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Multi-level Governance of Natural Resources:
Tools and Processes for Biodiversity and Water Governance in Europe

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The Governance of Biodiversity: Eco-systems, Institutions and the Interplay of Actors, Levels, Frameworks and Regimes

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"Multi-level Governance of Natural Resources: Tools and Processes for Water and Biodiversity Governance in Europe"

(GoverNat)

Objectives

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. **Specific research objectives** therefore address the enhanced understanding of multi-level governance of natural resources, the development of methods of public and stakeholder participation to be used in such contexts, the effective utilisation of specific analytical decision tools in multi-level governance, and the reflective evaluation of such use. These four tasks are necessarily interdisciplinary. The **central training objective** is to give 9 doctoral 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 communication between policy makers, scientists and the public in science/policy interfaces.

Consortium

1. UFZ – Helmholtz-Centre for Environmental Research, Germany (F. Rauschmayer);
2. ECOMAN - Ecological Economics and Management, Lisbon, Portugal (P. Antunes);
3. NERI - Danish Environmental Research Institute, Copenhagen, Denmark (M. S. Andersen);
4. SRI - Sustainable Research Institute, Leeds, United Kingdom (J. Paavola);
5. ICTA – Institute for Environmental Science and Technology, Barcelona, Spain (S. van den Hove);
6. CSWM – Centre for the Sustainable Water Management, Lancaster, United Kingdom (W. Medd);
7. UStutt - Institute for Sociology, Stuttgart, Germany (O. Renn);
8. IF - Institute of Forecasting, Slovak Academy of Sciences, Bratislava, Slovak Republic (T. Kluvánková-Oravská);
9. IELM-SIU - St. Istvan University, Budapest, Hungary (G. Pataki);
10. IREAS - Institute for Structural Policy, Slovak Republic (V. Chobotova).

Characteristics

- EU Marie Curie Research Training Network with 9 doctoral and 3 post-doc fellows
- Duration: 4 years (10/06 – 9/10)
    - Doctoral fellows: 4/07-6/10
    - Post-docs: 7/07-1/10
- 10 partners and several praxis affiliates in 9 European countries
- Coordination: Helmholtz-Centre for Environmental Research – UFZ (Dr. Felix Rauschmayer)
- Total contribution of European Commission: 2.4 Mio €
- Links water and biodiversity, participation and decision tools in a governance perspective

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Abstract:

This manuscript examines the key contributions of the political science and systems theory based literatures on environmental governance, and uses them to analyse the governance of biodiversity in Europe. The manuscript suggests that the key insights of the two bodies of literature are a distinction between governance frameworks and regimes on one hand, and the importance of multifaceted and multiple scales on the other. These key insights draw attention to horizontal and vertical forms of interplay. The manuscript suggests that interplay, both between actors and levels and between frameworks and regimes, is ubiquitous and ambivalent: it can either foster or hinder environmental governance and overlapping governance frameworks are often used to pursue multiple governance goals. The manuscript draws on this discussion to analyse the governance of biodiversity in Europe, highlighting how vertical and horizontal interplay between the governance framework for biodiversity and the broader institutional setting or regime have characterised the implementation of the Habitats Directive, both complicating and fostering the governance of biodiversity in Europe.

Keywords: Environmental governance, institutions, scale, biodiversity, Habitats Directive

1. Introduction

Environmental governance is in many ways a similar concept to “sustainable development”. It provides a degree of integration across various perspectives, interests and approaches, and yet it continues to mean different things for different people. For some, governance refers to new ways of achieving social objectives in which states participate but do not necessarily play a leading role (see e.g. Rhodes, 1996; Stoker, 1998). To others, environmental governance relates to all attempts to address environmental dilemmas or to resolve environmental conflicts by creating, changing or reaffirming institutional arrangements (see Davidson and Frickel, 2004; Paavola, 2007). Further understandings of environmental governance are also possible as we seek to demonstrate below. But whichever standpoint is adopted, one observation is clear. The institutional framework for environmental governance has both thickened and become more complex in Europe in the past several decades (Jordan, 1999).

The increasing interest of scholars in environmental governance is not really surprising, given the various takes on it, but still it merits some contemplation. As a concept, environmental governance provides a common locus or “boundary object” for the practice of governing and for research on it in different disciplines. For research efforts, it holds some promise for multi-, inter- or trans-disciplinarity. It has also enabled the reorientation of some earlier takes on research and practice on broadly similar or comparable issues such as public management and public policy analysis. Perhaps partly because of the foregoing reasons, environmental governance has proven a fertile concept just like “sustainable development”, at least if deemed on the basis of the sheer amount of published work making reference to and use of it.

The goal of this manuscript is to clarify the key elements of a specifically institutional approach to environmental governance. The manuscript does so by examining two complementary contributions to an institutional approach to environmental governance. The first of these is the more conventional political science approach for which one central question is to clarify how environmental governance relates to the state. The second one is a more interdisciplinary approach to environmental governance drawing from systems theory, which has sought to understand environmental governance as an interface between coupled socio-ecological systems. To date, the two areas of scholarship have remained relatively separate. Nevertheless, we argue that they have generated important complementary insights

into environmental governance and could well cross-fertilise each other. We also seek to demonstrate the usefulness of combining insights from the two bodies of literature by applying them to governance of biodiversity in Europe.

We suggest in the manuscript that a key contribution of the political science literature to research on environmental governance is a distinction between specific, purposive governance interventions or "governance frameworks", and broader "governance regimes" which encompass all rules and norms that in fact steer action under interest. For example, the Birds Directive and Habitats Directive are institutional frameworks for the governance of biodiversity in Europe, but governance regimes for biodiversity in Europe include a far greater number of formal and informal institutions ranging from international conventions such as CITES, to the Common Agricultural Policy of the European Union and the wider range of EU policies to the wide range of national and sub-national laws in member states that might impact on biodiversity positively or negatively (see e.g. Baker, 2003),. At its widest, this range also includes the universe of socio-economic, technological and natural processes that conspire to govern bio-diversity. This distinction acknowledges the ubiquitous interplay between different sets of institutions and reminds us of multiple causation of governance outputs, impacts and outcomes.

The systems oriented literature considers environmental governance as the institutional interface between ecological and human systems (see e.g. Folke et al., 2007). It has been interested in "the problem of fit" – the match between the key physical attributes of ecological systems and the design of institutions used for their governance (e.g. Ostrom, 1990; Young, 2002). A key contribution of this literature is the acknowledgement of the relevance of multiple scales in environmental governance – not only scales of space but also of time (see e.g. Gibson, Ostrom and Ahn, 2000). For example, spatial scales from the local to national, European and beyond are obviously important in the governance of biodiversity, when mobile species such as salmon and migratory birds are concerned. In terms of timescales, it reminds of the relevance of issues of different time scales in the governance of biodiversity, such as short-term re-introductions or measures to protect endangered populations, medium term habitat restoration, and longer-term relevance of population control (see e.g. Rauschmayer and Behrens, 2007). In short, this literature highlights the importance of multiple physical and time scales and, by extension, of other scales that are important for the fit between

environmental governance institutions and the pertinent human and social systems of the coupled socio-ecological systems.

The manuscript analyses the governance of biodiversity in Europe in the light of the foregoing conceptual discussion. The manuscript highlights the importance of considering the broader governance regime for biodiversity and not just the key EU directives, arguing that conflicts in a number of member states over site designations in the 1990s had in part to do with governance practice that omitted the relevance of institutions other than the Habitats Directive and Birds Directive. These conflicts also highlighted the central role of scales in environmental governance. The narrow governance frameworks put in place were adopted at a European level and involved a one-way, top-down implementation process. Failure to engage multiple levels was another reason for the ensuing conflicts. The implementation experience to date suggests that multiple scales have gradually become engaged and that this has also brought into play a broader range of institutions that have de facto impact on the governance of biodiversity in Europe.

In what follows, the second section will examine different conceptions of environmental governance in the political science literature and suggest the distinction between governance frameworks and governance regimes. The third section examines the systems based literature on environmental governance and particularly its contributions to understanding the importance and nature of scales involved in environmental governance. The fourth section applies the key conceptual insights of the two strands of literature to the governance of biodiversity in Europe to illustrate their complementary nature and the ability of the two strands to cross-fertilise each other.

2. The Importance of Governance Regimes

Concepts of governance can be interpreted in a range of ways. At their narrowest, debates on governance focus on the ways in which the diverse activities of the state are conducted, and notions of good governance refer to the ability of the state to deliver public policy objectives in an effective, efficient, equitable, transparent and accountable way. Such a definition therefore relates primarily to the *governance of the state*. The fact that the state is not a homogenous entity, but is instead a complex network of different actors operating at different

levels who both govern and are governed (see e.g. Wagner 2005; Paavola, 2007) indicates that even under a narrow definition, governance must be a complex, multi-actor, multi-level process. Such notions of governance can be used, for example, to examine the interplay between EU, national and local institutions and to consider the ways in which tensions between the harmonisation of policies and principles of subsidiarity are balanced. Clearly these factors are of great relevance in debates on biodiversity.

A slightly broader definition is concerned with the ability of the state to meet public policy objectives. Such notions therefore relate to *governance by the state*. Here, it is widely recognised that the capacities of the state are limited, and that the roles of the state are changing (e.g. Rhodes, 1996; Stoker, 1998). Indeed, within the context of globalisation and liberalisation, it has often been suggested that the state has shifted its role from provider and controller to facilitator and enabler (see e.g. Brereton and Temple, 1999). Such a process is associated with the privatisation of state owned companies (such as those involved in exploiting water or forest resources), and with processes of de-regulation and policy innovation. These forms of policy change, it is argued, can allow the state to use its limited regulatory capacities sparingly and to harness the capacities of non-state actors to realise public interest objectives (see Birner and Wittmer, 2004).

There is some debate on whether states have de-regulated, particularly as privatisation has often led to new regulatory frameworks to govern the market activities of privatised natural monopolies. However, there is widespread recognition that many states have explored the potential of new environmental policy instruments (NEPIs), particularly market and information based instruments and voluntary and negotiated agreements. These NEPIs enable governments to enlist market and civic actors in the design and delivery of what might traditionally have been state-centred forms of public policy. While governments have not given up older forms of regulation that constitute the main bulk of public interventions (see Jordan et al, 2005), NEPIs do call for new forms of relationships between the state and non-state actors. It is at this point that the debates on public policy have become debates on broader modes of governance. Again these conceptions of governance can be used to examine the ways in which governmental policies enable economic actors (producers, retailers, consumers) and civic actors (pressure groups, communities) to engage in new forms of activity relating to biodiversity (see e.g. Birner and Wittmer, 2004).

A broader definition still of governance suggests that human behaviour is governed by a much wider range of institutions than those that are embodied in or are enabled by the state. This broader definition highlights the significance of the processes through which individuals and organisations govern their own behaviour and conduct, driven for example by social expectations and cultural norms. This form of governance – which has been termed *governance of the self* (e.g. Rhodes, 1996) – therefore encompasses issues of social psychology and organisational culture. Whether they relate to individuals or organisations, internal governance processes cannot be disentangled from external processes, stemming not only from the state (*governance based on hierarchies*) but also from economic processes (what might be termed *market based governance*) or from social processes (what might be called *civic governance*).

It thus seems likely that a range of governance frameworks are likely to co-exist and to co-evolve. This conception of environmental governance is highly relevant to debates on bio-diversity, particularly where the aim is to understand the influence of the wide range of factors that conspire to shape behaviour and determine environmental outcomes. It highlights that while it might be appropriate to examine the nature and influence of a particular form of governance in a particular context, it is likely that an actor or an activity will be governed by the interactions between a range of multi-level and multi-actor governance processes. As it is impossible to disentangle the influence of one process from many, it is more appropriate to extend the boundaries of analysis to examine the influence of different "governance regimes" (see Krasner, 1982). Within the realm biodiversity, for example, different frameworks from Common Agricultural Policy to the Water Framework Directive play a role, in addition to directives such as Habitats and Birds Directives or Conventions on Biodiversity (CBD) and on International Trade and Endagered Species (CITES) which have been specifically established to govern biodiversity (e.g. Baker, 2003). We suggest here that these purposive governance frameworks interact with a wider universe of other frameworks and institutions that often unintentionally impact upon biodiversity within broader governance regimes. These would include, *inter alia*, those economic structures, processes and incentive systems, and also the social, cultural and psychological factors, that shape the behaviour of different land users.

There are several reasons for why it is important to consider the nature and influence of these broader governance regimes. From an analytical viewpoint, it may be appropriate to examine particular governance frameworks – for example by evaluating the impact of the Habitats Directive or Birds Directive on biodiversity in Europe. Such analyses can tell us much about the ways in which institutions and actors at different levels interact with one another. They can also tell us about the emergence of novel approaches, about the significance of changing roles and relations between state, market and civic actors. However, in common with many top-down approaches, there is a danger that an analysis of specific governance frameworks over-states the influence of the institutions in question whilst overlooking or under-emphasising the influence of other important factors that lie beyond the boundaries of the study. An analysis of governance regimes – particularly when pursued from a bottom-up perspective – is therefore more likely to capture the complexity of the interactions between diverse and complementary or competing governance frameworks. In what follows, we will examine more closely the potential contribution of the resilience and systems theory based take on the governance of coupled socio-ecological systems.

3. The Importance of Scale, Fit and Interplay in Governance Regimes

Natural and social systems are today both widely accepted as highly complex. However, social systems are typically seen in isolation from the environment and the environment is in turn often treated as a set of discrete resources the yield of which can be individually maximised (Berkes and Folke, 1998). A large number of interconnections and variables is analysed in natural systems but the role of humans as sources of disturbance is often described by a single actor model (Fischer–Kowalski and Weisz, 1999). The separation of humans and their environment obscures the dependence of the society on ecosystem services and functions and contributes to unsustainable resource use and environmental degradation.

An alternative understanding suggests that social and ecological systems are not merely linked but rather interconnected (Galaz et al., 2007) That is, the relationship between social and ecological system is complex. This view of coupled socio-ecological systems highlights the human dependence on the capacity of ecosystems to generate essential services, and the importance of ecological feedbacks of societal development. In the context of this understanding, institutions should be related to (or “fit”) environmental conditions so that

there is a possibility of a co-evolutionary relationship between nature and society (see e.g. Paavola and Adger, 2005; Noailly, 2008).

In the systems-oriented literature, socio-ecological dynamics in the governance of biodiversity is understood through the three analytical themes of fit, interplay and scale. The fit between institutions and environmental resources relates to a co-evolutionary relationship of interdependent socio-ecological systems, where social and ecological systems interact across various temporal and spatial scales. This means that ecosystems cannot be considered stable entities where social or economic drivers external to the system cause disturbance or destruction. In actual fact, disturbances and crises may instigate institutional learning and creative destruction or reorganisation (Galaz et al, 2007). As a corollary of this line of reasoning, the literature replaces the notion of stable ecosystem equilibrium (Folke 2006) with the concept of the "multi-stable state". Multi–stable state refers to the existence of several stable ecosystem states which allow some flexibility in responses to ecosystem shocks and scope for reorganisation of institutions of environmental governance. This concept is also known as "regime shift" (Gunderson and Holling, 2002, Folke, 2006).

The notion of fit thus really encompasses the behaviour of whole coupled socio-ecological systems across scales. Multi-scale phenomena have become key topics for research on socio-ecological dynamics and its governance and they will require even more attention in the future (Folke et al 2007). 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. For example, chemical control of insects in European boreal forests ignores that these kind of resources have to be managed at multiple levels and often results in effects such as infestation, and more brittle ecosystems and reduction of biodiversity cascading over scales. Similarly, EU agricultural subsidies have altered European land use with cascading effects on e.g. populations of bird species at different levels.

Examination of institutional performance should thus look at the linkages among distinct institutional arrangements at the same (horizontal) level of social organization and (vertically) across levels. A diversity of terms have been used to denote to these linkages, including institutional "interaction", "inter-linkage", "overlap", "interconnection" and "interplay" (see e.g. Young 2002). Whatever terms are used, such linkages have considerable effects on natural resource management. For example, the Maine lobster fishery in the United States

became overused because of interplay of earlier lobster fishery management solutions with a globalised fish market and "rowing bandits" operating in them. More recent institutional reorganisations have acknowledged and sought to govern these linkages and helped to attain a new stable state in the lobster fishery (see Berkes at al, 2006).

Mismatch of spatial, temporal, or functional scales is often behind unsustainable management practices (Folke et al., 2007; Ostrom 2007). Spatial mismatches occur where institutional (management) and ecological boundaries do not coincide. This happened in the above discussed Maine lobster fishery. The European Union's Water Framework Directive seeks to overcome a similar problem in the management of water resources through the establishment of river basin districts. Mismatch of temporal scales is involved for example when social systems respond too slowly to rapidly changing environmental systems (Kuran, 1988). Temporal 'mismatch' underlies many resource management problems and may constrain options for societal development and future capacity for adapting to environmental change in general, and to climate change in particular (Gunderson and Holling, 2002; Berkes et al., 2003, Carlsson 2003 in Folke 2006). Functional mismatch is in turn illustrated by chemical control of insects in forest ecosystems.

Scales thus emerge as a key issue of interest and importance from the literature on socio-ecological systems and their governance. Single scale analyses omit relevant interactions and outcomes and miss parts of the dynamics of coupled socio-ecological systems. This is because different scales may be and are likely to be coupled through feedback relationships (Berkes, et al., 2003; Gunderson and Holling, 2002). The challenge in responding to ecosystem feedbacks lies not only in developing institutions for multi-scale ecosystem management: there is also a need to examine ways of enhancing adaptive capacity to deal with continual changes, uncertainty and surprise. The capacity to live with and learn from changes and unexpected shocks – resilience – increases the likelihood staying within one of the multi-stable states and provides room for societal development and future capacity for adaptation (Dietz et al, 2003; Folke, 2006; Galaz et al, 2006).

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 the line of changing institutional settings such as globalisation. The complexity of coupled socio-ecological systems nested across the scale requires that we "go beyond panacea" (Ostrom 2007) by accepting that there is no simple solution for a complex problem.

Proper diagnostic approach requires considering fit, interplay and particularly scale as key factors in multilevel environmental governance, including multi-level governance of biodiversity.

4. Governance Frameworks and Regimes and Biodiversity in Europe

The EU governance framework for biodiversity is based on the *Birds Directive* and the *Habitats Directive*. The main aim of the Birds Directive is to maintain populations of wild birds, especially to protect endangered, vulnerable, rare and other species of birds that are considered to merit special attention. The directive identifies the establishment of special protection areas (SPAs), ecologically informed management of biotopes outside SPAs, and the re-establishment of destroyed biotopes as the main bird protection measures. It also limits killing and capture of wild birds and the taking of their eggs. The Habitats Directive provides for the creation of a European network of special areas of conservation (SACs) which is also known as Natura 2000, and it lists priority habitat types and species that member states should specifically consider when designating SACs.

A series of conflicts arose in member states in the early stages of implementation of the Habitats Directive (see e.g. Alphanderý and Fortier, 2001; Gibbs, While and Jonas, 2007; Hiedanpää, 2002; Krott et al., 2000; Paavola, 2004; Stoll-Kleemann, 2001). We argue that a distinction between governance frameworks and governance regimes, and due attention to multi-faceted and multiple scales, helps to shed light on what was going on in these conflicts. However, to understand what the conflicts were all about, it is necessary to look in greater detail at the aims and provisions of the Habitats Directive.

The Habitats Directive's Article 3 requires the member states to designate sites for habitat and species conservation as guided by its Annexes I and II. The directive set June 1995 as a deadline for transmitting lists of designated sites to the Commission. Article 5 empowers the Commission to request amendments from member states if their lists do not adequately reflect their habitat types and priority species. The Commission and the member states were to identify Sites of Community Interest (SCIs) from the submitted lists by June 1998. Member states were to designate these sites as Special Areas of Conservation (SACs) – which, together with the SPA sites designated under the Birds Directive, form the Natura 2000 network. The deadline for SAC designation was 2004.

The Habitats Directive also established rules for the management of SACs. Article 6 requires member states to take steps to avoid such deterioration of SACs which would compromise the directive's objectives. It also requires assessment of projects that can have significant effects on SACs either on their own or in combination with other projects. According to the Article, authorities in member states should approve a project only if it does not endanger the integrity of a SAC and suggests (but does not require) public consultation before making decisions. The article also requires member states to undertake compensatory measures if overriding economic and social reasons make a project necessary despite its adverse consequences. If these adverse consequences threaten priority habitats or species, only projects related to public health and safety can be considered to have such overriding reasons.

Other articles of the Habitats Directive are also worth noting. Article 8 makes EU co-financing available for the management of SACs with priority natural habitats or species. Article 12 provides for the protection of species, presenting limits to the capture, killing, disturbance, keeping and selling of specimens of species; destruction or taking of eggs; and deterioration or destruction of nesting and resting places. Finally, Article 17 requires the member states to report on the implementation of the directive every six years.

The implementation of the Habitats Directive has been controversial from the outset and the member states have not complied with original deadlines. The Commission took several member states – e.g. Denmark, Finland, France, Germany, Greece, Ireland, and the Netherlands – to the European Court of Justice because they failed to submit lists of designated sites by the deadline, to conform with other Article 3 requirements, or because they failed to prevent the degradation of sites as required by Article 6. Court decisions in these cases typically required member states amend their lists of designated areas and caused further delays. The selection of Sites of Community Interest (SCIs) missed the original deadline of June 1998 and the first SCIs were chosen only in the end of 2001. Member states could only start establishing SACs by national legislation thereafter. Therefore, Natura 2000 Network did not come into existence in 2004 as prescribed by the Habitats Directive.

Several authors have argued that the adoption and implementation of the Habitats Directive reflects the relatively greater power of environmental non-governmental organisations (ENGOs) in European decision-making than in national one (Fairbrass and Jordan, 2001a; Weber and Christophersen, 2002). According to them, ENGOs were able to influence and to participate in the implementation of the Habitats Directive both at the European and national

levels level because they could offer resources and expertise that the Commission and national governments and administrative agencies needed but did not have (Weber and Christophersen 2002). ENGOs could also pressure member states by making complaints of non-compliance with deadlines and provisions of the Directive to the Commission, which in turn referred the cases to the European Court of Justice (Fairbrass and Jordan, 2001b). As a result, EU and national priorities may have been in conflict: member states may not have prioritized and allocated adequate resources to the implementation of the Habitats Directive (Alphanderý and Fortier, 2001; Fairbrass and Jordan, 2001b).

In terms of our discussion above, the implementation of the Habitats Directive in the first decade after its adoption reflects a tension between the specific governance framework and the broader governance regime for biodiversity. The Habitats Directive embodied a narrow, top-down view of the establishment of a governance framework for biodiversity in Europe, but its adoption and implementation took place within an already existing institutional setting. An important aspect of this setting was the established and expected distribution of authority between the European and member state levels. The developments in the 1990s amounted to a shift in "the governance of the state" in the sense that a new European level became established for environmental politics and the ENGOs were quick and successful in exploiting it. The Commission and European Court of Justice also became more active in the field. The success of ENGOs became embodied in European legislation and its implementation, but this new thrust confronted the institutional inertia and expectations that governmental organisations had with regard to the implementation of European legislation. Further changes such as the adoption of the Aarhus Convention have transformed the earlier state-centred, uni-planar policy solutions to a multi-level governance regime where both the member state and European levels matter.

The implementation of the Habitats Directive proved controversial also in another sense: it provoked conflicts across a number of member states during the 1990s. In France, the lack of public consultation about site designation inflamed forest owners and hunters. They questioned both the science-based site designation and the quality of scientific information on which the designations were based, arguing that it was often superficial, past its "use by date", or simply wrong (Alphanderý and Fortier, 2001). Local residents, owners of agricultural land and forests, hunters, and other stakeholder groups were excluded from site designation process also in Finland (Hiedanpää, 2002), Germany (Krott et al, 2000; Stoll-Kleemann, 2001)

and the United Kingdom (Ledoux et al, 2000; Gibbs et al, 2007). The excluded groups staged protests and even hunger strikes (Hiedanpää, 2002). In new member states, exclusion of non-state actors from decision making originates in socialism, where internal institutions of civic society were replaced by externally designed, predominantly prescriptive institutions and central planning (Kluvankova-Oravska, Chobotova et al 2008).

The immediate reason for these conflicts was the top-down and non-inclusive site designation process followed initially by most member states. The Habitats Directive delegated to the member states the task of promulgating procedures for designating sites for Natura 2000 network. Member states followed the orientation of the directive and designated sites on the basis of scientific criteria and existing scientific information without consulting local landowners, civic groups or others who were affected by site designation. However, our discussion above suggests a broader interpretation.

In this issue at stake was governance by the state, premised on the top-down introduction of a narrow governance framework for biodiversity. The implementation of the Habitats Directive ignored that there are significant linkages between governance by the state and by the market, as well as both horizontally and vertically between various frameworks for governance by the state. Markets generate development pressures which compete with preservation interests over space, something which was at the root of a conflict over the designation of the Humber Estuary in the UK, for example (see Gibbs et al, 2007). At the European level, there was significant interplay horizontally between the Habitats Directive on one hand, and for example Common Agricultural Policy (CAP) and infrastructure investments supported by the European Regional Development Fund (ERDF) on the other hand. This horizontal interplay continues to be important in the new member states where institutional mismatch between post-socialist and new institutions is still prevalent. An example is conflicting dispersion of competencies in biodiversity and forest management practices among inter-governmental agencies, documented by Kluvankova, Chobotova et al 2008 from Sumava and High Tatras National parks. Significant infrastructure development needs in new member states are also likely to remain in tension with the designation and management of SACs for conservation of biodiversity (e.g. Chmielewski and Krogulec, 2007).

But vertical interplay has also been important alongside horizontal interplay, and this is where the issues of scale come to play. The pivotal role of ENGOs in the governance of biodiversity in Europe hinged on their ability to “jump scales” (see Brown and Rosendo, 2000) – that is, to

shift their political activism on biodiversity related issues from national arenas to the European ones in order to both forward their goals as well as to redefine the terms of engagement at the national level. But this success of ENGOs at the European level resulted in problems with the top-down implementation of the Habitat Directives – involved and affected groups at the local level were not included in the implementation process and as a result the legitimacy of the new governance framework suffered. That is, de facto actions and processes at different social scales were divergent. Decentralization, together with the increasing role of non-state actors, results in most of new member states in cross-scale coordination and information management problems. The emergence of multilevel governance in the new democracies of Central and Eastern Europe has demonstrated the absence of an accountability mechanism, in particular for non-representative participation, such as non-state actors (Kluvankova, Chobotova et al 2008).

It would be easy to interpret the experiences in the first fifteen years of Habitats Directive's implementation as evidence of the detrimental impact of horizontal and vertical interplay on the governance of particular environmental or natural resources such as biodiversity. However, this is partly an issue of timescales. The first policy outputs were delayed and were far from straightforward to obtain. However, and perhaps more importantly, the governance regime around biodiversity has changed and thickened: it now clearly has a multi-level structure and engagement of actors at different levels can at least to a degree manage both horizontal and vertical interplay. So in this sense the resilience of governance solutions should have improved. It will of course be difficult to predict whether the regime will be able to deliver sought-after policy outcomes – protected habitats and species and enhanced biodiversity. As we argued before, a myriad of other influences in addition to governance interventions are at play and may exert influence on outcomes.

5. Conclusions

One of our two key arguments in this manuscript has been that in studies of environmental governance, as well as in governance practice, it is important to distinguish between specific governance frameworks and the broader governance regime. The first one refers to specific institutional arrangements put in place to attain certain goals, while the latter encompasses all formal and informal institutions that influence (intentionally or otherwise) the behaviour of actors in the pertinent context. A failure to respect the distinction may give too much credit or

apportion too much blame on specific governance solutions for observable outcomes, and it also results in weak understanding of the governance solutions that may help to generate sought-after outcomes when embedded in the broader set of relevant institutions.

Our second key argument has been that physical, time and jurisdictional scales among others all matter a great deal in environmental governance. This is because scales are at the heart of understanding issues of fit and interplay in environmental governance. Failure to acknowledge their relevance results in the omission of complex interactions within and between natural and social systems – a recipe for weak explanations in scholarship and unsatisfactory outcomes in governance practice. Simultaneous analysis and action at multiple scales is likely to be needed.

These two complementary arguments do help to shed additional light to experiences with the implementation of the Habitats Directive in the European Union. The early phase in the implementation of the directive was characterised by a significant degree of interplay with a variety of institutions, including those that structure decision-making in the European Union and its member states, and those that govern other activities that are interlinked with conservation of biodiversity, such as agriculture, other economic activities, infrastructure development and the use and development of other resources such as water resources and forests. At first this interplay manifested mainly as slow progress and conflicts in the implementation of the Habitats Directive. More recent experiences suggest that the governance regime as a whole is currently changing. This change has been brought about by a number of changes since the adoption of the original governance framework. On one hand, participation has become a more important part of European environmental governance after the incorporation of the Aarhus Convention's provisions to other European legislation. On the other hand, the implementation of the governance framework itself has reached a state where the management of SACs in specific contexts will require involvement and engagement of actors that can affect and be affected by the SACs and their management. And all of this is taking place in a context of great institutional diversity where multiple forces are at work at multiple levels and where moments of resonance co-exist with periods of dissonance.

Action and participation take place at multiple levels which is likely to be better able to accommodate interplay both horizontally and vertically. However, this does not necessarily mean that the attainment of intended outcomes of the narrow governance frameworks are more likely to be realised: a complex multi-level governance framework is prone to create

tensions and dynamics of its own. This is not necessarily a disadvantage. An amalgam of formal and informal institutions operating at multiple levels and involving multiple groups of actors is an example of a polycentric governance regime which is likely to prove more resilient (for good or ill) than traditional hierarchical governance frameworks.

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