long as some of the sessions and most of the readings will be in English, the course participant will also need to possess reasonable English commands. Other transferrable skills reburied (and further developed) by the course are team work, evaluation and analysis of diverse sources of information.

Aims and objectives

The course provides the students with broader understanding of basic concepts and tools of forest governance (including institutions, stakeholders and actor networks, state and private governance, social license to operate, forest certification, discourses in forest governance). Where the EU is not directly concerned, all explanations are based on the examples from the EU and, where applicable, and reflect on options for Belarus, in particular for the regions bordering with EU. The course also includes sessions on identification and analysis of policy implementation deficits in the forestry sector, and on forecasting and backcasting in forestry. Two core components of the course are (1) interactive theory, methodology and skills sessions, and (2) moderated independent work that includes group field research and development of individual papers covering aspects of land-use and forest governance.

General learning outcomes:

By the end of the course, successful students will:

- understand basic social science concepts that are applicable to political science and policy studies in forestry; explain basic assumptions of core political theories;

- understand of the shape and processes of international and European forest policy; and reflect on the implications in Belarus
- critically examine international, European, national and local forest policy using actors, 'rules of the game', discourses and resources;
- accomplish own policy analysis on limited forest policy areas
- be familiar with the concept of forest capital, ecosystem services, sustainable livelihoods,their implications for forest governance and relevant experiences in the EU and Belarus
- be aware of ecological networks, green corridors, categories of forests and nature protected areas, and management and governance implications in the EU and Belarus
- be familiar with issues and problems of adapting EU legislation in EU accession countries, and reflect on this experience in the light of the Belarusian forest management practice

Teaching methods

The course will make most of interactive and self-reflective methods of teaching and learning and, where possible, avoid standing lectures and presentations. Most of the learning process will be channelized through supervised group work and group research assignments.

The course addresses basic approaches from the social sciences, political science and policy science and looks at the latest experience and practices in the EU, in particular in newer member states. These will be linked in a second step with the empirical world of European and international forest policy and management.

The course is based on core approaches of policy analyses. Within this theoretical introduction of basic policy science terms like actors, interests, discourses, conflict, power, resources, policy processes, instruments and governance will be characterized and discussed. The main part of the course builds on this knowledge and describes and explains the arrangement of international forest policy. Important international actors like UNFF, FAO on the global level and Forest Europe and European Union at the regional level are described as well as actors representing developing countries, like CIFOR and ICRAF. Processes including National Forest Programmes and Forest Certification are discussed on the background of governance with focus on participation. Students are asked to give presentations on these subjects, where they are also expected to reflect on the relevance of the EU experience in Belarus. The question of power structures within international forest policy processes are considered within the discussion on actors, processes and discourses. Brief reports on self-conducted policy analyses help the students gain the required knowledge.

The course will include group assignments on the development of vulnerability indicators for Belarusian forestry ecosystems based on European experience, and on the development of recommendations for guidelines for FSC certification (governance) for Belarusian forestry units. The individual assignment would cover any of the issues discussed on the course; it shall address a specific problem, be based on independent or field research in a forestry unit in Belarus, and contain comparisons with relevant EU practices or experience.

Course workload

Activities	Learning outcomes	Assessment	Estimated workload (hours)
Lectures with discussions	- understanding of a governance context of forestry and ecosystem management in	Class participation	18

or/and short workshops (in-class)	forests, and conceptual frameworks developed to explain its complexity; - awareness of biophysical and socio-economic (including institutional and infrastructural) dimensions of forest management and governance - general understanding of institutions of forest governance in the EU, EU forest policies and management tools - reflecting on applicability of EU practices in the local and broader Belarusian setup - understanding basic principles, concepts and tools of forestry governance used in research in practice in the EU, such as social license to operate, policy discourses and discourse analysis, advocacy coalitions, stakeholder identification, development of model forests etc.		
Moderated group work (in-class) and panel discussions	- understand qualitative methods of research inquiry, and be able to apply them in the analysis of forest governance; - awareness of the issues of policy transposition in the EU, and policy implementation deficits in forestry - be able to identify and map major stakeholders and analyse their stakes and interactions - be aware of scenario development tools and methods - ability to reflect on BY legislation, policies and implementation practices from the perspectives of EU practices - ability to work in groups and effectively distribute responsibilities and deliverables - ability to collect, evaluate and synthesise information from different sources - ability to use internationally accepted terminology from the field - effectively communicating information to a target audience	Class participation and preparedness for discussions; nuanced understanding and clear representation of a selected topic, identification of contestable aspects, representation of different interests, ability to formulate and represent own position	22
Reading and preparation to the classes	Familiarity with and ability to critically and creatively discuss key concepts, tools and methods as presented in the literature	Class participation, creative and active contribution to discussion	40

Grading

The students' performance will be based on the following:

- Level of preparedness for participation in class discussions and seminars (20 %) (from 100 % for active participation and demonstrated familiarity with the course readings to 0 % for completely ignoring in-class discussions);
- Contribution to group assignments (30 %) (from 100% for clearly demonstrated input to 0 % for non-participation);
- Quality of the individual assignment (50%)
    - +20% if done in comprehensible English
    - -20% if done in incomprehensible Russian

Key topics and the course schedule

Alla Ravino	AR
Aliaksandar Niaverau	AN
Anton Shkaruba	AS
Viktar Kireyeu	VK
Peter Edwards	PE
Natallia Lukashuk	NL

Slots	Topic, contents	Faculty involved	Academic hours
October 29, Thursday			
9:50-11:25	*Forestry* Introduction to the forestry as an interdisciplinary field of management policy and economics studies – lecture and discussion	AN	2
11:40-13:15	*Forestry* Institutional framework for forestry and forest policies and politics in Belarus – lecture and discussion	AN	2
13:50-15:25	*Forestry* Institutional framework for forestry and forest policies and politics in Belarus – lecture and discussion	AN	2
November 2, Monday			
8:00-9:35	*Forestry* Overview of governance in general – what is governance? – lecture and discussion	AS	2
9:50-11:25	*Forestry* Overview of governance in general – what is governance? – lecture and discussion	AS	2
November 3, Tuesday			
13:50-15:25	*Forestry* Points of similarities between BY and EU forest governance – moderated group work and discussion	PE	2
15:40-17:15	*Forestry* Anticipatory adaptation and risk management in forestry – – group work and discussion of the modelling results (LPJ-GUESS)	PE, AS, VK	2
November 4, Wednesday			
8:00-9:35	*Forestry* Anticipatory adaptation and risk management in forestry – group work and discussion of the modelling results (LPJ-GUESS)	AS, VK	2
November 5, Thursday			
9:50-11:25	*Forestry* Institutional fit, mismatches, scale, and principles of institutional design – lecture and discussion	AS	2
11:40-13:15	*Forestry*	AS	2

	Institutional fit, mismatches, scale, and principles of institutional design – moderated group work and discussion		
13:50-15:25	*Forestry* Policy arrangement approach: theory and application – lecture and discussion	PE	2
15:40-17:15	*Forestry* Policy arrangement approach: theory and application – moderated group work and discussion	PE	2
November 12, Thursday			
11:40-13:15	*Forestry* Implementation deficits - lecture	AS	2
13:50-15:25	*Forestry* Implementation deficits – moderated group work and discussion	AS	2
15:40-17:15	*Forestry* Implementation deficits – moderated group work and discussion	AS	2
November 16, Monday			
9:50-11:25	*Forestry* Forest institutional set-ups in EU and BY – lecture and discussion	VK	2
11:40-13:15	*Forestry* Forest institutional set-ups in EU and BY – moderated group work and discussion	VK	2
November 19, Thursday			
11:40-13:15	*Forestry* Forecasting and backcasting in forestry– moderated group work and discussion	VK	2
13:50-15:25	*Forestry* Forecasting and backcasting in forestry – moderated group work and discussion	VK	2
15:40-17:15	*Forestry* Forecasting and backcasting in forestry – moderated group work and discussion	VK	2

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