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Governance of the Commons

Edited by

Tatiana Kluvánková-Oravská and Veronika Chobotová

"Humans have great capabilities and somehow we've had some sense that the officials had genetic capabilities that the rest of us didn't have."

Elinor Ostrom in telephone interview following the announcement of the 2009 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, 12 October 2009.

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[1] Centre for Transdisciplinary Studies of Institutions Evolution and Policies (CETIP) is dedicated to introduce ideas from institutional, evolutionary and ecological economics into the European research, public debate and policy making: Inter - disciplinary research in Europe, primarily in the region of Central and Eastern Europe, presently undergoing the transition from socialism to free market and democracy. Flexible research teams across natural and social sciences and inter-generational cooperation of early stage and experience researchers. Platform for science and policy interface.

[2] GoverNat is a Marie Curie Research Training Network funded within the 6th Framework Program of the European Commission. The overall objective of GoverNat is to develop new solutions for multi-level environmental governance and to facilitate their use by decision makers in an enlarged EU. The central research objective is to test the hypothesis that certain participatory processes and analytical decision tools are particularly useful for improving multi-level environmental governance. The central training objective is to give 9 Doctoral Students and 3 Post-doctoral Fellows an interdisciplinary training 1) in research on environmental governance, particularly of biodiversity and water, in Europe, and 2) in designing legitimate and effective solutions for participation and communication between policy makers, scientists and the public.

Obsah:

Chapter 1
New Environmental Governance

Tatiana Kluvánková-Oravská[a]

ABSTRACT

The governance of the commons as interdisciplinary research field is becoming central research and policy agenda. Key issue is reframing regulatory and centralised governing processes to co-ordination of social relations in the absence of a unifying authority but with the involvement of various actors that are independent of a central power and acting at and across different levels. Such governance is known also multilevel governance. The main question addressed is how to govern common pool resources under the multilevel governance in effective and fair manner? The paper offer innovative concept for addressing multilevel governance of enlarged EU in particular in the area of the environment. It analyses processes in multilevel environmental decision-making and suggesting possible mechanisms for vertical and horizontal interaction of actors, institutions and ecosystem for their adaptation to new ecological and social conditions.

Introduction

The governance of commons is being on the top of interdisciplinary research agenda for more than a decade (Frohlich et al 1970 Dawes et al 1986 Ostrom 1998, Ostrom et al 1991, 1994, etc.). Key questions are: How to govern common pool resources, how institutions can increase effective allocation and fair distribution of common pool resources, why privatisation or nationalisation can not properly address social dilemmas, or what is the role of self governance and cooperation based on trust and reciprocity in the robust governance of the commons?

The ongoing processes of globalisation, fragmentation and European integration have shifted authority from national states up to the European level and down to sub-national levels, with an increasing role of non-state actors. Governance becomes organised through multiple

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jurisdictions and can no longer be understood as a central state monopoly (Hooghe and Marks, 2003). This poses a challenging question how traditional institutional systems concentrated around a central state can adapt to new roles where direct control over decision-making is shrinking but demand for co-ordination of the complex social arena is expanding. Key issues are democratic decision-making in the process of transformation from traditional governments to governance.

The terms government and governance consist of a rule system through which decision-making is conducted but, while government is linked to activities backed by formal institutions and authorities, governance refers to larger social processes and functions, including informal and formal institutions and multiple actors (Rosenau 1992, 1997); in another definition, government refers to the formal processes of political control at a central sub-national level and governance, to the co-ordination of social relations in the absence of a unifying authority (Bache and Flinders, 2004). Governance implies the involvement of various actors that are independent of a central power and operate at different levels of decision-making (Rhodes, 1996; Stoker, 1998). Additionally, governance is not restricted by temporal or spatial limits and can thus travel easily across categories and disciplines, allowing it to be used on different spatial scales (Jordan, 2008).

Evolution of the governance in the region of Central and Eastern Europe (CEE) is characterised by institutional change from hierarchical to democratic governance and market economy. Rather than geographically, CEE region is understood in its cultural, historical and political aspects, in particular the common aspects of institutional change. Governance of the commons in new EU member states and other CEE countries is still affected by post-socialist relations and transition. These processes often result in inefficient institutional designs and over-exploitation of natural resources. This is opening a window for opportunities for analysing the processes and governance structures in the new EU member states, candidates and near neighbours in Central and Eastern Europe.

The objective of the paper is to follow the evolution of governance of the commons as an organising perspective to explain and analyse transition and Europeanization in respect to development of new governance mode in the area of the environment. Our analysis concentrates on the those characteristics and processes of multilevel environmental decision-making, where actors from various levels and with different powers interact with evolving institutions and respective ecosystems; alternatively, what are the mechanisms for vertical and

horizontal interaction of actors, institutions and ecosystem attributes and how they can adapt to new ecological and social conditions.

Challenges of the Commons

Common pool resources (CPR) are defined as natural and human constructed resources in which exclusion of beneficiaries through physical and institutional means is especially costly, and exploitation by one user reduces resource availability for others (Hardin 1968, Ostrom 1994 and others). This create potential CPR dilemmas in which individual short term interests are in conflict with long-term society interest and thus makes governance of the commons challenging field of economic research and policy. Starting from defining attributes of common pool resources by Garret Hardin (1968) known also as the "tragedy of the commons" four broad types of property rights can be distinguished (Ostrom et al 1999). State property involves ownership by a national, regional, or local public agency that can forbid or allow use by individuals. Individual property holders can exhibit their private interests to explore and preserve. Common (group) property represent collective private ownership with primary difference from individual property in collective decision making such as buying, selling or maintaining the commons. When valuable CPRs are left to an open-access regime, degradation and potential destruction are the result regardless property type (Ostrom 1990, 1999). To prevent open access each well managed CPRs regime involves and requires that rules evolve regardless of the property rights (Ostrom 1990). Effective commons governance is easier to achieve when the resource extractions is regulated, can be monitored, non compliance is sanctioned and the information can be verified and understood at relatively low cost. Those attributes become a basis for formulation of design conditions for robust governance of CPR (Ostrom 1990, 1999). Ostrom thus challenged the conventional wisdom that common property is poorly managed and should be either regulated by central authorities or privatized and contributed to the interdisciplinary research on the role of institutions in organising human activities that affect the resilience of the environment.

From Government to Governance

Internationalisation, Europeanisation and EU enlargement can be seen as the most significant drivers of institutional change in Europe at present. The development of the environmental policy at the establishment of the European Union concerned mostly human health and was

largely fragmented and dependent on the national states. The key driving forces behind the development of the EU environmental policy were international obligations (Baker 2003, Jordan 2004) initiated mainly by the UN Earth Summit in 1992, followed by international agreements such as the Convention on Biological Diversity and others. Another important driver was the growing pressure of the global economy, in particular the depletion of natural resources and issues of genetically modified organisms. In the third Cohesion Policy, a reform of the regional policy in respect of the EU enlargement to the south of Europe triggered interregional collaboration (Baker 2008). Starting from the First Action Program (1974), solid environmental policy of the European Community can arguably be recognised but still rather responding to duties and incentives of international treaties. The turning point can be seen in the late 1980s, when the Third Action Programme was adopted and EU environmental policy turned to strategic actions. Examples are the incorporation of sectoral integration initiated by the European Council meeting known as the Cardiff process (1998) or the active participation in the UN Convention on Climate Change. However, most of the EU legislation was based on centralised enforcement, which, together with the absence of a proper form of participation, was considered among the reasons for the failure of the EU to meet the target of halting biodiversity loss by 2010 (Rauschmayer 2009). International obligations and continuing gradual commercial pressure on the market use of the environment provided a platform for the adoption of framework directives with the need for co-ordination and dispersion of competencies from the EU to national and sub-national levels as well as respective bottom-up processes back to the EU level. Examples are the Bird, Habitat and Water Framework Directives. They require a co-ordination of competencies and sectoral policies at the EU level (shifting responsibilities among DGs, common agricultural policy), but first of all, a vertical co-ordination with lower levels (implementation, monitoring, etc.) and horizontal co-ordination of competencies such as rights of non-state actors. These processes are accompanied by various difficulties such as the absence of community rules for collective action or dominance of natural sciences in designing and implementing laws and policies (Baker 2003). An illustrative example can be the designation of Natura 2000 sites narrowly implemented upon scientific criteria (Pavoola et al. 2009).

The massive institutional change characterised by the dispersion of authority from governments to supra- and sub-national actors – both vertically to actors located at different levels and horizontally to non-state actors – is seen as a response to the global processes of integration and decentralisation. The concept, known as multilevel governance, was first devised by Gary Marks (1993) in relation to the decentralisation after the 1950s and

implementation of regional and structural policy reforms, single market and EU enlargement to Southern Europe in the late 1980s. Since then, numerous scholars (Marks, 1992, 2003; Jordan 2008; Rosenau 1992, 1997; Bache and Flinders, 2004, and others) have been discussing whether the origin of multilevel governance is a new theory or an organising perspective to understand the changing nature of decision-making in the global era. The existing theoretical perspective of the concept lies in intergovernmentalism (Hoffmann 1964, p. 66) as an alternative to the state-centred view, and in international relations studies on neofunctionalism (Haas, 1958; Lingberg, 1963).

Multilevel governance is defined as "the dispersion of central government authority both vertically, to actors located at other territorial levels, and horizontally, to non-state actors" (Bache and Flinders 2004). Similar concepts to describe such development are multi-tiered governance, multi-perspective governance (Marks and Hooghe, 2004), condominio (Schmitter, 1996), and polycentric governance (Ostrom et al., 1961). Marks and Hooghe (2004) suggest that the development of multilevel governance in the European Union is in the form of general purpose jurisdictions at a limited number of levels (Type I) and task specific jurisdictions with flexible designs (Type II). An example of Type I is EU governance with the exception of a few sectoral policies, such as agriculture. Examples of Type II are mainly in trans-national regimes in the absence of authoritative co-ordination, and public-private partnerships particularly at the local level. Types I and II of multilevel governance are complementary.

European multilevel governance is seen as a more state-centric system with intergovernmental hierarchies (vertical authority) and does not properly incorporate the existence of horizontal actors that do not operate within hierarchical structures (Bache and Flinders, 2004). The key novelty in Europolitics thus lies in the growing dissociation between territorial constituencies and functional competencies (Schmitter 2000), resulting in a number of vertical and horizontal co-ordination problems. In the following text, we will concentrate on a brief summary of critical issues connected with the existence of co-ordination problems, e.g., the role of the state, accountability of new governance, and the position of new actors.

Diversification of governance actors, in particular involvement of actors independent from state power (non state actors) is originating in internalisation and fragmentation of global systems as described early in the paper. This addresses the need for more transparent and accessible exchange of information on the complex dynamics of the actors and diverse

territorial levels. Involvement and participation of non-state actors rather than dispersing action from the EU to lower levels is becoming necessity. The role of the state in new forms of governance is crucial. The recent expansion of global systems has resulted in a failure to control the economic system. The failure of national states to develop and co-ordinate proper multilevel institutions poses questions on revising the role of the state in multilevel governance, in both horizontal and vertical co-ordination. At the vertical level, it is the re-scaling of the state power as a response to sub-national and supranational pressures in order to increase state capacity (Bache and Flinders, 2004). Jessop (2004) specifies the role of the state in horizontal co-ordination in providing ground rules, control over the power, and shift of the competencies. It should also introduce institutional reforms to increase vertical and horizontal capacity of new actors or mobilise non-state actors to achieve specific objectives and outcomes. Legitimacy of new governance actors is emerging issue in finding new forms of democratic accountability. This requires revising the mechanisms for accountability beyond those provided by representative democracy and find ways how to connect more effectively citizens with the location of power shifting (Bache and Flinders, 2004) and increase representation of autonomous agents and structures at the horizontal level (Jordan, 2004; Rosenau, 2004; Newig and Fritsch, 2009; etc.). In summary, multilevel governance can be seen as new governance mode complementary to hierarchical or market governance (Williamson, O. E., 1979, 1991) or hybrid governance, defined also as network governance (Goodwin, M., 1998; Gulati, R., 1998). Multilevel governance can be characterised by four characteristics Bache and Flinders (2004):

(i) decision-making at all territorial levels is characterised by the increased participation of non-state actors;
(ii) the complexity and dynamics of actors and their networks make identification of territorial levels more difficult;
(iii) the role of the state is being transformed from a regulator to a co-ordinator of power and authority;
(iv) and finally the multilevel character of governance is challenging the traditional representative nature of accountability.

Adaptive Governance of Complex Systems

Current natural resource management is focused on narrowly defined goals such as control and efficiency, which often results in rigid and narrowly construed management solutions to address critical changes in ecosystems. Examination of institutional performance should thus look at the linkages among distinct institutional arrangements at the same (horizontal) level of social organisation and (vertically) across levels (Pavoola et al. 2009).

Social and ecological dynamics and the human dependence on the capacity of ecosystems to generate essential services, and the vast importance of ecological feedbacks for societal development, suggest interconnection of social and ecological systems (Galaz et al., 2006). To emphasise the concept, Berkes and Folke (1998) use the term *social-ecological system (SES)*. Social-ecological systems include societal (human) and ecological (biophysical) subsystems in mutual interactions (Gallopin, 1991)[3]. Both social and ecological systems contain units that interact interdependently and each may contain interactive subsystems as well. A social system includes economy, actors and institutions in mutual interaction. Institutions are understood here as social *rules* that define socially *acceptable* individual or group behaviour: they are sets of dual expectations that structure social interaction (Hodgson, 2002; Bromley 1989, 2006). Ecological systems include self-regulating communities of organisms interacting with one another and with their environment (Berkes F., Colding J., Folke C., 2003).

Biodiversity governance implies establishing compatibility between ecosystems and social systems. It involves the establishment and enforcement of embedded social rules that structure interactions between social and ecological systems (Paavola and Adger, 2005; Hodgson, 2004). The connectivity pattern within and between social and ecological systems plays an important role in designing effective institutions for sustainable resource use (Gatzweiler and Hagedorn, 2002).

Systems theory, on the interface within socio-ecological systems, generates important complementary insights into environmental governance in Europe (Paavola 2009). Socio-ecological dynamics in the governance of biodiversity are understood through the three analytical themes of fit, interplay and scale (e.g., Ostrom, 1990; Young, 2002).

Fit considers environmental governance as the co-evolutionary interface between ecological and human systems (e.g., Folke et al., 2007) – the match between the key physical attributes

[3] Turner et al. (2003) called this system a coupled human-environmental system.

of ecological systems and the design of institutions used for their governance. This notion of 'fit' differs from that in political science literature, which is mostly concerned with institutional fit of policy initiatives and interventions in relation to existing institutional settings (e.g., Trieb, 2008). Institution and ecosystem fit represents key assumption for increasing effectiveness of multilevel governance (Newig and Fritsch, 2009; Pavoola et al 2009).

Positive and mutually beneficial relations of fit within socio-ecological systems, such as social dilemma of private interests being in the conflict with group interest can be documented by behavioural experiments. Experiments offers possibility to test replicated decision making situation and effect of institutional innovations on the behaviour under the controlled situation and usually with lower costs than case study research (Ostrom 1998). Following Cardenas et al., (2008) such experiments are being conducted within the European Marie Curie Research Training Network "GoverNat: *Multi-level Governance of Natural Resources: Tools and Processes for Water and Biodiversity Governance in Europe*". They investigate impact of ecological dynamics, rules, sanctions and communication on collective actions and the governance of forest as common pool resources in the new European democracies of the Czech Republic, Slovakia and Cyprus (also in this issue).

The question of *interplay* emphasises interactions between actors operating at the EU, national, regional and local levels. The research on interplay has examined the degree to which governance regimes or policy processes are harmonised across the EU and co-ordinated with the EU frameworks. Implementation of the framework directives set broad objectives whilst allowing countries and regions some freedom to choose the ways in which they implement policies and realise objectives. This raises the importance of developing a multi-level understanding of policy and governance frameworks and the degree to which they interplay with existing national and sub-national environmental regimes. It is seen that the EU frameworks construct ground rules for multilevel governance but do not create adequate mechanisms for the interplay with existing regimes at the national and sub-national levels. The interplay of national environmental regimes and the EU frameworks – in particular, the increasing role of non-state actors – has been identified as the key source of cross-scale co-ordination and information problems (see also chapter 2). Different experience can be brought up from the study investigating the role and limits of market-based instruments for biodiversity protection (Chapter 4). Despite the positive experience from the operation of voluntary market incentives for biodiversity, the failure of the states to create institutional

support for market-based instruments has led to the exploitation of biodiversity by non-state owners.

Understanding interactions across temporal and spatial scales is critical for reducing misfit between ecosystems and institutions (Folke et al., 2007) as well as for managing institutional interplay in line with changing institutional settings such as globalisation. The complexity of coupled socio-ecological systems nested across the scales requires accepting that there is no simple solution to a complex problem (Ostrom, 2007).

Fit and interplay are thus considered key factors for adaptation to multilevel environmental governance. In particular, it implies the co-evolutionary character of socio-ecological systems, where internal and external dynamic processes result in destruction as well as reorganisation. This is also often referred to as multi-stable or dynamic equilibrium of several stable ecosystem states or polycentres (Folke, 2006). The dynamic and co-evolutionary character allow some flexibility for ecosystem responses to external factors and reorganisation of institutions for environmental governance (Gunderson and Holling, 2002; Folke, 2006). Maintaining flexibility of ecosystems and ability of social systems to adapt to new trajectories refers to the resilience of the socio-ecological systems. Functional relations within socio-ecological systems for adaptive governance are illustrated in Figure 1. Actors and ecosystems are embedded in a respective level but with interconnection to different levels. Institutions operate at one level or on multiple scales. Fit is the most relevant at the local level; however, interplay of institutions is important at each level (horizontal interplay) as well as between levels (vertical interplay).

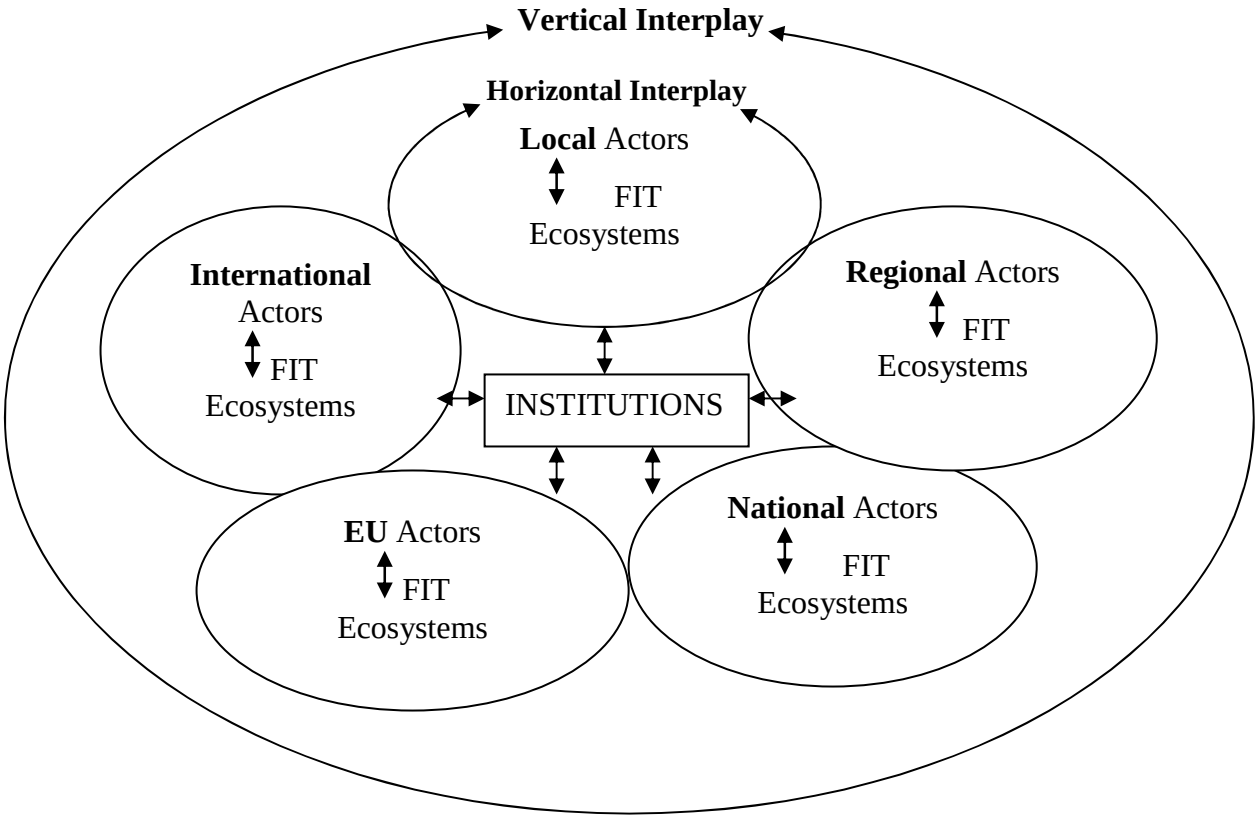

Figure 1. Adaptive Governance of Complex Systems

From Government to Governance in Central and Eastern European Countries

The focus of the analysis in this issue is on the emergence of new environmental governance in the region of Central and Eastern Europe. In the transition countries of CEE, the institutional changes undertaken in the late 1980s reflected a massive political, economic and social transformation of the former socialist systems. The property rights to the means of production in the socialist economic institutions had predominantly been held by state agencies. To facilitate top-down control, many internal institutions of civic society had been replaced with externally designed, predominantly prescriptive institutions, and central planning substituted for the spontaneous co-ordination of markets (Kasper and Streit, 1998). In summary, the transition in CEE can be characterised by changing the main direction of both economic and political systems, no violence and occupation by foreign military forces, and finally, fast progress (Kornai et al., 2008). Each of these countries started the transformation process from very different points of development, having experienced different socialist regimes and degrees of socialist control. Even though the transition history varies in each CEE country, the transition can generally be understood as interaction of external institutions – new political and economic institutions of the EU, also called fast-moving (Roland 2008) – with historical and cultural institutions of post-socialist states (i.e., slow-moving). Thus, the process of institutional change in CEE from command-and-control to democracy and market can be seen as an institutional rebuilding not on the ruins but with the ruins of socialism (Stark, 1996). The Western model of privatisation was implemented, ignoring the fit within social-ecological systems and the interplay of old and new institutions with the belief that capitalism would appear magically from the morning mist if only the heavy hand of government would get out of the way (Bromley, 2000).

In the CEE countries (Chobotova 2007) most actors for environmental governance and their corresponding institutions emerged as a recombination of the socialist ones and the imposition of new rules. Thus, most of those actors did not work effectively and either collapsed or transformed into completely new ones with formalised rules. It is therefore argued as necessary to change the habits of thought and behaviour in order to increase the durability and stability of newly imposed institutions. Evidence on behavioural change of habits driven by EU institutions is documented for example by the cross-country study on the emergence of multilevel governance in CEE (Chapter 2 in this issue).

The emergence of multilevel governance in new EU member states can be seen as a direct effect of EU integration. It is prone to create tensions but that this is not necessarily a

disadvantage. Democratisation and decentralisation results in cross-scale co-ordination problems and novelties. Centralised governments are slowly changing and decision-making authority is being established. Participatory approaches are becoming part of decision-making; however, still in a consultative way while little evidence on direct non-governmental participation in decision-making has been documented (Bache and Flinders, 2004). The absence of accountability mechanisms, particularly for non-representative participation, increases tension and co-ordination problems within sectors and at the sub-national and national levels.

Conclusions

The evolution of environmental governance in Central and Eastern European countries has been affected by massive institutional changes. Recombination of hierarchical institutions "with the ruins of communism" is affecting the durability and diversity of institutions. A co-evolutionary insight on the implementation of new multilevel governance in the EU assumes a dynamic equilibrium of social and ecological systems where fit and interplay are seen as measures for resilient multilevel governance systems.

In order to maintain resilience of environmental governance in the enlarged EU, the need to adopt guiding governance mechanisms, in particular a design for proper rules for participation and accountability of non-representative participation. Later can be addressed by the polycentric structures, that emphasizes the governance systems that manage to distribute capacities and duties across levels with co-existence of many centres of decision making, formally independent of each other and thus can integrate participation of non state actors. Poly-centres of governance can create opportunity for self-organization and cross-scale linkages of multiple actors, achieve better outcomes than fully decentralised or centralised systems and thus can be more resilient than traditional hierarchical governance systems.

References

Baker S, 2003. The dynamics of European Union biodiversity policy: interactive, functional and institutional logics. Environmental Politics, 12"3, 23-41.

Baker S, Eckerberg, K. 2008. In Pursuit of Sustainable Development. New governance practices at the sub-national level in Europe. Routledge /ECPR Studies in European Political Sciences, Abingdon 2008.

Bache I, Flinders M. 2004. Multi-level governance: conclusions and implications. In *Multi-Level Governance*, Bache I, Flinders M (eds). Oxford University Press: New York; 195–206.

Berkes F, Colding J, Folke C. 2003. *Navigating Socio-Ecological Systems: Building resilience for Complexity and Change*. Cambridge University Press: Cambridge.

Berkes F, Folke C (eds). 1998. *Linking Social Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*. Cambridge University Press: Cambridge.

Bromley, D., 1989. Economic Interest and Institutions: Conceptual Foundations of Public Policy. Oxford: Blackwell.

Bromley, D., 2006. Sufficient reason: volitional pragmatism and the meaning of economic institutions. Princeton, Princeton University Press.

Cardenas J.C., Janssen M. and Bousquet F., 2008, Dynamics of Rules and Resources: Three New Field Experiments on Water, Forests and Fisheries, in List J. and Price M. (eds), *Handbook on Experimental Economics and the Environment*, New York: Edward Elgar Publishing.

Commission of the European Communities 2001. European governance a White Paper. COM (2001) 428 final.

Chobotová V. 2007. *Evolution of Institution for Sustainable Tourism in the Context of Transition Process of Slovakia*, Working Paper 1. Institute for Forecasting, SAS: Bratislava.

Folke C. 2006. Resilience: the emergence of a perspective for social–ecological systems analyses. *Global Environmental Change* **16**: 253–267.

Dawes, Robyn M. Orbell, M.J. Kragt. A. 1986. Organising Groups for Collective Action.Americal Political Science Review 80: 1171-85.

Frohlich, Norman, Oppenheimer J. 1970. I Get by with a Little Help from My Friends. World Politics 23, 104-20.

Folke C, Pritchard L, Berkes F, Colding J, Svedin U. 2007. The problem of fi t between ecosystems and institutions: ten years later. *Ecologyand Society* **12**(1): 30.

Galaz V, Olsson P, Hahn T, Svedin U. 2008. The problem of fit among biophysical systems, environmental and resource regimes, and broader governance systems: insights and emerging challenges. In *Institutions and Environmental Change: Principal Findings, Applications, and Research Frontiers*, Young O, Schroeder H, King LA (eds). MIT Press: Cambridge, MA; 147–186.

Gallopin, G.C., 1991. Human dimensions of global change: linking the global and the local processes. International social science journal 130, 707-718.

Gatzweiler F, Hagedorn K. 2002. The evolution of institutions in transition. *International Journal of Agricultural Resources, Governance and Ecology* **2**: 37–58.

Goodwin, M., 1998:The Governance of Rural Areas: Some Emerging Research Issues and Agendas. Journal of Rural Studies. Vol. 14, No, I, pp. 5-12.

Gulati, R., 1998: Alliances and networks. Strategic Management Journal, Vol. 19, pp. 293-317.

Gunderson LH, Holling CS (eds). 2002. *Panarchy: Understanding Transformations in Human and Natural Systems*. Island: Washington, DC.

Hardin G., 1968, The tragedy of the commons, *Science*, vol. 162: 1243-48.

Haas E.B, 1958. The uniting of Europe: Political, social and economic forces 1950-57, London Library of World Affairs., London.

Hodgson, G., 2002. Evolution of institutions: An agenda for Future Theoretical Research. *Constitutional Political Economy*, 13(2), pp. 111-27.

Hodgson GM. 2004. *The Evolution of Institutional Economics: Agency, Structure, and Darwinism in American Institutionalism*. Routledge: London.

Hoffmann s, 1965. The European process at Atlantic purposes. Journal of Common Market Studies, 3:85-101.

Hooghe L, Marks G. 2003. Unravelling the central state, but how? Types of multi-level governance. *The American Political Science Review* **97**:233–234.

Jordan A. 2008. The governance of sustainable development: taking stock and looking forwards. *Environment and Planning C: Government and Policy* **26**: 17–33.

Kasper W, Streit ME. 1998. *Institutional Economics. Social Order and Public Policy*. Elgar: Cheltenham; 415.

Kluvánková-Oravská T, Chobotova V, Banaszak I, Slavikova L, Trifunovova S. 2009. From government to governance for biodiversity: the perspective of CEE transition countries. *Environmental Policy and Governance 19, 186-196.*

Kornai J, Matyas L, Roland G (eds). 2008. Institutional Change and Economic Behaviour. Palgrave Macmillan with the International Economic Association, p. 223.

Lingberg L, 1963. The political dynamics of European economic integration. Stanford University Press, Oxford University Press, Stanford, Oxford.

Marks G, 1993. Structural policy and multilevel governance in the EC. In: The state of the European Community. Carfuny A, Rosenthal G (eds)., Vol.2. The Maastricht debates and beyond.

Marks G, Hooghe L. 2004 Contrasting visions of multilevel governance. In: In *Multi-Level Governance*, Bache I, Flinders M (eds). Oxford University Press: New York; 15-31.

Newig J, Fritsch O. 2009. Environmental governance: participatory, multi-level – and effective? *Environmental Policy and Governance 19, 197-214.*

Ostrom V, Tiebout C, Warren R. 1961. The organization of government in metropolitan areas. *American Political Science Review* **55**: 831–842.

Ostrom. E. 1998. A Behavioral Approach to the Rational Choice Theory of Collective Actions. Americal Political Science Review 92, No:1, 1-22.

Ostrom E. 1990. *Governing the Commons: the Evolution of Institutions for Collective Action*. Cambridge University Press: Cambridge.

Ostrom, E., Walker, J. (1991). "Communication in a Commons: Cooperation without External Enforcement." In T.R. Palfrey (ed.), *Laboratory Research in Political Economy* (pp. 287–322). Ann Arbor: University of Michigan Press.

Ostrom, E., Walker, J., Gardner, R. (1992). "Covenants with and without a Sword: Self-Governance is Possible." *American Political Science Review*, 86(2), 404–417.

Ostrom, E., Gardner, R., Walker, J. (1994). *Rules, Games, and Common-Pool Resources.* Ann Arbor: University of Michigan Press.

Ostrom E, Burger J, Field Ch, Norgaard R, Policansky D., 1999. Revisiting the Commons: Local Lessons, Global Challenges. Science Vol: 284, pp. 278-282.

Ostrom E. 2007. A diagnostic approach for going beyond panaceas. *Proceedings of the National Academy of Sciences of the United States* **104**: 15 181–15 187.

Paavola J, Adger W.N. 2005. Institutional ecological economics. *Ecological Economics* **53**: 353–368.

Paavola J, Gouldson A, Kluvankova-Oravska T. 2009. The institutions, ecosystems and the interplay of actors, scales, frameworks and regimes in the governance of biodiversity. *Environmental Policy and Governance 19, 148-158.*

Rhodes RAW. 1996. The new governance: governing without government. *Political Studies* 44: 652–667.

Stoker G. 1998. Governance as theory: five propositions. *International Social Science Journal* 50(155): 17–28.

Rosenau J. 1992. Governance, order and change in world politics. In *Governance Without Government*, Rosenau J, Czempiel E-O (eds). Cambridge University Press: Cambridge; 1–29.

Rosenau J. 1997. Along the domestic –foreign frontier. Exploring governance in a turbulent world. Cambridge University Press : Cambridge.

Schmitter P. 1996. Examining the present Euro-polity with the help of past theories. In *Governance in the European Union*, Marks G, Scharpf.

Schmitter P. 2000. How to democratise the European Union... and why bother? (Boulder, Col:Rowman and Littlefield).

Trieb O. 2008. Implementing and complying with EU governance outputs. *Living Reviews in European Governance*. http://www.livingreviews.

org/lreg-2008-5 [29 January 2009].

Williamson, O. E., 1979: Transaction Costs Economics: the Governance of Contractual Relations. Journal of Law and Economics 22, pp. 233-261.

Williamson, O. E., 1991: Comparative Economic Organization: The Analysis of Discrete. Administrative Science Quarterly 36 (2), pp. 269-296.

Young O. 2002. *The Institutional Dimensions of Environmental Change: Fit, Interplay and Change*. MIT Press: Cambridge, MA.

Chapter 2
Interplay of Actors and Scales in Biodiversity Governance of Enlarged European Union

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ABSTRACT

This paper addresses the problems of institutional changes in governance and the framing of biodiversity conservation policy at the level of the enlarged European Union. Cross-country analysis of five Central and Eastern European countries is conducted, characterized by different socialist regimes and different transition processes from hierarchical to democratic and market governance. The theoretical basis of the paper is institutional rebuilding in Central and Eastern Europe in the context of the emerging multilevel environmental governance of the EU and what coordination problems and novelties results out of the rebuild process. In particular characteristics of multilevel governance such as the participation of non state actors, emergence of new networks, the power and changing role of the state and legitimacy of new actors and analysed and discussed. The data were collected from desk study research and interviews. The results show that the mismatch between the old hierarchical institutions developed under socialism and the new decentralized institutions introduced during the transformation process still persists and is visible. The emergence of multilevel governance with multiple actors' participation is prone to create tensions, but evidence from the countries studied indicates that this is not necessarily a disadvantage.

Introduction

The ongoing processes of globalization and European integration have shifted authority from national states up to European level and down to sub-national levels, with an increasing role for non-state actors. Governance becomes organized through multiple jurisdictions and can no longer be understood as a central state monopoly (Hooghe and Marks, 2003). This is posing challenging question how traditional institutional systems concentrated around central state can adapt to new roles where direct control over decision making is reducing but demand for

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coordination is expanding. Key issues are shifting of power and responsibilities and addressing new types of legitimacy for democratic decision making in the process of transformation of traditional governments to governance.

The focus of this chapter is on the region of Central and Eastern Europe (CEE), where institutional changes undertaken in the late 1980s reflected a massive political, economic and social transformation of former socialistic system. Economic institutions in which the property rights to the means of production were predominantly held by the state agencies. To facilitate top down control, many internal institutions of civic society where replaced by externally designed, predominantly prescriptive institutions, and central planning substituted for the spontaneous coordination of market (Kasper and Streit, 1998). The paper argues that socialistic regimes in the countries of Central and Eastern Europe, seriously affected the ability of the new democratic regimes to develop appropriate institutions for interactions among actors from multiple levels. Secondly that new governance frameworks introduced by EU enlargement are in interaction with institutions of existed post socialistic regime. Leading often to numerous cross-scale coordination and information problems but also novelties, depending on whether interaction of old and new institutions are producing new institutions. The paper traces institutions governing natural resources and biodiversity.

The empirical evidence was collected in Poland, the Czech Republic and Slovakia, three new EU member states where EU legislation has already been implemented, as well as countries characterized by different socialist regimes and transition histories, such as Potential Candidate Countries (Serbia) and Near Neighbors (Belarus). The analysis primarily covers the period from 1990 to the present. Within the European Marie Curie Research Training Network Multi-level Governance of Natural Resources: Tools and Processes for Water and Biodiversity Governance in Europe ”GoverNat”[4] data were collected using a desk study approach involving the use of secondary data such as books, governmental and non-governmental reports, reports of international programs or organizations, press releases etc. Personal consultations in the form of semi-structured interviews with key biodiversity governance representatives at national, regional or local levels were conducted where data were unclear or missing. The process of data collection was aimed at analyzing the determinants, effects and processes of institutional change in these countries and their impact on biodiversity governance.

[4] www.governat.eu

The paper is structured into eight sections, including this introduction. The theoretical concept of institutional change, in particular co-evolution of new democracies in Central and Eastern Europe with relation to multilevel governance in the EU, is discussed in next session. Followed by specific examples of horizontal and vertical coordination problems in particular the participation of non state actors, emergence of new networks, the power and changing role of the state and legitimacy of new actors. Finally, the eight section concludes this paper.

Transplantation or institutional rebuild?

The region of Central and Eastern Europe is understood as cultural historical and political platform where institutional changes can be characterized by similarities. The most serious environmental protection problems during socialism where the overexploitation of protected areas and the lack of environmental awareness of state officials. In majority of socialistic regimes, environmental objectives were strongly supported only in legal regulations and environmental protection was primarily shaped by an ideological legacy, rooted in Marxist value theory, which aimed to manifest the principles of socialism. Marxist value theory considered labor (power) to be the source of all value, and the environment, therefore, had no intrinsic value aside from the serving of human needs. As an 'unproductive and inefficient' activity, environmental protection had a low priority even within protected areas. Very often, environmental protection institutions existed only formally and the absence of the market allowed states to be the only regulatory body, often resulting in open access resource regime (Kluvankova-Oravska et al 2009). In most CEE countries, land was nationalized shortly after the introduction of socialistic regimes and private property did not exist. All protected areas were owned and regulated by the state with some limited resource use for citizens. One exception was Poland, where small-scale private property rights were largely respected and no massive land nationalization occurred. Intense economic activities such as tourism, timber or agriculture expanded in protected areas under state management (see Mirek, 1996; Kasprzak and Skoczylas, 1993, Kluvánková-Oravská and Chobotová, 2006). For example, the protected primeval forest Belovezhskaya Pushcha in Belarus was transformed in 1957 into a game preserve and used on an illegal basis by top party officials (Luckov *et al.*, 1997).

Transition initiated in early 90, can be characterized by changing the main direction of both economic and political systems, no violence and occupation by foreign military forces, and finally, fast progress (Kornai et al., 2008). The two most important institutional changes in CEE countries were transformation and EU accession. These countries started the

transformation process from very different points of development, having experienced different socialist regimes and degrees of socialistic control (Kluvankova-Oravska et al., 2009). Even though the transition history varies in each CEE country, the transition can generally be understood as interaction of new political and economic institutions of EU also called fast moving (Roland 2003) with historical and cultural institutions of post-socialistic states (called slow moving). The process of institutional change in CEE from command and control to democracy and market can be seen as institutional rebuilding not on the ruins but with the ruins of socialism (Stark 1996). However the western model of privatization was implemented instantly, ignoring the interplay of old and new institutions with the believe that capitalism would appear magically from the morning mist if only the heavy hand of government would get out of the way (Bromley 2000) or imposing of uniform institutional blueprints based on idealized versions of western institutions called "institutional monocropping" Evans (2004). This oversimplified view, that transition involves the unproblematic imposition of a western blueprint, is contested, being shaped by existing informal institutions and social conflicts (Gowan, 1995; Smith and Pickles, 1998) and by the persistence of routines and practices enduring from the socialistic period. Thus it is argued that it is necessary to change the habits of thought and behavior in order to increase the durability and stability of newly imposed institutions (Chobotova, 2007).

The transformation processes such as decentralization and structural changes in property rights, had a diversifying effect on biodiversity governance in CEE countries. In Poland, restrictions on property rights could only be introduced based on legal agreements, which entailed compensations for the landowners and compensation programs for landowners. After the split of Czechoslovakia in 1993, biodiversity governance in the Czech Republic is still centralized to park administration as most land in national parks remained in state hands. However in the Slovak Republic, land privatization was fully implemented but with the absence of appropriate institutions for market operation. Thus protected areas with diversified ownership structure lack appropriate incentives to encourage sustainable behavior of non-state owners. Multiple ownership conditions have significant effect also on the decision making within the parks. The biodiversity governance in Slovakia is subordinated to regional administrations and a state nature conservancy lack adequate coordination of competencies and tasks (Kluvankova-Oravska et al., 2009).

The development of Belarus and Serbia was rather backward. The transition initiated in the early 1990s was interrupted by the emergence of authoritarian leaders and, in Serbia, also by war. This had serious implications for environmental protection. In Belarus, for example, the

interruption of land reform after the election of Alexander Lukashenko as president in 1994 and the subsequent subordination of national parks' administration, together with all other national estates, under the presidential administration resulted in massive overexploitation of forest, land and minerals, with a serious impact on biodiversity. In Serbia, difficulties with the identification of land parcels and the absence of suitable proofs of pre-communist ownership caused land reformation to be delayed until 2006. Particular to Serbia is that natural resource governance is decentralized among various types of organization, usually public enterprises (Todic´, 2005).

To sum up the decentralization of previously hierarchical and centralized governance in CEE can be seen as a predominantly top down oriented process, in most cases heavily influenced by external political forces or factors. The time given to rebuild institutions from the socialist period or to build new institutions has not been adequate.

Transformation of the government to governance in European context is seen as more state centric process with intergovernmental hierarchies and does not properly undertake existence of horizontal actors that do not operate within hierarchical structures (Bache and Flinders, 2004). In following text we will concentrate on the existence of coordination problems related to the emergence of multilevel governance in CEE countries in particular the position of new actors in multilevel governance, multilevel dynamics that leads to coordination problems or novelties, the role of the state and accountability of new governance or as described in Bache and Flinders (2004) (see also chapter 1 of this issue).

Non state actors: challenge or opportunity?

Habitats and Birds Directives as the primary legal framework for the present biodiversity policy at the EU level that provides for the creation of a European network of special areas of conservation with European priority habitat types and species, known as NATURA 2000.

Implementation has been connected with various problems and conflicts in both old and new member states (see for example Alphandery´ and Fortier, 2001; Gibbs *et al.*, 2007; Hiedanpää, 2002; Krott *et al.*, 2000; Paavola, 2004; Rauschmayer *et al.*, 2009; Stoll-Kleemann, 2001), which are also well documented by Paavola *et al.* (2009).

In the new member states from Central and Eastern Europe that joined the EU in 2004 and 2006, NATURA 2000 was an example of an entirely new institution placed into post-socialistic governance structures. The major problem seems to be the cooperation and

participation of various actors. As the Habitats and Birds Directives leave the public consultation to each member state (Article 6 of the Habitats Directive), it allows for country-specific solutions to be implemented depending on the particular country's practices and the state of democratic decision making. In most new Member States, the critical factors influencing implementation were a weak history of participatory governance, including absence of a collective choice mechanism, conflict resolution and a lack of responsibility for the coordination of resources under the common regime. In some cases, non-state actors became part of governance consultation, for example, the NGOs in the High Tatras National Park (Slovakia) and Sumava National Park (Czech Republic), but not decision making. The institutional mismatch between post-socialistic and new institutions is still prevalent, resulting in coordination problems between actors such as exclusion from public dialogue. In most of new member states also local governments were fully excluded from consultations on NATURA 2000 designation (Kluvankova-Oravska et al 2009). Very specific is situation in the Slovak Republic, where the park administration is only advisory body to the respective authority and has no actual power. The lack of legal authority for park administration to monitor and sanction activities within the parks sometimes leads to illegal behavior by tourists and local inhabitants as well as ignorance of the rules.

Socialist influence still persists in the exclusion of non-state actors from decision making. Although national parks in most new EU member states find ways to establish a dialogue with local communities, environmental NGOs are often perceived by them as 'orthodox' and are not involved in consultations or in real decision making (Okraska and Szymczuk, 2004).

The exclusion of non-state actors from biodiversity governance is particularly significant in Near Neighboring Countries. In Belarus, there are no formal communication or cooperation channels between national park authorities and environmental NGOs. Additionally State control civic sector via flag ship NGOs. Such concentration of the power by the Management Department of the President has lead to inefficient conservation prioritizing economic interests of power groups legitimated by annual business plans (Banaszak et al., 2008).

Despite the serious difficulties with NATURA 2000 implementation several positive aspects can be mentioned. The Habitats Directive provides incentives for new Member States for the internalization of consultations with non-state actors in the decision-making process. Similarly, EU monitoring of compliance is seen as an incentive for the evolution of an internal monitoring and sanctioning mechanism.

In Poland, elements of multi-actor interaction are derived from a long tradition of market structures that, in small scale, remained even during the socialist period. Such a situation can be observed in Barycz Valley Network. The inhabitants recognized and utilized benefits from the NATURA 2000 network, such as wide-scale free promotion of the region, development of environmentally friendly tourism and agri-tourism and development of a label for local products (Antoniewicz, 2006).

Similarly, the existence of networks of actors (NGOs, interests groups etc.) in the Czech Republic and various consultation mechanisms for non-state actors, such as state and NGO partnerships, are due to the effect of historically determined informal civic movements. The most visible example was in the Czech Switzerland National Park, where the national park administration initiated the foundation of a non-profit organization intended for cooperation and communication with municipalities, NGOs and other non-state actors.

Moreover, NATURA 2000 improved access to information and encouraged public participation, particularly at the local level. Lesson learned from conflicting implementation of NATURA 2000 without public participation is creating space for evolution of institutional structures for public participation. These are seen as effective drivers of institutional consolidation.

In summary, EU integration, has created many challenges and opportunities in new member states. Particularly the implementation of NATURA 2000 was found to have positive effect on the stimulation of multi-actor interactions, monitoring and sanctioning. In Belarus and Serbia the effect of the EU has been mediated through external financial schemes such TACIS and INTERREG. Monitoring and sanctions applied to these programs provide certain incentives to follow rules. Nevertheless, most international programs are time specific and therefore the EU provides very little influence on institutional changes in countries' jurisdictions and informal institutions. They are seen external to existing governance structures thus can not trigger behavioral change and jurisdictions of hierarchical governance systems (Kluvankova-Oravska et al., 2009).

Multi-actor and multi-level governance processes.

Multilevel governance of complex network of different actors operating at different levels who both govern and are governed indicates that, even under a narrow definition, governance must be a complex, multi-actor, multi-level process (Paavola, 2007; Paavola et al., 2009). Traditional mechanism for effective communication and interaction between actors from

various decision-making levels does not fully exist in CEE countries, as democratization and decentralization are new processes.

However a new institution for actors' horizontal coordination has appeared recently in Polish and Czech biodiversity governance. Those institutions enable economic and civic actors to engage in new forms of activities related to biodiversity (Birner and Wittmer, 2004). The National Park Councils,[5] acts as an advisory body to the park administration for all important management processes (especially zoning, management planning, visiting rules, forest management, land-use plans etc). The membership of the national park scientific councils aims to achieve the representation of non-state actors, such as scientists, environmental organizations and local government representatives in the decision-making process (Kluvankova-Oravska et al., 2009). Councils are not enforced by legal obligations and thus EU enlargement and overall increase of democracy and subsidiarity can be considered as main triggers for behavior change.

In Slovakia the Association of Municipalities operating in some parks can be considered to be a new institution of multilevel biodiversity governance. For example, in Slovensky raj NP, such an association is called the 'Microregion' and includes the voluntary membership of municipalities around the park. The Microregion supports nature conservation, cultural activities and traditional crafts and cooperates in the provision of tourism services. Any decision made within the Microregion is based on a consensus among all the members. The park administration is also a member and can interact with non-state actors and be better informed about the activities planned within the national park. This assures at least informal cooperation in the decision-making process and biodiversity governance (Kluvankova-Oravska et al., 2009).

However as was stressed by Bache and Flinders (2004) a distinction must be drown between multilevel governance and multilevel participation, where the later notion signals greater involvement without effective influence for at least some types of new actors.

[5] In Poland, National Park Councils also functioned before the transformation, but primarily for scientific reasons only

The role of the state from regulator to coordinator

Institutional mismatch of existing management regimes and emerging EU frameworks such as habitat directive resulted in numerous coordination problems and conflicts of state agencies.
Example of vertical coordination problem is implementation of the Habitats Directive. Designed to integrate economic, social and environmental dimensions, EU delegated promulgating procedures for designating sites for the NATURA 2000 network to the member states. Member states followed mainly environmental orientation of the directive and designated sites on the basis of scientific criteria. The designation of NATURA 2000 sites upon scientific criteria increased overall frustration of non-state land owners in the new member states, as their aversion to following biodiversity protection stemmed from the absence of proper market incentives to do so. Compensation schemes and their monitoring require cooperation between many government units and interest groups, which has not yet evolved in new member states; consequently, NATURA 2000 was very often understood as a restrictive measure for nature conservation. The designation process was thus contentious (Young *et al.*, 2007) and in most new member states resulted in the preparation of 'shadow lists' by NGOs. The immediate reason for these conflicts was the top-down and non-inclusive site designation process.

Illustrative example of horizontal coordination problem is conflict on the division of competencies between state actors and intensity of forest use. In the Czech Sumava National Park, administration has competence over both biodiversity protection and forest management (Správa NP a CHKO Sumava, 2006), resulting in a conflict of interest between protection and economic use.
Another example is conflict of authorities in High Tatras National Park in the Slovak Republic. The former park authority was divided between the state forests, managed by the Ministry of Agriculture, and biodiversity management, which is controlled by the Slovak Ministry for the Environment. As the division of competences between these two governmental bodies has never been decided, a constant tension between them exists and has been increasing. A catastrophic windstorm in 2004, which affected a large part of the forest ecosystem, resulted in enormous pressure to reconsider the size of the core zone and the implementation of intensive forest practices by State Forests in two nature reserves designated as NATURA 2000 sites. The main argument for this change was that there was a considerable risk of bark beetle outbreak, which could potentially damage neighboring forests that were not

under the full protection regime as well. As a result the EU launched infringement proceedings against the Slovak government for potential violation of the Habitats Directive and reconsideration of the park's NP status according to IUCN standards (Kluvankova-Oravska et al., 2009).

Situation in near EU neighbors is rather different. In Serbia for example, biodiversity governance is subject to state–public partnerships; however, post-socialistic influence and lack of democracy results in institutional mismatch. The structure in place is largely based on slow moving post socialistic informal institutions and therefore the influence of powerful groups with links to former and present political elites. An alarming example is the large-scale ski resort constructed by the Serbian government with the support of international capacities in the Stara Planina Mountains, which violated six national acts and affected the largest protected area in Serbia with potential biodiversity effects on the whole Balkan Peninsula. The biodiversity of Stara Planina is represented by a number of ecosystems and species under international protection, e.g. the Ramsar site of peat meadows, nine species on the World and 42 on the European Red List of Endangered Species or a total of more than 100 species protected by various national regulations (Kluvankova-Oravska et al., 2009).

Accountability of new actors

In complex multi-governance situation, effective accountability arrangements can be particularly challenging to put in place. In such complex environment, is necessary that the responsibilities and authorities are clearly defined. In complex systems responsibilities may become blurred, and powerful players may take advantage of the situation (Flinders, 2001; Pearce et al., 2005). The proliferation of actors does not equate to power and does not necessarily enhance the position of weaker social groups. In contrary it may concentrate power more in hands of those groups and actors with the necessary resources to operate most effectively in the context of complexity (Bache and Flinders, 2004). The emergence of opportunistic and strategic behavior such as corruption or shirking is also possible (Ostrom et al, 1994). The emergence of multilevel governance in the new democracies of Central and Eastern Europe demonstrated the absence of new accountability mechanism, particularly for non-representative participants, such as that of non-state actors as documented by Kluvánková-Oravská *et al.* (2009). Authoritative decision making is historically determined in Central Europe, the region with traditional culture and rural character (Kluvankova-

Oravska and Chobotova 2006). The dominance of autorities in decision making has accelerated in socialism, where formal institutions but also informal institutions of civic society were replaced by externally designed, predominantly prescriptive institutions of central planning.

In Slovakia for example biodiversity governance is decentralized to regional and local self-governments divided in each park to more administrative units. Specific competencies are still wielded by several state organizations, such as the water management, fire and forest authorities. The national park administrations have the main responsibility for nature protection, preserving biodiversity and national park conservation and management, but it has no legal accountability for performing those responsibilities. They have only an advisory position to the hierarchical authority which formally makes the decisions (State Nature Conservancy and regional administrative units).The shift of powers to multiple authorities has the potential of increasing the role of actors from outside the formal decision-making boundaries and therefore greater participation in the governance process (Kluvánková-Oravská and Chobotová, 2006). Hovewer such multiple decision-making structures and territorial diversity have a significant effect on the co-ordination of responsibilities. Several legal provisions contradict one another, especially those falling under the responsibility of the Ministry of Agriculture and particularly with respect to the forestry management[6]. This makes the management structure of Slovak nature conservation very complicated. The diffusion of competences and changing patterns in participation demand additional mechanisms of accountability. The regulatory setting which enables weaker actors to define a legal basis for they actions (Bache and Flinders, 2004) and regular monitoring of the fulfillment of any objective is the first step to guaranteeing a better understanding of each actor's responsibilities. Due to the deformation of institutions by socialism civic sector is often underdeveloped in CEE countries or largely controlled by few actors (Kluvánková-Oravská and Chobotová, 2006).

Conclusions

Multilevel governance in CEE countries can be characterized by a prevailing hierarchical structure arising from a limited tradition of decentralization and self-government, rapidly affected by transformation and integration processes. The situation varies from country to

[6] For example, the Nature Conservation Act (543/2002) declares the protection of nature as a fundamental priority within protected areas; however, the Forests Act (61/1977) allows timber production within areas of nature conservation, even providing subsidies for activities in areas with extreme climatic conditions (Kluvánková-Oravská and Chobotová, 2006).

country, depending on historical determinants such as the role of property regimes prior to or during socialism. These aspects determine the overall effectiveness of institutional changes undertaken to transform post-socialist governance structures into the hybrid systems that are common in European democracies.

Based on empirical evidence from studied countries, we might conclude that the mismatch between the old hierarchical institutions developed under socialism and the new institutions introduced during the transition process still persists and is visible, as illustrated in our paper over the forest management conflicts between state actors in Slovakia and the Czech Republic or by the exclusion of non-state actors from public consultations and decision making.

EU integration has been found to be a key driving force for changes and synchronization in the governance of natural resources. In Poland, Slovakia and the Czech Republic the implementation of NATURA 2000 brought some changes especially that the management of sites must be negotiated with non-state owners and that compliance is driven by EU monitoring. In Belarus and Serbia, the effect of the EU is seen rater as external to existing governance regimes. In both countries, state executives remain pivotal actors as authoritarian regimes prevent institutional reform, especially the re-distribution of power to supra- and sub-national actors.

Decentralization, together with the increasing role of non-state actors, results in cross-scale coordination and information management problems in most countries. This was especially seen during the designation of NATURA 2000 sites, which in most new member states resulted in the preparation of 'shadow lists' by NGOs. The immediate reason for these conflicts was state centered the top-down and non-inclusive site designation process.

The emergence of multilevel governance in the new democracies of Central and Eastern Europe demonstrated the absence of any accountability mechanisms, particularly for non-representative participants, such as non-state actors. The appearance of new institutions operating at multiple levels and involving a multitude of groups of actors, is prone to create tensions, but evidence from the countries studied indicates that this is not necessarily a disadvantage.

References

Alphandery´ P, Fortier A. 2001. Can territorial policy be based on science alone: the system for creating the NATURA 2000 network in France. Sociologia Ruralis 41: 311–328.

Antoniewicz P. 2006. Partnerstwo czlowleka i przyrody. Dolnoslaska Fundacja Ekorozwoju. http://www.iee.org.pl/rozwoj/docs/PARTNERSTWO_CZLOWIEKA_I_PRZ.pdf [2 september 2008].

Bache I, Flinders M. 2004. Multi-level governance: conclusions and implications. In Multi-Level Governance, Bache I, Flinders M (eds). Oxford University Press: New York; 195–206.

Banaszak I, Chobotová V, Kluvánková-Oravská T, Slaviková L, Moravec J. 2008. From Government to Governance for Biodiversity in the European Union: the Experience in the New Member States, Working Paper 1. Institute for Forecasting, SAS: Bratislava.

Birner R, Wittmer H. 2004. On the 'efficient boundaries of the state': the contribution of transaction-costs economics to the analysis of decentralization and devolution in natural resource management. Environment and Planning C 22: 667–685.

Bromley D. 2000. A most difficult passage: the economic transition in Central and Eastern Europe and the Former Soviet Union. Paper presented at the KATO Symposium, Berlin, 2000.

Chobotová V. 2007. Evolution of Institution for Sustainable Tourism in the Context of Transition Process of Slovakia, Working Paper 1. Institute for Forecasting, SAS: Bratislava.

Fairbrass J. Jordan A. 2004. Multilevel Governance and Environmental Policy. In: Multilevel Governance. Bache, I. Flinders M. (eds). Oxford University Press: 147-164.

Evans P. 2004. Development as institutional change: the pitfalls of monocropping and the potentials of deliberation. Studies in Comparative International Development 39: 30–52.

Flinders M. 2001. The politics of accountability on the modern state. London Ashgate.

Gibbs D, While A, Jonas AEG. 2007. Governing nature conservation: the European Union Habitats Directive and conflict around estuary management. Environment And Planning 39: 339–358.

Gowan P. 1995. Neo-liberal theory and practice for Eastern Europe. New Left Review 213: 3–60.

Hiedanpää J. 2002. European-wide conservation versus local well-being: the reception of the Natura 2000 reserve network in Karvia, SW-Finland. Landscape and Urban Planning 61: 113–123.

Hooghe L, Marks G. 2003. Unraveling the central state, but how? Types of multi-level governance. The American Political Science Review 97: 233–234.

Jessop B. 2004. Multilevel Governance and Multilevel Meta-governance. In: Multilevel Governance. Bache, I. Flinders M.(eds). Oxford University Press:49-74.

Jordan A. 2008. The governance of sustainable development: taking stock and looking forwards. Environment and Planning C: Government and Policy 26: 17–33.

Kasper W, Streit ME. 1998. Institutional Economics. Social Order and Public Policy. Elgar: Cheltenham; 415.

Kasprzak K, Skoczylas 1993. Rozwój Ochrony Przyrody Nieozywionej i Ozywionej, Historia i Współczesnos´c´. Poznan: Fundacja 'Warta'.

Kluvánková-Oravská T, Chobotová V. 2006. Shifting governance. Managing the commons: the case of Slovensky Raj National Park. Sociologia 2006 38: 221–244.

Kluvánková-Oravská T, Chobotová V. Banaszak, I. Slavikova L, Trifunovova S. 2009. From Government to Governance for Biodiversity: The Perspective of Central and Eastern European Transition Countries. Environmental Policy and Governance Env. Pol. Gov. 19, 186–196 (2009).

Kornai J, Matyas L, Roland G (eds). 2008. Institutional Change and Economic Behaviour. Palgrave Macmillan with the International Economic Association, p. 223.

Krott M, Julien B, Lammertz M, Barbier J-M, Jen S, Ballestreros M, de Bovis C. 2000. Voicing interests and concerns. Natura 2000: an ecological network in conflict with people. Forest Policy and Economics 1: 357–366.

Luckov A, Tolkach V, Berwick S, Brylski P. 1997. Descriptions of the Belovezhskaya Pushcha. In Belovezhskaya Pushcha Forest Biodiversity Conservation, Luckov A, Tolkach V, Berwick S, Brylski P (eds). Belovezhskaya National Park: Minsk; 69–137.

Mirek Z. 1996. Tatry i Tatrzanski Park Narodowy – wiadomosci ogolne. In Przyroda Tatrzanskiego Parku Narodowego. Tatry i Podtatrze 3, Mirek Z, Glowacinski Z, Klimek K, Piekos-Mirkowa H (eds). Tatrzanski Park Narodowy: Zakopane-Krakow; 176.

Newig J, Fritsch O. 2009. Environmental governance: participatory, multi-level – and effective? Environmental Policy and Governance. Env. Pol. Gov. 19, 197-214. (2009).

Okraska R, Szymczuk R. 2004. Jaka przyszłos´c´ polskich parków narodowych? Raport 'Dzikiego Zycia', Dzikie Zycie 9/23. Pracowania na Rzecz WszystkichIstot. http://www.pracownia.org.pl/dz/index.php?d=archiwalne&e=artykuly&rok=2004&nr=120&id=498 [1 February 2008].

Ostrom, E., Gardner, R., and J. Walker, 1994. Rules, Games, & Common-Pool Resources. The University of Michigan Press.

Ostrom V, Tiebout C, Warren R. 1961. The organization of government in metropolitan areas. American Political Science Review 55: 831–842.

Paavola J. 2004. Protected areas governance and justice: theory and the European Union's Habitats Directive. Environmental Sciences 1: 59–77.

Paavola J. 2007. Institutions and environmental governance: a reconceptualization. Ecological Economics 63: 93–103.

Paavola J, Gouldson A, Kluvankova-Oravska T. 2009. The institutions, ecosystems and the interplay of actors, scales, frameworks and regimes in the governance of biodiversity. Environmental Policy and Governance. Env. Pol. Gov. 19, 148-158.(2009).

Pearce, G., Ayres, S., and M. Tricker, 2005 Decentralisation and devolution to the English regions: Assessing the implications for rural policy and delivery. Journal of Rural Studies 21 (2005) 197–212.

Rauschmayer F, Berghöfer A, Omann I, Zikos D. 2009. Examining processes or/and outcomes? Evaluation concepts in European governance of natural resources. Environmental Policy and Governance, Env. Pol. Gov. 19, 141-147 (2009).

Roland Gerald Fast Moving and Slow Moving Instituions. In: Kornai et.al: Institutional Change and Economic Behaviour. Palgrave Macmillan with the International Economic Association, p. 134-158.

Rhodes RAW. 1996. The new governance: governing without government. Political Studies 44: 652–667.

Rosenau J. 1992. Governance, order and change in world politics. In Governance Without Government, Rosenau J, Czempiel E-O (eds). Cambridge University Press: Cambridge; 1–29.

Rosenau J. 1997. Along the domestic –foreign frontier. Exploring governance in a turbulent world. Cambridge University Press : Cambridge.

Schmitter P. 1996. Examining the present Euro-polity with the help of past theories. In Governance in the European Union, Marks G, Scharpf F, Schmitter P, Streeck W (eds). Sage: London; 121–150.

Schmitter P. 2000. How to democratise the European Union... and why bother? (Boulder, Col:Rowman and Littlefield).

Stoker G. 1998. Governance as theory: five propositions. International Social Science Journal 50(155): 17–28.

Smith A, Pickles J. 1998. Introduction: theorizing transition and the political economy of transformation in Eastern and Central Europe. In Theorizing Transition: the Political Economy of Post-Communist Transformations, Pickles J, Smith A (eds). Routledge: London; 1–24.

Správa NP a CHKO Šumava. 2006. Rocenky Správy Národního Parku a Chranene Krajinne Oblasti Sumava 1997–2006. Správa Národního parku a CHKO Šumava: Vimperk.

Stark D. 1996. Recombinant property in East European capitalism. American Journal of Sociology 101: 993–1027.

Stoll-Kleemann S. 2001. Barriers to nature conservation in Germany: a model of explaining opposition to protected areas. Journal of Experimental Psychology 21: 369–385.

Todic´ D. 2005. Upravljanje zasˇtitom zˇivotne sredine u Srbiji. In Evropeizacija Institucija: Zasˇtita Zˇivotne Sredine u Grcˇkoj i Srbiji, Mijalkovic´ A (eds). Beogradski centar za evropske integracije (BeCEI): Beograd; 93–134.

Young J, Richards C, Fischer A, Halada L, Kull T, Kuzniar A, Tartes U, Uzunov Y, Watt A. 2007. Conflicts between biodiversity conservation and human activities in the Central and Eastern European countries. Ambio 36: 545–550.

Chapter 3
Institutional Rebuild in CEE Countries

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ABSTRACT

The paper looks into the unprecedented political and economical changes in the CEE countries, the consequent evolution of formal and informal institutions surrounding these changes, and how the process of institutional building affects the environmental governance and sustainable development. In particular, it tries to find out how to increase the durability and stability of newly imposed institutions. The transition process has offered some opportunities and triggered changes but also has been influenced by pre-existing institutional settings and thus created new conflicts. The process of transition is very slow, mostly due to embedded habits. The article argues that when habits become a common part of the group or a social culture they grow into routines and customs and consequently we can understand them as barriers to institutional changes. The article highlights the former informal institutions and habits as one of the key elements in the process of transition: on the one hand they can be a barrier and slow down institutional changes, but on the other hand they can help to make up our preferences and give rise to new perceptions and dispositions within individuals.

Introduction

The countries of Central and Eastern Europe (CEE) have undergone unprecedented changes in the last two decades. The process of transition was not a 'simple' transformation of political and economic systems, but reflected massive institutional changes and opened up many tensions, which proved difficult to resolve. The process of institutional change has altered the formal and legal rules and as a consequence induced new norms and conventions, and has been supported by these. Institutional change in the CEE countries was faster and more comprehensive than in other European countries in the recent history, which makes it intriguing study object. However, most institutions cannot be simply implemented; instead, they evolve as a response to social and physical characteristics, and it is a slow process (Gatzweiler and Hagedorn 2002). According to Bromley (2006) it is a continual process of adaptation to new settings and circumstances. The situation characterized by rapid

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institutional change, and the consequent increase in social conflicts and overexploitation of natural resources affect sustainability in the long run.

Sustainability as such is not a fixed ideal but an evolutionary process (Cary 1998). Sustainable systems are systems that persist, but also evolve and change (Holling, 2003 in Berkes et al., 2003). Rammel et al. (2007) point out that a co-evolutionary approach is necessary to understand such complex systems and to enhance sustainability in the long run.

Our understanding of sustainability refers to ways in which social and ecological systems interact by means of their institutions. Institutions of sustainability therefore relate to environmental assets in a fashion that secure their capacity to support development for a long time into the future (Costanza *et al*. 2001; Folke 2006). Institutions represent essential linkages between social and ecological system by regulating the relationship among individuals and between social and ecological systems. Both social and ecological systems are embedded and intrinsically interwoven. Co-evolutionary approach highlights the historically developed interactions between complex social and ecological systems, the interrelations between economic activity and ecosystems (Norgaard 1994) and the mutual relationship between humans and their institutions (Hodgson 2000). A major challenge is to understand the process of institutional building for environmental governance that allows sustainable management of local, regional and global ecosystems. The connectivity pattern within and between social and ecological systems plays an important role in designing institutions for sustainable resource use.

Understanding the conditions for successful sustainable development is becoming an increasing central issue in economics and social science. The objective of this paper is to find out how the process of transition affects the evolution of institutions, how the process of institution building affects the sustainable development of the rural areas and moreover how to increase the durability and stability of newly imposed institutions? All this questions are important, and not all have yet received a convincing answer.

The structure of this chapter is as follows: Section 2 summarizes various definitions of institutions and outlines the implication of categorization of the institutions in order to understand their evolution. Section 3 discusses the notion of the importance of pre-existing institutions in the context of the transition process. Section 4 presents a short overview of different theories of institutional change.Section 5 provides discussions on the institutional rebuild and the main implications of the various approaches to institutional change in the context transition countries. Section 6 presents the conclusions.

What is Meant by 'Institutions'?

Before trying to understand the importance of institutions for sustainability and the meaning of establishing compatibility between ecosystem and social systems, there is a need to first address the content and grammar of various types of institutions and their interaction. The classification of institution is proposed as a step in understanding their evolution and change.

Institutions shape behaviours and govern how conflicts are dealt with. The use of the term institution has become widespread in social science in the recent years, reflecting the growth in institutional economics and the use of the institution concept in several other disciplines, including philosophy, sociology and geography (Hodgson 2004).

The problem appears when one moves beyond the effort to develop a general definition of institutions to ways of classifying them.

> Institutions are the rules of the game in a society, humanly devised *constraints* that shape human interaction, made up of formal *constraints* (rules, laws, constitutions), informal *constrains* (norms of behaviour, conventions and self-imposed codes of conduct), and their enforcement characteristics (North 1994).

However, as Bromley (2006) pointed out, institutions cannot be seen only as constrains. In our everyday life, rules are both positive and negative signals concerning individual behaviour. If an institution restrains an individual (or group or class of individuals), it simultaneously liberates another individual (or group or class of individuals) (Bromley 1992). This correlative nature of institutions, meaning the dual character of any rule, has been recognized by the legal scholar Wesley Hohfeld (1913; 1917). Institutions both constrain and enable behaviour. Or as Hodgson (2004) pointed out, they are not always the antithesis of freedom; they can be its *ally*. The definition by Crawford and Ostrom (2005) is of a similar character. They define institutions as a broad set of shared linguistic *constrains and opportunities* that prescribe, permit or advise actions or outcomes for participants in action situations.

Another reason why we do not fully accept North's definition of institutions is because of lack of explanation how the rules are enacted. Hodgson (2004) emphasizes that this does not necessarily have to be entered into definition, but there has to be some account of how rule-systems affect individual behaviour. In this sense Bromley's' definition (1989; 2006) where he understands institutions as social *rules* that define socially *acceptable* individual or group behaviour: they are sets of dual expectations; is more appropriate. In this thesis we are using the terminology of institutions defined Hodgson (2004) where the institutions are social rule-systems (not only 'simple rules'), or *durable systems of established and embedded social rules* that structure social interaction.

Our interest in Bromley's and Hodgson's definition of institutions arises from their use of the term 'socially *acceptable*' or '*embedded'*. In order to understand why people respect, accept and do not ignore certain rules (institutions), we have to focus on their 'habituation' or, using John R. Common's (1934) terminology, 'institutionalized mind' or 'instituted personality'.

Clearly, the mere codification, legislation or proclamation of a rule is not sufficient to make that rule affect social behaviour (Hodgson 2004). It might be simply ignored, just as many farmers ignore restrictions on certain pesticides, or tourists break the ban on the use of vehicles in certain parts of protected areas.

It is easier to recognize the evolution of norm into law when there continues to be a good reason for that evolution. Thus, the current legal domain can be understood as simply codification of earlier customs that were found to have durable persistence or value (Bromley 2006). People accept rules when they are socialized into and habituated to the prevailing circumstances or as Commons claimed, the individual mind is formed by accommodating itself to the prevailing customs and practices (Ramstad 2001). Various forms of regularized behaviour become codified in a variety of ways.

On the other hand, what makes a rule become a habit and what makes people accept it? First of all, it has to be slowly and gradually embedded into shared mental models, shared habits of thought and behaviour. Habits are the conditional, rule-like dispositions that marshal behaviour (Hodgson 2004). People will slowly start to see newly emergent practices, choices and actions as normal, right and correct. In a situation where prevailing institutions are the plausible cause of emergent problems, new institutions will become the plausible cause of

solutions to those emergent problems (Bromley 2006). Off course there will always be individuals complaining about the new institutional arrangement (e.g., new zoning restrictions in protected areas). Notice that over time, pre-existing behaviour – whether or not officially (legally) sanctioned – takes on the aura and the presumption of the right, but especially in the mind of those well served by the status quo ante. Such behaviour is simply the artefact from the earlier times when there was 'no law' (Bromley 2006). Then such complaints are groundless because their customary actions against which change is now to be gauged was itself not an exercise of free will or freedom; rather, the human mind had already been shaped by 'naturalizing' that which it had gradually come to regard as normal (Ramstad 1990). As Bromley (2006) stresses, we become, to a certain extent, who we are in virtue of what the prevailing institutional arrangement make – indeed, often *force* – us to become. This is especially true for the CEE countries, where forty years of command and control regime formed people's behaviour.

How could it not be this way? Here I would like to use an example of an interview with the mayor of a municipality in Slovakia, where he mentioned that

> '*Moses was leading Jews across the desert for forty years. People usually ask if it was because the desert was so large, but the answer should be no, it was because those who remembered how things had been before had to die off, whereby those arriving to the different and better land would be thankful to God for that change'*.

In the CEE countries people still have in mind the system where a 'de facto' open-access regime was considered normal and right and that still forms a major mental model for individuals' behaviour. As an example, we can see the accepted violations of nature protection law – such as illegal tourist facilities in protected areas. However, after the fall of the communist regimes new acts and laws came into force, which was simply a new constellation of institutions formulated in the legislative, executive and juridical realms. According to Bromley (2006), new institutions at the national, regional, or local level represent collective actions in restraint, liberation, and expansion of individual action; a new law or a new rule is simply an alteration in prior collective action (or mere custom) that modifies extant choice domains of individuals. Some will be aided by those new working rules, and some will be harmed (ibid). Thus, when institutions changed, those whose actions have been newly constrained have invariably complained.

However, in the slow process of transition our offspring, who have never been exposed to such a regime, are (will be) socialized into and therefore become habituated to settings and circumstances very different from those of their elders. And by being so habituated, they are (will be) different from the rest of us (Bromley 2006).

Grammar and Classification of Institutions

When classifying institutions, it is reasonable to relate to the type of problem they are meant to solve and what role in the social life they have. They simplify life, co-ordinate action, bring order to human relationship, but also produce and protect values and interests. Moreover, they create expectations about others' behaviour (Hodgson 2004; Crawford and Ostrom 2005). Hodgson (2004) emphasizes that much human interaction and activity is structured in terms of overt or implicit rules.

Several scholars have criticized the drawing of a sharp line between various types of institutions. However, when studying the formation and evolution of institutions, we incline to Crawford and Ostrom's (2005 in Ostrom, 2005) opinion that clear distinction can help us understand their evolution and change; when conventions or norms evolve into rules and why.

To distinguish various types of institutions, Crawford and Ostrom (1995) use something called the 'ADICO syntax'[7], consisting of five elements, which make up all the types of institutional statements. Understanding the 'grammar' of institutions can help us find what difference it makes if the prescription is a rule or a norm and to find out the point at which a norm can be said to have evolved into a rule.

There are overlaps between norms and conventions, although they are both non-codified generally accepted regularities in behaviour that bring order, civility, and predictability to human relationships (Bromley 2006). Conventions have a variety of forms but their common feature is to simplify various complexities of life by structuring and classifying, by combining a certain situation with a certain act or solution (Vatn 2005). They also solve co-ordination problems.

[7] A: An *Attribute* is the characteristics of those to whom the institutions applies; D: A *Deontic* defines what one may (permitted), must (obliged) or must not (forbidden) do; I: An *Aim* describes particular action or outcome to which the deontic is designate; C: A *Condition* defines when, where and to what extent as Aim is permitted, obligatory or forbidden; O: An *Or Else* assigned consequences (e.g. sanctions) for not following a rule.

Following their 'grammar', both 'Or Else' and 'the Deontic' are omitted. A convention just says how something is to be done. As Crawford and Ostrom (2005) pointed out, if individuals share only 'AIC' statements, their discussion of why they would follow such advice focuses only on prudence and wise judgement. In the case of norms, only the '*Or Else'* is omitted. Norms are inherited practices of everyday life that constitute much of what it means to be socialized into a particular culture (Bromley 2006). They define what is an appropriate or right act. Although they do not arise from rulings and declarations of authoritative agents with coercive power of the state behind them, the term 'must' or 'must not' describe what individuals should do. When norms are fully internalized, they work via feeling of guilt and no external sanction is needed. However, some 'Or Else' can be involved, even though its not part of the definition. If a norm is not fully internalized, group pressure may still make people follow it. Vatn (2005) calls it an implicit, non-formalized 'Or Else'.

We see, therefore, that norms and conventions must be distinguished from the class of institutions for which there exist formal (codified) enforcement mechanisms (Bromley 2006). Formally sanctioned rules are different from the above categories in various ways. The 'grammar' of legal institutions contains all five elements of ADICO syntax. The formalized 'Or Else' component is very important to this category. As institutions (working rules) are sets of dual expectations, they indicate what "individuals must or must not do (compulsion or duty), what they may do without interference from other individuals (privilege or liberty), what they can do with the aid of collective power (capacity or right), and what they cannot expect the collective power to do on their behalf (incapacity or liability)" (Commons 1924). The ways in which those institutions are promulgated and enforced constitute the legal system of the society (Bromley 2006). The third party with extended power to use force is the sanctioning authority of working rules. According to Vatn (2005), third party regulations – that is, state regulations – are necessary. However, such authority does not have to be the state with courts, lawyers and jails. It is sufficient that the society have a structured set of rules and sanctions that result in social order. When they are recognized on the part of the members of the collectivity, they are understood as the legal system (Bromley 2006).

Another reason why norms and conventions are different from legal rules, is that the former tend to changed continuously, albeit more slowly (Roland, 2008). The change of legal rules does not necessary mean the change of norms. An important element is whether or not institutions can change by authoritative decision. Although the legal rules or laws can be

changed overnight, their effectiveness and enforcement also depend on their acceptance in society and on the existing social norms and conventions.

Importance of Institutions in Transition Process, Evolution or Co-evolution

The transition process in CEE countries has been given names such as 'jump start', 'institutional gap' (Gatzweiler and Hagedorn 2002) and 'institutional vacuum' (Stark 1996; Hanisch *et al*. 2001) in literature, and the Western model of privatisation as essential institutional transformation was intended to be implemented instantly, thus ignoring the importance of interaction within SES and co-evolution of institutions.

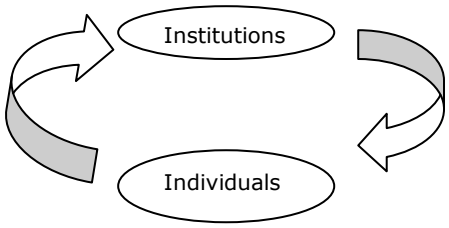
People believed that capitalism would appear magically from the morning mist if only the heavy hand of government would get out of the way (Bromley 2000). According to Evans (2004), such imposition of uniform institutional blueprints based on idealized versions of Western institutions can be called 'institutional monocropping'. Such an oversimplified view that transition involves an unproblematic imposition of a Western blueprint is contested as being shaped by existing informal institutions and social conflicts (Gowan 1995; Smith and Pickles 1998). Routines and practices endure from the socialist period. Thus, the transformation cannot be viewed as a replacement but rather a recombination; in other words, actors in the post-socialist context have been rebuilding institutions not *on the ruins* but *with the ruins* of communism (Stark 1996). The transition involves not the imposition of a blueprint on a 'blank' social and economic space, but a reworking of institutions of central planning (Williams and Balaz 2002). The institutions are given by our history and constitute our socio-economic flesh and blood (Hodgson, 1998). In this paper we propose to view institutional change as the interaction of between prevailing norms and legal rules. It is this interaction that can influence institutional change, both positively and negatively.

To understand the process of institutional changes in the transition countries of Central and Eastern Europe, we have to underline the necessity of assuming the prior existence of some other institutions. So the main problem, which we want to discuss here, is the theoretical impossibility of starting with – as Hodgson (1998; 2002) calls it – an institution-free 'state of nature' in the analysis of the transition process. Van den Bergh and Stagl (2003) also pointed out that such a process cannot occur in a vacuum but is affected by economic, social and ecological forces. According to Rammel *et al.* (2007), the evolution of institutions over time

(either by deliberative design or spontaneously) is always constrained by path dependencies. This means that their structure, rules and objectives reflect past conditions and reveal on the process of adaptation over time (Hodgson 1993). Thus the process of implementation of new institutions in the transition period of the CEE countries has been difficult because it has relied on previous institutions (rules and norms).

At the theoretical and methodological level, there is no clear consensus among modern researchers as to what constitutes an adequate or acceptable level of explanation of the process of emergence of institutions (Hodgson 2002). The work of many 'new' institutional economists is concerned with showing how spontaneous institutions can emerge simply out of interaction of individuals, without considering that those individuals are acting in a certain institutional context. We are all born into and socialized within a world of pre-existing institutions, even if these institutions were made by others (Hodgson 1998) and our purposes can be partly explained by relevant institutions. On the other hand, those institutions can be partly explained in terms of other individuals. Individuals interact to form institutions, while individual purposes or preferences are also moulded by socio-economic conditions. Individuals are both producers and products of their circumstances.

Figure 1: Institutions-individuals influential circle



Based on Hodgson (1998)

Thus the idea of explaining all institutions in terms of individual interaction alone should be abandoned. What is required is a theory of process evolution and learning rather than a theory that proceeds from an original, institution-free 'state of nature' that is both artificial and untenable (Hodgson 1998). In the recent years, a number of 'new institutional' economists have also moved in this direction and recognized the importance of the evolution of institutions, in part from other institutions, rather than from the model of rational individual behaviour tracking out unintended consequences of human interaction in an assumed

hypothetical, institution-free ‘state of nature’ (Hodgson 1998). They now stress that individuals changed by circumstances are an important or legitimate matter for economic analysis. Aoki (2001), for example, identifies a historically bestowed set of institutions together with individuals as given.

Our interest in looking into institutional change from the ex-post analysis arises because, according to Bromley (2006), any new institution is simply an alteration in prior collective action (or mere custom) that now modifies the extant choice domains of individuals. He also pointed out that those who will be harmed by new working rules perceive the status-quo-ante institutional arrangement as historically sanctified and therefore justified reality. Institutional change forces some people to change the ways they have been doing certain things (ibid.).

By recognizing that human activity can only be understood as emerging in a context with some pre-existing institutions (norms and rules), we are better able to understand how such interaction can influence the durability and stability of new institutional forms. It can be thought that instant implementation of an institution such as private property rights can be a good starting point for changing people’s mental models. However, ideologies have played an important role in the CEE transition countries. The forty years’ influence of former institutions and a centrally planed regime have affected the people’s values, preferences and attitudes for a long time. In fact, such a process never stops in the course of one’s life. According to Van den Bergh and Stagl (2003), such a cultural influence can last very long. They mention that parents are also grandparents and thus transmit culture to their children and grandchildren. In a very slowly changing environment such as the period of communist regime, the cultural influence is very effective. Since institutions, especially those at the embeddedness level (norms, values, shared mental models) change slowly, building institutions of sustainability is a complex task (Gatzweiler and Hagedorn 2002) and cannot be seen as a process starting from an institution-free situation.

If in principle every component in the system evolves, then too should individual preferences. According to Hodgson (2002), malleability of preferences can explain the evolution and stability of institutions. Institutions mould individual purposes and preferences through psychological and social mechanisms (process of socialisation and education). This preference malleability could improve the possibility and stability of an emergent institution and overcome difficulties in some cases where institutions fail to emerge (ibid). This process

is particularly important in the transition countries, where it is necessary to change the habits of thought and behaviour in order to increase the durability and stability of newly imposed institutions. This process of affecting individuals by institutions is called downward causation (Commons 1934; Hodgson 2002; 2004). According to Veblen (1919), the situation of today shapes the institutions of tomorrow through a selective, coercive process, by acting upon people's habitual views of things. The key elements in this process are habits, which help to form our preferences and give rise to new perceptions and dispositions within individuals. This process will be discussed further in the next chapter.

We argue the required institutional arrangements for achieving suitable environmental governance cannot be established easily as there was no 'institution-free space'. The period of transition in the CEE countries is a slow, complex and dynamic process that requires evolution, co-adaptation and learning rather than 'shock therapy'.

In the transition situation, we cannot speak about simple institutional change or the evolution of new institutions but rather institutional co-evolution. The next step is thus to focus on a co-evolutionary approach in which the emphasis is on the ongoing process of consecutive changes. Such a co-evolutionary approach focuses more on understanding the past (ex-post analysis), also helping to understand how today's conditions and problems were created in the past. By analysing the path dependence of co-evolutionary development, it increases our ability to maintain options for sustainable futures (Rammel *et al*. 2007).

In order to understand such a complex process, the following chapter focuses on the ongoing process of change and which takes into consideration the influence of past and prevailing institutional factors (habits) on the durability of newly established institutions. However, first we will compare different economic theories of institutional changes and the emergence of different institutions in the situation of a transition process.

Institutional Change: Different Positions

Institutional change covers both the process of changing existing institutions and establishment of new institutions in a field where such institutions have not existed before. As a matter of fact, the process of institution building for environmental governance in the CEE countries is affected by the particular procedures and problems arising from the process of

transforming the former political and socio-economic systems (Gatzweiler and Hagedorn 2002). The breakdown of the command economies of Central and Eastern Europe highlighted the problem of institution building. The question becomes to focus on whether one should rely on spontaneity or on the deliberate construction of market institutions, should one use the forces of collective bodies such as the state to form private property and a market type of exchanged structure? (Vatn 2005)

The Co-evolutionary Perspective on Istitutional Change

The distinction between the evolutionary perspective on institutional changes and other institutional economics has become blurred (Hodgson 1993; 1998). However, the main domain of 'old' institutionalism is and recognition that evolution of institutions can only be understood as emerging in a context with some pre-existing institutions and the perspective on the importance of the concept of habits (Hodgson 1998). In this view, the habit is regarded as crucial to the formation and sustenance of institutions. This is noticed when looking on their definition of the institution. Hamilton's 'A way of thought or action of some prevalence and permanence, which is embedded in the habit of people' (Hamilton 1932), or Veblen's (1919) definition 'settled habits of thought common to the generality of men' are just few showing the importance of the concept of habits.

When an individual is making a decision, s/he acquires ways of looking at things, choosing her/his alternatives and dealing with others. The ways of looking at things are referred to as her/his habitual assumptions, or 'institutionalised mind'. Habits themselves are formed through repetition of actions or thought (Hodgson 2002). As Hodgson (2004) pointed out, repeated behaviour is important in establishing a habit and, to the contrary, habits are repertoires of potential behaviour, and they can be triggered and reinforced by appropriate stimuli and contexts. They are influenced by prior activity and have durable, self-sustaining qualities (Hodgson 2003). Veblen (1914) stressed that accustomed ways of doing and thinking not only become habitual matter of course but they come likewise to be sanctioned by social convention and so become right and proper. When their mind is institutionalised, they pay no attention to prevailing habitual assumptions till some limited factors emerge and go contrary to what they were habitually expecting. Individuals are dominated by these habitual assumptions arising from the prevailing customs of the time and place, and their opinion can

change with changes in economic or political conditions (Commons 1931), or is adapted to changing environments (Hodgson 2004).

In the previous chapter, we mentioned the malleability of preferences and the importance of habituation for institutional change. According to Hodgson (2002), this process of downward causation – or habit formation – results from framing, shifting and constraining capacities of social institutions, which through habit give rise to new perceptions and dispositions within individuals. Once habits become established, they become a potential basis for new intentions and beliefs. As a result, shared habits are the constructive materials of institutions providing them with enhanced durability, power and normative authority (ibid). Such an approach is especially important for our research into institutional changes in the CEE countries, where newly established institutions have not fully 'fitted' into peoples' minds. We want to understand the extent to which these mechanisms of habituation play role in a transition countries and how such a process of habituation helps to strengthen and sustain the newly established institutions.

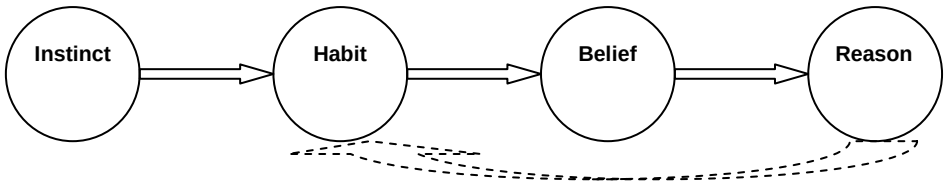
In Veblen's writings, habits are not actions but dispositions that guide them: dispositions or propensities. They are a tendency to behave in a particular way in a particular situation.

As Ostrom (2007) indicated, human agents frequently try to use reason and persuasion in their efforts to devise better rules. However, in the old institutional economics, reason and belief are removed from the exclusive driving forces of human action, compared to the neoclassical view, where habits are seen as based upon rational behaviour. From the evolutionary perspective, habits come before reason, which does not make reason or belief less important. As Hodgson (2003) pointed out, reason is always situated in a context, and relies on surrounding changing circumstances, including social institutions and thus it is an iterative process of adaptive response.

Hodgson (2004) writes that reason is deployed to make a choice when habits conflict or are insufficient to deal with complex situations and in turn, reason becomes habituated. Such adaptation of our minds in the interaction of changing conditions means, according to Daugert (1950), that habits of thought are not merely the passive products of our environment but are active, dynamic, and creative instruments searching for conduct adaptable to changing circumstances.

The view that habits and instincts are the basis for motivation, according to Veblen (1914), dominates any rational calculation of individual interest or objective. The neoclassical view gives priority to deliberation over habit. As Hodgson (2004) stresses, the evolutionary perspective questions rationality as an entirely context-independent matter, although he does not attack the notion that humans act for reason. But reasons and beliefs themselves are based on habits and instincts, and cannot be sustained without them (ibid). Any our action is based on habits from the past. Thus by analysing any existing action situation, we must focus our attention on past habits. Margolis (1987) pointed out the hierarchy of instinct, habit and reason, where habits must be built out of instincts, and judgement must somehow derive from instinct and reason. Habit comes before both belief and reason. Habit supports rather than obstruct rational deliberation; without habit, reason is disempowered (Kilpinen 1999). In the perspective of old institutional economics, reason always requires habit to operate. But the reverse is not always the case, because although sometimes decision leads to habits: we often form habits as the result of non-discursive impulses such as instincts. Habit has priority over reason and instinct has priority over habit (Hodgson 2004).

Figure 2: Hierarchy of human action



Based on Margolis (1987) and Hodgson (2004)

Common to these approaches is the idea of habits being the foundation of learned behaviour. In the evolutionary perspective, institutions emerge from the complex interaction among individuals, their habits and accumulated knowledge (Van den Bergh and Stagl 2003). Learned skills become partly embedded in habits. When habits become a common part of the group or a social culture they grow into routines and customs (Commons 1934). As Hodgson (1998) stresses, the habits and routines preserve knowledge and institutions act through time

as their transmission belt. The imitation and emulation of behaviour leads to the spread of habits, and to the emergence and reinforcement of institutions. In turn, institutions foster and underline particular behaviour and habits, and help transmit them to new members of the group (ibid.). Also Veblen saw conventions, customs and institutions as repositories of social knowledge. According to Hodgson (2004), institutional adaptations and behavioural norms are stored in individual habits and can be passed on to succeeding generations by education or imitation. Each individual learns to adapt to the prevailing circumstances, and through repeated action acquires culturally specific habits of thought and behaviour (ibid).

Summarizing the argument so far, what has been stressed in this section is the co-evolutionary approach to the emergence of institutions with a particular emphasis on the role of habit. The suggestion here is that especially during the transition process of Central and Eastern European countries the emergence and the stability of some institutions maybe enhanced by formation of habits. As the 'old' institutionalists argue, the transmission of information from institutions to individuals is impossible without a coextensive process of enculturation, in which the individual learns the meaning and value of that information.

To recapitulate, important and interconnected aspects of institutional change in transition countries have been shown here. First, there is the importance of impossibility of taking individuals as given, without taking into consideration pre-existing institutional settings and habits, and the importance of the emergence of reason and deliberation with a particular emphasis on the role of habit. The second and the key related issue is the possibility of institutions having a reconstructive effect on the preferences of individual actors through the process of habituation and the degree to which the evolution of institutions and their durability may depend on the formation of habits.

Focusing on the transition process, we can argue that changing norms and rules of sustainability require adequate learning process embeddings or habituation of newly established institutions. Next section adds further credence to these arguments by considering some empirical difficulties that are raised where the co-evolutionary path is aimed to be 'shortcut' in order to fasten the process of building institutions for sustainability.

Discussions: Exploring Links of Imposed and Spontaneous Institutional Change

In Central and Eastern European countries, fundamental institutional changes have taken place in the last two decades. All these processes have altered the formal and legal rules and

as a consequence slowly induced new norms and conventions, and have been supported by these. Institution building towards environmental governance and sustainability is a very specific, complex and not completely predictable process. The question arises whether it is possible to achieve both transition and sustainability within a few decades. What is missing here is sufficient time given for building durable institutions or for co-evolution of institutions for sustainability. Such a process is influenced by pre-existing institutions. People are mentally still under the influence of the previous regime. We argue that in the transition situation of the CEE countries, the assistance of a powerful pre-existing institutional setting is required to create or sustain institutions of sustainability. As Hodgson (2002) pointed out, while some institutions can emerge and develop spontaneously, it is often the case that an institution reaches an important stage of development when it becomes consciously recognized and legitimated by the state.

In the case of a transition country, the state can play an even more powerful role than just a declaratory or legitimising one. This argument does not imply that the state is necessarily the best or only solution to institutional change. However, the bottom-up spontaneous emergence of an institution or institutional change in a transition situation is a very long process and is influenced by pre-existing institutional settings. An example from the CEE countries in searching for constructive solutions for environmental problems such as the effort to create funds for biodiversity protection or sustainable development. The emergence of such an instrument has rarely occurred spontaneously or by a bottom-up approach of individuals. There was no habit or previously existing institution of investing finances in a common budget, specifically for issues connected with the environment or sustainability. Only by decentralization and state intervention the local political bodies were able to introduce an environmental tax (e.g. energy, waste management or tourist sector) and use it for their own purposes while returning it into the development of the area. For example in tourism sector each provider of accommodation has to pay the municipality a tax based on the number of tourists and nights spent in his/her hotel. In the early stage of implementation of this instrument usually most of the local entrepreneurs are against it, especially due to the fact that the state or government imposed it. However, in most cases when they found the re-investment of this money are guaranteed by transparent and fair rules, they started to support the idea and understand it as necessary and an important instrument for local sustainable development. The support of the tax instrument by local actors and the creation of a habit of paying own money for sustainable development make this institution more durable.

The development of an institution such as the introduction of entrance fees and thus controlling access to the National Parks and reducing the pressure of tourism on sensitive areas without state intervention, especially when the impact of such pressure is not yet visible, can be a very long process. Although the state intervention is critical for the creation of such a rule, such a process should go in line with the actors' involvement and transparency.

We can conclude that neither state intervention nor bottom-up emergence can work alone in transition countries. It is not possible to rely only on one perspective; both are necessary for the evolution of institutions of sustainability.
However such process should go in line with actors' involvement and transparency.

Conclusions

The aim of this paper was to raise some theoretical questions concerning the process of institutional change. The analysis of the evolution of institutions shows that past institutional settings can have a significant influence on the current institutions and behaviour of the actors within transition countries.

In summary, we can say that many institutional changes in the last 20 years have created a complex institutional setting for nature protection and environmental governance. The transition process has offered some opportunities and triggered changes but also has been influenced by pre-existing institutional settings and thus created new conflicts. Instant implementation of an institution such as private property rights can be a good starting point for changing people's mental models. However, ideologies have played an important role in transition countries. The forty years' influence of former institutions and centrally planned regime has affected the values, preferences and behaviour of the people for a long time. The process of transition is thus very slow, mostly due to embedded habits and informal rules. Following Commons (1943), we have argued that when habits become a common part of the group or a social culture they grow into routines and customs and consequently we can understand them as barriers to institutional changes. Especially at the beginning of the transition process, individuals were dominated by ex-communist habitual assumptions arising from the prevailing customs of the time and place and thus newly established institutions have not 'fitted' well into their minds. In CEE countries, most of the environmental organizations or organizations for sustainable development and their corresponding institutions emerged as

a recombination of previous ones and the imposition of new rules was affected by previous institutional settings. In the changing social and economic environment, it was difficult to rely on former informal rules and habits which prevail from the communist period. Informal rules and conventions are those types of institutions which together with habits change slowly. One can always find examples to the contrary, but norms and habits, seen as a whole tend to change slowly. The interaction of those slow moving institutions with newly imposed institutions created conflicts. Thus most of those organizations did not work effectively and either have vanished or transformed to completely new ones with formalized rules. Moreover, the instant implementation of western institutions (or 'institutional monocropping') was affected by different biophysical conditions and the attributes of local communities. It provides a rational why reforms in the given area must be build on these local conditions. Ignoring these factors in designing institutional reforms is likely to be a recipe for failure.
By looking at the institutional changes from the evolutionary perspective, another question arises: How to change deeply embedded habits and preferences of individuals? Newly established institutions can mould individual purposes and preferences through social interactions. This process is particularly important in the transition countries, where it is necessary to change the habits of thought. Individuals learn through repeated action and thus can acquire new specific habits of thought and behaviour. Repeated behaviour is also important in establishing a habit and behaviour in order to increase the durability and stability of newly imposed institutions. By creating rules that enhance the repetition of actions, various rules thus become habits. Thus this process of habituation helps the rule itself become stable and durable. However it is not our intention to see individuals only as puppets of institutions. Not only institutions that enhance the repetition of actions are important for the change of habits. We observed other factors such as leadership was critical for the habituation of top down implemented institutions.

We argue that this gradual process is particularly important in the transition countries, where it is necessary to change the habits of thought and behaviour in order to increase the durability and stability of newly imposed institutions. In this article we wanted to highlight the 'slow-moving' informal institutions and habits as one of the key elements in the process of transition: on the one hand they can be a barrier and slow down institutional changes, but on the other hand they can help to make up our preferences and give rise to new perceptions and dispositions within individuals. It is necessary to mention that habit is not the only factor involved in the transition process, but it is important when interact with other factors. Having

pointed the importance of pre-existing institutions in institutional change, the article highlights the role of state in the emergence and sustenance of some sustainability institutions.

References

Aoki, M., 2001: *Towards a Comparative Institutional Analysis*. Cambridge: MIT Press.

Berkes, F., Colding, J. and C. Folke. 2003. *Navigating Social-ecological Systems: Building Resilience for Complexity and Change*. Cambridge: Cambridge University Press.

Berkes, F., and C. Folke, (Eds.), 2003. Navigating Social–Ecological Systems—Building Resilience for Complexity and Change. Cambridge University Press, Cambridge.

Bromley, D., 1989. Economic Interest and Institutions: Conceptual Foundations of Public Policy. Oxford: Blackwell.

Bromley, D., 1991. Environment and Economy: Property Rights and Public Policy. Oxford: Blackwell.

Bromley, D., 1992. The commons, Common Property and Environmental Policy. Environmental Resource Economics 2: 1-17.

Bromley, D., 2000. A Most Difficult Passage: The Economic Transition in Central and Eastern Europe and the Former Soviet Union. Paper presented at the KATO Symposium. Berlin, 2-4 November.

Bromley, D., 2006. Sufficient reason: volitional pragmatism and the meaning of economic institutions. Princeton, Princeton University Press.

Cary, J., 1998. Institutional innovation in natural resource management in Australia: The triumph of creativity over adversity. Abstracts of the Conference “Knowledge Generation and Transfer: Implications for Agriculture in the 21st Century”. University of California-Berkeley, Berkeley.

Commons, J.R., 1924. Legal Foundations of Capitalism. New York: Macmillan.

Commons, J.R., 1931. Institutional Economics, American Economic Review, 21(4), 648-657.

Commons, J.R., 1934. Institutional Economics – Its Place in Political Economy. New York: Macmillan.

Costanza, R., Low, B.S., Ostrom, E. and J. Wilson, editors. 2001. Institutions, Ecosystems, and Sustainability. Lewis Publishers, New York, USA.

Crawford, S.E.S., and E. Ostrom, 1995. A grammar of institutions. American Political Science Review 89, 582–600.

Crawford, S. E.S., and E. Ostrom, 2005. "A Grammar of Institutions," in Elinor Ostrom (ed.), *Understanding Institutional Diversity*, Princeton, NJ: Princeton University Press; originally published in 89(3) *American Political Science Review* (1995), 582–600.

Daugert, S. M., 1950. The Philosophy of Thorstein Veblen. New York, Columbia University Press.

Evans, P., 2004. "Development as Institutional Change: The Pitfalls of Monocropping and the Potentials of Deliberation," 39(4) *Studies in Comparative International Development*, 30–52.

Folke, C., 2006. Resilience: The emergence of a perspective for social–ecological systems analyses, Global Environmental Change Volume 16, Issue 3August 2006, Pages 253-267 Resilience, Vulnerability, and Adaptation: A Cross-Cutting Theme of the International Human Dimensions Programme on Global Environmental Change.

Gatzweiler, F., and K. Hagedorn, 2002. The evolution of institutions in transition. International Journal of Agricultural Resources, Governance and Ecology 2 (1), 37–58.

Gowan, P., 1995. Neo-liberal theory and practice for Eastern Europe. New Left Review, 213, 3–60.

Hanisch, M., Beckmann, V., Boger, S. and M. Brem, 2001. In Search of the Market: Lessons from Analyzing Agricultural Transition in Central and Eastern Europe. Paper submitted for the 10th EAAE Congress. Exploring Diversity in the European Agri-Food System. August 28-31, 2001, Zaragoza (Spain).

Hamilton, W. H., 1932. 'Institutions', in Seligman E.R.A. and Johnson, A. (eds) Encyclopedia of the Social Sciences, Vol. 8, 84-9.

Hodgson, G.M., 1993. Economics and evolution: bringing life back into economics. University of Michigan Press, Ann Arbor.

Hodgson, G.M., 1998. The approach of Institutional Economics. Journal of Economic Literature 36: 166-92.

Hodgson, G.M., 2000. 'What is the Essence of Institutional Economics' Journal of Economic Issues, 34(2): 317-29.

Hodgson, G.M., 2002. Evolution of institutions: An agenda for Future Theoretical Research. *Constitutional Political Economy*, **13**(2), 111-27.

Hodgson, G.M., 2003. 'The Hidden Persuades: Institutions and Individuals in Economic Theory'. Cambridge Journal of Economics, 27(2), 159-75.

Hodgson, G.M., 2004. The Evolution of Institutional Economics: Agency, Structure, and Darwinism in American Institutionalism. London and New York: Routledge.

Hohfeld, W. N., 1913. 'Some fundamental legal conceptions as Applied in Judicial Reasoning' 23 Yale Law Journal 16-59.

Hohfeld, W. N., 1917. 'Fundamental legal conceptions as Applied in Judicial Reasoning' 26 Yale Law Journal 710-70.

Kilpinen, E., 1999. 'What is Rationality? A New Reading of Veblen's Critique of Uttilitarian Hedonism'. International Journal of Politics, Culture and Society, 13(2), 187-206.

Kluvánková-Oravská, T., Chobotová, V., Banaszak I., Slavikova L. and S. Trifunovova. 2009 From Government to Governance for Biodiversity:The Perspective of Central and Eastern European Transition Countries. *Environmental Policy and Governance* 19, 186–196

Margolis, H., 1987. Patterns, Thinking and Cognition: A theory of Judgement. Chicago: University of Chicago Press.

Norgaard, R.B., 1994. *Development Betrayed. The end of progress and a coevolutionary revisioning of the future*, New York: Routledge.

North, D.C., 1990. *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.

North, D.C., 1994. 'Economic Performance Through Time', American Economic Review, 84(3), 359-67.

Ostrom, E., 2005. Understanding institutional diversity. Princeton, NJ: Princeton University Press.

Ostrom, E., 2007. A Diagnostic Approach for Going beyond Panaceas. *Proceedings of the National Academy of Sciences* 104(39) (2007): 15181–87.

Rammel, C., Stagl, S., and H. Wilfing, 2007. Managing complex adaptive systems - A co-evolutionary perspective on natural resource management, Ecological Economics, 63:9-21.

Ramstad, Y., 1990. 'The Institutionalism of John R. Commons: Theoretical Foundations of a Volitional Economics.' in Warren Samuels (ed.), Research in the History of Economic Thought and Methodology, pp. 53-104. Boston: JAI Press.

Ramstad, Y., 2001. John R. Commons's Reasonable Value and the Problem of Just Price. Journal of Economic Issues. Vol XXXV, No. 2, 253-277.

Smith, A., and J. Pickles, 1998. Introduction: Theorising transition and the political economy of transformation in Eastern and Central Europe. In J. Pickles, & A. Smith (Eds.), Theorising transition: The political economy of post-communist transformations (pp. 1–24). London: Routledge.

Stark, D., 1996 Recombinant Property in East European Capitalism. American Journal of Sociology 101:993-1027.

Taylor, M., 1987. The Possibility of Cooperation. New York: Cambridge University Press.

van den Bergh J., and S. Stagl, 2003. Coevolution of economic behaviour and institutions: towards a theory of institutional change, Journal of Evolutionary Economics 13: 289–317.

Vatn, A., 2005. Institutions and the Environment. Cheltenham, Edward Elgar. 481 p.

Veblen, T.B., 1914. The Instinct of Workmanship, and the State of the Industrial Arts. New York: Macmillan.

Veblen, T.B., 1919. The Place of Science in Modern Civilization and Other Essays. New York: Macmillan.

Williams, A. M., and V. Baláž, 2002. The Czech and Slovak Republics: conceptual issues in the economic analysis of tourism in transition. Tourism Management 23: 37–45.

Chapter 4
The Role of Market-Based Instruments for Biodiversity Conservation in Central and Eastern Europe

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ABSTRACT

This paper presents the development and the emergence of market incentives for biodiversity conservation in biodiversity governance in Central and Eastern European countries. Although the development of market-based instruments for biodiversity governance has been receiving increasing attention as a possible cheaper and more effective alternative to the regulatory approach all around the world, it is particularly challenging in post-socialist countries, where the state command-and-control economy disturbed the functioning of markets. Our analysis indicates that market-based instruments can increase the effectiveness of biodiversity governance, but are not always suitable and appropriate. The following preconditions for effective design of market-based instruments in Central and Eastern European countries have been identified: clear property rights, rules on information dissemination, monitoring responsibilities, and sanctioning. Our results show that successful implementation of market-based instruments for biodiversity governance in CEE countries is furthermore influenced by pre-existing institutions and local circumstances which affect the performance of those new mechanisms. However, MBIs should complement rather than substitute regulatory approaches. Thus, in combination with traditional regulation, market-based instruments can be seen as crucial steps and new options towards conservation objectives and effective biodiversity governance.

Introduction

Biodiversity provides human society with a vast diversity of benefits, such as the provision of food, fibre and fuel, regulation of air and water quality, flood protection, pollination, pest control, recreation, and many more. Our well-being is totally dependent on the continued flow of natural services. This statement implies that these services have some value to people, which in turn implies that these services have an economic value which can be internalised in

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economic policy and the market system. However, some of those services are difficult to quantify, which impedes estimation of their economic value and the development of appropriate market incentives (McNeely, 2009, p. 135). Due to problems with evaluation, most of these benefits are not captured by conventional market-based economic activity (Balmford et al., 2002, p. 951).

The situation in which markets are either entirely lacking or do not sufficiently account for the 'true' or social cost of economic activity is referred to as market failure (COM, 2007). Market failure, in the case of biodiversity, originates from the nature of the goods and services provided by biodiversity. Biodiversity-related goods and services have been seen as public goods that benefit large groups of people (McNeely, 2009, p. 137), and the costs of producing/maintaining a good or service are borne by others than the beneficiary. By the very nature of this characteristic, the market fails to conserve the biodiversity asset.

Imperfect markets are one of the reasons behind current unsustainable use of natural resources and high biodiversity losses (Brauer et al., 2006, p. 9). In order to ensure that conservation of areas with a high ecological value takes place in spite of market failure, almost all European countries have introduced regulation on production practices of land owners or granted specific areas legal protection from various types of economic use (known as command-and-control regulation, CAC). The status of protected areas recognises the different degrees of importance of the area concerned in terms of landscape, biodiversity and as a recreational resource. They are managed by national and local agencies or voluntary conservation organisations as national parks, nature reserves or other types of protected areas. It is estimated that approximately 16% of European land (39 European countries) is currently within nationally designated protected areas, amounting to 100 million hectares (EEA, 2009a). At the same time, 40–85% of habitats and 40–70% of species of European interest have an unfavourable conservation status (EEA, 2009b, p. 8). The management budgets for parks and protected areas across Europe are closely associated with national incomes. Due to lack of funding and political support, many of these protected areas are frequently ineffective in practice and exist only on paper. The problems of 'paper parks' arise when funds are insufficient to implement and enforce protected area restrictions (Mullan and Swanson, 2009, p. 6).

The solutions to the current, mostly financial difficulties, faced by biodiversity organisations require biodiversity agencies to become more like accountable service providers, generating also public benefits through effective regulations and market forces (Inamdar et al., 1999). The development of market-based instruments (MBIs) for biodiversity conservation has thus been receiving increasing attention as a possible cheaper and more effective alternative vis-à-vis the regulatory approach. The use of market forces reduces the state resources spent on conservation activities. The introduction of such instruments results in generating revenues that can be used for environmental improvement, which potentially may reduce the burden on taxpayers.

However, introduction and expansion of such instruments is particularly challenging in post-socialist countries, where the state command-and-control economy disturbed the functioning of markets. In addition, in most socialist countries, basic institutions of capitalism such as private property existed only in very limited areas. In this paper, we trace back the development and problems in relation with the emergence of market-based instruments for increasing the effectiveness of biodiversity governance in Central and Eastern European (CEE) countries. The key factors for success and failure of these instruments are assessed. For comparison of empirical evidence, we chose Poland, the Czech Republic, and Slovakia. The countries were characterised by different roles of private property during the socialist regime and different paths regarding transformation and land restitution also in protected areas after the transformation. Within the European Marie Curie Research Training Network "GoverNat", data on different market-based instruments in CEE countries have been collected based on a desk-study research involving secondary data. In particular, we reviewed academic literature and other publications and documents. We also interviewed experts such as researchers and civil servants in order to access internal publications and statistics. Following the literature review, a few examples of the practical use of various MBIs in different CEE countries were chosen and analysed in more detail. The paper builds on Chapters 1 and 5 and will describe the challenges and difficulties affecting the performance of new market instruments as novel tools for good biodiversity governance under the conditions of CEE countries. The paper concentrates on the uses of market-based instruments that are specially designed for the conservation and sustainable use of biodiversity in the multilevel governance of the enlarged EU.

Command-and-control approach versus development of markets in Central and Eastern Europe

During the socialist regime in the countries of Central and Eastern Europe (CEE), the internal institutions of civic society were replaced with externally designed ones for top-down control, and central planning substituted for the spontaneous co-ordination of markets (Kasper and Streit, 1998, p. 415). In most CEE countries, land was nationalised shortly after the introduction of socialist regimes and private property practically did not exist. Almost all protected areas were owned and regulated by the state, with some limited resource use for citizens. However, the role of private property rights and market elements for biodiversity conservation during the communist period differed in the analysed countries. Poland was the most liberalised country in the region. For example, seventy-six percent of agricultural land in Poland was cultivated by private family farms, which was unique in the Soviet bloc. Some land and real estate was also privately owned in protected areas. National park directorates regulated the use of the private assets. The owners of private land transformed to national parks could either be compensated for the land or exchange it. The directorates could also allow some prohibited activities within the parks such as collection of protected plants, picking mushrooms, collection of resin, stones and other materials from streams, but also running commercial and trade activities by private actors. Nevertheless, most of the production activities related to forestry, pastoral and fishing management within national parks were carried out by assistant holdings owned by the park administration (Kozlowski et al., 1981, p. 97). In contrast, private property as such did not exist[8] in Czechoslovakia before 1989. The movement of tourists in national parks and the species conservation were regulated by central legislation. There was a full state ownership of protected areas with only limited resource use for the citizens, decided on and directed by the government.

In general, under most socialist regimes, environmental objectives were strongly supported only in legal regulations and environmental protection was primarily shaped by an ideological legacy, rooted in Marxist value theory, which aimed to manifest the principles of socialism. The Marxist value theory considered labour (power) to be the source of all value, and the environment, therefore, had no intrinsic value aside from the serving of human needs. As an 'unproductive and inefficient' activity, environmental protection had a low priority even within protected areas (Kluvankova-Oravska et al., 2009). Very often, environmental

[8] There was only the so-called personal (direct) ownership, which was not relevant for the purpose of biodiversity conservation.

protection institutions existed only formally and the absence of the market allowed states to be the only regulatory body, often resulting in a *de facto* open access resource regime. Intense economic activities such as tourism, timber and agriculture expanded in protected areas under state management (see e.g. Mirek, 1996; Kasprzak and Skoczylas, 1993; Kluvankova-Oravska and Chobotova, 2006).

In general, regulation was the traditional measure for supporting biodiversity conservation during the socialist regime in CEE countries. However, regulations being imposed, enforced and controlled by authorities may also lead to an inefficient allocation of resources, called government failure. If protected areas are isolated nature areas, surrounded by degraded or urbanised land, their sustainability might be questionable due to limited gene flow and high vulnerability and low adaptability to disturbances (McNeely, 1994, p. 399). Even if protected areas can potentially be effective in protecting biodiversity within their boundaries, the land outside these areas will not be protected even if it has high ecological values. Moreover, an increase in the total area of protected sites may increase pressures on biodiversity outside those areas, for instance through growing urbanisation and transport infrastructures (EEA, 2009a).

Most of these regulatory mechanisms are costly. Although it has been argued that the CAC approach has been responsible for much of the improvement in the European environment and better conservation of biodiversity (Bräuer et al., 2006, p. 9), the costs of biodiversity conservation are not automatically paid by those who profit from its benefits. As a result, government agencies responsible for biodiversity conservation face financial difficulties with maintenance of conservation activities. There are various elements that contribute to the costs of regulatory mechanisms for biodiversity conservation. However, the calculation of true costs is difficult and has been carried out rather rarely. Direct costs of conservation activities can include land purchases or compensations for the removal of opportunities and loss of potential income generation to the land owners. Active monitoring and enforcement costs are necessary in order to achieve the objective of the conservation activity. High transaction costs of decision-making are influenced by the costs of collecting the information necessary for the appropriate decision, costs of co-ordination, or costs of resolving potential conflicts (Birner and Wittmer, 2004, p. 669; Bräuer et al., 2006, p. 29; McNeely, 1994, p. 396).

Market orientation and privatisation of state resources was the dominant approach in the transformation process in CEE. The breakdown of the command economies of CEE highlighted the problem of building institutions for biodiversity conservation (Gatzweiler and Hagedorn, 2002). The Western model of privatisation as essential to institutional transformation was intended for instant implementation, ignoring the importance of the co-evolution of old and new institutions. This oversimplified view, that transition involves the unproblematic imposition of a Western blueprint, is contested, being shaped by existing informal institutions and social conflicts (Gowan, 1995; Smith and Pickles, 1998) and by the persistence of routines and practices enduring from the socialist period. Thus, transformation cannot be viewed as a simple replacement but as a recombination: actors in the post-socialist context have been rebuilding institutions not *on the ruins* but *with the ruins* of communism (Stark, 1996). To understand the process of institutional changes in the transition countries of CEE from command-and-control to market economies, we must remember that some other institutions existed previously (Chobotova, 2007).

The solutions for sustainable use of biodiversity can lie in corrections of existing institutional frameworks in order to create adequate institutions to support market incentives with full social and economic cost and distribution of the benefits of biodiversity conservation to those who ultimately bear the costs of conservation (Pascual and Perrings, 2009). The market may internalise the biodiversity values through price premiums, creating positive incentives towards biodiversity conservation decisions (ibid.).

Implementation of market-based instruments used in biodiversity conservation in Central and Eastern Europe

Market-based instruments are policy tools that use prices or other economic variables to provide incentives for actors to reduce environmental damage, support better environmental practices, and prevent the depletion of a natural resource. They seek to address the market failure of negative environmental externalities either by incorporating the external cost of production or consumption activities through taxes or charges on processes or products, or by creating property rights and facilitating the establishment of a proxy market for the use of environmental services (EEA). The most commonly used market-based instruments in the EU

that have a potential to be applied in biodiversity conservation[9] include: (i) taxes, fees and charges; (ii) subsidies/support, grants and funds; (iii) tradable permits; (iv) liability and compensation schemes; (v) financial mechanisms[10] (e.g. green venture capital funds); and (vi) eco-labelling/certification (Bräuer et al., 2005). Generally speaking, also the majority of Central and Eastern European countries appear to have some MBIs of relevance to biodiversity conservation in place, though this varies between countries (Bräuer et al., 2006). Although in the economic terms they all work in similar ways, they also differ in notable aspects (COM, 2007). Price-based instruments are direct positive (such as supports or subsidies) or negative incentives (taxes, charges or fees) to reduce environmental damage or improve resource use. On the other hand, quantity-based instruments (tradable permits[11], liability or compensations) – also known as indirect incentives – control environmental damage by distributing permits to achieve a fixed aim. Market instruments such as labelling, tradable permits, certification, etc., which enable active participation of non-state actors and may thus trigger behavioural change for sustainable economy, are considered a novel tool for improving environmental governance (Baker, 2008).

Fees

Environmental taxes are compulsory and unrequited payments to the government. Fees and charges are requited and compulsory payments to the government which are levied in proportion to services provided. They can follow the polluter-pays principle by charging those who cause environmental damage, and generate the necessary revenues for biodiversity conservation. However, they require a high degree of monitoring. As they are generally implemented in a top-down manner, they might cause conflicts among the affected actors and thus do not support behavioural changes (Bräuer et al., 2006, p. 31-32). An example of such instruments would be the introduction of charges for hunting licences and fishing permits. Fees used in eco-tourism may be another example of expanding the role of markets for nature conservation by generating the necessary revenues for nature protection.

[9] They are mostly in use for habitat and ecosystem conservation but also for the protection of specific species (COM, 2007).

[10] Financial mechanisms include, for example, reduction in taxes for companies which invest in green equipment, or green venture capital funds, which provide money to fund companies in exchange for a portion of their shares, which makes it possible to influence the production methods and products. They may be linked to land use changes or as an investment in enterprises which could improve their performance with relation to biodiversity to help them expand (Bräuer et al., 2005, pp. 37-38). Such schemes can support biodiversity-related business; however, sometimes they take into account only short-term developments and achieving actual biodiversity conservation aims may be questionable. They are not commonly used in CEE.

[11] Tradable permits provide market incentives to trade rights to pollute, develop or use natural resources. Effective MBI for biodiversity conservation are not commonly used in Central and Eastern European countries comparing to other countries in EU or worldwide. They are mostly used in coastal zones for tradable fishing quotas. Other examples can be tradable hunting quotas or wetland banking (Bräuer *et al.*, 2005: 34-35)

The decentralisation and new environmental legislation in Central and Eastern Europe have strongly empowered the lower levels of government and given a broad autonomy to national park directorates. However, the increased power to the lower levels of state administration and more autonomy for national park directorates has been in sharp contrast with decreased funding and budget cuts for biodiversity conservation. Mostly in Poland, market-based instruments have become a necessity for national park fundraising, but the efficiency of those instruments in achieving conservation goals has become questionable. The park authorities often need to undertake actions which improve the economic situation of the still insufficiently financed national parks from the state budget. This includes, for example, capturing tourism benefits for the benefit of protected areas by the introduction of entrance fees. This instrument can thus act as a way of regulating access to the protected areas whilst generating income, which can then be used to fund biodiversity management needs. In comparison with the narrow view of compliance with imposed regulations, this approach adopts the broader perspective of environmental management related to market benefits (Huybers and Bennett, 2002, p. 7).

Although in the Czech Republic the legislation[12] allows the introduction of entrance fees to national parks on their territories outside built-up areas, this option is rarely used (with the exception of a few sites). More examples can be found in Poland. There are various income channels for Polish national parks. Firstly, it is income from the central budget and secondly, income from the park's auxiliary activities. Moreover, the income can also come from subsidies by external organisations. The national parks in Poland have some degree of freedom in their auxiliary activities, which are mostly related to forms of payment for tourist utilisation of parks. The park directorates can regulate the rules for visitors together with entrance fees. The funds raised from the fees are to be spent on conservation actions within the park (Kasprzak and Skoczylas, 1993, p. 70). In the case of the Biebrza National Park, the contribution of entrance fees to the total budget is not high. In the late 1990s, the contribution of income from entrance tickets never made up more than fifteen percent of the total budget. However, the peatland of the Biebrza National Park will never be as attractive and profitable as seaside dunes or a bison reserve (OECD, 1997). On the other hand, the income generated by the administration of the Polish Tatra National Park (Tatrzański park narodowy) from charging entrance fees is comparable to the yearly budget. According to the legislation, fifty

[12] Act no.114/1992 Coll., on Nature and Landscape Protection , Section 24

percent of these revenues needs to be directed to the state budget; however, the rest of the income from the auxiliary activities is part of the park administration budget and is used for maintenance of tourist paths, park waste management or grassland management.

Slovakian legislation[13] also allows the introduction of entrance fees by park administration (in the case of non-state ownership, the park administration needs permission from the land owner); however, this approach is not employed very much. One of the few national parks in Slovakia where tourists are paying a fee is the Slovak Paradise National Park. Several municipalities are the owners of the technical equipment within the park (wooden and iron ladders and steps) necessary for passing through the park, but are not necessarily owners of the land. Since the summer season of 2000, the tourists have had to pay a fee for entering the park.The payment is officially not an entrance fee but a payment for using the municipalities' equipment. However, by introducing this fee, the municipalities – being the only subject practically controlling access to the park – have a chance to regulate visitors and thus decrease the pressure on the environment. One could argue that due to the unique character of the area and the low cost of the ticket, tourists are willing to pay the price and this mechanism will not directly reduce the pressure on the environment. This market-based instrument of 'tourist fee' is useful for generating revenues, which are later used for renovation of the technical equipment. Even though this instrument is not an official park entrance fee, and is not directly used for biodiversity conservation, the renovation of old and damaged technical equipment helps to prevent the stamping down of the vegetation, trampling of biotopes, and soil erosion. The directors of other national parks in Slovakia agree that levying fees could play an important role in nature conservation and information and education services for tourists in a situation where public money for nature conservation purposes is very limited. However, the problems with the entrance fees in Slovak national parks are twofold. Most of the national parks have multiple ownership structures where most of the land is in the hands of private owners. The park administration acts only as an advisory body to the respective authority without actual power (in contrast to other Central European countries, such as the Czech Republic and Poland, where decision-making in nature conservation is undertaken by the respective park administration).

[13] Act no.543/2002 Coll., on Nature and Landscape Protection , Section 58

Unclear property rights thus impede the implementation of this MBI. Moreover, the revenues generated are deposited in an environmental fund and do not go directly to the park administration budget. The implementation of entrance fees would not help the park administration generate necessary revenues. To the contrary, under the current legislation the transaction cost of introducing this MBI would have to be borne by the park administration without receiving adequate benefits. The first step towards this approach is property right resolution in the form of buying or long-term renting of the non-state land. It is not possible to create a market incentive for biodiversity conservation if supporting institutions are missing. Without a proper institutional framework, the costs of biodiversity conservation may exceed its benefits (Pascual and Perrings, 2009).

Funds and subsidies

Environmental subsidies, grants and funds are financial contributions or supports aiming to stimulate changes in consumer behaviour and create new markets for environmental goods. Environmental subsidies can be offered by the government to businesses, citizens or organisations to encourage a desired activity. The use of grants and funds is similar, although they are often distributed and administrated by NGOs (Bräuer et al., 2005, p. 14-15). However, while subsidies may sometimes be widely accepted, they may not be effective in achieving their actual environmental aims, due to inadequate targeting, unclear objectives and asymmetry of information in their design. Subsidies are used the most commonly in the agricultural sector to pay farmers to encourage less environmentally harmful practices: e.g., actions that will protect and improve habitats for farmland species and reduce pollution (Bräuer et al., 2006, p. 32). Some of these payments are for the protection of particular species in the form of compensations to farmers or fishermen for the damage caused by birds. There is a need for a high degree of monitoring in order to ensure that actions carried out under the financial contribution actually translate into improvement of biodiversity. Funds may also be used to target biodiversity conservation species by species or whole ecosystem protection. They are frequently used market-based instruments in Central and Eastern Europe. They are mostly distributed and administrated by an NGO (Bräuer et al., 2005, p. 14).

An example of a fund which could work particularly well in achieving its objectives is a fund to establish a private protected area in Slovakia. The fundraising initiative of the NGO Wolf called ‘Buy your own tree’ started in 1997. Trees have been symbolically sold mostly to

individuals, but also to groups, school classes and whole schools, various companies and organisations. The fund has been used to buy forest land from private owners and establish the Wolf Private Nature Reserve, an area of 21.24 hectares. In order to guarantee official protection of the area under the Act on Nature and Landscape Protection, specifying details of territorial protection, the NGO has prepared a proposal for the designation of a private nature reserve. Despite the simplicity of the idea, the actual implementation was fairly complex and bureaucratic, and the area was finally declared only after five years of long administrative procedures. Moreover, buying the land required a high capital input (3.2 million Slovak Crowns/100,000 US dollars), meaning that the costs of the conservation (the direct costs of the conservation activity) had to be paid for through the market by those who demanded the benefits. However, as no human interventions are made in this area, meaning no logging, no planting of trees, no removing of dead trees; the NGO has almost no long-term maintenance costs. Although this area can potentially be effective for conserving the land within its boundaries, its current size cannot guarantee its long-term sustainability. In order to achieve the objectives of the given conservation activity, continuous sources of funding need to be accessible. Thus the NGO set its goal to collect 27 million Slovak Crowns to gradually purchase the 180 hectares of the land adjacent to the Wolf reserve.

In comparison to other countries in the region, the key role of the Polish funds for environmental protection (National Fund for Environmental Protection and Water Management, Voivodeship funds for environmental protection, and the EcoFund) in the national environmental protection system is quite different. Such funds cover expenditures necessary for some significant protective tasks, and although those are paid for by the government they are not included in the state budget financing schedule. The role of the EcoFund is exceptional on a European scale. It is an initiative for the replacement of external debt with environmental protection investment. The EcoFund is in possession of financial means from debt swapped by some creditor-countries and directed to international projects, including biodiversity conservation related programmes (OECD, 1997, p. 44). The financial support provided from the EcoFund resources is exclusively in the form of non-returnable grants. Biological diversity conservation is one of the sectors recognised to be of priority importance for receiving finances from the EcoFund. Biodiversity conservation projects make up the most numerous group of projects handled annually by the Foundation but the share of such projects in the total EcoFund expenses is relatively insignificant because of their low costs (EcoFund, 2008, p. 3). They may be used to target the preservation of particular species

(such as birds of prey or the European bison), habitats or educational activities. Subsidies for national parks are included in this category (OECD 1997, p. 44). In Polish national parks, the existing dualism of funding environmental protection (auxiliary activities and environmental funds) seems beneficial. Even changes in the state budget situation will not significantly affect nature and biodiversity conservation in Poland under the EcoFund. Nevertheless, the EcoFund was established in a dynamic setting and therefore must evolve to meet changing demands and challenges. Especially due to EU integration, there is a need to consider what role it might play in helping Poland to implement least-cost approaches for compliance with EU environment directives. In order to help Poland meet domestic and international environmental goals, the EcoFund should improve its links with the private sector and commercial financial institutions so as to facilitate their greater involvement in the financing of environmental investments (OECD, 1998). Although there have been some basic principles such as additionality[14] or cost-effectiveness since the very beginning (Zylicz, 2000), more effective dissemination of information about its activities and ensuring transparency of the project selection process are necessary (OECD, 1998).

Liability and compensation schemes

Liability and compensation schemes are instruments that lead to compensation for environmental damage resulting from harmful activities or accidents (Bräuer et al. 2005, p. 14-15). In Poland, the market mechanisms for environment protection have been an important element particularly in the country's environmental policy since the late 1990s. The first example within the new environmental legislation was the introduction of compensation schemes for damage caused by wild species such as bison, bears and beavers. According to the Czech legislation[15], damage caused by any of seven listed species can be claimed for reimbursement from funds of the Ministry of the Environment. This law provides for compensation of damage incurred by farmers, domestic animal breeders, fishermen, foresters, and beekeepers. The compensations to fishermen in fish-pond production areas for damage caused by Large Cormorants (*Phalacrocorax carbo*) represent the largest portion. These compensations were paid out even before the EU accession and are supplementary to hunting permits (by exception to the law) for the cormorants. An inquiry study has indicated that the fishermen in the major fish production area (partly overlapping with the Trebonsko Protected

[14] The projects selected are to be additional in the sense that, without the assistance of the EcoFund, they would have either not proceeded at all or only proceeded at a substantially later date despite their international importance (Zylicz 2000).
[15] Act no. 115/2000 Coll., on Damage Compensations Caused by Selected Protected Species.

Landscape Area) in South Bohemia are relatively content with the way the issue of cormorants is handled by the authorities, in comparison with other regulations (Urbanová, 2005, p. 165-166).

In Slovakia, the Act on Nature Conservation adopted in 1995 implemented compensations for removal of opportunities for income generation to private and municipal owners. The government order to administrate such a right came into force at the end of 2001 and the application process is very complex, non-transparent and lacking state support. By the end of 2002, only two owners in Slovakia were able to get compensations. An absence of appropriate incentives to encourage sustainable behaviour of non-state owners and an absence of general principles that would increase the performance of the institutional design and robust governance of the resources have resulted in the expansion of unsustainable economic activities, e.g., intensive tourism and timber industry (Kluvankova-Oravska and Chobotova, 2006). These institutional weaknesses are considered the main source of conflict over the type of forest management and are followed in Chapters 12 and 13.

Ecolabelling and certification

Ecolabelling and certification are other instruments that mitigate the problem of market failure. They establish a market advantage through recognition of those who preserve biodiversity. Ecolabels and eco-certificates are mechanisms that enable consumers to buy products that have been produced in an environmentally friendly way. Ecolabelling refers to a policy scheme that is characterised by the evaluation of a product, or product characteristics, against particular specifications; certification refers to a policy scheme that is characterised by an evaluation of a product's underlying management system against particular management specifications (Nunes and Riyanto, 2005, p. 2012). In the context of Central and Eastern Europe, ecolabels are related to food products (such as fruits, vegetables, honey, meat and dairy products) or non-food agricultural products (cosmetics, textiles, cleaning and washing detergents). An example of certification that offers the potential to protect biodiversity is the certification scheme for national parks, which involves certification of local business partners (tourist operators and services provided within the parks). Although market demand for such products provides the financial incentives for ongoing biodiversity conservation, there is a need for initial investments in a certification scheme and the related monitoring and inspection process. The effectiveness of such schemes will also depend on consumers' trust

towards the product and the credibility of the certification scheme, which can be guaranteed by awareness raising and information dissemination. The flow of information across the demand and supply forces crucially influences the success or failure of the market. The role of such a scheme is to act as an instrument to resolve the standard hidden information problem[16]. Labelling can be a key tool in ensuring that consumers have the information needed to help them play a responsible role (EEA, 2005).

In the Czech Republic, creating a separate market for such products by ecolabelling is mostly supported by a local initiative of several NGOs. The best-known is the 'Originalni produkt', a label for various products and services that measures and confronts specific characteristics attributed to the product's origin such as quality or environmental friendliness. The environmental criteria encompass wastewater treatment, waste separation, energy and water efficiency, the use of detergents, and more. The preparation for the implementation of the label is realised in different regions in the form of workshops with local actors and producers, discussing and modifying labelling and certification criteria, while taking into account local circumstances. In addition, certification committees and logos are established during those workshops. The label was established by the NGO REC CR and currently covers ten Czech regions.

The government is not directly involved in the process. However, it plays a crucial role in providing a favourable economic and institutional environment that helps to enhance the effectiveness of a certification and ecolabelling policy (Nunes and Riyanto, 2005, p. 2012). In the Czech Republic, there is a variation in consumer awareness with respect to ecolabelling and general environmental issues. Some consumers are willing to pay a price premium for certified and labelled products; however, there is still a lot of scepticism about such schemes. Therefore, the government can launch an information campaign aiming at raising the consumer awareness of ecolabelling schemes. During the workshops for the Czech certification schemes of the 'Originalni produkt', most of the producers highlighted the importance of this approach. The reasons for the application of the schemes were mostly to identify them for consumers who search for environmentally friendly products and the pride in being an original and local producer. However, some of the actors complained about the implementation costs. In order to sustain certification and ecolabelling schemes, the

[16] Hidden information refers to a case in which one party knows more about its true type than the other party before a contract (relationship) is initiated (Vatn 2005).

government should increase the awareness of the values and the benefits of environmentally friendly products and services and provide enough incentives (e.g., economic benefits or technical assistance) to producers to adopt certification schemes, which would decrease their production costs.

Discussion and Conclusions

MBIs have been receiving increasing attention in political discussions over future strategies for biodiversity conservation in biodiversity governance. Difficulties with their successful implementation are especially visible in Central and Eastern European countries. The problems with functioning of instruments for biodiversity conservation vary from country to country. The lack of clear property rights was identified as the main issue in Slovakia. In Poland and the Czech Republic, it was mostly the lack of publicly available information about market activities having an impact on biodiversity. In general, in all studied countries the lack of governmental support in the form of economic or institutional incentives and awareness raising is significant for the functioning of MBIs for biodiversity conservation.

Nevertheless, there are a number of examples of market-based instruments that work well and produce desired results in achieving biodiversity conservation objectives and thus effective biodiversity governance. It can be summed up that MBIs can be beneficial for biodiversity conservation, but not always suitable and appropriate. Our analysis indicates that the principal preconditions for the effective design of market-based instruments are clear property rights and rules for information dissemination, monitoring responsibilities, and sanctioning. Our results show that successful implementation of market-based instruments for biodiversity conservation in CEE countries is additionally conditioned by the previous construction of an institutional structure and influenced by local circumstances which affect the performance of those new mechanisms. In Slovakia, the issues of property rights and decision-making structures impede the implementation of MBIs. The current multiple ownership structure in the protected areas does not allow implementation of entrance fees for generating income to be used for reducing impacts on biodiversity. The park administration is only a budgetary organisation dependent on the state budget and no dualism of financing of environmental protection exists. The situation in the Czech Republic and Poland is different. The decision-making in nature conservation is undertaken by the respective park administration. Moreover, they have an advantage in the possibility to augment their financial resources with auxiliary

activities or environmental funds. In Poland, the income from auxiliary activities such as the introduction of entrance fees is used for biodiversity conservation activities such as grassland management. In Poland and Slovakia, environmental funds are other financial instruments for biodiversity conservation. Their successful implementation is based on rules for information dissemination and transparency. However, the governments should still have the main responsibility for managing protected areas, in view of their key role as national assets and the generalised benefits these sites provide to society (McNeely, 1994).

Many examples show that MBIs should complement rather than substitute regulatory approaches. Such a dual approach can avoid the weaknesses and inefficiencies that may occur when adopting either the command-and-control policy or the market mechanism approach alone. The regulatory approach makes sure that an upper limit of biodiversity damages is set at the regional or national level, and the market mechanism approach should assure flexibility and efficiency and should lead to equal distribution of costs and benefits of biodiversity conservation (Nunes and Riyanto, 2005; Pascual and Perrings, 2009). Thus, in conjunction with traditional regulation, market-based instruments can be seen as crucial steps and new options towards conservation objectives and good biodiversity governance.

References

Baker S, Eckerberg, K. 2008. In Pursuit of Sustainable Development. New governance practices at the sub-national level in Europe. Routledge /ECPR Studies in European Political Sciences, Abingdon 2008.

Balmford A, Bruner A, Cooper P, Costanza R, Farber S, Green RE, Jenkins M, Jefferiss, Jessamy V, Madden J, Munro K, Myers N, Naeem S, Paavola J, Rayment M, Rosendo S, Roughgarden J, Trumper K, Turner RK. 2002. Economic reasons for conserving wild nature, *Science*, 297 (5583): 950-95.

Birner, R., Wittmer, H. 2004. On the “Efficient Boundaries of the State” – The contribution of Transaction Costs Economics to the Analysis of Decentralization and Devolution in Natural Resource Management. Environment and Planning C: Government and Policy

Bräuer I., Mussner, R., Marsden, K., Oosterhuis, F., Rayment, M., Miller, C., Dodokova, A. 2006. The Use of Market Incentives to Preserve Biodiversity. Final Report. A project under the Framework Contract for Economic Analysis ENV.G.1/FRA/2004/0081

COM 2007. 140 final. Green paper on market-based instrument and related policy purposes (SEC(2007) 388). Commission of the European Communities

EcoFund 2008. The report of the EcoFund Operation in 2007. The EcoFund Foundation 2009, Warsaw

EEA http://glossary.eea.europa.eu

EEA 2005. Market-based instruments for environmental policy in Europe, Technical report No 8/2005, 155 pp.

EEA 2009a. CSI 008 - Designated areas. http://themes.eea.europa.eu/IMS/IMS/ISpecs/ISpecification20041007131611/IAssessment1216803252161/view_content

EEA 2009b. Progress towards the European 2010 biodiversity target, EEA Report. No 4/2009, ISSN 1725-9177

Inamdar A., de Jode H., Lindsay K., Cobb S. 1999. Capitalizing on Nature: Protected area Management, *Science*, 283(5409): 1856-1857

Kasper W, Streit ME. 1998. *Institutional Economics. Social Order and Public Policy*. Elgar: Cheltenham; 415.

Kasprzak K, Skoczylas 1993. *Rozwój Ochrony Przyrody Nieozywionej i Ozywionej, Historia i Współczesnos´c´*. Poznan: Fundacja 'Warta'.

Kluvankova-Oravska T, Chobotova V. 2006. Shifting governance. Managing the commons: the case of Slovenský Raj National Park. *Sociologia 2006* **38**: 221–244.

Kluvankova-Oravska T, Chobotova V, Banaszak I, Slavikova L, Trifunovova S. 2009. From Government to Governance for Biodiversity: The Perspective of Central and Eastern European Transition Countries. *Environmental Policy and Governance.* 19, 186–196.

Kozlowski, J., Baranowska-Janota, M., Ptaszycka-Jackowska, D. 1981. Ochrona srodowiska przyrodniczego oraz struktura funkcjonalno-przestrzenna w koncepcji planu Tatrzanskiego Parku Narodowego. In: Wojcik, Z. (ed.). Ochrona Tatr w Polsce Ludowej. Materialy na Sympozjum Tatry 1981. Warszawa: Polskie Towarzystwo Przyjaciol Nauk o Ziemi. Dyrekcja i Rada Tatrzanskiego Parku Narodowego.

McNeely, J. A. 1994. Protected areas for the 21st century: working to provide benefits to society. *Biodiversity and Conservation* **3**(5): 390-405.

McNeely, J.A. 2009. Payments for Ecosystem Services: An International Perspective. In: Ninan, K.N. (ed.). Conserving and Valuing Ecosystem and Services and Biodiversity. Economic, Institutional and Social Challenges. Earthscan, London.

Mirek, Z. 1996. Tatry i Tatrzanski Park Narodowy – wiadomosci ogolne. In *Przyroda Tatrzanskiego Parku Narodowego. Tatry i Podtatrze 3*, Mirek Z, Glowacinski Z, Klimek K, Piekos-Mirkowa H (eds). Tatrzanski Park Narodowy: Zakopane-Krakow; 176.

Nunes, P.A.L.D., Riyanto Y.E. 2005. Information as a regulatory instrument to price biodiversity benefits: certification and ecolabeling policy practices. *Biodiversity and Conservation* 14: 2009–2027.

OECD 1997. Case Study on The Polish Experiences Relating to The Implementation of Economic Incentive Measures to Promote the Conservation and Sustainable Use of Biodiversity in The Biebrza Valley, with Special Attention to the Biebrza National Park, Ministry of Environmental Protection, Natural Resources and Forestry, Warsaw

OECD 1998. Swapping Debt for the Environment. The Polish EcoFund. OECD, Phare.

Pascual, U. and Perrings, C. 2009. Developing Mechanisms for In Situ Biodiversity Conservation in Agricultural Landscape. In: Ninan, K.N. (ed.). Conserving and Valuing Ecosystem and Services and Biodiversity. Economic, Institutional and Social Challenges. Earthscan, London

Urbanova, T. 2005. in Sauer P. Dvorak, A., Geuss, E., Klusák, J., Kovar, J., Lisa, A., Medkova, M., Prchal, J., Urbanova, T., Vojacek, O., 2005. Environmental Protection Costs - Concepts, Effectiveness & Optimization. Oeconomica, Praha

Vatn, A. 2005. Institutions and the Environment. Edward Elgar. Cheltenham, 481 p.

Zylicz, T. 2000. Costing Nature in a Transition Economy. Edward Elgar Publishing Ltd, Cheltenham, 192 p.

Chapter 5
Institutions and Ecosystem Dynamics. Experimental Perspective
Experiences from three new EU Member States

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ABSTRACT

The governance of common pool resources (CPR) implies establishing compatibility between ecosystems and social systems and enforcing governance institutions as essential links to maintain the capacity of socio-ecological systems. In the given context a behavioural experiment with common pool resource (CPR) was conducted, inspired by the innovative work of recent Nobel prize laureate Elinor Ostrom and colleague from the Centre for the Study of Institutional Diversity, Arizona State University. Following field experiments on commons dilemmas previously conducted in Colombia, Thailand, Namibia, South Africa we undertaken experiments with forest in lab and field in three new EU members Slovakia, Czech Republic and Cyprus. These countries are characterised with significant cultural and political diversity but also similarities, in particular long term isolation from western European political processes. In contrast to typical experimental works, where ecological aspects are rather scarce, the authors incorporated the re-growth of the forest simulating dynamics of socio-ecological systems. The experiment was further developed by addressing issues of communication effects as critical aspect of collective decision making for sustainable socio-ecological systems. Lessons can be derived regarding the design of better rules for the governance of CPR, in particular understanding functional roles of social and ecological context and can help to develop a framework for institutional diversity.

Introduction

Understanding human behaviour represents a fascinating field of social science and defined by Elinor Ostrom (1998) as the study of "the world of possibility rather than necessity". Social dilemmas on common pool resources are being on the top of interdisciplinary research agenda for several decades (Frohlich et al 1970. Balaz 2009, Dawes et al 1986 Janssen 2006, Ostrom 1998, Ostrom et al 1991, 1994.) The particular research focuses on series of key questions: how to govern common pool resources effectively? How can we predict behaviour

of decision makers? How do resource dynamics and communication affect the ability of groups to organize and respond in common pool resource dilemmas?

Today it is evident that rational choice models, explaining human decisions by maximising individual benefit can no longer fully address the social dilemma. It is well documented that human actions are diverse, include large variations of interests, traditions, informal norms and other variables of decision-making that affect willingness and ability of individuals to participate on collective actions. A second generation of rational choice theories thus have ambitions to address attributes affecting human behaviour such as the role of trust building in fostering or inhibiting communication and cooperative strategies, reciprocity, reputation (Ostrom 1998, Boyd and Richerson 1988 and others) and diverse motivation for collective actions, known as 'other regarding preferences'.

Existing and novel theories trying to explain behavioural patters are traditionally confirmed by empirical and experimental studies. Experiments offer the possibility to test a replicated decision making situation and the effect of institutional innovations on the behaviour under the controlled situation (Ostrom 1998, Janssen 2009). Furthermore such experimental techniques usually involves lower costs than case study research Experiments related to collective action of the commons represent a form of social dilemma where human subjects face a situation in which private interests are in conflict with group interests (Janssen 2009). They are usually undertaken in laboratory conditions with undergraduate students. There is however a growing criticism toward the limits of laboratory experiments, focusing on the abstract nature of decision making, the limited subject pool, the small incentive and the subject self selection (Cooper, 2006; Levitt and List, 2007a, 2007b, 2008, Ahn, Ostrom and Walker forthcoming). Such criticisms are also known as external validity of laboratory experiments in contrast with internal validity of case studies (Janssen 2009). Thus there is a growing interest on experimenting with real decision making subjects in the field in an effort to overcome validity problems of laboratory experiments and case study approaches (Cameron, 1999; List, 2004; Carpenter et al., 2005, 2007; Henrich et al., 2006, Cardenas, J.-C. 2001, Cardenas et al 2004, Cardenas, Janssen, Bousquet, forthcoming, Slonim and Roth, 1998, Sears, 1986; Potters and van Winden, 2000 etc.).

In our paper we focus on the use of field experiments to study governance of common pool resources in three new member states of the European Union. The particular field experiment and the employed forest game had been originally developed by Cardenas et al.,

(forthcoming) and was applied initially in Colombia and Thailand. It was later replicated within the European Marie Curie Research Training Network "GoverNat: *Multi-level Governance of Natural Resources: Tools and Processes for Water and Biodiversity Governance in Europe*". A novel and challenging element of field experiments with common pool resources is to address ecosystem institution fit (Young 2002) by the inclusion of ecosystem dynamics into the game design (Janssen, Anderies, Ostrom 2007, Cardenas et al forthcoming). The experiment in this paper not only includes ecosystem dynamics but it was further developed by the authors as to address the effects of communication. The experiment was conducted both in the field with forest users and owners and in laboratory conditions with university students, across three new EU member states: Cyprus, the Czech Republic, and Slovakia.

All three countries where the experiment was conducted joined the European Union in 2004. Their EU membership brought an end to a relatively long period of isolation from the (Western) European discourses. This fact was due to completely different reasons but led largely to some common characteristics shared by the case study areas.

Cyprus constitutes a geographically remote island at the very edge of Europe and the Mediterranean Sea. Two communities and four self-administrative entities[17] with little interaction share limited resources. The complexity of the situation increases the uncertainty over the outcome any discourse on common natural resources might take. Furthermore, the available resources may be further strained upon by the climate change (Alcamo et al., 2007). Areas, such as the depletion of vital natural resources and its impact, remain vaguely explored island-wide although they will necessarily become high priority issues in the near future (Sorman and Zikos, 2009). From this perspective interviews revealed the representativeness of "forests" as indicators of "healthy nature" in the mindsets of the Cypriots. Forest in Cyprus constitutes public property but small-scale users can apply for permission to use the resource for commercial or private purposes.

In the Czech Republic and Slovakia institutional changes seriously affected the capacity of the new democratic regimes to develop appropriate institutions (Kluvankova-Oravska et al. 2009). In the area of biodiversity governance, state regime implemented during socialism resulted due to the absence of proper rules for governing into the open access. The forest management in the Czech Republic and Slovakia today is subject to strict governmental

[17] The two Cypriot communities, the British sovereign military bases, and the UN administrated buffer zone

regulation however the ownership structures is diversified. It mainly concern state forest, individual private owners and historical land co-ownership regime from the times of the Austro-Hungarian Kingdom ('urbars) as a form of self-governed land ownership for poor people. Urbars were re-established in the early 1990s and represent the most important non-state forest ownership type in Slovakia.

Summarising, we observed that forest represents the majority of ecosystems and thus the key common pool natural resource in Central Europe, while at the same time it was identified as the most significant symbol of nature in Cyprus.

As such, the authors selected an experiment including a "forest game". In each country, 40 subjects participated on the game: 20 stakeholders linked to the specific resource as users or owners and 20 advanced university students in disciplines related to the environment for comparison. However, as the students presented a rather differentiated group (see Zikos et al, forthcoming), this paper concentrates on the games conducted with rural forest owners and users in five regions with high biodiversity values represented by national parks or other types of nature protected areas. All 60 subjects participated after the experiment on semi-structured interviews to find out demographic characteristics, reasoning of individual behaviour and similarities of the experimental design to the real decision making situation. In cases where a group was homogeneous and capable to respond collectively, a focus group discussion was undertaken instead of individual interviews. Additionally, some subjects participated in a post-experiment workshop and numerous informal discussions where the processes and results were presented and discussed jointly.

The key question is whether communication, ecosystem dynamics and local knowledge can increase cooperation for sustainable governance of forest in the enlarged EU.

The second section of the paper explain experimental design of novel field experiment, in particular ecosystem dynamics. Third session sets up the theoretical basis, upon which our research was unfolded, highlighting the positive role of communication in cooperative behaviour. Section four provides description of cases, sessions five and six constitutes the empirical part of the study. The authors present and analyse the results of the "forest game" at general and in the three countries. Finally, the last section summarises the major findings of the research.

Experiment Design

Cardenas et al. (forthcoming) designed three games referring to renewable common pool resources that are generally over-harvested, especially when no rules limit who can harvest or how much (an open access situation). In our experimental approach, we focused on the forestry game (ibid.), as forest represents the majority of ecosystems and thus the main (common pool) natural resource in Central Europe, while at the same time it was identified as the most significant symbol of nature in Cyprus.

Original game consists of two *parts* each having 10 *rounds* and it focuses on a forest resource. In each game, four groups of five players participate. The scenario requires individual harvesting of trees from a limited common pool (forest) that regenerates slowly depending on the number of trees remaining at the end of each round. Game starts with 100 trees (m3) of wood . The target of the players is to get as many trees as possible given technical maximum 5 trees per player and the round. Harvest is reimbursed in cash at the end of the game. The fee was calculated on the basis of comparable income (across geographical borders) if aggregated to the total game income per player as an average amount equal to two days of work. The game involves a typical social dilemma over depletable common pool natural resources, where the individual and social (group) optimums may clash. Although each individual makes their harvesting decisions secretly without being allowed to communicate with other participants, the decisions indirectly influence the common resource, reducing the size of the forest and thus the harvesting pool for the next round. The game may very well end up with the absolute depletion of the resource, illustrating a typical tragedy of the commons, as Hardin (1968) initially argued.

In the second part of the game, a rule is voted – again secretly and without any interaction among the players – and implemented. The applied rule regulates harvesting, either by setting a maximum harvesting limit to the players, by rotating the harvesting players or by allocating harvesting rights randomly, in a lottery way, to different players each round. Breaking the rule is possible, but includes a certain risk of inspection (1 out of 6). In such a case, the illegal harvest is confiscated and an additional sanction is imposed on the cheating player.

The forest game design, employed in this research, involves a third part of the game, where communication among the players is allowed every second round. As such, subjects discuss face-to-face the rules to be implemented, customise an existence rule or invent a completely new rule. Furthermore, the subjects decide on the sanctions and jointly decide on any modifications they wish, with no formal enforcement. As expected, communication among participants influenced their decisions and the development of the game as a whole, while also providing some surprising preliminary findings as discussed in the following sections.

Specific to this experiment is also the inclusion of specific ecological features (ecosystem dynamics) of relevant common pool resources in the experimental design (Cardenas et al. forthcoming). Stock effects and spatial effects are issues that natural scientists and economists have studied in forests, fisheries or watershed management although experimental works on these ecological aspects are rather scarce. This represents an innovative feature in common pool resources experiments and aims to contribute to the complexity and interdisciplinarity of the research. In the forestry game, ecological dynamics are represented by the re-growth of trees at a certain rate, aiming at describing and aligning better the co-evolution of certain ecosystem and institutional characteristics. In each round, after extraction, every 10 standing trees will yield one more tree that is available to the group for extraction.

Communication and collective action

Early experiments with common pool resources were designed to question standard non cooperative strategy of rational behaviour models concentrated on the appropriation problems (Ostrom, Gardner, Walker, 1994). In particular they pointed on the dominance of cooperative behaviour of studied individuals.

In numerous behavioural studies, communication was found a key factor of cooperative behaviour. For example, a meta analysis of more than 100 experiments, showed that communication increased cooperation in about 45% (Sally 1995). In experiments with common pool resources, communication was found having positive effect on the reduction of over harvesting against theoretical assumption (Janssen 2009). The positive effect of face-to-face communication in common pool resource dilemma was further explored by a number of studies (Ostrom and Walker 1991, Ostrom et al 1992, 1994, Ostrom 1998). Common pool resource experiments conducted with PhD students in Indiana, USA and at an international

summer school in Slovakia studied such effects on subjects from 41 countries (Ahn, Ostrom and Walker forthcoming). Face-to-face communication played a major role in allowing groups to find cooperative solutions in social dilemma settings. The overall results imply that previously reported findings are not due to subject demographics or self-selection into the experiments. The findings obtained in this series of experiments replicate findings from similar experiments conducted with undergraduate students from U.S. universities and with farmers recruited from rural communities in Colombia.

Trust as mutual relationship with reciprocity and reputation is seen as key factor of positive effect of communication (Sobel 2002, 2004, Putnam 1993, Brehm, Rahn 1997). It affect individuals willingness to initiate cooperation (Ostrom 1998). In common pool experiments she documented that groups with higher initial trust reinforced via relationship with reciprocity and reputation by "cheap talks" achieve better social outcomes and vice versa. Failure of one the attribute results in cascading collapse of mutual relationship and loss of trust within the group. Similar experience was achieved in common pool resource experiments in Colombia. Local villagers knew the identity of others in the experiment and sat facing one another in the communication experiments. With no communication, decisions changed over time toward the predicted Nash equilibrium similarly to experience received in the lab. Cardenas also concluded that group size matters: as it is easier to communicate in smaller groups, the quality of communication increases when the size of the group is smaller and it is easier to make optimal decision (see Cardenas et al., 2000, 2004, 2008 also Janssen et al, Castillio et al forthcoming). Even when the initial population is dominated by selfish individuals, the evolution drives the model towards agents with a level of other regarding preferences that enables a high level of cooperation (Janssen 2008).

The cases

In Cyprus, all the four groups of the participating stakeholders were residents of the Paphos region and either permanent or temporal residents of the town of Panagia and small-scale users of the surrounding forest. The mountain forest of Paphos is strictly protected and offers shelter to dozens of endemic species, including the Cypriot Mouflon, the symbol of the island, and the rare Cypriot Cedar. The forest constitutes public property – like all forest areas in Cyprus – but individuals can apply for permission to cut down trees allocated by the state for this purpose. The average age of the participants was 45 years, but ranged from 18 to 83

years. Only two women participated in the game: quite a representative sample, as forestry is traditionally a male-dominated profession.

In the Slovak Republic, the field experiment took place in two national parks: the Slovak Paradise (SRNAP) in the south-east of the country, and the Pieninsky National Park (PIENAP) in the north .Two games were conducted in each national park. The participants differed in their relations to the forest resource. Different types of forest owners were represented, but prevailing were members of 'urbars'. The concept of the urbars is a particularly important historical land co-ownership regime mainly of forested land and pastures. It originates in the times of the Austro-Hungarian Empire as a form of land ownership for poor people and is typical of Slovakia. Urbars were re-established in the early 1990s in the process of land restitutions. The main decision-making body is actually an assembly of owners, which takes place once a year and adopts an annual economic strategy. In the meantime, an economic committee (consisting of elected and professional members) takes day-to-day decisions. Urbars operate on ten-year programmes, where timber, replanting and other activities are planned for this time period and each subject can decide specific targets and activities for each year. This allows certain flexibility and reflexive governance within the given time span and for a certain degree of adaptation to external factors such as crises, ecological conditions, etc. One game in each location consisted of players from one urbars, while the second one was a mixture of different ownership types, including urbars but from different communities. The average age of the participants was approximately 50, with the prevalence of 60-plus-year-olds.

In the Czech Republic, four stakeholder groups were chosen in smaller villages in the hilly regions with a high proportion of surrounding forest cover. In general, there are private (individually owned), municipal and state forests in the Czech Republic. State officials control all owners to see if they undertake management duties as set forth by the legislation (especially “cleaning” the forest, preventing the appearance of bark beetles, etc.). If an owner wants to cut their forest, they need permission from the state officials. The clear cutting of forests is only allowed where the forest reaches a certain age (around 80 years). The first two stakeholder groups were from the village of Oldris in the Vysocina Region. Most participants were men and the average age was 48 years. The majority of the participants were individual forest owners, but owning only small pieces of land (between 0.3 and 4 hectares). As highlighted during interviews, in such a situation where each part of the forest borders on

another owner's, individual owners must in reality co-ordinate and adjust their behaviour accordingly (e.g., it is practically impossible to cut the forest without communicating with the others, as this might cause external damage, etc.). The other region was in the Beskydy Protected Landscape Area with individual players owning between 2 and 20 hectares of land. This region is quite specific as it is located on the Slovak-Czech border and represents the traditional historical culture of sheep grazing where land is subject to cultural identity.

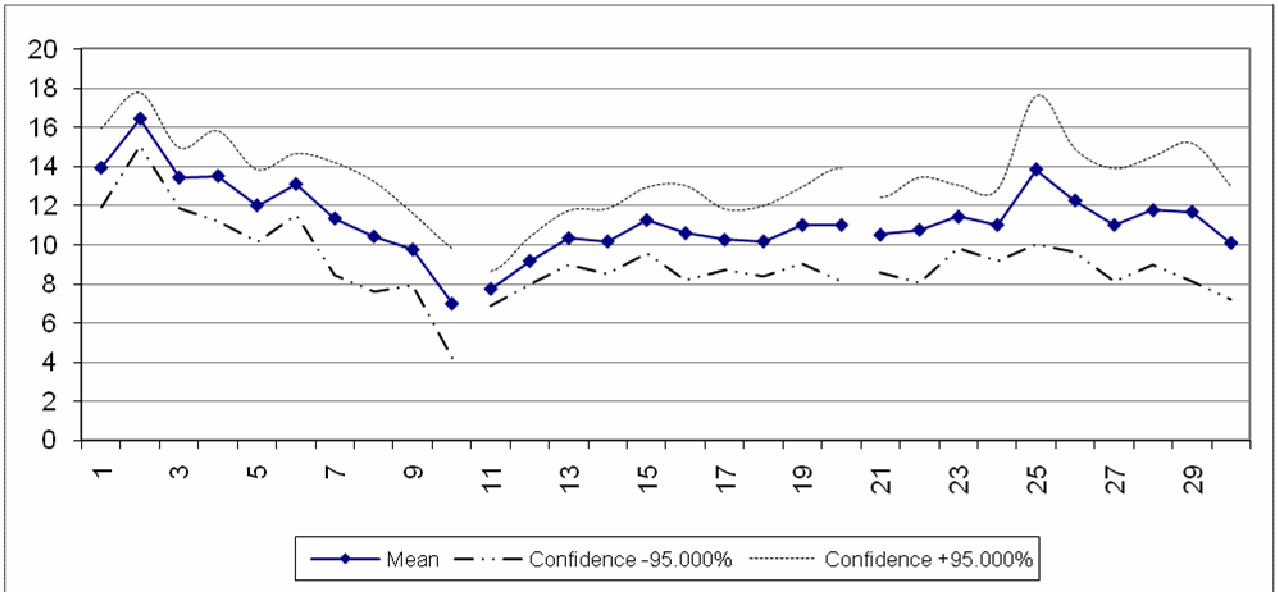
Additionally in each country 20 master and bachelor students studying subjects related to environmental management participated. Compared to forest owners male and female students were present in the groups equally, their average age was 22- to 24 years, with majority less than 50% self depended.

The next section presents and discusses the empirical results of the experiment. It must be noted, though, that the following analysis focuses especially on the stakeholders, as they constituted our main point of reference to address our research questions and furthermore, they offered fertile ground for valuable conclusions with policy implications.

Overall results of field experiment

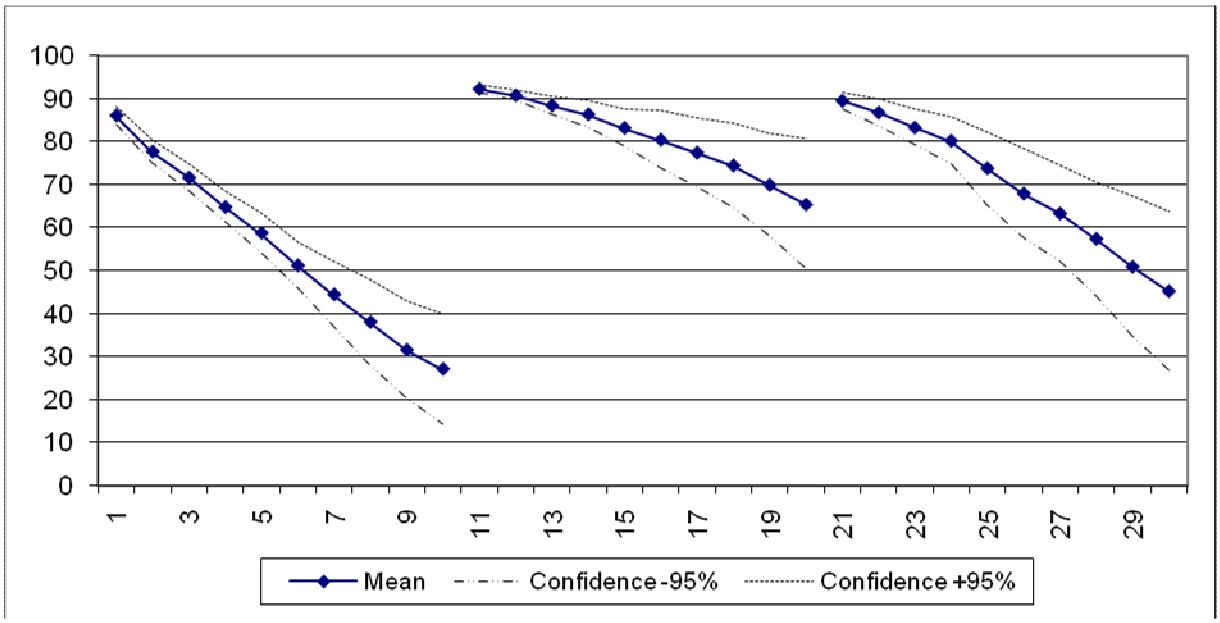
Behaviour of players is summarised in two figures bellow. Figure 1 shows the mean and 95 percent high and low confidence intervals for group extraction over the rounds. Figure 2 illustrates depletion of the forest stock over the rounds.

Figure 1: Group extraction by rounds



Source: own analyses

Figure 2: Depletion of the forest by rounds



Source: own analyses

Figure 1 and 2 confirm findings of Cardenas (et al forthcoming) from Columbia and Thailand that high initial extraction in stage 1 is decreasing together with the forest depletion as an open access situation allows over-harvesting. In the second stage where rules are voted and implemented to control harvesting the target to preserve the resource is largely achieved. Forest resources are maintained, however, the group earnings reduces. As seen from confidence interval individual variations were minimal. In third stage Figure 2 shows that the resource was maintained at a level comparable to stage two. However 9 from 12 groups increased the group income compared to stage 2, reaching optimum balance between extraction and forest stock.

Communication

As seen on Figure 1 in the first stage the players learned that extraction and income are not linearly dependent. Or similarly to Cardenas et al (forthcoming) that over harvesting results in reduction of the income as of forest stock would not allow for much recovery and declines. Extraction dropped to an average of nearly 10 units per group (2-3 units per player) allowed for the resource stock to sustain with more than 50 % left at the end of the stage. Thus major behavioural change in stage 2 is reduction of extraction. In stage 3 balance between extraction and forests stock was achieved as shows Figures 1 and 2, lowering forest stock to 45% on average but increasing income in about 20% compared to stage 2. Thus we see learning and a face-to-face communication as variables that influence group dynamics and behaviour towards sustainable manners, balancing social, individual and environmental issues, as previously reported in for example Janssen (2009), Saly (1995), Ostrom (1998) or Ahn, Ostrom and Walker (forthcoming).

The knowledge on ecosystem dynamics

Secondly it is possible to argue that ecosystem dynamics provides motivation for optimum harvesting strategy and against selfish maximalization, as the knowledge on re-growth rate (10 % after each round) was found an incentive for informal negotiations on group harvesting maximum to be kept below 15.

Thus importance of knowledge of local users on forest re-growth represent the match between the key physical attributes of ecological systems and it is vital condition for the design of institutions used for their governance known as ecosystem –institution fit (Young, 2002). As discussed in chapter 1, fit provides connectivity within social and ecological systems playing an important role in designing effective institutions for sustainable resource use (Gatzweiler and Hagedorn, 2002, Paavola and Adger, 2005; Hodgson, 2004).

The role of trust and forest size

Similarly to previous findings (Ostrom 1998, Cardenas et al 2000, 2004) the role of trust (initial and developed) played a determining role on the individual and group performance. We found that higher initial trust but also size of the resource (forest) increased cooperative behaviour. It can be documented by results of games with small forest owners (Slovakia and Cyprus). Those groups largely maintained the forest stock at sustainable level over stage 2 and 3, reflecting their direct connection to nature and personal skills from forest management. As those players reported in interviews, forest represent much more than monetary profit,

compared to large scale owners that use forest mainly commercially. In most of groups we found that interpersonal trust involved higher "cheating tolerance" in particular towards community leaders. This is consistent with the role of leadership that is traditional in all three countries.

The particular finding supports Ostrom's (2006) argument on exogenous rules. According to her (ibid), even when the rules are monitored at realistically high levels, subjects cheat even though following the rule would generate optimal outcomes. On the other hand, Ostrom (ibid) further argues that, given the opportunity, experimental subjects will devise their own rule systems and impose sanctions on each other with greater success. These findings complement previous research by confirming the critical importance of communication and endogenous rule formation to achieve effective self-governance arrangements (Ostrom et al. 1992; Ostrom 1990). This is particularly prevalent for transition countries (Slovakia and Czech Republic) where self governance of local property regimes can support co-evolution new and old institutions and institutional consolidation. Cooperative behaviour and reflexive governance observed in most of Slovak urbars could serve as evidence provided in this study.

The way rules were chosen and the role they played in the players' decisions provided another important preliminary finding. Subjects avoided the lottery rule reporting equity arguments. Players generally preferred rotation and property rights, reflecting the needs for solidarity. Rotation and property rights, especially under the communication stage, reflected according to the interviews that followed institutions (often informal) that the stakeholders practised in reality. It should be finally mentioned that some groups selected a "no formal rules" strategy at the last stage of the game. Those groups were based only on trust mechanisms between the players and informal strategies changing through the game.

Local knowledge

It is particularly interesting that at the beginning of the game, some groups persistently required further information on the characteristics of the forest, as this would determine their cutting strategy. With those characteristics unavailable, they saw the experiment more as a game than a reflection of real conditions. That was particularly the case of larger owners or players with weak connection to the resource. Large owners lack incentive for stock preservation and preferred profit maximalization. Illustrative example of week connection to the resource are three subjects – co-owners of the community forest, at the same time professional employers of national park. This was the only stakeholders' group where the forest stock was considerably over-exploited in all three parts and with highest individual

extraction over three countries. This brings us to the possible statement even professional knowledge could not guarantee sustainable behaviour and that *managerial skills* are vital to achieving sustainable outcomes particularly in cases where governance is well interconnected with ecosystem attributes. However, verifying this assumption requires further testing. For small owners direct connection to the forest provides incentive for long term harvesting strategy and game design presented realistic management scenario. Thus local knowledge and direct connectivity to the resource supported sustainable behaviour.

Comparing to field results

Students largely followed individualistic and less co-operative behaviour, with primary objective to maximise individual profits. The interviews hinted at a very strong lack of trust among them, forcing them to get as much as they could before the others would, even when personally they disagreed. In general, the vast majority of the subjects in the laboratory experiment had a single motive: revenue. The altruistic behaviour that did pop up was usually not enough to change the course of the group dynamic.

Countries comparison

Individual data from the three countries do not differ considerably, following more or less the same pattern over time. Most significant country specific observations are described in this session.

Slovakia

All the four Slovak groups, but in particular those representing homogenous community land co-ownership, showed a progressively resource-sustainable oriented logic throughout the three parts of the game. Compared to the three countries' average, they performed generally better in this sense. Their harvesting decisions were close to the average as well as their earnings in the first two parts. There were minimum differences between the second and the third parts of the game. Interesting example derived from the Slovakian case illustrates the role of sanctioning, leadership and trust (see Box 1).

Box 1. Even a charismatic leader cannot prevent human error

In the second Slovakian group, all participants were members of the same 'urbars'. The urbar's leader took part in the game, claiming the same role. The leader has long experience and knowledge and he has been in this position since the co-operative was re-established. He is an acknowledged, skilled and charismatic leader, proud of what he has inherited, trusted by the others but also a very authoritative person.

In the first part, a great number of trees (69) remained and the average yield was 18.8 trees/player. In the second part, the impressive number of **94 trees remained**. The average yield dropped to 13.6 trees/player, though. Interestingly, the leader cheated three times while other players mostly followed the rule setting maximum harvest. In the third part of the game, the forest was largely sustained and **93 trees remained.** The average yield rose again to reach 16.2 trees/player. The leader, bringing forward equity arguments, proposed the rotation rule and a 100% control, actually making cheating impossible without sanctioning. All the participants accepted the suggestion without any opposition. The rule was not changed until the end of the game. However, two players cheated constantly, obviously because of misunderstanding. The leader tried to warn them indirectly, but they did not respond. One of those players achieved a negative score in the particular set of rounds! The other cheater argued during the interview, 'If others cheat, why should I not!"

Throughout the game, the leader was counting as if he was really trying to both preserve the forest and earn money. The result showed that he had taken a good individual strategy and the leader's earnings were well above the others' in his group and compared to the average of other groups. Moreover, the forest was conserved almost entirely. However, the poor scores of the other players, particularly in the third game, indicated how complex finding the equilibrium among individual, social and natural optimums can be, especially when there is absolute reliance on an individual – no matter how capable he or she is – and not on a joint effort.

Source: authors

Czech Republic

In the Czech Republic, the results in certain games varied greatly among groups and individuals. It is the researchers' hypothesis that the size of the owned land played a major role in the participants' behaviour. Small-scale owners behaved more sustainable because, as in reality, they did not perceive forest as a source of profit. Contrariwise, large-scale forest owners (15-20 ha on average) grasped the mechanism of the game quickly and set up their individual strategies in a way that allowed rapid profit maximisation.

In the third part, regional differences were observed among the groups. The Oldris and Velke Karlovice groups took a rather different path to formulating and achieving their goals. The latter set explicitly as a goal to cut the forest entirely and maximise the profit (see Box 2). Contrariwise, the first group saw a longer horizon than the official ten rounds of the game, and thus their primary objective was to keep enough trees to ensure continuity. As in reality, informal rules played an important role within groups as did individuals knowing each other, living in the same territory and sharing the same resources. As a result, the players largely

respected informal rules. The communication round was unique for the Czech stakeholders as the resource that survived the game was close to the three countries' average for the first time, while the total earnings surpassed the mean considerably.

Box 2. Finite games: Constraints to realism?

A Czech group composed only of men was the only group in which bigger owners prevailed (owning more than 16 ha of forest). All of them self-managed their forests and used them as a partial source of income.

In the first part, **13 trees remained** and the average harvest was very high (27.4 trees/player). The individual players' strategies were diverse: some of them harvested less at the beginning and more at the end; others did the contrary. Players who harvested less stated as their motivation "the maintenance of the forest as a capital goods (as a reserve for future "problems")". In the second part, **52 trees remained**, and the average harvest dropped to 23.6 trees/player. The chosen rule was to set maximum limits to harvesting. Two cheaters were caught from the early rounds on, without being discouraged from breaking the rule again. In fact, the constant cheater achieved the highest earnings, despite the sanctions. Non-cheating players stated that they respected the rules being aware of the severe penalties. In the third part, only **7 trees remained**, and the average harvest was 29 trees/player (which was the highest score achieved). Individual harvesting results were the most equal as well. The first six rounds were played without formal rules – they just decided informally to keep enough forest at the beginning to maximise re-growth, and perform a clear-cut towards the end (income motivation). Because of increased breaking of the informal rule, they decided to adopt rules for the 7^{th} and 8^{th} rounds to prevent early destruction of the forest. The customised rule was to set a slightly higher than normal maximum harvest and a 50% chance of an inspection. Those rules were 100% observed. For the last two rounds, the group abolished all rules and decided to cut at a maximum rate. However, some players decided not to take this advantage and logged less instead.

The group was satisfied with the result of the game – they met their goal – however, they stressed that in real life, you do not think in a ten-round (or ten-year) horizon. If the games were

Source: authors

Cyprus

The earnings of the Cypriot stakeholders almost perfectly coincides with the three –countries' average. An exemption is the second staged, where the earnings (harvest minus sanctions) were comparable to the other two cases, coinciding perfectly with the mean but the forest remaining preserved to a larger extent. This indicates that Cypriot stakeholders cheated only sparingly and were rarely sanctioned

Box 3: Changing perspectives

In the second set of rounds, a certain group voted for the rule setting maximum harvest to two trees per person. An individual started harvesting aggressively by getting five or four trees per round in the first four rounds. Suddenly, he ceased harvesting for the next two rounds, getting zero trees, although he was allowed to get the maximum of two. He kept his harvest below the limit until the last two rounds, when he harvested to the maximum again. In total, the subject cheated six times (and was sanctioned twice) while he harvested below the limit the four other times.

In the third game, the group decided to play without any kind of formal rules, thus abolishing inspection and sanctions. However, there would be an informal harvesting limit which changed according to the size of the resource. The particular player not only agreed wholeheartedly but also introduced the aspect of "needs-related harvesting". Under this concept, players with low total harvest in the previous two games would be allowed to exceed the set limit. Interestingly, the particular subject did not once break the informal agreement despite the absolute lack of a risk of sanctioning.

The particular stakeholder achieved very high earnings while his group was one of the most successful in terms of group earnings, resource conservation and equity among players.

When the subject was interviewed after the game and asked to explain his behaviour, he stated that he did not pay any attention to sanctioning but he was deciding purely based on three interlinked and non-hierarchical priorities: his own profit, the earnings of others in the group, and the conservation of the forest. When he was able to cut more due to the size of the forest, he did so without hesitation. When the forest decreased in size, he ceased the harvesting only to increase to the maximum at the end of the game when the forest recovered. In the third game and having met the imaginary profit target he had set, it was his chance to contribute to the community. As long as the forest was above a certain limit, players with low profits would be able to compensate for their losses. This sophisticated strategy – also observed in other players but not in such extreme – was a rather natural reaction based on real life and a strong community identity of the particular stakeholder. A final point worth mentioning is that the particular player never completed his elementary school.

Source: authors

Limitations

The third stage of the game, communication was introduced for the first time in this context in the particular policy experiment. Although it provided valuable insights on the effects of communication in the particular social dilemma under consideration, a series of limitations must be taken into account. As the participants were able to modify or introduce their own rules, some incompatibilities on how the researchers handled the players' decisions were to be expected.

Diverse cultural contexts presented some other difficulties in applying methodology, originally developed in English and homogenised as much as possible, to their cases. Cypriot participants kept asking, "How can a forest be private?" and "How can I own a part of the forest?". On the other hand, stakeholders in Slovakia and the Czech Republic insisted on a

more detailed description of the forest, as this would determine their harvesting strategies. Additionally, the translation of the original English text led to some unexpected turns during the interviews as the words “public” and “common” mean quite the same in all the three languages in contrast to English. For the Czech and Slovak Republics, this is also partly due to the fact that community ownership was not practised during socialism. Those differences – although they do not considerably alter the overall results – highlighted the considerable necessity for a homogeneous methodological approach during the communication set of rounds in the future.

Conclusions

Field experiment initially applied in Colombia and Thailand was replicated within the European Marie Curie Research Training Network “GoverNat in three EU new member states Cyprus, the Czech Republic, and Slovakia. The experiment was further developed by addressing the effects of communication. Experimental approached aimed to analyse the role of communication ecosystem dynamics but also trust and local knowledge for the effective management of natural resources, complementing findings from Thailand and Colombia.

Communication greatly contributed to finding equilibrium between the individual and social optimums. Moreover, it allowed the formation of informal and customised rules that were largely accepted and followed. In such cases, small incidents of rule-breaking were tolerated. Additionally, cheaters were more reluctant to go to an extreme, feeling included in the community decision and as such partially responsible for the outcome of this decision. Communication was found also having positive effect on equity and trust building. First it reduces cheating as well as positively stimulated interpersonal trust and cooperation.

The knowledge on ecosystem dynamics was found to stimulate cooperative strategy rather than profit maximisation.

Small-scale forest owners and users and areas with a collective ownership generally exhibited a more “resource-friendly” behaviour than large-scale owners and commercial users of the natural resource. The latter generally prioritised the individual benefit at the expense of the social or natural optimum. Connectivity to the resource and local knowledge provides

incentive for long term harvesting strategy of first type of players and it determined their behaviour to a higher degree.

Cultural attributes of stakeholders influenced harvesting decisions. However, the case of the urbars in Slovakia provided evidence that in the particular regime significantly higher adaptability was observed as well as intergenerational connectivity to the resource leading to sustainable behaviour[18].

We may conclude that common pool resource field experiment replicated in Europe support previous findings (Cardenas et al forthcoming, Janssen and Ostrom 2008, Ostrom 1999, Ostrom et al 2008 etc) that the communication, local knowledge, lead to more effective management and sustainable use of natural resources than large-scale professional but centralised management. In particular, face to face communication increases trust and may improve group performance as previously determined by (Ostrom 1998, Janssen 2009). Secondly that knowledge on ecosystem dynamics generates motivation for cooperative strategy rather than profit maximisation. The employed experiment thus, constitutes an innovative tool to study social dilemmas and could substantially contribute to good "governing of the commons".

Furthermore it provided an examples on successful self-organising and self-governing of commons. In general, it can have a broad impact on political sciences and ecosystem governance by deriving an understanding of what factors affect the ability of resource users to change institutional rules effectively.

On the whole, the experiment identified a series of emerging issues urging for further research. Namely, those areas of interest could refer to the following broad questions/categories: *Could policy experiments be employed as tools enhancing learning and capacity building? Could they foster co-operation over competition on natural resources especially in conflicting contexts? What are the prospects for such tools to be used as participatory mechanisms at the local level? Is it after all the combination of local knowledge and managerial skills, participation and strong connection to the resource what indirectly leads to sustainable management?*

[18] However this will be analysed in separate publication

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References

Ahn. T.K., Ostrom. E, Walker. J., (2009) "Common Pool Resource Experiments with Subjects from 41 Countries" Ecological Economics, submitted.

Alcamo, J., J.M. Moreno, B. Nováky, M. Bindi, R. Corobov, R.J.N. Devoy, C. Giannakopoulos, E. Martin, J.E. Olesen, A. Shvidenko, 2007, Europe. In *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change,* M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 541-580

Baláz. V. 2009. Riziko a neistota. Úvod do behaviorálnej ekonómie a financií. Veda, Bratislava 456p.

Cameron, L.A. (1999). "Raising the Stakes in the Ultimatum Indonesia." *Economic Inquiry*, 37, 47–59.

Brehm, J. – Rahn, W., 1997: Individual-level Evidence for the Causes and Consequences of Social Capital. American Journal of Political Science 41 (3), pp. 999-1023.

Boyd. R. Richerson P.J., 1988. The Evolution of Reciprocity in Sizable Groups. Journal of Theoretical Biology 132. 337-56.

Cardenas, J.-C. (2001). "How Do Groups Solve Local Commons Dilemmas? Lessons from Experimental Economics in the Field." *Environment, Development and Sustainability*, 2 (3–4), 305–322.

Cardenas, J.-C., Ahn, T.K., & Ostrom, E. (2004). "Communication and Cooperation in a Common-Pool Resources Dilemma: A Field Experiment." In S. Huck (ed.), *Advances in*

Understanding Strategic Behavior: Game Theory, Experiments and Bounded Rationality(pp. 258–285). New York: Palgrave.

Cardenas, J.-C., Stranlund, J.K., & Willis, C.E. (2000). "Local Environmental Control and Institutional Crowding-Out." *World Development*, 28(10), 1719–1733.

Cardenas, J.-C., & Ostrom, E. (2004). "What Do People Bring into the Game? Experiments in the Field about Cooperation in the Commons."*Agricultural Systems,* 82(3), 307–326.

Cardenas J.C., Janssen M.A. and Bousquet F., (forthcoming), Dynamics of Rules and Resources: Three New Field Experiments on Water, Forests and Fisheries, in List J. and Price M. (eds), *Handbook on Experimental Economics and the Environment*, New York: Edward Elgar Publishing

Cooper, D.J. (2006). "Are Experienced Managers Experts at Overcoming Coordination Failure?" *Advances in Economic Analysis and Policy*, 6(2), article 6 (Berkeley Electronic Press).

Carpenter, J., Burks, S., & Verhoogen, E. (2005). "Comparing Students to Workers: The Effects of Social Framing on Behavior in Distribution Games." In J. Carpenter, G. Harrison, and J. List (eds.), *Field Experiments in Economics* (pp. 261–290). Greenwich, CT: JAI Press.

Carpenter, J., Connolly, C., & Myers, C. (2007). "Altruistic Behavior in a Representative Dictator Experiment." Working paper. Middlebury, CT: Middlebury College.

Dawes, Robyn M. Orbell, M.J. Kragt. A. 1986. Organising Groups for Collective Action.Americal Political Science Review 80: 1171-85.

Frohlich, Norman, Oppenheimer J. 1970. I Get by with a Little Help from My Friends. World Politics 23, 104-20.

Gatzweiler F, Hagedorn K. 2002. The evolution of institutions in transition. *International Journal of Agricultural Resources, Governance and Ecology* **2**: 37–58

Henrich, J., McElreath, R., Barr, A., Ensminger, J., Barrett, C., Bolyanatz, A., Cardenas, J.-C., et al. 2006. "Costly Punishment across Human Societies." *Science*, 312(5781), 1767–1770.

Hodgson GM. 2004. *The Evolution of Institutional Economics: Agency, Structure, and Darwinism in American Institutionalism*. Routledge: London.

Janssen. M.A. (2008). Evolution of cooperation in a one-shot Prisoner's Dilemma based on recognition of trustworthy and untrustworthy agents, Journal of Economic Behavior & Organization 65: 458-471

Janssen M. and Ostrom E., 2008, Turfs in the Lab: Institutional Innovation in Real Time Dynamic Spatial Commons, *Rationality and Society*, Vol. 20(4):371–397

Janssen. M.A., Goldstone. R.L., Menczer. F. Ostrom. E., 2008. Effect of Rules Choice in Dynamic Interactive Spatial Commons, *International Journal of the Commons*, 2(2): 288-312

Kluvankova-Oravska, T. Chobotová V., Banaszak I., Slavikova L. and Trifunovova S., 2009, From Government to Governance for Biodiversity: The Perspective of Central and Eastern European Transition Countries, *Environmental Policy and Governance*, 19: 186–196

Levitt, S.D., List, J.A. (2007a). "What Do Laboratory Experiments Measuring Social Preferences Reveal About the Real World?" *Journal of Economic Perspectives*, 21(2), 153–174.

Levitt, S.D., List, J.A. (2007b). "Viewpoint: On the Generalizability of Lab Behaviour to the Field." *Canadian Journal of Economics*, 40(2), 347–370.

Levitt, S.D., List, J.A. (2008). "Homo Economicus Evolves." *Science*, 319, 909–910.

List, J.A. (2004). "Young, Selfish and Male: Field Evidence of Social Preferences." *Economic Journal*, 114, 121–149.

Ostrom, E., Walker, J. (1991). "Communication in a Commons: Cooperation without External Enforcement." In T.R. Palfrey (ed.), *Laboratory Research in Political Economy* (pp. 287–322). Ann Arbor: University of Michigan Press.

Ostrom, E., Walker, J., Gardner, R. (1992). "Covenants with and without a Sword: Self-Governance is Possible." *American Political Science Review*, 86(2), 404–417.

Ostrom, E., Gardner, R., Walker, J. (1994). *Rules, Games, and Common-Pool Resources.* Ann Arbor: University of Michigan Press.

Ostrom. E. 1998. A Behavioral Approach to the Rational Choice Theory of Collective Actions. Americal Political Science Review 92, No:1, 1-22.

Paavola J, Adger W.N. 2005. Institutional ecological economics. *Ecological Economics* **53**: 353–368.

Potters, J., van Winden, F. (2000). "Professionals and Students in a Lobbying Experiment: Professional Rules of Conduct and Subject Surrogacy." *Journal of Economic Behavior and Organization*, 43(4), 499–522.

Putnam, R. D., 1993: Making Democracy Work: Civic Traditions in Modern Italy. Princeton University Press.

Sobel, J., 2002: Can We Trust Social Capital? Journal of Economic Literature XL/March/, pp. 139-154.

Sally, D. (1995). "Conversation and Cooperation in Social Dilemmas: A Meta-Analysis of Experiments from 1958 to 1992." *Rationality and Society*, 7, 58–92.

Slonim, R., Roth, A.E. (1998). "Learning in High Stakes Ultimatum Games: An Experiment in the Slovak Republic." *Econometrica*, 66(3), 569–596.

Sorman A. and Zikos D., 2009, Cyprus: Does water recognise borders? in *Methods and tools for environmental appraisal and policy formulation,* under THEMES Marie Curie, 35 pages, *in press*.

Sutter, M., Haigner, S., Kocher, M. G. (2005). Choosing the stick or the carrot? –Endogenous institutional choice in social dilemma situations, University of Cologne, Department of Economics.

Zikos D., Kluvánková-Oravská T. and Sláviková L. Policy Experiments on Common Pool Resources: Innovative tools providing multi-dimensional insights. Experiences from three new EU Member States. In: Kluvankova-Oravska et al. 2010. From Government to Governance? Good Governance for Water and Biodiversity in Enlarged Europe, Alfa Printing forthcoming .

Young OR. 2002. *The Institutional Dimensions of Environmental Change: Fit, Interplay and Change*. MIT Press: Cambridge, MA.

Chapter 6
Back to traditional forest management regimes?

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ABSTRACT

In the Slovak Republic, the establishment of protected areas began more than half a century ago. The protection concept created then was driven mainly by economic values, which has been projected, for example, in the attitude of forest management in national parks. In the paper, two types of regimes for forest management in national parks are observed. The regimes were created in different time periods. Today, they are both seen in interaction with a new governance framework for biodiversity that has arrived along with EU integration. The first type was established when planning of all activities related to forests was simplified due to the nationalisation of the land and centralised decision-making, leaving behind a swathe of inflexibility, mismatches with regimes supportive of values other than economic. The second type represents a much older type of forest management regime created for the common use of forest resources. Although embedded in the same forestry regulatory system, and supporting utilitarian values, this type is an example of management practice that is also supportive of biodiversity conservation.

Introduction

In the Slovak Republic, the establishment of protected areas began more than half a century ago. However, the conventional conservation concept was directed mostly by utilitarian values and supported by centralised decision-making. Today, the old concept still permeates forestry policy and it clashes with the biodiversity policy that has arrived along with EU integration. Furthermore, responsibilities for forest resources are now spread across different governmental levels, which together with increased involvement of non-state actors creates a more complex situation. Today, such a situation is well characterised by the term “multi-level governance”.

In the following text, we first introduce the new governance concept that has emerged from different studies on EU integration. The aim is to introduce the evolving complexity in relation to decision-making over the forest resources in the national parks of the Slovak Republic. The complexity is related to the increased number of actors and the diversity of the

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consequently increased number of institutions. The second step will therefore be to introduce the reader to the meaning and roles of institutions in the decision-making. Diverse institutions are identified, established in different time periods, and so in different social contexts, supporting different values in relation to the use of forest resources. Furthermore, the institutions are not isolated from each other: they interact and their performance depends on those interactions.

Two cases are examined showing the interplay of new institutional framework for biodiversity governance with existing forest management regimes. Two types of forest management regimes, with contrasting supportiveness for the new institutional framework, are presented.

Evolving multi-level governance for biodiversity in the enlarged EU

European integration has been seen as a driver for dispersion of formal authority both up to supranational levels and down to the sub-national governments (Marks and Hooghe, 2004). A belief has been created among the majority of scholars that the EU is evolving a multi-level governance system (Jordan, 2001). The development of the concept was part of a new wave of thinking about the EU as a political system rather than seeking to explain the process of integration (Bache and Flinders, 2004).

The term 'multi-level' implies that the EU operates at different interdependent administrative levels, while 'governance' refers to the growing interdependence between governments and non-state actors at various territorial levels (Bache and Flinders, 2004). The term governance refers to the absence of coercive state power. The government, and the state, should be understood as arenas and instruments of collective action, where complex networks of different actors operating at different levels govern and are governed (Paavola, 2007). Thus, government is no longer a regulator of power and authority, but rather a co-ordinator. While such a state is still more desirable than a central state monopoly (Marks and Hooghe, 2000), it challenges analysis due to its complexity and dynamics.

Today, the prevalent opinion is that biodiversity can successfully be maintained by such complex, multi-layered governance systems. EU biodiversity policies have been seen as a typical product of dispersed decision-making competencies and involvement of both state and non-state actors. Fairbrass and Jordan (2001), for example, followed the developments in the EU biodiversity policy in the United Kingdom. They found that previously marginalised environmental groups learnt to use EU opportunities to achieve policy outcomes which they

were not able to achieve through national channels of representation. Thus, they conclude that EU integration has open the opportunity for competition and collaboration between state and non-state actors situated at different levels (Fairbrass and Jordan, 2001; 2004).

With regard to new EU member states, some authors (Jehlička and Tickle, 2004) have recognised a more passive approach of these countries in EU environmental policy-making, where 'top-down' imposition of EU requirements has come to be the leading framework of their environmental policies. Kluvánková-Oravská et al. (2009) pointed out that in the past political regime, the environment had no intrinsic value aside from catering for human needs; moreover, nature protection had a low priority even within protected areas. Secondly, externally designed institutions for top-down control have replaced internal civic institutions, which has had a serious impact on the new democratic regime in the sense of developing appropriate institutions for interactions among actors at multiple levels.

While political passivity relates to simple legal harmonisation, we assume that it is not followed by passive adaptation to the new rules: instead, the time given has simply not been sufficient for the evolution, co-adaptation and learning to take place (Kluvánková-Oravská et al., 2009). There has been enough time since the EU accession for certain developments or processes to start, due to processes of decentralisation and democratisation: increased numbers of both state and non-state actors operating at different levels, their actions and interactions, etc. The increasing diversity of institutions that shape decisions over the management of natural resources has also become an inseparable part of this process. We will discuss that in more detail in the two following sections.

The role of institutions in environmental decisions

When searching for reasons for specific decisions, we ask what motivates the decisions and how those motivations are created (Vatn, 2005). How we explain that depends on which position we take. While neoclassical economists explain human behaviour as being driven only by desire to maximise individual utility, institutionally oriented social scientists see a person's behaviour as a product of social conditions under which they live (Vatn, 2005). Their behaviour is guided by rules established by society in which they live.[19]

The rules tell us about the way in which things should be done, they tell us what we can do and what we cannot do: they direct human behaviour. Rules can be formal (written in formal documents) and informal. Informal ones can even contradict formal rules, and they are often

[19] The present paper assumes the latter postion.

difficult to identify (Ostrom, 2007). Where formal rules exist, they have been established to protect certain interests. Where agreement is possible without the need for a third party (state), rules may exist in other forms which are not formalised. The important point is that they are not made in a vacuum, but they are all social constructions (Vatn, 2005). We call them institutions.

Institutions are "sets of rules, decision-making procedures, and programs that define social practices, assign roles to the participants in these practices, and guide interactions among the occupants of individual roles" (Young, 2002). Institutions facilitate, as well as constrain human behaviour (Bromley, 2006).

Paying attention to institutions and their role in environmental decision-making is important. How to approach the analysis is a difficult task to be decided as institutions have a nested structure (rules within rules) (Ostrom, 2007). For the sake of clarity, Ostrom (2007) identifies three levels of decision-making. The *constitutional level* is the one which says who can participate in policymaking and decides about the rules that will be used to undertake policymaking. The *collective choice level* is the one in which decision-makers have to make policy decisions within the constraints of a set of collective choice rules. The final level is the *operational level*, in which actors make decisions that directly impact the physical world. Each level in itself represents an action arena, but they affect each other: the constitutional level affects collective choice decisions, while decisions made at the collective choice level set limits to operational decisions.

This is a useful differentiation to start with. In our paper we are primarily interested in decisions made at the operational level. However, as already pointed out in the above text, institutions are not isolated from each other: they interact, and it is more likely that observed behaviour is a result of those interactions rather than of a single institution.

Multiplicity of institutions and their interactions

Individual institutions are complex enough, but such complexity also has implications for their interactions with other institutions. That is why we cannot look at them separately. Moreover, such interactions often produce consequences that are too important to be disregarded (Young, 2002).

Institutions interact with other institutions which can be at same level of societal organisation (horizontal interplay) or at different levels of societal organisation (vertical interplay) (Young, 2002).

Ostrom et al. (1999) argue that institutional diversity is necessary to deal with the complexity of environmental problems. Such an argument supports the current trend towards solutions applied at multiple levels. With regard to the propensity of scale that biodiversity governance includes, tackling of different problems dispersed across different scales seems to be achievable only in this way.

Multi-level governance leads to increasing institutional density and a higher chance of institutional interactions (Young, 2002). The effects of interactions can be positive, but also negative. Paavola et al. (2009), for example, stress that conflicts in a number of member states over the designation of Natura 2000 sites actually arose as a result of the new institutional framework for biodiversity governance, neglecting the other institutions and their relevance.

Recognition of broader governance regimes (a variety of informal and formal institutions at different levels) that shape the performance of specific, purposive government interventions is important, but not sufficient (Paavola et al., 2009). It is also important to design institutions which will fit with the attributes of ecological systems (Young, 2002), and so be able to maintain them, as they represent a support to social and economic systems (Kluvánková–Oravská et al., 2009). But how to design institutional interactions that will produce positive effects? Such a goal seems almost unachievable, but acknowledging of such interactions and finding a way to manage them, or even prevent them, is important.

Establishment, reaffirmation or change of institutions in the name of resolving conflicts over environmental resources is what environmental governance is about (Paavola, 2007). Negative consequences of institutional interactions often appear as conflicts, but not always. Other negative effects appear too, which often remind us about dynamics and complexity of both social and ecological systems.

The operational level

The operational level represents a mediator between physical world and institutional framework (totality of institutions) that shapes decisions made at the same level. If more actors perform in a particular place, decisions could differ. In Slovak national parks, there were identified heterogeneous actors, whose activities were directly related to the forests. There are state actors on one side: (1) state forestry company responsible for managing the state forests and (b) national park administration, responsible for nature conservation of whole

national park. On the other side, there are various types of non-state forest owners: private, municipal, common type, church, brought by post-socialist restitution.

Diversification of actors caused multiplication of values and interests, and consequently diversification of institutional structures for forest management. The existing institutions are not isolated one from another, on the contrary, they interact. In this paper, two types of institutional structures for forest management are observed, and their interaction with the new institutional framework for biodiversity governance.

Development of two sectors with overlapping activities

The system of nature conservation territories in the Slovak Republic was already established in 1948. However, at that time, environmental objectives were only strongly anchored in legal regulations, while the history of practice tells a different story (Kluvánková–Oravská et al., 2009). The Slovak Republic is characterized by a traditionally strong position of ministries in charge of industrial and economic affairs, while the Ministry of the Environment is much younger and its position since its establishment (1992) has been perceived as quite weak in providing good arguments for biodiversity conservation in a democratic market society (personal communication with Tatiana Kluvánková–Oravská). Thus, any possibility of its strengthening has been ignored by the economically oriented ministries and lobbies in connection with the Government. This creates a situation in which non-environmental bodies have more influence on environmental issues (Szöllös et al., 1998).

The Ministry of the Environment is a central body in the area of environmental protection, and it has three planning units: the Slovak Environmental Inspection, regional environmental protection authorities, and the State Nature Conservation Agency, which is also its expert organisation. In addition, there are several individual expert and contributory organisations. Responsibilities for nature conservation are under the executive control of the State Nature Conservation Agency, operating through the administration bodies of national parks and other types of protected areas in each region. The administration bodies have in fact only an advisory role in relation to the hierarchical authority. Moreover, formal institutional links between the elected regional and local agencies are missing, which makes it difficult to co-ordinate activities. The same is true for other state actors (Kluvánková–Oravská and Chobotová, 2006). For example, national park administrations are responsible for nature conservation in the entire area of the national parks, but the forests are under the control of a

state company subordinated to the Ministry of Agriculture. Therefore, their opinions in respect of forest management can easily be neglected.

Forestry has had a long history, which takes us back to the 16th century, when today's Slovak Republic was a part of the Austro-Hungarian Empire. Then, its organisational developments related mainly to royal forests (approx. 15%): a time when mining was relevant and forestry development was also driven by utilitarian values. Because the negative impacts performed by such activities on the quality of forests were increasingly evident, the first legal measures began to emerge as well as a series of organisational restructuring measures, in order to protect the forests. This led to a distribution of responsibilities, and the established rules also spread to other forest owners. The most important legal document, representing a strong basis for future developments in forestry, was created in 1879. District administrative boards were entrusted the leading role in controlling its performance. However, as they were not capable enough to fulfil their administrative duties, they asked state authorities to take over this responsibility. The state took over the responsibility in the form of a voluntary agreement, never to affect individual property rights (Bednár, 1996). At that time, the state administration was already well-developed with a built-in hierarchical administrative structure.

When the Slovak territory became a part of the Czechoslovak Republic in 1918, the responsibility for state forests was transferred to the Ministry of Agriculture. The forests were still managed according to the previous law, with only one change. Earlier, before the establishment of the Czechoslovak Republic, the felling of forests was free from any announcing, while now, under the changed circumstances, it has become obligatory, with approvals issued by the responsible ministry. Later on, several additional legal adjustments were made, together with some organisational restructuring. A new act on forests was issued in 1960 (Bednár, 1996).

In 1946, after World War II, a gradual intensification of forestry business activities started, and all forestry activities were finally centralised hand in hand with the expropriation of private lands performed by the socialist regime. The political practice lasted unaltered for approximately 50 years. After the political transformations of 1989, restitutions took place and the extent of state managed areas decreased, followed by a restructuring of the sector. The main reorganisation took place in 1999, when the Ministry of Agriculture established the united state company "State Forests" via integration of several state companies, with the aim of conducting works in the public interest.

Nowadays, the central body responsible for forest economy is submitted to the Ministry of Agriculture, which also participates in the legislation process. It too consists of planning units and contributory organisations. Its work should be dedicated to creating conditions that would also provide for sustainable forest management, and it is also expected to co-operate with the Ministry of the Environment. However, experience so far shows that all this still stands on rather shaky legs and sometimes results in conflicting legal provisions with regard to nature protection (Kluvánková–Oravská and Chobotová, 2006).

Introduction to the case studies

In the following section, two case studies will be presented in relation to the recognised interplay between new institutional framework for biodiversity governance and old institutional structures for forest management. The first case study shows conflicting interests in relation to forest use: commercial use versus biodiversity conservation, where both interests are protected by state, but their simultaneous existence not possible in the present form. The second problem appears when it comes to non-state forest users who have to apply the dual contradictory regulatory system. In the second case, the attention is turned to the re-established old common ownership regimes in national parks. Those actors show ability to deal with the conflicting dual regulatory system, which in a certain way, gives them more freedom in decision over the forest management.

The analysis of the first case is mostly based on written data and discussions found on the internet between the two opposing state actors that operate in the same national park- High Tatras. The data used for the analysis of the second case were collected through semi-structured interviews with leaders of the so-called 'urbars' in the same national park: the Slovak Paradise.

Institutional clash

National parks in the Slovak Republic were established more than half a century ago, when all activity was in the hands of centralised decision-making. The first national park – the Tatras National Park – was established in 1948. Since the forests had been significantly damaged by grazing and felling before the establishment of the park, the restoration of these forests became the prime goal of the responsible authorities. At that time, all of the land was nationalised, and all the legal rights for the utilisation were shifted to the state forestry enterprise, transformed later on into the national park administration (Vološčuk, 2000). After that moment, state foresters were operating throughout the area for more than fifty years.

Such a long period of creating "new" conditions (nationalisation of all the land) was sufficient not only for the establishment of new institutions with specific management practices, but also for taking deep roots all over the system.

The planting of non-native monocultures of pine trees in the lower-lying and easily accessible parts of the Tatras National Park is in fact a clear illustration of the former perception of conservation. A few years ago, the monocultures showed themselves vulnerable: "no more efficient" in the foresters' economic language. The foresters made a momentary attempt to change their long-lasting practice, following some ecological principles. It was interesting to find out how this change was perceived by some conservationists, pointing out this change as a change in the foresters' value system: "The foresters have finally learnt what sustainable practice is, but it was a shame that the positive change was stopped by a single windstorm, after which they turned back to their economically oriented behaviour once more."

The foresters' protection concept is, "green forest without dead trees", which actually means, to protect the forest (keep it non-vulnerable), it must be cleaned of all dead trunks or ill trees. That is an extreme opposition to the conservationist concept, which calls for leaving such trees to stay in their place of growing, because they are a part of a natural process. The difference in the protection concepts is caused by their divergent interests: commercial use of forests versus biodiversity conservation.

The administrative structure of the national park changed in 1995, after the fall of the communist regime. The state forestry company (under the Ministry of Agriculture) preserved its authority over the forests and continued with its former practice, but with a reduced amount of forests caused by the restitution process. A new actor is the national park administration, which has responsibility for nature conservation. However, it is only an advisory body with no decision-making power, subordinate to the Ministry of the Environment (which is also quite young) (Kluvánková–Oravská et al., 2009).

In addition to the dual administrative system, the management activities of the two state actors are guided by different management plans, coming from a dual regulatory system (forestry regulation vs. nature protection regulation). The discordance between those regulations is often strongly criticised by conservationists, as it causes difficulties in the achievement of biodiversity goals.

In 2004, the national park administration made a proposal to create a new management plan through which the areas of the highest level of protection would be transferred under their

authority. Those areas (according to the act on nature and landscape protection) were locations with highly preserved natural characteristics, formally excluded from commercial use and left only to natural processes. The proposal caused tensions between the Ministry of the Environment and the Ministry of Agriculture, since the latter refused the proposal (Kozová and Vološčuk, 2008).

In the same year, a heavy windstorm hit the Tatras National Park and devastated a huge amount of trees (an area of around 12,000 ha). After that natural disaster, the Governmental Committee for the Renewal and Development of the High Tatras was formed. One of the major discussed issues was the character and the type of forest operations. The final decision was a proposal to leave the two affected, but less damaged territories (Tichá and Kôprová valleys) to natural evolution. Such a decision was in fact expected because the two mentioned valleys are national nature reserves protected by the national Act on Nature Protection from the 1950s. They are also sites of international importance for biodiversity conservation, as well as an inherent part of the Tatras International Biosphere Reserve (UNESCO MaB Programme since 1993). Moreover, the area is protected by the EU Habitats Directive through the Natura 2000 network of specially protected sites (personal communication with Tatiana Kluvánková-Oravská).

The official decision did not live for a long time, because in 2007, the state forestry company entered the area of the two reserves and started collecting deadwood, excusing their conduct with the existence of a considerable bark beetle risk. The decision was approved by the regional forestry authority, without the required preceding environmental impact assessment study. That argument managed to stop the activity for a while. A short time later, the Slovak Environmental Inspection issued a permit for continuation of the activity, claiming that the logging represents no harm to the future restoration of the forest. Such an exception induced non-state forest owners to a revolt because of the loss caused by the imposed limitations over their own properties. Consequently, a number of economic voices began to be raised. On the other hand, the decision caused protests by the national park administration, environmental NGOs, scientists, etc. They created a new Non-governmental Committee as an antipode to the Governmental Committee. The group has been quite eager in presenting their discontent through different public media, and so managed to get enormous public support. The protesting group also called for international help. The European Commission has motioned an investigation into the case due to the infringement of the EU Habitats Directive.

Unfortunately, the conflict remains unresolved, and the response to the infringement is still under question.

We recognise that in the Slovak Republic development of biodiversity policy has been of a non-integrative nature, and so it has enabled the persistence of traditional forest management institutions, supportive mainly of utilitarian values. This has led to dis-coordinated activities between the two sectors, with no tendencies towards their political interplay, but rather a fight over political empowerment, in which environmental groups switch their searching for support from national channels to international ones, which were the source of the new rules. The narrow top-down view of the establishment of a new biodiversity governance framework has revealed an already existing institutional setting (Paavola et al., 2009), which was designed in a way to protect economic interests in the first place.

The recognised interaction relates to functional interplay. Its negative consequence is an open conflict between two parties, which has caused a serious handicap for communication between the two administrations, and disabled a chance to designate institutions for adaptive governance.

Slovak endemits

The 'urbar' is an old institutional structure, a common ownership regime mainly for forest resources and pastures. The essence and meaning of the 'urbar' were defined in the feudal past, when it was a register of serfs' properties and their respective duties towards a feudal lord. Gradually, the feudal property relations were stabilised and registered[20] however, without specifying any of the serfs' rights in relation to their properties. Those rights were only specified in Theresian period, when they were also given a kind of financial support: the right to use the feudal lord's pastures and forests for their own purposes. After feudalism ended, the serfs' properties were split from the feudal lords' when they became equalised, and serfs were freed from obligations towards feudal lords. However, they continued to use the pastures and forests, paying a rent to the owner in return. Some time later, those pastures and forests were transferred to them in ownership, while the feudal lords were given a compensation from the state (Bednár, 1996). The land was given to them in a form of common ownership, specifying their duties. For that reason an 'urbar' society was created to take care of the common land. Each owner had a duty to participate in taking care of the

[20] Each house with a garden around it, and extra agricultural land.

common land according to the amount he owned. The yields from the land were then distributed to each owner according to that amount.

In communism, the owners lost their rights to use the land, and responsibility for the land was transferred to the state for the next 50 years. Fifteen years have already elapsed since the restitution and the land is under the responsibility of its legal owners now. The same form of 'urbar', including a few differences, more or less still exists. The numbers of owners are increasing, as the death of an owner divides the land into equal but smaller pieces inherited by the children. After 50 years of being paralysed, the common property has had enormous numbers of co-owners. The inherited land makes approximately 1-2 hectares per person now, but it can be even less.

Nowadays, the same society is fully responsible for the common management, where just a small number of co-owners is involved in the management, while the rest of them are in fact renting their parts of the land to the society. Forest maintenance depends on earnings from timber sold. Thus, each earning is reduced by the costs of maintenance, and only then the remaining money is distributed to the individual owners according to the amount of land owned. As the amount of land owned per owner is usually very small, the individual earnings are rather minor.

The forest maintenance responsibilities are derived from the forest regulations. They have to satisfy the management plans for successive periods of 10 years. The plans are never exactly translated into practice, since they have to deal with unpredictable natural events at the same time. It might happen, after a windstorm for example, that more wood than predicted has to be taken out of the forest. In other words, the damaged trees have to be collected according to the forest regulation prescriptions. Such a condition implies costs, which have to be covered. The costs can be returned from the timber sold, but the wood cannot always be sold at a good price. In that sense, the management depends heavily on the dynamics of the economic system. Last year, for example, it was impossible to find customers; moreover, the price offered was below consideration. Furthermore, when looking for customers, the managers mostly rely on private companies operating in the region. The private companies usually resell the timber, but sometimes they claim a lack of customers, even though they still can find them to sell their own timber to them. This shows a possibility of existing market monopolisation.

If such a situation occurs (impossibility to sell the timber or to achieve an adequate price, and consequently to cover the elementary costs of forest maintenance), forest managers prefer to

keep the forest where it is and not cut it[21]. The same may happen after windstorms, when the land owners prefer to keep deadwood in the forest avoiding its collection, which is prescribed by forest regulations. Keeping deadwood in the national park, according to the regulations on nature protection, is possible and desirable in areas under the highest degree of protection.

The 'urbars', when re-established, found themselves within the national park territory, what had not been a case before. Furthermore, some territories in 'urbar' property fell under the protection of Natura 2000 sites. However, their activities are not in contradiction with the biodiversity goals set by these regulations. First of all, the amount of forest owned is not so high and does not represent a resource from which high benefits could be realised. Since the very beginning of forest ownership, forests have only served their owners as an additional source of living. Due to their small size, they learnt and understood how to ensure the long-term availability of forests, which led to the formation of institutions for sustainable use of forests. The values supported by the traditional activities have survived to this day, despite the disturbance in their performance during the 50 years of the socialist regime. They have survived thanks to the knowledge transferred from one generation to another. Nowadays, the main carriers of traditional values are the elderly people who show a strong emotional attachment to the inherited resource and high appreciation of the way in which activities of their ancestors were done. The question is whether this is a strong enough motive for younger generations to take care of the resource. For now, effective compensation for loss of opportunities for income generation does not exist, which proves to be not enough of an incentive for private and municipal owners (Kluvánková–Oravská et al., 2009).

In most cases the 'urbars' did not oppose the designation of the Natura 2000 sites on their respective territories. However, the process has led to a decrease in their trust and to disappointment, as they were not really involved in it. Nowadays, they are receiving small compensations for the restriction on their activities. While many private owners complain about the inadequate compensations, the above mentioned owners reconciled themselves to the fact that they cannot derive much more from their forest. They rather show disappointment for the way they were approached.

The 'urbars' show even more characteristics which could be a positive contribution to biodiversity governance. They turn out to be a kind of voluntary controllers and monitors of activities of other forest users. For example, they complained and called for measures to deal

[21] The strategy is viable as they always have reserve money to cover the costs of forest maintenance for the next seven years. However, the strategy can be practised only for this time period.

with forest-destroying management activities of some business-oriented companies rushing for short-term benefits. They complained many times to responsible authorities about what they had seen. However, there was no response. They show a big disappointment that such interests are protected. Moreover, such above mentioned activities often represent a potential danger to neighbouring forests owned by 'urbars'. In that sense their rights are also violated.

Activities of the co-operatives support traditional values, which are capable of achievement of biodiversity goals. However, generational changes may lead to a change in the traditional activities. Due to the low income from those activities and non-existence of effective economic incentives, the motivation for new generations to take care of the land might not be strong enough.

Conclusions

Just a few years ago, Slovak Republic was perceived as a passive actor in EU environmental policy arena. Later, much stronger dynamics could be identified in domestic political arena, as a consequence of increased number of actors produced by decentralisation and democratisation process. The increased number of actors has made significant contribution to variability of values and interests circulating in the governance system. Such a situation obviously call for pluralist approach in decision-making.

In the first case, there was identified a weak, sometimes even conflicting interaction between two governance regimes, that functionally interplay. Observing the interaction of post-socialist forest management institutional structures and new institutional framework for biodiversity governance, we could identify a clash of values promoted by them. Such a clash resulted from the functional isolation of the two sectors. Polarisation of activities has driven to dis-coordination and created a conflicting space. Forest management institutions, which evolved in isolation during socialist regime, have become much less flexible for integrative policies. However, the forestry sector, who is still keeping the role of an authoritative actor, can no more silence the environmental groups, seeking empowerment of their temporarily weak position in domestic politics. The case shows that created institutional diversity in the multi-level governance, also necessitates creation of institutional links for harmonisation of increasing number of interests and values. Their further isolation do not support existence of mediate regimes neither.

The second case, which was examined, represented a good example of such a mediate regime. It is much older institutional structure of forest management, created before socialist era, in which the traditional values were recognised, proving themselves to be supportive of

biodiversity conservation objectives, not just utilitarian ones. They are a good example of capability to make out a possible balance between conflicting interests. Their long isolation from the system disabled their co-evolution hand in hand with changing circumstances, what created their rather difficult current position. Regardless of this fact, they have showed capability of adapting to changed conditions. Additional positive characteristics associated with this type of regime were recognised: accountability and ability to control not only internal activities, but also activities of other forest actors. They developed responsibility for shared forest resources, what made them to perceive the forests shared not only within the borders of their property.

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References

Bache I, Flinders M. 2004. Themes and issues in multi-level governance. In *Multi-level Governance* , Bache I, Flinders M (eds.). Oxford University Press Inc.: New York, pp 1-11

Bednár Š. 1996. *Príručka pre Vlastníkov Lesa.* Slovenské združenie vlastníkov neštátnych lesov SR.

Bromley DW. 2006. *Sufficient Reason: Volitional Pragmatism and the Meaning of Economic Institutions.* Princeton University Press: Princeton, New Jersey.

Fairbrass J, Jordan A. 2001. Protecting biodiversity in the European Union: national barriers and European opportunities. *Journal of European Public Policy* **8** : 499-518.

Fairbrass J, Jordan A. 2004. Multi-level governance and environmental policy. In *Multi-level Governance* , Bache I, Flinders M (eds.). Oxford University Press Inc.: New York, pp 147-164.

Jehlička P, Tickle A. 2004. Environmental implications of eastern enlargement: The end of progressive EU environmental policy? *Environmental Politics* **13** : 77-95. DOI: 10.1080/09644010410001685146

Jordan A. 2001. The European Union: an evolving system of multi-level governance ... or government? *Policy & Politics* **29** : 193-208.

Kluvánková–Oravská T, Chobotová V. 2006. Shifting governance. Managing the commons: the case of Slovenský Raj National Park. *Sociológia* **38** : 221-244.

Kluvánková–Oravská T, Chobotová V, Banszak I, Slaviková L, Trifunovová S. 2009. From government to governance for biodiversity: The perspective of Central and Eastern European Transition Countries. *Environmental Policy and Governance* **19** : 186-196. DOI: 10.1002/eet.508

Kozová M, Vološčuk I. 2008. Zásadné problémové / konfliktné oblasti v manažmente územia. In *Krajinnoekologicky optimálne priestorové a funkčne využitie. Územia biosférickej rezervácie Tatry.* Drdoš J, Bublinec E. (eds.). VEDA: Bratislava, pp 150-158

Marks G, Hooghe L. 2000. Optimality and authority: A critique of neo-classical theory. *Journal of Common Market Studies* **38** : 795-816.

Marks G, Hooghe L. 2004. Contrasting visions of multi-level governance. In *Multi-level Governance* , Bache I, Flinders M (eds.). Oxford University Press Inc.: New York, pp 15-30

Ostrom E. 2007. Institutional rational choice: An assessment of the institutional analysis and development framework. In *Theories of the Policy Process* , Sabatier PA (ed). Westview Press: Boulder, CO, pp 21-64

Ostrom E, Burger J, Field CB, Norgaard RB, Policansky D. 1999. Revisiting the commons: local lessons, global challenges. *Science* **284** : 278-282.

Paavola J. 2007. Institutions and environmental governance: A reconceptualization. *Ecological Economics* **63** : 93-103.

Paavola J, Gouldson A, Kluvánková–Oravská T. 2009. Interplay of actors, scales, frameworks and regimes in the governance of biodiversity. *Environmental Policy and Governance* **19** : 148-158. DOI: 10.1002/eet.505

Szöllös J, Huba M, Dahlstrom T. 1998. Environmental protection and capacity building in Slovakia. In *Environmental Policy and the Role of Foreign Assistance in Central and Eastern Europe* , KPMG: Copenhagen, pp 93-124

Vatn A. 2005. *Institutions and the Environment*. Edward Elgar: Cheltenham and Northampton.

Vološčuk I. 2000. *Trvaloudržateľný rozvoj v biosférickej rezervácii Tatry.* Slovenský národný komitét Programu UNESCO Človek a biosféra pre Správu Tatranského národného parku – Biosférickej rezervácie Tatry.

Young OR. 2002. *The Institutional Dimensions of Environmental Change. Fit, Interplay and Scale.* The Mit Press: Cambridge and London, pp 221

Chapter 7
The Rise of Multi-Level Governance for Biodiversity Conservation in Belarus

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ABSTRACT

This paper is seeking to indicate conditions under which hierarchal and top-down governments are willing to release some of their control and power to non-state actors and lower levels of the government. We analyze biodiversity protection polices in Belarus from the collapse of the Soviet Union until present. Our evidence is based on document analysis and in-depth interviews with representatives of different stakeholder groups, including the Belarusian government, Presidential Management Department, and legalized as well as banned NGO representatives. Although the development of civil society institutions in Belarus has been frozen for more than a decade, the collapse of the Soviet Union and growing influences of international organizations initiated the transformation of the environmental policy towards multi-level policy instruments. Some policy changes have been initiated from the bottom-up, while there is also an increasing role of international cooperation and implementation of international governance standards coming from organizations such as the European Union. [22]

Introduction

Biodiversity protection in Belarus has a long history. The first protected area in the modern understanding of this term was established in Belarus in 1925. However, the institutional mechanisms for biodiversity protection have been developed in the Soviet time and the overall style of governance remained largely unchanged since then. Private property in its conventional form was introduced only after the collapse of the Soviet Union and land is still restricted only to small patches for household keeping. Although the development of civil society institutions has been frozen for more than a decade, the collapse of the Soviet Union and growing influences of international organizations initiated the transformation of the environmental policy towards a multi-level policy instruments. There are cases of bottom-up initiation of policy change. The governance standards coming from the European Union, UN agencies, and other international organizations are starting to have an impact on the national legislation.

In this paper we trace back the rise of the multi-level policy in biodiversity governance in Belarus. Our objective is to analyze how the changes were introduced and the response of different administrative levels of the Belarusian governance structures, characterized by a long tradition of being highly hierarchical. We focus on the period from the collapse of the Soviet Union until present and we ask how changes in environmental policies emerge and develop in conditions where there is a strong centralized and hierarchical system monopolizing the political discourse.

There is a broad range of literature investigating how new policies come to an action. Nevertheless, the literature focuses mostly on policy innovation process in western democracies characterized by multi-actor discourse and deliberative change. For example Voβ 2007 summarizes studies of policy innovations into three groups: (i) Implementation studies, which argue that policies and instruments used in the design of action programs often undergo considerable change in the process of implementation, what is caused by the fact that political programs are drafted far away from the agencies that have to implement them in the context in which they shall take place; (ii) Policy diffusion and transfer studies, which track policies as they occur across various governance domains and explanation for patterns is sought by correlating variables of governance domains with a point in time where policy became adopted. It thus identifies leaders and laggards of the policy adoption and statistically tests conditions for the innovativeness of the policy pioneers. Policy transfer studies focus on the transfer of policy ideas from one focal domain to other domain; (iii) Policy learning studies view the innovation process as an accumulation of experience and know-how across several instances of policy-making and focus more on general problem frames and policy goals embodied in beliefs and ideology than on instrumental aspects of the policy (Voβ 2007: 65-67). Berry (1994) giving an example of the U.S. argues that the primary factors leading to policy changes are internal political, social and economic characteristics. However, also due to regional diffusion some policies are adopted following changes in nearby states. National communication network also play a certain role in this process. The interactions of state officials spread the changes from adopting states to non-adopters.

Deyle (1994: 469-470) brings attention to the conflict and uncertainties in policy changes. Stakeholder perceptions of the consequences of different types of policy change influence the level of political conflict in a particular policy innovation. Uncertainty influences both the level of conflict and the choice of innovation process. The statutory authority held by an agency also can influence its choice of a particular innovation process. If a policy innovation requires new statutory powers, an initial legislative process is necessary. Stakeholders'

perceptions, level of conflict, and the choice of innovation process will also be influenced by other exogenous and endogenous variables.

Several studies discuss policy changes in top-down and centralized systems in Eastern Europe (Pickvance 1997; Elander 1997; Zsamboki and Bell 1997; Banaszak and Beckmann 2008; Bosse et al, 2009; Bosse, 2009; Korosteleva, 2009). In the context of natural resource management, Kluvankova-Oravska et al. (2009) study how the recombination of newly emerging institutions with the ruins of communism influences the restructuring of hierarchical governance structures to multilevel governance in biodiversity protection in Central and Eastern Europe. The problem of transforming former socialistic natural resource management institutions is also addressed by Gazweiler and Hagedorn (2002) and Chobotova (2007). Still, for Belarus, with its special development path, communism governance system is not in ruins, and the old institutions are trying to cope with the new reality and keep the status-quo. This configuration, apparently much stronger pronounced in this country than in Russia, Moldova or Ukraine, is the focus of this paper.

The article is organized as follows. Section 2 presents the analytical strategy of the research. Section 3 describes the new elements caused by the policy change. Section 4 evaluates the changes, and finally Section 5 concludes.

The analytical strategy

The concept of multi-level governance in biodiversity protection

Hogson (2004) defines institutions for biodiversity governance as systems of established and embedded social rules that structure interactions between social and ecological systems. Individual institutions are oftentimes linked together through various types of interdependencies. Environmental changes and increasing density of international institutions lead to an increase in interactions between and among institutions (Young 2002). Hooghe and Marks (2001) refer to the process of the dispersion of central government authority both vertically and horizontally as multi-level governance. The multi-level governance can either be related to dispersion of governmental authority to general purpose territorial jurisdictions with non-intersecting membership or to special purpose jurisdictions tailoring membership, rules of operation, and functions to a particular policy problem. This process is also referred to as polycentric governance which describes co-existence of many centers of decision-making that are formally independent of each other (Ostrom et al. 1961; McGinnis 1999). A

central characteristic of multi-level governance is an increasing participation of non-state actors in political decision-making (Bache and Flinders 2005).

Following Kluvankova-Oravska et al. (2009), the emergence of multi-level biodiversity governance in transition countries is demonstrated by processes such as democratization, decentralization, and an increasing role of market governance in institutions for biodiversity protection. The market governance is defined as assignment of previously collective and state property rights to specific owners by means of restitution, sale or other forms of privatization. A broader understanding of market governance can be understood as a resource allocating mechanism or measuring efficiency through monetary criteria (Pierre and Peters 2000). Among market mechanisms that can be applied in biodiversity governance we may find market based instruments such as taxes, fees and charges, forms of subsidies and compensations, tradable permits, and eco-labeling (Bräuer et al. 2005). The concepts of democratization and decentralization are discussed broadly by Pickvance (1997). Democratization can be measured by the degree of inclusiveness of citizens and direct participation in decision-making (Pickvance 1997). It also refers to freedom of joining associations, freedom of expression, right to vote, eligibility for public office, right of political leaders to compete for support, access to alternative sources of information, free and fair elections, and dependence on institutions for making government policies based on votes and other expressions of preference (Dahl 1971). Decentralization is referred to as empowering lower government levels by increasing the range of functions they carry out, increasing the degree of their autonomy how these functions are carried out, and the degree to which local governments are funded from their own resources (Pickvance 1997).

In Central and Eastern Europe the communist period and treating common property as open access resulted in over-exploration of natural resources and inefficient institutional design of biodiversity governance (Kluvankova-Oravska and Chobotova 2006). Many authors argue that multi-level governance and inclusion of non-state actors may lead to reaching higher ecological standards and improved compliance with environmental legislation (e.g. Dryzek 1997; Smith 2003, Sabatier et al. 2005). Newig and Fritsch (2009) undertake a broad literature review analysis that suggests that a highly polycentric governance system comprised of many agencies and levels of governance yields higher environmental outputs than monocentric governance. In the subsequent parts of the article we will examine the drivers that lead to opening up the hierarchical and centralized environmental governance system in Belarus to non-state actors and the effects of these changes.

Data and methods

In order to investigate the policy change process in Belarus we carried out a literature review and 14 in-depth interviews. The literature reviewed has included national and international scientific publications, reports, planning documents, decisions and regulation by governmental and international agencies involved into biodiversity conservation in Belarus. The in-depth interviews were conducted with representatives of major stakeholder groups. We have interviewed officials from the Ministries involved in the environmental policy, NGO representatives, local authorities from districts where the Belovezhskaya Pushcha National Park is located, and scientists from the Belarusian Academy of Sciences. Although it was quite a challenge to access representatives of the Presidential Management Department, we managed to carry out an interview with an employee of the administration of the Belavezhskaya Pushcha National Park, which is managed by the Presidential Management Department.

A detailed list of interviewees is presented in Table 1. Interviews were divided into two sections: (1) what are the new processes observed by the interviewees in biodiversity governance in Belarus and (2) how do the interviewees evaluate these changes.

Table 1: List of interviews

Organization	Positions	No. of persons interviewed	Date
Ministry of Forestry	A representative of the national forestry company "Belgosles"	1	Oct 2008
Ministry for Natural Resources and Environmental Protection	Representatives of the Ministry related to the management of international projects, biodiversity conservation and climate change	3	Jan 2008, 7 Jul 2008
Presidential Management Department	Representative of the administration of the National Park "Belavezhskaya Puscha"	1	9 Jul 2008
National Academy of Sciences	Research officers of the Conservation Sector of the Research Center for Biological Resources designing management plans for protected areas, including Belavezhskaya Puscha	3	10 Jul 2008, 6 Nov 2009
Ministry of Education	Researchers at Belarusian State University involved into the strategic planning for biodiversity conservation	2	10 Jul 2008, 29 Oct 2009
Local Authorities	Representatives of Kamianec District Council and Pruzhany District Executive Committee	2	8 Jul 2008
NGOs	Representatives of the initiative group "Belavezhskaya Puscha - XXI Century" and NGO "Ecopravo"	2	8 Jul 2008, 10 Jul 2008, May 2009

Historical development of biodiversity governance in Belarus

The history of building a Communist state started in Belarus in 1917. In 1921 under the Peace of Riga, Western Belarus became a part of Poland, while the Central remained a part of the Belarusian Soviet Socialist Republic (BSSR) and Eastern Belarus until 1924-26 belonged to the Russian Soviet Federal Socialist Republic. In Central and Eastern Belarus all the land and forests were nationalized immediately after communists took control.

There is a large body of literature about the history of biodiversity conservation in the Soviet Union (e.g. Weiner, 1999; Mnatsakanian, 1992). The first protected area in Soviet Belarus, Biarezinsky Reserve (*Zapavednik*) was established in 1925. For this, 30 farms were removed from the protected area in 1928-30 (Stavrovsky et al., 1996), however land use and property conflicts were not reported officially. There has always been tension between different

governmental institutions taking share in the use of nature resources and environmental protection. Each part of the state had to contribute to the growth of the socialistic economy and ministries and government agencies had always put pressure on environmental resources. After the Second World War the Biarazinsky Reserve became an arena of large-scale lodging operations, and in 1951, on an initiative of the USSR Minister of Forestry, the reserve was abolished and renewed only in 1959. The Belavezhskaya Puscha National Park, although it was recognized and sustained as a natural protected park, had been drastically modified and transformed into a game preserve extensively used by top party officials (Belavezhskaya, 1976).

The situation improved slightly by the mid 1970s when it was firmly established that natural protected areas were sites for conservation, research and learning, and the government did not make serious attempts to use them for other purposes. Most of Reserves possessed some tourist infrastructure, but it was not well developed. Principles of management were in the stage of development until the mid 1970s, and since then they have not change a lot. Text Box 1 presents detailed profiles of existing categories of protected areas in Belarus.

The only non-state actors included in environmental decision-making at that time were researchers. It was deeply rooted in the technocratic Communist ideology that all the major decisions are based on scientific evidence, and therefore scientists have always been consulted before new decisions and policies on biodiversity conservation were adopted. In the Soviet decision-making, the USSR Academy of Science and its regional branches were very important institutions, and partially substituted the role NGOs play in Western societies.

In 1990 land property rights were re-established in Belarus (Land Code,1990; Law *On the Land Property Rights,* 1993). However, there are restrictions in regards to the size of land plots and eligible ways of using them. This situation has not been changed much since then, and on the 2nd National Referendum in November 1996, any further developments of land market were banned by an overwhelming majority of voters (Sakovich, 2005). The overall coordination in environmental protection in the country is performed by the Ministry of Natural Resources and Environmental Protection. A large portion of biodiversity management tasks is also allocated to the Ministry of Forestry. However, in 1994 land in national parks and natural reserves was transferred from the Ministry of Natural Resources and Environmental Protection to the Presidential Management Department. Text box 1 describes current categories and characteristics of protected areas in Belarus.

Text Box 1: Protected Natural Areas in Belarus

Belarusian Act on Specially Protected Natural Areas (2000) defines 4 categories of Special Protected Nature Areas:

- National Park
- Reserve (*Zapavednik*)
- Preserve (*Zakaznik*)
- Nature Monument

National parks are established to preserve natural ecosystems and objects, to restore disturbed ecosystems with high ecological, historical, cultural, and aesthetic values, and to use them in a sustainable way for the purposes of environmental research, education, health, and recreation. A legal entity is set up to manage the area. The land of national parks is in permanent use of the managing entities or/and other land users and land owners. There is functional zoning. Legislation suggests 4 zones: forbidden zone (only research and protection activities are allowed), zone of restricted use (some economic activities are allowed), recreational zone (eligible activities are nature protection and sustainable use of recreational resources), and economic zone (economic and other activities are allowed if protection of natural ecosystems is not compromised). In Belarus there are 5 national parks which cover 480 thousands ha, which is about 28% of protected areas.

Reserves are specially designated areas with the strictest possible level of protection created to preserve natural ecosystems and objects, to study the gene pool of flora and fauna, typical and unique ecological systems and landscapes. A legal entity is created to manage the area. This entity can not be a profit generating organization. All lands of reserves are excluded from economic use. There is only one reserve in Belarus – Biarezinsky Reserve, which covers 50 thousands ha, which is approximately 3% of protected areas.

Preserves are created to preserve, reproduce, and restore ecosystems and objects, natural resources of one or many types with restricted usage of other natural resources. With respect to the objectives of conservation, landscape, biological, hydrological, geological, and paleontological preserves can be established. No legal entity is created to manage the area. The lands of Preserves remain in permanent use and/or private ownership unless land users and land owners are violating the protective regime set up by the statute documents. Preserves can be of the national or local significance. This is the largest category of protected areas in Belarus. There are 537 preserves which cover 1,231 thousands ha (71% of protected areas).

Nature monuments are unique and irreplaceable ecosystems, objects and adjacent areas, which have special ecological, historical, cultural and aesthetical values. They are established to preserve valuable qualities of ecosystems or the objects in the interest of future generations. There are 3 types of nature monuments: botanical, hydrological, and geological. Land patches adjacent to nature monuments may remain in permanent use or private ownership. No legal entity is established to manage these areas. There are national and local monuments of nature. There are 913 nature monuments in Belarus; their area is very small, covering only 16 thousands ha (1% of protected areas).

Reserves and national parks are established, reorganized, and closed by decrees of the President and/or the Council of Ministers after suggestions from Ministry of Natural Resources and Environmental Protection (or any other national governmental body such as the Presidential Management Department, Ministry of Forestry etc). National preserves are subject to decisions of the Council of Ministers, national nature monuments are established, reorganized or/and closed under decrees of Ministry of Natural Resources and Environmental Protection, and local preserves and nature monuments require decrees of local executive committees (local governance bodies) based on the approval of local units of Ministry of Natural Resources and Environmental Protection.

Protected natural areas cover approximately 8% of Belarus. Table 1 presents the total number and size of protected natural areas in Belarus. Table 2 presents changes in the number and area of protected natural areas. The reasons behind the recent increase of the size of protected areas are related to abandonment of many agricultural and military areas and abandonment of land due to the Chernobyl' radiation contamination. However, as we will discuss later, biodiversity conservation became a higher priority in the national policy, and therefore many new protected areas were introduced.

Table 2. Change of the number and area of specially protected natural areas in 1980 - 2005 (excluding nature monuments and local preserves)

Parameter	Year						
	1980	1985	1990	1995	2000	2004	2005
Number of sites	58	63	67	80	102	102	104
Area, ha	884,600	882,900	900,700	799,300	974,400	1,258,100	1,416,400
% of the country's area	4.2	4.2	4.3	3.8	4.7	6.1	6.8

Source: Second National Communication 2006

Characteristic of the policy change

Introduction of Market Governance

After the transformation, the Soviet economy collapsed and the financing of protected areas decreased dramatically. From 1991, when the Belarusian state emerged, market became a necessity for the management of protected areas in order to survive. An emphasis was on timber production and tourism, including hunting. These activities were, however, kept where possible within limits set up by relevant legislation.

In 1994 the Presidential Management Department took over the management of the most important protected areas. If in the first years not much changed, from 2001 the protected areas are requested to generate profit, and this demand was increasing every year. Currently, there are a few agencies designated to coordinate biodiversity conservation in Belarus. These agencies have different purposes, which are profit making in the case of the Presidential Management Department, forest management as with the Ministry of Forestry, and

environmental protection tasks as with the Ministry of Natural Resources and Environmental Protection and the State Inspectorate. The legislation underlines the need for close cooperation and coordination, but this does not happen often. Kazulka (2005) and Parnikoza (2008) point out that the subordination of the management to such a business-minded body as the Presidential Management Department leads to multiple violations of conservation regimes.

Industrial facilities, tourism activities and other services in national parks and reserves are run by the Presidential Management Department. Park managers, acting on its behalf are very active in the development of business projects with a particular focus on tourism (including game tourism with increasingly developing flow-line production features), logging operations, food production and woodwork. In fact, logging and woodwork became central to the activities of national parks in Belarus. According to Zenina (2003) and Kozulko (2005), the park management bodies have launched large-scale timber-harvesting operations under the cover of sanitary felling. After new woodwork production lines have been launched in the National Parks Belavezhskaya Pushcha and Pripyatsky, more forested areas have been transferred from the Ministry of Forestry to the Presidential Management Department (i.e. management bodies of the national parks) to secure timber supply. For instance, the area occupied by the national park Pripyatsky increased by three times. A good illustration for this is the Park's web-page (http://www.npp.by/, accessed November 16, 2009). It contains exhaustive information about woodworks produced, while information about research (a declared park's core activity) is given much less space than specifications of ecologically safe parquet manufactured by the Park.

Smaller scale tourist facilities can be privately owned, e.g. agro/ecotourism infrastructure etc. The latter is even supported by the Government and (in cooperation with the Government) by international donors (e.g. GEF, UNDP, TACIS, INTERREG).

Although the Ministry of Natural Resources and Environmental Protection is designated by legislation as a chief supervisory body where environmental protection is concerned, and should act to stop an overuse of natural resources in protected areas, our interviewees pointed out that the Ministry has limited capacities compared to the Presidential Management Department and even though there are quite a few complains, they cannot be expected to intervene. This can be explained by a considerably higher position of the Presidential Management Department in the informal hierarchy of governmental bodies.

New elements of market governance that appeared after the change and separation from the Soviet Union are compensation schemes. According to the new legislation, damages made by

protected species are subjected to compensation. Nevertheless, due to gaps in the executive law, according to the knowledge of our interviewees, compensations were never paid. As pointed out by an interviewee from the Bioresource Research Centre, "It is only written that losses should be compensated, but there are no working mechanisms, nobody even tried to do it".

Increasing Role of Local Communities

Due to easier access to information in our time (e.g. access to Internet, satellite TV channels etc), increased education level, and also due to private property that makes people value their local environment more, the awareness of the public is increasing. Big disasters such as Chernobyl and their long-term negative consequences also played a role. However, there are still institutional gaps that make organization and coordination of protest actions difficult. A law professor from the Belarusian State University pointed out, "We notice that the public has a tendency to get more active, but it is not always that they are able to use legal tools. Because there is a lack of a good institutional basis: consultancies, organizations providing high-quality help […] here there is a need in the "advocacy" process, promotion of public interest."
A recent example of the former is a campaign of people from the District of Pukhavichy (the Region of Minsk) against an agrochemical production facility (AvgustBel) to be constructed in the neighborhood. Despite a constant administrative pressure, potential danger to loose jobs, penalties being imposed on activists etc., people continued to protest. A few thousand signatures have been collected against this project (close to 50% of local electorate), a few street actions held (broken up by the police; activists charged as participants of an unauthorized gathering); a meeting organized by local authorities failed and was walked-out by locals, because the officials present (including a Minister) had refused any dialogue from the very beginning. Nevertheless, the logics of the campaign shows that if nothing really extraordinary happens (though these vigorous protests are extraordinary in themselves) the facility will be constructed anyway, as apparently big economic interests are involved.
Community protests were also raised to protect the Sevastopalski City Park in Minsk (Karol, 2008). The City of Minsk has attempted a few times to reduce the park's area in order to make space for a highway or some other construction activities. Interestingly enough, every time the locals managed to assert their rights for green surroundings. A possible explanation is that many apartments in the neighborhood have been historically set up for the staff from public prosecutors offices, mostly retired. The former officials had a broad knowledge about the

procedures and possible legal tricks that could be used and possibly this explains their success. It is remarkable that they usually appealed to the Act *On Addresses of Citizens* (1996) that guarantees that any citizens' appeals to any governmental agency shall be properly examined and answered within a firmly set term. It was introduced by the President and was considered by many as a populist gesture, but that time it worked for the citizens' interests.

Local communities participated further in protesting against intensive logging in Belavezhskaya Pushcha (Kazulko, 2005), but in most cases they do not have enough knowledge to appeal to relevant legislation, including the Aarhus Convention.

However, these cases are still rather exceptional. In most cases the public participation is very hard to initiate. Public meetings are almost impossible due to the law that prohibits unapproved meetings with a number of participants above a certain threshold. Furthermore, according to the Law *On the National and Local Meetings*, local meetings are considered as representative of local population only if they gather over 25% of local permanent residents above 18 years, and are convened by local governments or at least upon the initiative of at least 10% of local permanent residents above 18 years old.

Emergence of Non-state Actors

A group of non-state actors that have always been included in consultations and political decision-making are scientists. However, this increasingly becomes a formality, as scientists want to secure research funding and are not fully objective. Research departments of Special Protected Natural Areas (including national parks) are loosing their importance.

Some scientists are also members of non-governmental organizations. These are so called "research" NGOs, usually associated with a research institute or department (even if they have a national status). Good example are "Bird Protection in Belarus" (APB), and the National Geographical Society. Some of these NGOs can be very successful with fundraising. Research NGOs are trying to keep as far from any suggestions of criticizing governmental policies as possible, because they either depend on international assistance, which is compulsory to register with the government and normally need endorsements from The Ministry of Natural Resources and Environmental Protection, or are hosted by a governmental institution.

Other non-governmental organizations can be referred to as "activist" NGOs. Activist NGOs manage to get support from international or national sources without registering it or survive without any external support. These NGOs are either registered as legal entities in Belarus and

operate on the verge of being closed down or manage to do even without any support at risk of being persecuted for "activities on behalf of an unregistered organization", which may lead to imprisonment in Belarus (Criminal Code of the Republic of Belarus, 2009). An example is NGO "Belavezhskaya Puscha – 21st Century" that runs a very successful webpage (http://bp21.org.by) and campaigns against current management practices in Belarusian Special Protected Natural Areas.

The last group of non-governmental organizations is so called "governmental" NGOs. These organizations were partly established back in the Soviet time, and from that time serve as departments of governmental agencies that outsource to them certain functions, e.g. issuing hunting or fishing licenses, as the Society of Hunters and Fishers does. Although formally these organizations are non-governmental, in fact they are fully controlled (or rather run) by the Government.

The research and activist types of NGOs have to struggle for their survival. They need to comply with increasing amount of rules and regulations ranging from requirements for their office (e.g. it should not be registered as a housing unit; it should have a separate entrance from the street and comply with many specific requirements to fire and sanitary safety etc) to the eligible activities. The Government strongly controls their budgets.

Non-governmental organizations are nevertheless still tolerated since they are recognized as an important attribute of an open society which improves the image of the country in foreign politics. Representatives of NGOs are often called to attend meetings with international guests. Furthermore, there is often a need to create a competition when distributing international funds made available to non-governmental initiatives within priority areas identified by the Government, or invite NGO representatives for consultations that formally require (e.g. under international regulations or conditions of (co-funding) participation of non-governmental institutions. At the end, and perhaps most important, NGOs are still considered relatively harmless and can be easily closed down in case they are getting too radical.

However, even loyal NGOs are regarded as potentially rebellious, just because they are not governmental. This view is shared by many from broader public, whose lifelong experience was limited to daily routine with the Government, although it was in most cases a string of attempts to cheat each other.

A law professor from the Belarusian State University pointed out that, "The legal situation of NGOs is getting worse. Fewer and fewer of them remain, and those which remained are not always able to pay rent, as rent fee rates are increasing. They cannot defend citizens due to the deficient legislation that allows NGOs only to defend the rights of their own members, but not

of the others. The regulation also stipulates that new members can be enrolled only on the meetings of NGOs' governing bodies; and if you want to hold such a meeting you should inform the authorities about the meeting time and venue two weeks prior to the meeting. So you can imagine, how difficult that gets, especially if an urgent action is needed…"

It is worth mentioning that, but for a few exceptions, NGOs usually prefer to keep undisclosed information on their current activities and, in particular, fundraising opportunities. The same applies to the environmental research community, which is very segregated. The public, in particular older people usually do not trust NGOs and any initiatives, actions or campaigns that come outside the Government. That makes it somewhat difficult for NGOs to approach other stakeholder groups.

If fulfilling international agreements requires involvement of non-state actors, only scientists or government-friendly NGOs are invited that makes a way for "false participation." As the law professor from the Belarusian State University pointed out, "They acknowledge the [Aarhus] convention in the ministry, but at the same time they have learned to mimicry. So if there is a discussion they invite loyal NGOs, or state-controlled NGOs, they even created a number of them for this purpose."

Increasing role of International organizations and funds

Belarus is a beneficiary of environmentally oriented international funds, such as: World Bank, GEF, UNDP, funds of UN conventions (e.g. the Ramsar), FAO, TACIS etc. The projects certainly had an impact on existing legislation and, in particular, conservation practices. For example EU TACIS projects mostly focused on water management, environmental monitoring, waste management, circulation of chemicals, waste water treatment facilities etc.

Most of the international granting activities are coordinated (advised) by the Ministry of the Environment or other Governmental institutions (e.g. GEF grants), and all the forms of international assistance should be registered by the Government, and this registration is not necessarily granted. Funds are distributed among a limited number of NGOs which are loyal to the government. Heads of these NGOs often hold key positions in organizations that are subordinate to the Ministry of the Environment (Kazulka, 2005)

At the moment, a new EU neighborhood policy is being set-up. It will replace existing TACIS programs and promises to be more specific in terms of priorities set by the EU. Belarus ratified a number of international environmental agreements, including the Kyoto Protocol, Helsinki Convention and Aarhus Convention. One of our interviewees, a law professor from

the Belarusian State University, mentioned that the main incentive to ratify international agreements or conventions is availability of technical assistance, "because unfortunately Belarus is not rich enough to pay for the quite expensive environmental protection." However, it also depends on the initiative of certain people from the Ministry of the Environment. If there is somebody who can see an opportunity to get help by entering international agreements, either financial or by providing expertise, they propose the Minister or vice-minister that it is promoted to the Government to sign.

Furthermore, UNESCO recognition and Diplomas of the Council of Europe (BP awarded in 1997, extended in 2002 and non-renewed in 2007 (and, most likely, also in 2009, because of the negative reviews of the new Management Plan), are important drivers. For instance, the new Management Plan has been commissioned by the BP only after the Council of Europe non-renewed the Diploma in 2007.

Evaluation of the policy change process

Perception of change by stakeholders

The strongest criticism expressed by interviewees related to the biodiversity governance refers to the lack of control and monitoring of the protected areas under the Presidential Management Department. The changes involving democratization and decentralization are mostly perceived as positive and having positive effects on the environmental protection. In particular, the influence of international organizations and international cooperation is seen as an important opportunity. Oftentimes international programs are sources of additional funding for the state administration and thus they are usually eager to comply with the program requirements.

Nevertheless, impacts of many international projects are only short-termed and the funds are often spent on business trips and office equipment with no long-term impacts. Our interviewees criticized in particular international projects which are carried out by external experts and which are finished by reports which have no real impact.

Practically all the interviewed stakeholders hope that the changes will empower them to gain independence from the Presidential Management Department, improve the public awareness, the quality of the environment, and in many cases give them more income, financial support or development opportunities. A representative of the Kamianec District Council pointed out

that as a result of cooperation within the Euroregion that involved national parks and local communities, road signs and information boards were installed. A representative of Belavezhskaya Puscha said that they regularly have international projects implemented there that contributed to the restoration of the environment. For instance, as a result of a project funded by the Agricultural Ministry of the Netherlands, some wetlands in the Park were restored.

The pressure of the international community is seen as necessary to provide information for citizens and to involve the Ministries in international projects, in order to make them feel that what they are doing is important. Although there are no actual sanctions for not fulfilling international agreements, reputation sanctions are also important. A law professor from the Belarusian State University pointed out, "the political image of the country also means a lot, because they will tell you that you do not comply with an international agreement, and in a broader sense you do not comply with the main principal of Vienna convention, that says that all agreements should be implemented. It is a slap in the face of the country."

Institutional gaps are often compensated by informal practices. On the international level, NGOs from Ukraine or Poland represent illegalized NGOs from Belarus. On the local level despite the lack of formal communication channels, local authorities have informal contacts with National Park's administration and cooperate in various educational and other activities. For instance, local inhabitants have informal rights to use dead wood and hay in some parts of the protected areas. In the Belavezhskaya Puscha although there are no formal cooperation channels between the National Park Administration and local authorities, the Park's General Director was elected as one of 37 members of the District Council to facilitate cooperation with the Park. As a representative of the Kamianec District pointed out, "Cooperation is somewhat very regular for us; for instance the National Park has a school bus collecting children from remote areas. […] They also participate in our activities, including financial assistance to certain persons."

Another informal practice compensating the lack of mechanisms to pay compensations for land included to protected areas is a simple exclusion of private land from protected areas. A researcher from the Bioresource Research Centre reported, "Because we do not have compensation mechanisms, when drawing the boundaries of special protected areas, they exclude the lands of settlements, summer house cooperatives, and engineering constructions, so they have got very complicated contour with lots of holes."

Level of Political Conflict

The conflicts are, in particular, related to the division of responsibilities between various government agencies and lack of control over the Presidential Management Department. However, although the interviewees from the Ministry of Environment mentioned disagreement, they do not intervene in the conflicting issues and give the way to the presidential administration. When we inquired about the information about over logging in the Belavezhskaya Pushcha, the interviewed representative of the Conservation Inspectorate insisted that in her opinion there were no problems. The interviewee also said that according to the legislation local governments also had rights to control compliance with the environmental legislation, however, they did not do it since they lacked political will and people responsible for this.

An interviewed research officer from the Bioresource Research Center, reported that there are conflicts between managers of protected areas who belong to the Presidential Management Department and local land users. Since the Presidential Management Department has much larger financial and administrative power, they do not treat other land users and also local governments as partners. There are also conflicts within the Presidential Management Department. One of them is related to the fact that national parks' directorates have conflicting task. On one hand they are to protect the nature on the other they are under pressure to maximize income generated on the protected areas. Thus they develop agricultural, hunting and logging activates within parks and built tourist infrastructure themselves within protected areas instead of making agreements with outside businessmen and tourist agencies. A representative of Belavezhskaya Puscha referred to this situation, "We still have a planned economy in our country. It means that we get certain plans (i.e. assignments) for earning money from higher levels. […] You see the management of the National Park is often criticized that we cut a lot of trees and so on. But it is not an issue. We just have the plan. If we do not comply with it, then we are punished/fired. May be the director even does not want to cut a lot, but he has to do so. The only way to escape this is to transfer land to the forbidden zone as much as possible." Nevertheless, not all areas can be transferred to the forbidden zone since it would disable any kind of human intervention there.

The Presidential Management Department controls all the units subjected to it and all the information flows. The interviewed representative of Belavezhskaya Pushcha said, "All National Parks are subordinated directly to the Management Department of the President. If all other forests are managed by the Ministry of Forestry, National Parks are managed by the Management Department. Accordingly, this makes a lot of difference. On one had we are well

backed by the State budget, on the other, there is a stricter regime, e.g. concerning relations with media, contacts with the public."

There are also a few reports about social conflicts at protected areas: Zenina (2003), Heorhi Kozulko (2005) and Parnikoza (2008) report mass dismissals of local contracted workers, forest officers and research staff. Instead, people from other parts of Belarus or even abroad are contracted. The message prevailing in these reports is that being "foreigners" to these forests, the newcomers do not care about the environment and do not feel anything wrong when cutting trees in natural reserves. Some other conflicts (destroying crops etc) also exist, although have never been broadly publicized as yet.

On the other hand, since the state owns most of the land, it is relatively easy to establish new protected areas. In the neighboring Poland enlargement or establishment of national parks is usually strongly opposed by local communities who are afraid of hampering development activities. On contrary in Belarus such protests do not occur and usually local inhabitants support establishment of protected areas or even local governments give themselves a protection status to valuable local environmental sites within their administrative borders. The interviewed members of local governments stressed that for the local community the parks in their area are very important tourist attractions and they see the nature as an asset.

Nevertheless, a source of potential conflict between local communities and protected areas administration is the lack of enforcement of compensation for damages by wild animals. As a representative of the Kamianec District Council pointed out, "Ungulate animals are redundant, or a portion of agricultural lands has been transferred to the Park, also some animals are protected, some are hunted. Nowadays they also appear on nearby crops and make certain damages, both to individuals and agricultural companies. We are coming up now with proposals to the Administration of the President in order to find optimal solutions."

Illegalized NGOs and activists are clearly in a conflict with both the government and the Presidential Management Department. Interestingly, in order to get into the park and make inspection of what is going on, the activists often have to conspire with population living in settlements within the National Park. The activists often witness many examples of overuse of Park's resources by locals, but they never report this officially.

Uncertainties related to the policy change

Uncertainties are related to the reaction of the Presidential Management Department. It is still a highly centralized and very much top-down system. Practically all actors keep in mind that

in case they are openly against the current governmental policy they may lose their jobs or be prosecuted.

An interviewee from the Bioresource Research Centre pointed out uncertainties related to the availability of the public funding both from the Presidential Management Department and from the Government. Certain categories of protected areas like, for instance, so-called Special Protected Areas have very small budgets and they are under threat that the funding will be discontinued.

As personal connections and relationships with the President and close to him people are important, a big source of uncertainty is related to whom and for how long will be supported by the President. People favored by the President do not have to comply with the law and the attempts to bring an action against them would not help. A representative of the NGO "Belavezhskaya Puscha – 21st Century" mentioned that people may complain, but there will be no reaction if the person or agency they complain about enjoys support from the highest level. According to the interviewee, the monitoring law is not enforced by the government due to the uncertainty about the reactions of the President's Administration, "Although there is some monitoring law, the people from the Ministry are afraid of touching it."

Sources of other uncertainties are global environmental changes and, in particular, climate change. As it was expressed by the interviewee from the Ministry of the Environment, climate change affects many fields of the economy such as energy, agriculture, and forestry. The Ministry and national science institutes have limited capacity to deal with these impacts. The authorities are thus more open for the advice and assistance of international organizations and experts.

Perspectives on the future of the process

Weak monitoring and law enforcement as well as practically monopolistic control of the Presidential Management Department over protected areas suggests that although there are clear signs of emerging multi-level governance, the changes are slow. In the Soviet times there were no consultations with local and there were no independent NGOs. In this context, what is happening now is very different. At practically all levels new actors appear and demand action.

Practically all interviewed actors see that coming changes are inevitable; they clearly see their benefits and they are not afraid of talking about them. The representative of the Belavezhskaya Puscha, although he is a part of the Presidential Management Department,

pointed out: "I believe the most efficient projects are where representatives of various parties are involved, not only from one institution, but from several institutions, with joint control over the implementation. It is important because it happens often that the project is formally implemented, the report is written, and that's it, and the country cannot really benefit from the any tangible project outputs. […] We have a big problem with NGOs in our country in general, because they are almost absent. […] You know, there is a proverb that one head is good to have, but two heads are even better. […] It is always good to listen to different opinions."

Despite the fact that NGOs are not encouraged to be active, their representatives are aware and proud of benefits generated by their action. The Head of the Belavezhskaya Puscha – 21st Century NGO, although he lost his job because of his activism and the presidential administration keeps prosecuting him, he is proud he changed the history and helped to save the National Park. "I can say now that our activity changed the history of Belavezha Forest. If there were no our activities the history could be different. Due to our activities, the history has radically changed. […] Another activist from Minsk wrote a letter to the UNESCO about the world heritage being in danger. After that mission a group of experts were sent to control the Park, volunteers visited the Park. […] the UNESCO experts accepted our point of view and the Park administration was afraid to be scandalized […]." The NGO also provided information to the Council of Europe that 20 recommendations they gave regarding how to maintain and conserve the Park were broken by the Park's administration. It was an international scandal which undermined the reputation of the country, thus the administration is afraid of breaking the international agreements again.

Conclusions

The paper analyzes conditions under which hieratical and centralized political systems are willing to share some of their power and control and include non-state actors and lowers levels of the government into the decision-making and governance of natural resources. Belarus has been under strongly centralized political regime since 1994. The Presidential Management Department overtook management of national parks and some other protected areas in the country. This resulted in an overuse of the resources and failure of monitoring schemes.

Nevertheless, recently we observe in Belarus an increasing involvement of non-state actors and lower levels of the government in biodiversity governance. These changes are driven by

outside processes such as implementation of major international biodiversity conventions and agreements but are also driven by a growing awareness and protest of Belarusian citizens. Access to various sources of information such as the Internet and satellite TV together with private property that makes citizens value their local environment activates the public.

In other post-socialist countries that joined the European Union, the EU integration was the main driver continuously enforcing new democratic institutions to co-evolve with post-socialistic institutions (Chapters 1, 2, 4, and 5, this issue). The effects of international programs in Belarus are still limited to their duration and scope. In addition, the state tries to counteract the democratic tendencies by a strong control of non-governmental organizations and so called "false participation" that is inclusion of only government-friendly NGOs. However, the lack of formal inclusion channels is compensated by informal practices on the local level. Certain forms of cooperation and exchange are developed by local actors who see the benefit of involving various stakeholders into management of natural resources.

Overall the changes have positive effects on biodiversity protection. Inclusion of non-state actors and active involvement of citizens and local governments improve monitoring and enforcement of environmental legislation. International organizations and programs providing technical assistance promote compliance with international protection standards. Nevertheless, the citizens' empowerment has oftentimes high personal costs for environmental activists. Support of international organizations for local activist is required in order to strengthen the positive tendencies.

References

Bache, I., Flinders, M. (2005). Multi-level Governance: Conclusions and Implications. In: Bache, I., Flinders, M. (eds.) *Multi-level Governance*. New York: Oxford University Press; 195-206

Banaszak I., Beckmann V. (2008). Incentive Structure in Public Policies - Example of the Law on Producer Groups in Poland, *Society and Economy*, 30 (1)

Berry, F.S. (1994). Sizing Up State Policy Innovation Research. *Policy Studies Journal*. 22(3): 442-456)

Bräuer I., Mussner, R., Marsden, K., Oosterhuis, F., Rayment, M., Miller, C., Dodokova, A. 2006. The Use of Market Incentives to Preserve Biodiversity. Final Report. A project under the Framework Contract for Economic Analysis ENV.G.1/FRA/2004/0081

Chobotová V. 2007. Evolution of institution for sustainable tourism in the context of transition process of Slovakia. Working Paper No1, Institute for Forecasting, SAS, Bratislava

Dahl, R.A. (1971). *Polyarchy*. New Haven: Yale University Press

Deyle, R.E. (1994). Conflict, Uncertainty, and the Role of Planning and Analysis in Public Policy Innovation. *Policy Studies Journal*. 22(3): 457-473

Dryzek, J.S. (1997). The Politics of the Earth. Environmental Discourses. New York: Oxfrod University Press

Elander, I. (1997). Between Centralism and Localism: On the Development of Local Self-government in Postsocialist Europe. *Environment and Planning C*, 15: 143-19

Gatzweiler F, Hagedorn K. 2002. The evolution of institutions in transition. *International Journal of Agricultural Resources, Governance and Ecology* **2**: 37–58.

Hodgson G. M. 2004. The evolution of institutional economics: agency, structure, and Darwinism in American institutionalism. Routledge: London and New York.

Hooghe L, Marks G. 2003. Unraveling the central state, but how? Types of multi-level governance. *The American Political Science Review* **97**: 233-234.

Hughes, T.P. (1987). The Evolution of Large Technical Systems. In: Bijker, W.E., Hughes, T.P., Pinch, T.J. (eds.) *The Social Construction of Tecjnological Systems. New Directions in the Sociology and History of Technology*. Cambridge, Massachusetts: MIT Press

Korochkina, L.N. et al. (1980).Belovezhskaya pushcha: Gos. zapovedno-ohotnich'e hoz-vo "Belovezhskaya pushcha" - Minsk : Uradzhaj, 1980.

Kozulko, G. (2005). Zelenyj bazaar, ili pochemu belorusskie ekologi ne podderzhali akciju v zaschitu Belovezhskoj Pushchi. Availave at <http://bp21.org.by/ru/art/a051014.html> (Retrieved on 14 April 2009)

Kluvankova-Oravska, T., Chobotova, V., Banaszak, I., Trifunovova, S., Slavikova, L. (2009). From Government to Governance for Biodiversity: The Perspective of Central and East-European Transition Countries. *Environmental Policy and Governance*, Vol. 19

McGinnis, M.(ed).(1999). Polycentric Governance and Development: Readings from the Workshop in Political Theory and Policy Analysis, University of Michigan
Press

Mnatsakanian, R. (1992). Environmental Legacy of the Former Soviet Republics, University of Edinburgh, Edinburgh.

Newig, J., Fritch, O. (2009). Environmental Governance: Participatory? Multi-Level – and Effective? *Environmental Policy and Governance*, 19(3): 197-214

Ostrom V, Tiebout C, Warren R. 1961. The organization of government in metropolitan areas. *American Political Science Review* **55**: 831-842

Parnikoza, I. (2008). Sistema pryrodnyh terytoryj asablivaj ahovy Belarusi –pozirk z Ukrainy <http://h.ua/story/87219/> (Retrieved on 14 April 2009)

Pierre, J., Peters, G.B. (2000). *Governance, Politics and the State*. New York: St. Martin's Press

Pickvance, C.G. (1997). Decentralization and Democracy in Eastern Europe: A Skeptical Approach. *Environment and Planning C*, 15: 129-142

Sakovich, V. (2005). O zemelnoj reforme v Belarusi na rubezhe 20 –nachale 21 vekov. *Obshchestvo i ekonomika*, 5: 108-124.

Sabatier, P.A., Leach, W.D., Lubell, M., Pelky, N.W. (2005). Theoretical Frameworks Explaining Partnership Success. In: Sabatier, P.A., Focht, W., Lubell, M., et al. (eds.) *Swimming Upstream. Collaborative Approaches to Watershed Management*. Cambridge: The MIT Press; 173-199

Second National Communication of Belarus to the UNFCCC. - Minsk, 2006. – 131pp.

Smith, G. (2003). *Deliberative Democracy and the Environment.* London: Routhledge

Stavrovsky, D.D., Kovaliov, A.A. (eds.) (1996) Berezinsky Biosphere Reserve, Belaruskaya Encyklapedya, Minsk, 190 pp. (Березинский биосферный заповедник / под ред. Ставровского Д.Д., Ковалёва А.А. – Минск: Беларуская Энцыклапедыя, 1996. – 190 с.)

Shvarts, E.A., Shestakov A.S. (2000). Soviet Greens: Who They Are? The view from inside. In: B. Jancar-Webster (ed.), Environmental Action in Eastern Europe: Responses to Crisis, pp. 176-191.

Voß, J.-P. (2007). Designs on Governance. Development of policy instruments and dynamics in governance. Enschede: University of Twente, School of Management and Governance

Weiner, D.R. (1988). Models of Nature. Ecology, Conservation, and Cultural revolution in Soviet Russia. Indiana University Press, Bloomington, 312 pp.

Weiner, D.R. (1999). A little corner of freedom: Russian nature protection from Stalin to Gorbachev. University of California Press, Berkley-London, 556 pp

Zenina, I. (2003). Grimasy zapovednosti sovremennoy Belarusi. *Zapovednik* (Russia)_№ 1. <http://bp21.org.by/ru/art/a0301.html> (Retrieved on 20 June 2009)

Zsamboki, K., Bell, M. (1997). Local Self-government in Central and Eastern Europe: Decentralization or Deconcentration? *Environment and Planning C*, 15: 177-186

Young, O.R. (2002). *The Institutional Dimensions of Environmental Change. Fit, Interplay, and Scale.* Cambridge: the MIT Press

Bosse, G., Korosteleva-Polglase, E. (2009). Changing Belarus?: The Limits of EU Governance in Eastern Europe and the Promise of Partnership. *Cooperation and conflict*, 2(44): 143-165

Bosse, G. (2009). Challenges for EU governance through Neighbourhood Policy and Eastern Partnership: the values/security nexus in EU-Belarus relations. *Contemporary Politics*, 2(15): 215-227

Korosteleva, E. (2009). The limits of EU governance: Belarus' response to the European Neighbourhood Policy. *Contemporary Politics*, 2(15): 229-245

Legislation

Land Code of the Republic of Belarus, December 11, 1990. *Vedamasci Viarhounaha Saveta Belaruskay SSR*, 1991, N 2(4), P. 11.

Act of the Republic of Belarus on the Land Property Rights, June 16, 1993. *Vedamasci Viarhounaha Saveta Respubliki Belarus'*, 1993, N 23, P. 285.

Criminal Code of the Republic of Belarus. – Minsk: Alafeya, 2009, 352 pp.

Act of the Republic of Belarus on the Adress of Citizens, June 6, 1996. *Vedamasci Viarhounaha Saveta Respubliki Belarus'*, 1996, N 21, P. 376.

Act of the Republic of Belarus on Specially Protected Natural Areas, October 20, 1994. *Vedamasci Viarhounaha Saveta Respubliki Belarus'*, 1994, N 35, P. 570.

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