

CDAE 295 Ecological Economics and Sustainable Forest Management in the Ukrainian Carpathians

University of Vermont, Fall 2007

Dr. William Keeton and Dr. Joshua Farley

Course Participants:

This course is designed for graduate students from the natural resource, forestry, community development and applied economics, and related disciplines. Students participating in the course and atelier have thesis work related to and/or a strong interest in the issues to be addressed at the atelier.

Course Objectives:

- Identify and examine sustainable development and sustainable forest management (SFM) issues at play in the Ukrainian Carpathian region and, along with academics, practitioners and other stakeholders at the atelier, create working solutions to enhance development and the environment.
- Understand and apply concepts from SFM, community development and ecological economics literature while actively participating with a diverse group of stakeholders in an atelier designed to improve the design and implementation of public policies regarding sustainable development and SFM in Ukraine during the transition economy.
- Contribute to the development of a coherent vision of the present profile of natural resources management, challenges and solid policy recommendations for SFM while addressing factors underlying environmentally-sound community development. One of the proposed outcomes will be presentation and analysis of a Draft White Paper for the Ukrainian Carpathian mountain region in the framework of the [Carpathian Convention](#). Facilitate the integration of the scientific findings and expert contributions into decision making process, harmonizing contradictive stakeholders' interests for achieving sustainable development goals.
- Work with atelier participants on journal papers based on the results of the atelier.
- Graduate students are expected to work as facilitators during the atelier. They are also expected to act as professional collaborators throughout this course. Students will not function in a traditional "student role." This will be a collective, mutualistic learning process for everyone involved.
- Generate a hybridized understanding of research and collaboration across disciplines and cultures. Through the policy development process, students will critically analyze and discuss relative benefits, barriers, advantages and disadvantages associated with an integrated approach as applied to the Ukrainian Carpathian region in the atelier format.

Atelier Description:

This atelier aims to improve the design and implementation of public policies regarding SFM in Ukraine during the transition economy. The atelier will incorporate public

participation to identify problems and potential solutions, and will generate useful SFM strategies that can be applied by a host of stakeholders. SFM represents an integrated, encompassing approach to natural resource management that combines the ecology, economics, cultural and social elements which supports long-term vitality of human and biological communities. These management strategies embrace the four underlying capitals: Natural, Human, Social and Built Capital to meet goals for community economic development, ecological integrity and social justice, all of which contribute to the overall wellbeing and sustainability of the region.

Course Meetings and Format:

This course involves an intensive 10-day atelier September 22-October 1, 2007 on site in the Ukrainian city of L'viv and the Carpathian Mountain region. (Travel itinerary follows.) The class will also meet for several sessions both before the atelier for preparation and after for debrief, discussion and for the development of related documents and/or articles.

REQUIRED READINGS

Sustainable Forest Management

1. Bihun, Y., 2004. "Implementing Reduced-Impact Logging (RIL) to Advance Sustainable Forest Management (SFM) in the Ukrainian Carpathians." From the Proceedings of the IUFRO Conference: *Forest Engineering: New Techniques, Technologies and the Environment*, October 5-10, 2004, Lviv Ukraine. Ukrainian State University of Forestry and Wood Technology, Technical Bulletin. Vol. 14.4: 238-247.
2. Badea, O., Tanase, M., Georgeta, J., Anisoara, L., Peiov, A., Uhlirova, H., et al. (2004). Forest health status in the Carpathian Mountains over the period 1997-2001. *Environmental Pollution*, 130(2004), 93-98.
3. Bihun, Y., 2004. "Principles of Sustainable Forest Management in the Framework of Regional Economic Development." From the Proceedings of the Fulbright Ukraine Conference on May 20-24, 2004, Skolje, Ukraine. In Publication. 12 pp.
4. Bihun, Yuriy. 2007. *The Mountain Forests of the Ukrainian Carpathians Revisited: An American Forester's Perspective*. 2006 Fulbright Ukraine Yearbook, Council for the International Exchange of Scholars (CIES), Kyiv, Ukraine. pp 47-49.
5. Buksha, I. Forestry Sector of Ukraine in Transition to Market Economy. Ukrainian Research Institute of Forestry and Agroforestry.
www.unece.org/trade/timber/h3/Warsaw%20doc
6. Bytnerowicz, A., Godzik, B., Grodzinska, K., Fraczek, W., Musselman, R., Manning, W., et al. (2004). Ambient ozone in forests of the central and eastern European mountains. *Environmental Pollution*, 130(2004), 5-16.
7. Chernyavskyy Mykola, 2005: The dynamics of virgin beech forests in the Ukrainian Carpathians. In: Commarmot, B.; Hamor, F. D. (eds): *Natural Forests in the Temperate Zone of Europe – Values and Utilisation*. Conference 13-17 October 2003, Mukachevo, Ukraine. Proceedings. Birmensdorf, Swiss Federal Research Institute WSL.XX–YY. Pp.100-107.

8. Elbakidze, M. and Angelstam, P. [Empirical evaluation of forest policy cycle development in actual landscapes: observations from Ukrainian and Russian cases.](https://arbetsplats.sfak.slu.se/faculty_doc/Delade%20dokument/IBFRA/Presentation/model_forest/SFM_Ukraine_Russia.pdf) // 13th IBFRA Conference “New Challenges in Management of Boreal Forests”, Umea, Sweden - https://arbetsplats.sfak.slu.se/faculty_doc/Delade%20dokument/IBFRA/Presentation/model_forest/SFM_Ukraine_Russia.pdf
9. Elbakidze, M., & Angelstam, P. (In Publication). Implementing sustainable forest management in Ukraine’s Carpathian Mountains: The role of traditional village systems. *Forest Ecology and Management*, 2007(XXX), XXX-XXX.
10. Keeton, W. (2007). Role of managed forestlands and models for sustainable forest management: Perspectives from North America. *George Wright Forum*, In Press.
11. Larsson, T. B., Barbati, A., Brusselen, J. V., Lindner, M., Marchetti, M., Petriccione, B., et al. (2007). The role of forests in carbon cycles, sequestration and storage. *IUFRO Newsletter*, 2007(5), 1-10.
12. Nijnik, M. 2002. To sustainability in forestry: The Ukraine’s case [electronic version]. *Wageningen: Wageningen University*. Retrieved October 10, 2006 <http://library.wur.nl/wda/dissertations/dis3244.pdf>
13. Maksymiv, L., Soloviy, I. & Zahvoyska, L. 2004. SFM in Ukraine: Reality and Perspectives. International Conference on Economics of Sustainable Development. www.forestry.utoronto.ca/socio-economic/icesfm/
14. Muzika, R. M., Guyette, R. P., Zielonka, T., & Liebhold, A. M. (2004). The influence of o₃, no₂ and so₂ on growth of picea abies and fagus sylvatica in the Carpathian Mountains. *Environmental Management*, 130(2004), 65-71.
15. Palang, H., Printsman, A., Konkoly, E., Urbanc, M., Skowronek, E., & Woloszyn, W. (2006). The forgotten rural landscapes of central and eastern Europe. *Landscape Ecology*, 2006(21), 347-357.
16. Polyakov, M. O. 1999. *Valuation of Forest in Ukraine*. Royal Institute of Technology. Retrieved 10/9/06. <http://web6.duc.auburn.edu/~polyama/msc/thes.pdf>
17. Sikor, T. (2003). The commons in transition: Agrarian and environmental change in central and eastern Europe. *Environmental Management*, 34(2), 270-280.
18. Soloviy, I. P. 2000. Afforestation in Ukraine: Potential and Restrictions. *European Forest Institute Series*. N 35.
19. Soloviy, I.P. 2006. Forest Policy towards SFM: Problems of International Agreements Implementation at National and Local Levels. // 13th IBFRA Conference “New Challenges in Management of Boreal Forests”, Umea, Sweden- https://arbetsplats.sfak.slu.se/faculty_doc/Delade%20dokument/IBFRA/Presentation/model_forest/FOREST_POLICY_TOWARDS_SFM_Soloviy_Ukraine.pdf
20. Synyakevych, I., Soloviy, I. 2002. Modern forest policy in changing societies. – Scientific Papers of Agricultural University of Poznan. Forestry Vol.5, 87-95. Pp 87-95
21. Synyakevych I, Soloviy I. Institutional Preconditions for the Ukrainian Forest Policy Development. // Forests in Transition II. Challenges in Strengthening of Capacities for Forest Policy Development in Countries with Economies in Transition. Edited by Libor Jansky, Radovan Nevenic, Ilpo Tikkanen, Brita Pajari. – Tokyo, Japan : United Nations University, 2004. - P. 363-375

22. Turnock, D. (1999). Sustainable rural tourism in the Romanian Carpathians. *The Geographical Journal*, 165(2), 192-199.

Ecological Economics

1. Angelstam, P. 2006. Maintaining cultural and natural biodiversity in Europe's economic centre and periphery. In: Agnoletti, M. (Ed.), *The Conservation of cultural landscapes*. CAB International, 125-143.
2. Bartczak, A. Forest non-market valuation studies in the Czech Republic, Hungary and Poland: a Review. <http://www.medforex.net/e45/2.Catania/Bartczak.pdf>
3. Costanza, R., 2004. Social Goals and Valuation of Ecosystem Services *Ecosystems Journal*. February 19,
4. Daly, H. E. & Farley, J. 2004. *Ecological economics: Principles and applications*. Washington, DC: Island Press.
5. Meppem, T. (2000). The discursive community: Evolving institutional structures for planning sustainability. *Ecological Economics*, 34(234), 47-61.
6. Melichar, J., Scasny, M. Introduction to Non-Market Valuation Methods and Critical Review of Their Application in the Czech Republic http://ies.fsv.cuni.cz/storage/sylab/127_ii-02melichar.pdf
7. Vrublevska, O. Do liberal market reforms provide sustainable use of the nature capital fund in the Ukrainian Carpathians? - *European Association for Comparative Economics Studies (EACES) 9th Bi-Annual Conference: Development Strategies - A Comparative View*. - <http://www.bton.ac.uk/bbs/eaces/papers/1e2.pdf>
8. Zahvoyska, L. Implementation of Sustainable Development Paradigm into Ukrainian University Education -http://www.hesd.si/HESD_Day2/Zahvoyska.pdf Workshop on „Economic Valuation of Recreation Functions of Forest Ecosystems” <http://www.cuni.cz/COZPENG-75.html>

Ukrainian Policy Review

1. National assessment of the national policy, legislative and institutional frameworks related to the carpathian convention: Ukraine. (2005.): Regional Environmental Center, EURAC Reserach, Ministry for the Environment, Land and Sea.
2. Hall, J. J., & Egerer, H. (2004). Constructing the Carpathians: The Carpathian convention and the search for spatial ideal. *Revue de Geographie Alpine*, 92(2), 98-106.
3. Polyakov, M., & Teeter, L. (2005). The influence of regulatory forest policy tools on biodiversity measures for forests in Ukraine. *Forest Policy and Economics*, 7(2005), 848-856.

Ukrainian Culture

1. Schevche, A. (2005). *Culture smart! Ukraine: A quick guide to customs and etiquette*. London: Kuperard.

TENTATIVE ITINERARY

Atelier

Ecological Economics and Sustainable Forest Management in the Ukrainian Carpathians

Ukrainian National Forestry University
L'viv, Ukraine
September 22, 2007 -October 1, 2007

Day One

Saturday, September 22, 2007

Arrival in L'viv
Afternoon meeting (UNFU)
Introduction to Atelier Process
Opening and official welcome
Dinner

Day Two

Sunday, September 23, 2007

9:00am – 1:00pm Field trip to regional landscape park “Znesinnya”.
Roundtable discussion about urban forest ecosystem
services potential, roles and perspectives

1:00pm – 2:00pm Lunch

2:00pm – 5:00pm Tour of historic L'viv

7:00pm Student social event

Day Three

Monday, September 24, 2007

9:00am – 6:00pm **Conference day**

8:15am – 9:30am **Conference registration**

9:00am – 9:15am **Welcome and Introductory Remarks** *Dr. Lyudmyla Maksymiv*, Director of the IEE, *Dr. Stepan Myklush*, Dean School of Forestry School.
Presentation of the Atelier task in Ukraine

9:15am – 10:15am **Keynote Presentation** (to be announced) *Dr. Robert Costanza*, Director, Gund Institute for Ecological Economics, University of Vermont (UVM)

10:15am – 11:15am Lessons learned and experiences from previous ateliers leaded by the Gund Institute for Ecological Economics, UVM. Relevant ecological economics theory *Dr. Joshua Farley*, Gund Institute for Ecological Economics, UVM)

11:30am – 1:00pm

Panel Discussion: The status of sustainable forest management in the Carpathians

Moderator: *Yurij Bihun*, Director, Shelterwood Systems, Project Coordinator, Penn State University, WIRA Program

Presenters:

- Forest Ecosystems Dynamics and Relevant SFM Theory. Dr. *William Keeton*, Rubenstein School, of Environment and Natural Resources, UVM)
- Dr. *Per Angelstam*, Swedish Agricultural University, School of Forest Engineering
- Dr. *Anatoliy Deyneka*, Lviv Regional Forestry Association
- Dr *Mykola Tchernyavsky*, Department of Ecology and Landscape Architecture, UNFU

1:00pm – 2:00pm

Lunch

2:00pm – 3:30pm

Panel Discussion: Forestry in transition economies pressing problems

Moderator: *Dr. Lyudmyla Zahvoyska*, IEE, UNFU

- *Dr. Ihor Soloviy*, IEE, UNFU
- *Dr. Ihor Synyakevych*, Department of Economics, UNFU
- *Dr. Andriy Polovsky*, IEE, UNFU

3:30pm – 4:00pm

Coffee break

4:00pm – 5:30pm

Panel Discussion: Forest Services

Moderator: *Dr. Ihor Soloviy*, IEE UNFU

- *Dr. Lyudmyla Zahvoyska*, UNFU
- *Carlie Avis, Michael Baltzer*, WWF
- *Dr. Lyudmyla Maksymiv*, UNFU

5:30pm – 6:00pm

Closing comments: *Dr. William Keeton*, UVM

6:30pm

Dinner

Day Four

Tuesday, September 25, 2007

Situation with forest management in Carpathian Region: problems, stakeholders, interests

Working Group Leader: Dr. *Marine Elbakidzide*, Department of Geography, Lviv University

8:00am

Field trip to Skole district, Lviv region

8:30am – 9:30am

Visit to the National Park “Skolivski Beskydy”

9:30am – 1:00pm

Discussion of high conservation value forests

1:00pm – 2:00pm

Lunch

2:00pm – 4:00pm

Meeting with forest service of State Enterprise “Skole Forestry” and forest service of the communal forest enterprise “Galsillis” and other stakeholders

4:00pm – 6:00pm	Visit to forest operation sites. Acquaintance with forestry practices
6:00pm – 7:00pm	Departure to Khust district, Transcarpathian Region Travel time spent in working groups
7:00pm	Dinner

Day Five

Wednesday, September 26, 2007

How far we are from SFM? Overview of forestry practices

Working Group Leader: Dr. Volodymyr Kovalyshyn, Department of Forest Economics, UNFU

9:00am	Visit to office of State Enterprise “Khust Forest Enterprise” (harvesting operations, protected areas, reforestation areas, nursery management, etc.) Field Lectures Survey
1:00pm – 2:00pm	Lunch in the forest
2:00pm – 4:00pm	Visit to Isa village, Khust district. Folk art crafts; willow baskets, etc.
4:00pm – 6:00pm	Work in the groups. Discussion
6:00pm	Dinner

Day Six

Thursday, September 27, 2007

Panel Discussion: Public participation in SFM ideas implementation: the human capital perspective

Moderator: Dr. *Ihor Soloviy*, IEE, UNFU

Venue: Transcarpathian Forest Technical College

9:00am	
9:30am – 10:30am	Transcarpathian region from ecological economics perspective (Dr. <i>Volodymyr Kovalyshyn</i> , UNFU)
10:30am – 11:00am	Local ENGOs – activities (<i>Oksana Stankevych</i> , Ecosphere, Uzhgorod)
11:00am – 12:00am	Discussion
12:00am – 1:00pm	Social – economic survey
1:00pm – 2:00pm	Lunch
2:00pm – 6:00pm	Aesthetical landscape values as potential benefits for tourism development from local economy perspective (trip to Khust surroundings: Castle Hill, Valley of Daffodils, Tisa river)
6:00pm	Dinner

Day Seven

Friday, September 28, 2007

Natural capital perspectives

	Session leader (TBA)
9:00am – 10:30am	Work in the groups, preliminary journal paper drafting
10:30am – 11:00am	Coffee break
11:00am – 1:00pm	Presentation of preliminary outcomes of the atelier
1:00pm – 2:00pm	Lunch
2:00pm	Departure to Uglya village (Tyachiv district of Transcarpathian region)
3:30pm	Visit to old – growth beech forests of Carpathian Biosphere Reserve (the largest one in the Western Ukraine)
	Field lecture. Visit to stalactite cave in the forest
6:00pm	Return to Khust
8:00pm	Dinner

Day Eight

Saturday, September 29, 2007

Cultural capital perspective

	Session leader (TBA)
8:00am	Departure to Rakhiv
9:00am – 12:00pm	Visit to Museum of Carpathian Biosphere Reserve (history of Carpathian Mountains, life style and art of Carpathian "Hutsul" ethnic groups, biodiversity of mountains), Rakhiv district
12:00pm – 1:00pm	Discussion
1:00pm – 2:00pm	Lunch
2:00pm – 6:00pm	Visit to Yaremcha (cultural center of Hutsul ethnic group) en route
	Travel time spent in working groups
6:00pm	Return trip to Lviv

Day Nine

Sunday, September 30, 2007

Atelier Analysis and Synthesis

	Working group leaders (TBA)
9:00am – 1:00pm	Working groups draft paper outlines
1:00pm – 2:00pm	Lunch
2:00pm – 4:00pm	Work in the groups to complete journal paper outline
	Cultural event, Opera, L'viv Opera House
	Dinner hosted by UNFU Forestry Dean Stephan Myklush

Day Ten
Monday, October 1, 2007

Presentation of results and implementation strategy

	Working group leaders (TBA)
9:00am – 10:30am	Work in the groups
10:30am – 11:00am	Coffee break
11:00am – 1:00pm	Presentation of the atelier results and recommendations Moderator: <i>Dr. William Keeton</i> , Rubenstein School, UVM
1:00pm – 2:00pm	Lunch
2:00pm – 4:00pm	Internal wrap up meeting Departure
