Marie-Curie Research-Training Network GoverNat:
Multi-level Governance of Natural Resources:
Tools and Processes for Biodiversity and Water Governance in Europe

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Multi-level Governance of Natural Resources:
Tools and Processes for Water and Biodiversity Governance in Europe – A European Research and Training Network

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HELMHOLTZ CENTRE FOR ENVIRONMENTAL RESEARCH – UFZ

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

Content of the paper

1 Introduction

In October 2006, 10 European partner institutes and a number of praxis affiliates (see list in annex) started a new research and training project on multi-level governance of natural resources in Europe. The first of altogether 12 doctoral and post-doctoral fellows have started to work on the research programme in March 2007. Several observations underlie the project:

- Governance of natural resources is confronted by increased challenges, especially due to global change processes. Rhetorics of integrating the public, stakeholders, and of a science-based environmental policy proliferate, but are not taken up by the practice.
- Meta-studies on participation and inclusion of scientific knowledge in the governance of natural resources show a lack of systematic and comparative studies in specific fields of application, and particularly studies encompassing several fields.
- Research on biodiversity and river basin management (two areas addressed by the project) is increasingly expected to integrate science/policy interfaces in research design. This usually happens without a systematic reflection on the aims and structures of such interfaces.
- The increased interest in issues related to the governance of natural resources has not been addressed by an interdisciplinary training programme.

It is the aim of this 4-year Marie-Curie Research Training Network to systematically improve multi-level governance of natural resources. It does so by applying a common framework to analyse cases of water and biodiversity governance, to propose appropriate analytical tools and participatory processes that can improve governance, and to evaluate factual or hypothetical policy experiments, before generalising the results and recommendations.

2 Research

2.1 Scientific 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** are to enhance understanding of multi-level governance of natural resources, to develop participatory methods for use in such contexts, to identify analytical decision tools for participatory multi-level governance, and to evaluate their use. These four tasks are necessarily interdisciplinary.

The **central training objective** is to give 9 doctoral and 3 post-doctoral fellows an interdisciplinary training in 1) research on environmental governance, particularly of biodiversity and water, in Europe, and 2) designing legitimate and effective solutions for participation and communication between policy makers, scientists and the public. GoverNat brings together a critical mass of excellent partners to attain these objectives and to overcome disciplinary and policy fragmentation.

Research and training objectives are pursued in the context of water and biodiversity governance, which are characterised by the interdependence of local use regulations and externalities of resource uses across spatial scales and policy fields. They also include challenges which are typical of multi-level governance of many other natural resources:

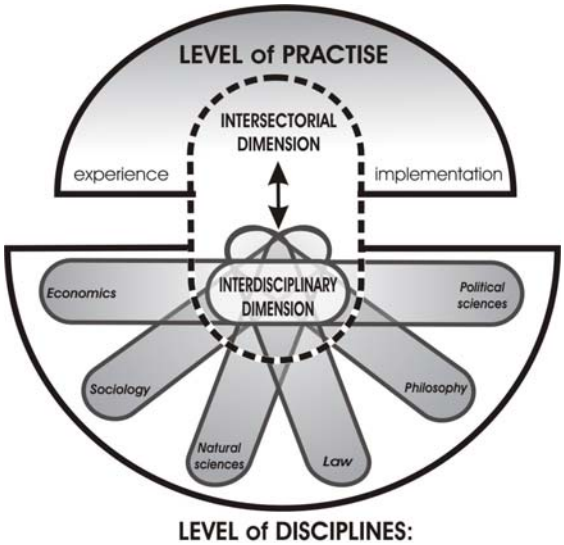

Figure 1: **Integrating Approach of Governance**

(1) Complex natural and social processes which create high levels of uncertainty;

(2) Legitimacy of adopted institutional processes and of their consequences;

(3) Social dynamics generated by new modes of governance;

(4) Costs of governance processes, policy implementation, and failed decisions.

This complex interplay poses problems for the effectiveness and co-ordination of governance solutions. Traditional disciplinary approaches and regulatory decision making can only contribute partial solutions. For example, economic theory of federalism sheds light on the optimal level of decision making and welfare economics provides estimates of the costs of different measures. However, these approaches ignore legal and social justice implications of nested decision procedures in multi-level governance. Recent theories of political science analyse joint decision making, but they fail to identify comprehensive improvements addressing all four challenges identified above. Only an interdisciplinary approach integrating research questions from e.g. institutional economics, natural and political sciences, law, sociology, and philosophy can generate a break-through in research and foster good governance of natural resources.

GoverNat will train 9 doctoral fellows to tackle the four challenges from both an insider and an outsider viewpoint. The interdisciplinary consortium of research institutions (*partners*) provides the "outsider perspective" for comparative analysis and the evaluation of case studies. Interdisciplinary networking is necessary for a break-through in research and practice of environmental governance. The fellows will have internships in *praxis hosts* to experience from the "insider perspective" the challenges of making decisions on environmental governance at different spatial scales. Praxis hosts include public administration organisations, SMEs and NGOs. Interplay between partners and praxis hosts ensure the feasibility and effectiveness of designed governance solutions. Three post-doctoral fellows in economics, politics and law distil disciplinary lessons from the project.

2.2 Scientific originality and innovation of the project

Networked governance (Jordan et al. 2003; Jordan and Schout 2006; Williamson 1979, 1991; Stoker 1998; Jones, Hesterly, Borgatti 1997; Goodwin 1998; Gulati 1998), heterarchic governance (Pülzl and Rametsteiner 2002), meta-governance (Jessop 2002a and b) and other new forms of governance demand co-ordination between policies, the public and science. Moreover, particularly regarding environmental problems, decision-making processes are highly complex encompassing different and interwoven levels (Heinelt et al. 2002). Analysis and development of tools and processes for this purpose needs contributions from several disciplines. GoverNat brings together the latest ideas from economics, political science, law, sociology and philosophy to bear on the four relevant interdisciplinary research fields: governance, participation, decision analysis, and the design, implementation and evaluation of collaborative management of natural resources. Participatory processes are a key element in new modes of governance[1] because they contribute to legitimacy and effectiveness of governance solutions (Fiorino 1989; Stirling 2006; Hajer 2003) and can lower the costs of policy implementation. Analytical decision tools can in turn reconstitute the science/policy interface by making explicit different forms of uncertainty which characterise complex environmental systems (Stern and Fineberg 1996; NRC National Research Council 1999). There is substantial evidence that these methods can support new resolutions to environmental management challenges (Rauschmayer and Wittmer 2006), but their uptake remains low. Moreover, as distributional consequences of environmental decision-making processes come under consideration (Millennium Ecosystem Assessment 2005), governance processes raise concerns in regard to questions of democratic accountability and environmental justice (Peters and Pierre 2004; Paavola 2005 a and b; Paavola and Adger 2006). In what follows, we outline in greater detail how GoverNat examines reasons for the low uptake and identify and exploit possibilities for overcoming them.

[1] See Heinelt et al. (2002) and Meadowcroft (2002), but also Agenda 21, the Aarhus Convention, the White Paper on European Governance, the Sixth Environment Action Programme, the WFD, the Göteborg European Council, and the 2002 World Summit on Sustainable Development.

Environmental governance

The coherence of EU environmental policies is hampered by the diversity of legal and political traditions in the member states. EU enlargement, policy integration and mainstreaming environmental policy provide new challenges (Jordan 2005). The implementation of network-based governance solutions such as those contained in the Habitat and Water Framework Directives (WFD) will prove particularly difficult for those Member States which have relied on hierarchical, sectorial structures and regulatory instruments (Knill and Lenschow 2000). For example, analysis of WFD implementation in Germany shows a tendency to fulfil only the directive's minimum requirements (Moss 2004). In biodiversity governance, the tensions between international, European, national, and local levels of management need to be addressed (Baker 2005). Thus, multi-level environmental governance faces challenges regarding the integration of heterogeneous levels of decision making governed by rules of their own and the integration of political and natural scales examined by scientific concepts often difficult to synthesize (Young et al. 2005; Drechsler et al. 2005). GoverNat analyses the governance of water and biodiversity in old and new member states and contributes to research needed on the implementation of EU environmental policy (Héritier et al. 1996; Jordan 2000 and 2005; Kellow and Zito 2002; Paavola 2004). Evidence from recent studies in new EU member states (Kluvánková-Oravská and Chobotová 2006) underlines that low trust in formal institutions of hierarchical governance may stimulate the establishment of multileveled networks of interconnected actors. This applies in particular for biodiversity governance where inefficient institutional design and non-robust governance of the resources prevalent in the communist period have resulted in over-exploitation of natural resources and in treating common property as open-access. GoverNat examines the linkages between the European, national and local levels of governance through case studies which will be selected to represent the diversity of environmental governance settings in Europe. This will generate insights on policy implementation and how the problems of multi-level governance have been and can be addressed (Ostrom 1995).

Participatory processes

Participatory processes have been used in environmental governance for over 20 years (Bingham 1987) because they can improve the legitimacy and effectiveness of governance solutions and reinforce democracy (Bulkeley 2003). However, participation is not always voluntary: legal regulations can also be used to pressure private actors to participate in public decisions (e.g. § 73 subpara. 4, 3rd sentence Administrative Procedure Act of Germany). Moreover, strategies to enhance the science-policy interface aspect in decision processes raise new concerns on how this is reconcilable with public deliberation (Fischer 2000; van den Hove and Sharman 2006). Evaluation of participatory processes depends on the theoretical conceptions used to promote them (Luhmann 1989; Dryzek 1990; Habermas 1994; Raiffa 1994) and on the different methods which have been used to enhance public and/or stakeholder participation (Renn et al. 1995; Lafferty and Meadowcroft 1996; van den Hove 2006; Steyaert and Lisoir 2005; Ridder et al. 2005). GoverNat compares these methods and, in co-operation with praxis hosts, adapts the most promising ones to each case study and combine them with the most appropriate decision tools. Limits and drawbacks of different participatory processes will also be analysed. By researching participation in the multi-level context, GoverNat breaks new ground: participatory methods have mainly been used at local or global levels and only to a lesser extent at regional and national levels (Moss 2004).

Analytical decision tools

Decision tools used in operations research, systems analysis and integrated assessment can complement participatory processes by rendering questions of uncertainty and ignorance more explicit (Bouyssou et al. 2000). Decision tools should allow translating different viewpoints into decision criteria to be taken into account in decision making (Roy 1996). While decision tools are increasingly used in environmental decision making at different spatial scales in Europe (Beinat and Nijkamp 1998; Tacconi 2000; Nunes et al. 2003), there is a need for the improvement of these tools

for use in conjunction with participatory processes. It is particularly important to enhance the understanding of the suitability of particular methods for the cases at hand – a task which places emphasis on the contextualisation of the choice of a method instead of on the differences between the methods themselves[2] (Salminen et al. 1998, Rauschmayer and Wittmer 2006). GoverNat develops decision tools particularly for use in conjunction with participatory processes of multi-level environmental governance and elaborate procedures for selecting tools that are suitable for the task at hand.

Evaluation of participatory and analytical natural resource management

Evaluation of participatory and analytical processes can be based on several criteria (Renn et al. 1995; Moore 1996; Webler et al. 2001). GoverNat uses a set of criteria developed for process-oriented evaluation of combined participatory and analytical approaches (Wittmer et al. 2006 and Table 2 below) which focuses on the way in which information on natural systems enters the process (Pullin et al. 2004), institutional, legal and ethical legitimacy; social dynamics (Schusler et al. 2003); and costs of decision processes. Governance outcomes such as changes in natural systems are often immeasurable due to involved time lags, unclear causal links, and ill-identified goals (Conley and Moote 2003). Therefore, only expected outcomes and associated uncertainties can often be used for evaluation. Using a process-oriented frame of analysis (Table 1 below), GoverNat identifies differences in involved natural and institutional systems and tests the hypothesis that certain combinations of analytical and participatory processes improve multi-level governance.

Scientific Results to be expected:

1. Systematic analysis of **multi-level governance** of water and biodiversity in Europe and the generalisation of obtained lessons to the governance of all natural resources;
2. Evaluation of instrumental and normative roles of **participation** in environmental decisions and case-specific development of participatory processes for multi-level governance solutions;
3. Evaluation of suitability of **analytical decision tools** for use in conjunction with participatory processes, and their adaptation to selected cases of multi-level environmental governance;
4. Systematic **evaluation** of the combined use of participatory and analytical solutions in selected cases of natural resource management.

2.3 Integrating disciplines and overcoming fragmentation

GoverNat's overall field of research is fragmented across disciplines, between science and policy-making, and between fields of application. GoverNat seeks to overcome the **fragmentation** by integrating the relevant disciplines, by comparing water and biodiversity governance, by creating links between academia and praxis, and by integrating different cultural and institutional traditions. Researchers analyse, design, implement, support, and evaluate participatory decision processes and decision tools, considering the legal, institutional, cultural, and natural specificities of the studied cases, to assess their impact on the governance of natural resources. To date, there have been no comparable efforts to combine research and training encompassing interdisciplinary, inter-field, and intersectorial perspectives.

GoverNat **integrates different disciplinary perspectives** on environmental governance: Neither the integration within natural or social sciences nor between natural and social sciences has been sufficient to train researchers competently dealing with such interdisciplinary problems. Natural sciences such as ecology and hydrology do shed light on how natural systems partly constitute governance problems. Social sciences in turn shed light on the institutional and other policy relevant aspects of the governance problems. Within the consortium, the social science perspective encompasses economics, political sciences, sociology, legal sciences and philosophy and many partners

[2] For example multi-criteria mapping (Stirling 2001), outranking methods (Hokkanen and Salminen 1997) or multiple-attribute utility-based models (Prato 2003).

also cover natural sciences. In each of the four relevant interdisciplinary research fields: multi-level governance, participation, analytical tools and management evaluation, several disciplines already co-operate. In each of three fields, one discipline leads the debate: political sciences in governance issues, sociology in participation, and economics in analytical decision tools – evaluation is a truly interdisciplinary field without a specific discipline dominating.

GoverNat **integrates science and policy** in collaboration with the praxis hosts which include public administrations, SMEs and NGOs. The instruments for integration include internships at the praxis hosts for the preparation of case studies which facilitate the integration of practical requirements into research design and practice. Praxis hosts will mentor the fellows concerning the practical relevance of their research, ensure the appropriateness of the results, and give advice on their presentation for non-academic research users.

GoverNat achieves **integration across fields of environmental governance** by applying the same analytical framework and evaluation criteria to the governance of water and biodiversity in Europe. The Water Framework and Habitats Directives are both subject to a Europe-wide implementation but also demand local co-ordination of resource use, conservation and restoration. Both fields of governance also demand exchange between science, administration, and interest groups although participation plays different roles in them: participation has not officially been part of Natura 2000 but is legally required in river basin management.

GoverNat examines the effectiveness and legitimacy of multi-level governance solutions constituted by the Habitats and Water Framework Directives through case studies reflecting the diversity of political, cultural, and institutional environments of Europe. Geographical distribution of partners and praxis hosts across Europe (D, P, SK, DK, UK, A, E, F, HU, Belarus) ensures that coordination and integration problems are addressed comprehensively. The **integration of different cultural and institutional traditions** in governance already present in the consortium (a range from the rather non-participatory Belarus, over rather new member states HU and SK, to states with a long participatory traditions such as DK) will be re-enforced by regarding two further new member states (CZ and POL) in the analysis of multi-level governance and in the dissemination of GoverNat results.

2.4 Research methodology

GoverNat's methodological framework (tables 1 and 2) to be used by all GoverNat fellows addresses the specific research objectives in the four interdisciplinary research fields mentioned in 2.2. It consists of two stages: analysis and evaluation, each integrating a theoretical and empirical step. **Analysis** (Table 1), is used to systematically characterise and assess experiences in multi-level governance of water and biodiversity by combining concepts from economics, political and legal sciences, as well as from ecology, hydrology, philosophy and sociology. We take advantage of traditional disciplinary analyses of natural resources and of how stakeholders use them, before considering whether and to which degree the resources' attributes are reflected in multi-level decision-making structures and considered in decision processes. This theoretical analytical knowledge will be dealt with in a second step through examining concrete multi-level activities in water and biodiversity governance. This two-step procedure allows to structure in a systematic and comparative way the wide range of different activities in multi-level governance.

Participation, analytical decision tools and their combined use in multi-level governance of natural resources will be evaluated in a second stage: **Evaluation** looks at the main challenges of multi-level environmental governance (see above) and will be carried out along the grid in table 2. The research questions in tables 1 and 2 will be answered using institutional economic analysis, discourse analysis, transaction cost analysis, hermeneutics and policy analysis. An overall evaluation can only be obtained by combining these methods. In a first step, analytical tools and participatory processes are evaluated, before taking up the multi-level activities assessed before. Building on the analysis and on the evaluation of these activities, improvements for selected case studies will be developed. Assessing these suggestions empirically in the selected case studies constitutes the final

test of the central GoverNat hypothesis, i.e. that certain participatory processes and analytical decision tools are particularly useful for improving multi-level governance.

The methodological framework will be mobilised in case studies paying particular attention to scale effects. For instance, social and legal legitimacy of a decision (Table 2) depends on the actors' scope for decision making contingent on their position on the political scale. The network's natural scientists explore how and to what extent natural sciences can be better taken into account and how to deal with uncertainties related to predicted environmental outcomes. Social scientists study how the legitimacy of decisions and processes is related to the willingness of actors to implement the decisions. The GoverNat partners also examine how spatial, temporal and issue-related openness of multi-level governance solutions is related to social dynamics. Finally, analysing the relative costs of governance solutions is of significant importance as water and biodiversity administrations are systematically underfunded (e.g. for the GoverNat praxis host SRNAP, administering a Slovakian national park, the government finances do not cover even 10% of all actions and objectives in the management plan).

The methodological innovation of GoverNat is to provide for (1) multidisciplinary training, (2) interdisciplinary research, (3) transdisciplinary case studies, and (4) an integration of these three elements. Each of these steps builds progressively on the earlier ones. The fellows for (1) get training in key elements of environmental governance as specified below, for (2) develop a special research question appropriate to their interests, the supervising capacities of their hosts, and to the need for complementarity within the research training network, and for (3) apply participatory processes during their 3-month internships in the praxis hosts. Particularly the experienced fellows for (4) feed the experiences gained with the case studies through the interdisciplinary analysis back to their disciplinary background.

The wealth of empirical material encompassing interrelations at multiple levels will help to generalise the results. Transdisciplinary analysis of these interactions, together with the scientific tools to be developed, will contribute to better realisation of the principles of the White Paper on European Governance and the implementation of the Habitats and Water Framework Directive.

Figure 3: **Frame for analysing multi-level governance**

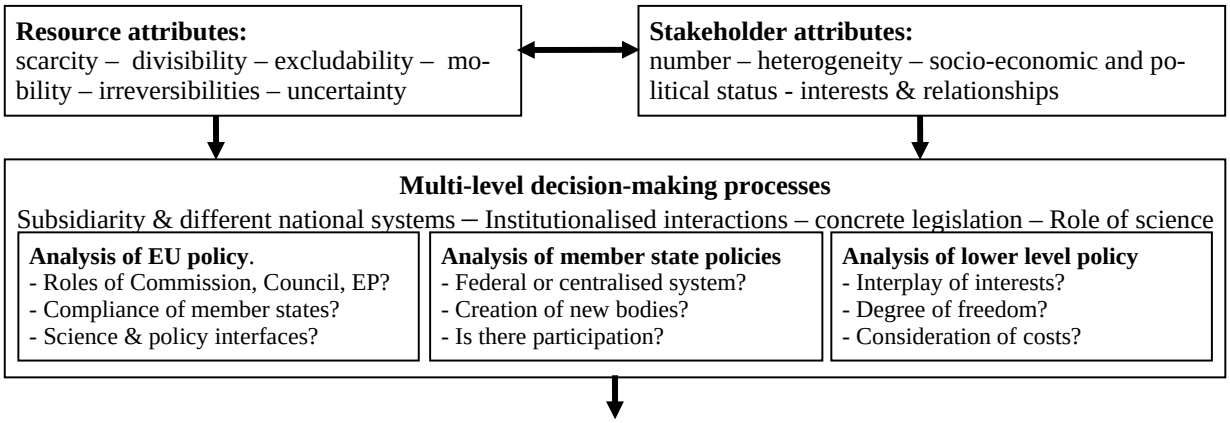

Figure 3: **Evaluation grid of governance processes**

Complexity and information
- How well can different types of information (different disciplines, lay and expert knowledge) be elucidated?
- How are different types of information integrated?
- What are the environmental outcomes of altered management options and governance structures?
- How are uncertainty and complexity taken into account?

Legitimacy
- Is the procedure compatible with the subsidiarity principle?
- Is someone held accountable for the decision and its outcome? Is it clear who?
- Are all relevant interests and values included or at least represented?
- Are rules and assumptions transparent to insiders and outsiders?

Social dynamics
- How does the process affect the relationships and networks of the actors?
- Is there scope for agency or empowerment of the actors?
- Does the process allow for the changing of perspectives or learning to take place?
- Does it facilitate convergence or illustrate diversity?

Costs
- Does the process consider the cost-effectiveness of the proposed solutions?

The proposed work is structured as follows. The preparation phase lays the foundations for the subsequent efforts in the network by collecting, analysing and systematising pertinent research conducted in the consortium. Between March and June 2007, fellows start their work by analysing governance of biodiversity and water and formulate on this basis their own research programmes (Work Package 1). The selection of multi-level activities will include a three-month internship and the analysis and assessment of its results (WP 2). Participatory processes and analytical tools as well as selected cases will be evaluated in order to propose possibilities for improvement (WP 3). These improvements will be empirically tested, and the results will be evaluated (WP4). The research results will finally be synthesised and disseminated in WP5.

WP 1: Analysing multi-level water and biodiversity governance in their context

Duration: month 7-18
Objective: Synthesise disciplinary perspectives on water and biodiversity governance
WP-leader: Jouni Paavola, SRI

1. Analysing the specific research context of governance of natural resources (month 7-10)
A literature review constitutes the basis for the more specific issues of GoverNat, gives a first introduction, and is the necessary condition for tasks 1.2-1.5. Analysing the specificities of water and biodiversity governance in each country means to assess the relevant institutions, their governance roles, as well as to translate the natural properties of water and biodiversity issues in appropriate social science language.
2. Consultations with scientists, stakeholders and decision makers involved in past cases (month 9-12)
The interviews guide the researchers to more specific and socially relevant research questions. Fellows are trained to conduct and analyse the interviews.
3. Comparing specifics along the analysis framework (table 1) (month 11-15)
The first understanding of the research context, gained through tasks 1.1 – 1.2 is consolidated and combined with the comparison of all specific expertise found within the consortium. This overview constitutes the frame for specifying research programs for all doctoralfellows.
4. Report on governance of natural resources in two new member states (month 12-15)
The state of the art of governance of natural resources in two additional new member states (CZ, POL) is documented by a subcontracted report. The importance stems from the high level of change in, and different historical conditions of governance structures in new member states.
5. Contextualising individual research programmes within governance of natural resources (month 13-18)
Preparing the first generalisation, the results of WP 1 are contextualised, and differences to other natural resources highlighted. The differences between old and new EU member states in the governance of natural resources are highlighted.
Deliverable: Specified research programme on governance of natural resources

WP 2: Assessing multi-level activities in water and biodiversity governance

Duration: month 11-28
Objective: Deepen the understanding of water and biodiversity governance; select and analyse case studies
WP-leader: Paula Antunes, ECOMAN

1. Selecting cases for further analysis through in-depth interviews (month 11-17)
A first set of cases are selected in co-operation with non-research institutions. The experienced researchers take care of the scientific fertility of the cases.
2. Analysing cases within the non-research institutions along the analysis framework (month 16-22)
The understanding of these cases is deepened in a 3-month internship at a praxis host (cp. B0 for a list of committed praxis hosts). The framework (table 1) is used to structure the insights.
3. Integration of case studies within wider water and biodiversity governance (month 23-28)
The representativity of the selected case studies for the fields of water and biodiversity governance are assessed, and missing issues highlighted.
Deliverable: Assessment of state-of-the-art European water and biodiversity governance

WP 3: Evaluating and improving decision-making processes

Duration: month 15-30
Objective: Assess analytical decision tools & participatory processes and adapt them to specific case studies
WP-leader: Ortwin Renn, UStutt

1. Overview analysis and evaluation of analytical decision tools and of participatory processes (month 15-25)
The state of the art of analytical tools and participatory processes is analysed and evaluated for issues of multi-level governance of natural resources.
2. Evaluating the cases along the evaluation grid (table 2) (month 21-25)
The cases are evaluated to recognise the strengths and weaknesses of actual multi-level governance. The interviews conducted in task 2.1 give first suggestions for this task
3. Deriving appropriate tools and processes for improving selected specific case studies (month 21-30)
The overview analysis (task 3.2) and the wider picture of water and biodiversity governance (task 2.4) are combined in order to derive and further develop appropriate tools and processes for the case studies of WP 4.
Deliverable: Possibilities for using analytical tools & participatory processes in multi-level governance of natural resources

WP 4: Empirically applying refined tools and processes in specific case studies

Duration: month 16-35
Objective: Identify strengths and weaknesses of improved processes and tools
WP-leader: Tatiana Kluvánková-Oravská, SAV

1. Selecting specific case studies (month 16-22)
In co-operation with the non-research partners, appropriate application cases for using tools and processes are selected, considering research interests and the complementarity of cases in the research field. The cases selected should be among the cases experienced in the internship (task 2.2).
2. Empirically applying the proposed improvements (month 23-31)
One of the appropriate tools and processes from task 3.3 is applied to an ongoing case study. If no window of opportunity is open for empirical work, such an improvement is applied hypothetically with interviews.
3. Evaluation of specific case studies according to GoverNat evaluation grid (table 2) (month 29-35)
The strengths and weaknesses of using proposed tools and processes are assessed and evaluated with the evaluation grid.
Deliverable: Case study reports on weaknesses and strengths of novel processes and tools

WP 5: Conclusion and Dissemination

Duration: month 25-48
Objective: Integrate the knowledge and disseminate it to science and policy-making
WP-leader: Felix Rauschmayer, UFZ

1. Integration of results with analysis frame (table 1) (month 25-40)
The results from all WPs are drawn together and integrated. The outcomes of the case studies are compared and put into the wider context of water or biodiversity governance and of governance of natural resources, at the national and European levels respectively.
2. Design and execution of national dissemination strategies (month 29-48)
Partners disseminate the GoverNat results in their countries and in further CEE countries. Fellows design and partly execute national dissemination strategies, complemented by activities of their hosts.
3. Design and execution of European dissemination (month 29-48)
GoverNat results are disseminated at the European level towards science and policy making.
Deliverable: Dissemination of GoverNat results: Improving European multi-level governance of natural resources

3 Training and transfer of knowledge

Chart 1: **Time schedule for GoverNat**

month	1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47
Phases of the project:																								
Preparation phase																								
WP 1: Analysing multi-level governance																								
WP 2: Assessing multi-level activities																								
WP 3: Improving decision-making processes																								
WP 4: Empirical application in case studies																								
WP 5: Conclusion and dissemination																								
Personnel involved:																								
9 Doctoralfellows																								
3 Experienced fellows (econ., law, pol. science)																								
Training and cooperation activities:																								
Schools (number of school)					1			2					3											
Workshop (number of workshop)					1			2					3			4								
Internships (I), conference (C)									I	I										C				
Virtual seminar																								

3.1 Training objectives

The central training objective is to give 9 doctoral fellows 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. GoverNat trains researchers to examine political processes, actors and arenas, to analyse the transaction costs associated with different institutional settings, to improve the implementation of European and national regulations, to develop legitimate structures of good governance, and to design science/policy interfaces which integrate scientific results into decision processes. This training program brings together knowledge from different fields in a novel way and which requires communication skills beyond monodisciplinary exchange. It is designed to assist in digesting the disciplinary, institutional, and cultural/geographic diversity. Doctoral and post-doctoral fellows leaving the GoverNat should be able to:

- develop practically relevant structures of good environmental governance as a result of acquiring interdisciplinary and intersectorial knowledge in two fields of governance;
- transfer their acquired knowledge through interdisciplinary and intersectorial communication to other complex fields of practice and research.

These objectives will be achieved through a training program consisting of a combination of network-wide and individual measures. The program uses innovative methods and approaches specifically designed to develop communication skills, while focussing on substantive project requirements. Fellows should ideally have an interdisciplinary background in social sciences. GoverNat aims at a mix of research questions and fellow backgrounds corresponding to the expertise of the consortium partners (see below table 3).

All doctoral Marie Curie fellows will follow the full research and training work programme. Working on their respective research topics (cp. table 1) will deepen their understanding of all four relevant interdisciplinary research fields: governance, participation, analytical tools and evaluation (cp. B1.2). The GoverNat partners agreed to the following topics in line with their methodical and thematic competences. The questions for the PhD theses of the doctoral fellows will be developed within these topics according to the fellows' competences.

Table 1: **Main research topics of the doctoral Marie Curie fellows**

1. UFZ	Leipzig, Germany	Social, institutional, economic and ecological costs of biodiversity governance – considering monetary and non-monetary aspects of institutional arrangements
2. ECO-MAN	Lisbon, Portugal	Participation in multi-level water governance – developing interfaces between stakeholders, science and policy formulation
3. NERI	Roskilde, Denmark	Multi-level governance and administrative reform of water governance
4. SRI	Leeds, UK	Costs of misfit of scales in multi-level environmental governance
5. UAB ICTA	Barcelona, Spain	Can Coordination of interfaces between European biodiversity research and stakeholders improve science-policy interfaces for biodiversity governance and contribute to halting biodiversity loss?
6. CSW M	Lancaster, UK	The legitimacy of public participation in multi-level governance: a case study of water governance
7. UStutt	Stuttgart, Germany	How to include different types of knowledge and how to manage information, interests and values in participatory processes?
8. SAV	Bratislava, Slovak Rep.	The meaning of institutions in multi-level governance of biodiversity: from government to governance
9. IELM-SIU	Gödöllö, Hungary	The social dynamics of public participation in multi-level governance: a case study of biodiversity governance in Hungary

As shown in table 2, these questions address water, biodiversity and comparative questions, and take up the four challenges of multi-level governance (cp. 1.1). During the preparation of their PhD, each doctoralfellow will co-author with an experienced researcher within GoverNat at least one paper in their research topic in the own discussion paper series and to be submitted to a peer-reviewed journal.

Table 2: **Thematic and methodical foci of doctoralresearch topics**

	Complexity	**Legitimacy**	**Social dynamics**	**Costs**
Water	NERI	CSWM	ECOMAN	
Biodiversity	UAB ICTA	SAV		UFZ
Comparative	USTUTT		IELM-SIU	SRI

The **post-doctoral Marie Curie fellows** have the main task to link and transfer the inter- and transdisciplinary work back to their disciplinary traditions (economics, political and legal sciences, respectively). They identify and harvest the disciplinary wealth of experience produced in the network. Their training consists of (1) participation in the training of doctoral fellows to enhance the post-doctoral fellows' transdisciplinary teaching skills, (2) integration of case study results from a selected disciplinary viewpoint, and (3) long- and short-term exchanges, visits and secondments which seek to guarantee the consistency of research undertaken by the doctoral fellows. The main research questions of the post-doctoral fellows are identified in Table 3.

Table 3: **Main research topics of the experienced Marie Curie fellows**

1. UFZ	Leipzig, Germany	Legal possibilities and constraints for participation in water and biodiversity governance
2. SRI	Leeds, UK	Policy needs on public participation in the governance of biodiversity and water
3. SAV	Bratislava, Slovak Rep.	Socio-economic aspects of environmental governance in transition economies - water and biodiversity governance

3.2 Training measures to be undertaken on a network-wide basis

The GoverNat training programme includes (a) **schools,** (b) **workshops,** (c) **courses on complementary skills,** (d) **a conference,** and (e) **virtual seminars**. All of these are obligatory to all fellows, who contribute largely to their thematic organisation. **Schools** complement local training of fellows by offering an interdisciplinary understanding of environmental governance. Three schools

each lasting a week are organised. Partners contribute to these schools according to their competences. The school proceedings will generate a **curriculum on environmental governance** as a major product of GoverNat. **Workshops** focused on interdisciplinary and intersectorial communication skills take place in conjunction with the schools. Praxis hosts participate in the workshops. **Courses on complementary skills** focus on interdisciplinary and intersectorial skills of fellows and are organised in conjunction with the workshops. Schools, field trips, courses and workshops ensure a common language and understanding of different aspects of multi-level environmental governance. The **conference** will present GoverNat's results to the scientific community, decision-makers and other stakeholders involved in environmental governance. A **virtual seminar** involving all partners is organised (a) to assist preparation of the second and third school and, (b) to discuss nine bi-monthly papers jointly authored by doctoral fellows and experienced fellows or researchers during the seminar phase. Contents of schools, workshops and courses are described below. Timing of training events and praxis internships is indicated in chart 1 and is complemented by individual scientific training and mentoring (see B2.3).

Table 4: **Contents and schedule for network-wide training events**

School 1: *WP1* 5 days, month 9	**Aim**: - Provide a common framework and overview of environmental governance: **Content:** 1) Governance, institutions, policy design and implementation; 2) Environmental decision making in a multi-level system; 3) Legal frame of European environmental governance; 4) Economic properties of natural resources water and biodiversity
Workshop1: *WP1* 2 days, month 9	**Content**: 1) Collect and analyse decision-makers' views on environmental governance and participation (i.e. related EU stipulations); 2) Discuss suggestions for case studies to secure the quality of the case study portfolio. **Course on complementary skills:** Project management and research design
School 2: *WP2, 3* 5 days, month 15	**Aim**: - Acquire an overview of water and biodiv. governance, partic. approaches and decision tools **Content:** 1) Water and biodiversity governance: main challenges. Environmental and social complexities: dealing with uncertainty and ignorance; 2) Tools for science/policy and public/policy interfaces. Decision support instruments: part. approaches, multicriteria analysis, mediated modelling, etc. ; 3) Different perspectives of participation: stakeholder involvement- legitimacy - enhancing democracy - improving decision quality .
Workshop 2: *WP1, 4* 2 days, month 15	**Content**: 1) Analyse past experiences of leading researchers; 2) Select case studies for young researchers 3) Discuss WP 1 deliverable draft (research programme on governance of nat. resources); 4) Revise and rewrite WP 1 deliverable sections on policy. **Course on complementary skills:** Scientific English
School 3: *WP 2, 3, 4, 5* 5 days, month 25	**Aims**: - Establish multi-perspective discussion on methodology and first findings to include inter-sectoral and interdisciplinary aspects in the respective case studies; - Enhance methodological knowledge (primarily of doctoralfellows) **Contents and Partner input** to be adapted according to work in progress

Workshop 3: *WP 2, 4* 2 days, month 25	**Content**: 1) Present and discuss the different case studies; 2) Provide facility for interdisc. training for each member of the network (e.g. comments from researchers with experience in other disciplines/ environmental topics); 3) Discuss WP 2 deliverable draft (state-of-the-art of European water and biodiversity governance), prepare policy brief (prepared mainly by the post-doctoral fellows); **Course on complementary skills:** Presentation techniques
Workshop 4: *WP 5* 3 days, month 31	**Aim**: - Establish first project conclusions; **Content**: 1) Discuss WP 3 deliverable draft (Using analytical tools & participatory processes) 2) Discuss overall GoverNat results for improving European multi-level governance of natural resources and prepare policy brief; 3) Prepare the dissemination of results in an optimal way. **Course on complementary skills:** Interdisciplinary and intersectorial communication

3.3 Individual Scientific Training and Mentoring of the researchers

Individual scientific and intersectorial training and mentoring are provided both within our network together with external institutions. In order to best exploit the networks scientific potential a combination of four elements are used to tailor the scientific training programme to the individual needs:

- Personal **career development plans**,
- **training offers** on complementary and scientific skills,
- longer **stay at a second institute**,
- **secondments**.

The training program acknowledges individual training needs as each doctoral fellow addresses different questions of multi-level governance of water and biodiversity. Each doctoral fellow is guided by a **personal scientific committee** composed of 2-3 experienced researchers from different partner institutes. The committee also assist the fellows to develop a **personal career development plan**. This plan defines the steps of the PhD thesis, the personal career aim of the fellow, and the individual training measures necessary to achieve thesis and career development. The plan will be reviewed every 6 months to assess the fellows' progress. The hosting institutes ensure that **training offers** needed for the fulfilment of the plan can be taken. This includes scientific training within the institute, language training, and training in communication techniques. Doctoral fellows move among the partners to best exploit the network capacities and to enhance exchange of knowledge. Each of them will have a **longer stay** of several weeks with another partner. This exchange enhance their capacity for comparative work by giving first-hand experience of another cultural and institutional context.

Intersectorial training

The network-wide intersectorial training mainly taking place in the workshops is reinforced by three individual elements:

- an **internship** in a committed praxis host,
- the responsibility for **national level dissemination**, and
- through the formulation of **policy briefs.**

Doctoral fellows spend about three months at a praxis host (see annex for a first list) involved in their own case study. This **internship** provide a more profound understanding of the decision-making context and the processes that GoverNat seeks to improve. Thereby researchers can enhance

their capacity to communicate with stakeholders and decision makers and improve their career possibilities. In each country, the doctoralfellow(s) will elaborate a **national dissemination strategy** with the help of an experienced researcher. This might comprise information packages such as the translation of summarised policy briefs, consultations and interviews and the organisation of a small workshop. They thereby acquire further communication and management skills. Formulating research results in common **policy briefs** in a network-wide task for WPs 1-3 trains the fellows for formulating their own results of the specific case study undertaken in WP 4 in case-specific policy-briefs. Such training is essential for a successful national dissemination strategy.

4 Policy impact of GoverNat

4.1 Impact of GoverNat activities on researchers

GoverNat aims at enhancing training and mobility opportunities for European researchers and will contribute positively to the **career** of the participating fellows, either if they continue in research or if they decide to work as practitioners. Researchers trained in GoverNat will not only have experienced international **mobility** in research, but, through their internships, secondments, stays at other institutes and the experiences made in the national dissemination activities will have learned to know and to understand different cultural and national perspectives beyond the research sector. This international and intersectorial experience constitutes a key asset for the continuation of their career. At all levels, political institutions, administrations, think-tanks, research institutes and NGOs alike **need persons with a profound training in European multi-level governance**, especially in environmental issues, to better address the challenges posed by global change – such as biodiversity loss and climate change – to the European management of natural resources with its interlinkages and cross-scale effects. GoverNat does not only train such persons directly, but will facilitate – through delivering a curriculum on governance of natural resources – the subsequent training of similarly educated researchers and practitioners.

Additional to specific scientific training, fellows have the opportunity to develop their skills in networking, languages, co-operation with decision-making authorities and other stakeholders groups, especially through their internships and dissemination strategy, and project or event management. Doctoralfellows directly benefit from the **interdisciplinary** training programme as they will be offered opportunities to gain training and knowledge at their host, but also within the network-wide activities. All fellows benefit from the **intersectorial approach**: it will focus their research towards policy relevance, they will experience the end-users' and intermediate perspectives in their internships. Such experience also facilitates mixed career possibilities as it shows ways on how to systematically use practical experiences in research and theoretical expertise in practice. Young researchers have the opportunity for cross-cultural learning without methodical limitations in GoverNat. They are exposed to diverse ways of doing research in partner organisations and become members of an international forum bringing together key European research groups working on participatory environmental governance.

To sum up, GoverNat will train young researchers to become excellent contributors to an improved environmental governance– and this with an explicit aim to qualify them for work in all institutions contributing to improving governance: research, SME, NGO, or administration. Furthermore, GoverNat creates a network with a durable vocation and capability to train subsequent researchers, and to collaborate on further research projects.

4.2 Integrating disciplines and intersectorial co-operation

Implementing the GoverNat research and training programme has two effects: (1) to improve research on governance of natural resources, and herewith contribute to improving governance itself, and (2) to train researchers in Europe.

In order to reach both objectives, GoverNat overcomes the **fragmentation** that today hinders a sound improvement of environmental governance. This fragmentation is effective in the internal organisation of research, but even more in the delivery chain of research products. The internal research fragmentation comes from existing institutional and disciplinary boundaries and from lack of resources to effectively cross those boundaries. This project provides a unique opportunity to bring together research individuals and groups from different disciplines and different national origins to work collectively on the research area. Nevertheless, research results produced without a clear integration of end users in their production process tend to be not focussed enough to be of practical use, and often remain in the academic sector only. Through the commitment of praxis hosts, GoverNat overcomes this limitation: it includes SMEs which often act as intermediates between research and policy making, and it includes administrations and NGOs as two types of end-users, who determine environmental policy-making to a large extent.

The group as a whole is able to offer a much more specific **interdisciplinary training** in the area than is available today. This will overcome the problem of transfer of fragmented knowledge which exists with issue areas that are inescapably transdisciplinary, such as participatory environmental governance. To specify the interdisciplinary framework drafted in section 1.4, to verify its explanatory force with case studies, and to improve it in one research and training project constitutes a novelty and a chance for improving environmental governance. Systematically involving non-research partners, different disciplines, and a wide variety of countries all over Europe in such a research endeavour is a new approach. A break-through in science/policy co-operation in biodiversity and water governance can be expected. This **intersectorial approach,** directly involving the end-users and intermediate perspectives, improves the policy relevance of research. European training in general will benefit from the offered example of **high quality interdisciplinary and intersectorial European research training**. Opportunities for cross-fertilization of ideas will be manifold.

The involvement of knowledge from the user side (including administration, SME and NGOs) makes GoverNat an exemplary piece of transdisciplinary research. Similarly, it fits to the criteria of "**Science for Sustainability**" as developed by the International Council of Scientific Unions and presented at the Johannesburg WSSD summit.

4.3 Relevance to European environmental policies

One of the four main findings of the Millennium Ecosystem Assessment demands "significant changes in policies, institutions and practices that are currently not under way", but which could partially reverse the world-wide degradation of ecosystems (Millennium Ecosystem Assessment 2005: 1). Links between science and society lie at the heart of research on environmental governance, addressing sustainable development which is a key area of Community policies and actions, as defined by the Treaties and as developed in the European Union Sustainable Development Strategy adopted by the European Council in Göteborg[3]. The recent communication from the Commission to the Council and the European Parliament: "On the review of the Sustainable Development Strategy" names the management of natural resources as one of the key issues "where a stronger impetus is needed in coming years" (European Commission 2005: 5). GoverNat selects two major areas of environmental policy-making, and it will contribute to improved policies in both, water and biodiversity. Biodiversity and water governance deal with safeguarding conditions for a sustainable life on earth, but also have direct influences on the quality of life of those living here and now by changing the political framework for economic and social activities.

GoverNat focuses on participatory and on multi-level governance. Within the European Union, participation is recognised as a central element for general governance orientation, as illustrated by the White Paper on Governance in which participation appears as one of the five *"principles of good governance"* – together with openness, accountability, effectiveness and coherence (European

[3] Council of the European Union (2001b).

Commission, 2001). In the environmental domain, participation was visibly introduced in the 1993 Fifth Environment Action Programme (European Communities, 1993). In its successor – the 2002 Sixth Environment Action Programme – participatory environmental governance has been fully taken on board through systematic inclusion (European Communities, 2002). In parallel, participation is directly integrated in an increasing number of Community legal instruments such as the **Water** Framework Directive (European Communities 2000). The legal frame for European **biodiversity** policy, though, is mainly conceived without public or interest group participation. On the paper, the selection criteria for the Natura 2000 sites were based on ecological or conservation criteria only. In practice, selection of the sites mostly happened in an informal participatory way, addressing mostly local economic interests before reporting the sites. Non-participatory reporting is starting to result in costly court procedures. GoverNat will analyse how the legal frame influences participation, and the effects of participation on information management, legitimacy, social dynamics, and costs. By signing in 1998 and ratifying in 2005 the Aarhus Convention, the European Community recognized the importance of public participation in terms of information, consultation (i.e. public participation in the narrow sense) and access to justice in environmental matters. The convention was signed by all EU member states but not yet ratified by all, let alone implemented. Public participation intended by this legislation seems so far restricted to environmental impact assessment, and integrated pollution and prevention control, and does not cover e.g. nature conservation matters (not in terms of consultation, but as regards access to justice). At least for natural resources, an enhanced participation may lower the implementation deficit of EU environmental legislation, stated by the European Commission in its 2004 Environmental Policy Review. By addressing decision tools and processes for participatory environmental governance, GoverNat directly links in with the Union's priorities and implementation of its policies, and it is a timely answer to the need for further research, training and dissemination on ways of implementing such governance in Europe.

The **multi-level** aspect of the **Water** Framework Directive is evident, and the problem of upstream/downstream riparian water users has been one of the starting points of neo-institutional economics. The European Community tries to catch this problem in its WFD that aims at establishing a framework for protection of inland surface waters, transitional waters, coastal waters and groundwater with the key objectives of enhancing the status of the aquatic ecosystem, promoting sustainable water use, ensuring the reduction of groundwater pollution, and contributing to mitigating the effects of floods and droughts. The WFD intends to impose a harmonisation and co-ordination in water resources management across the whole of Europe. Governments are required to prepare river basin management plans and to let the public participate in this process. As river basin boundaries do not follow political boundaries, a successful integrated management of water resources at the river basin scale often cannot be achieved by local or national action alone. Throughout Europe there are many international rivers, and their management is impeded by differences of interests and of governance structures between the member countries. This applies even more to river basins integrating states not being EU members. GoverNat is directly aimed at facilitating the implementation of the WFD: Its outputs will help to ensure better governance coherence among the Member States. The **multi-level** aspect of **biodiversity** governance has, until now, been framed differently, and focuses more on the apparent contradiction of a global need for biodiversity conservation with a local need for using ecosystem services, often speeding up the decline of biodiversity. As the local power on deciding on the existence of biodiversity is largely uncontrollable, multiple forms of practical participation mainly in the agro-biodiversity field have been institutionalised. The combination of local power with often incoherent European, national, and regional regulations, which target biodiversity conservation or have an impact on it, such as agriculture, transport, housing policies, accentuates the multi-level aspect of governance. Little has been done, though, to conceptualise, test, and evaluate existing and novel forms. This absence might contribute essentially to failing the EU target of halting biodiversity loss by 2010 as well as the effective completion of a working Natura 2000 network. As pointed out by the third Assessment of Europe's Environment (chapter 11.7), the Natura 2000 network is a key instrument for halting the loss of biodiversity. The network is pro-

gressively taking shape at the EU level, with up to 18% of the EU15 territory covered. But the situation still needs to be improved, both in old an new member states. The specific biodiversity-related aim of GoverNat is in full accordance with the recommendations of the OECD Council (21st April 2004) on promoting the conservation of biodiversity, and is a way to implement the ecosystem approach of the Convention on Biological Diversity, especially referring to the first Malawi principle. The European Community Biodiversity Strategy (ECBS), and its reaffirmation in the Message from Malahide, esp. in the objectives 2, 17 and 18, and the Council Conclusions of June 28th, 2004, as well as the reforms suggested for the Common Agricultural Policy (CAP), the Habitat Directive, the Strategic Environmental Assessment (SEA) Directive and many more specific instruments illustrate that conserving biodiversity is an important societal aim within Europe. The aims of GoverNat correspond to the research needs 22 and 28 from the Biodiversity Research Action Plan, adopted by the European Platform for Biodiversity Strategy in April 2005 and calling for research to "develop governance and management options for biodiversity conservation and sustainable use" and to "further develop participatory and conflict management methods", respectively.

GoverNat addresses these challenges by proposing improvements of multi-level biodiversity and water governance through the use of participatory decision tools. We are aware that no solutions to all of these problems can be found in a research project, but are confident to identify the main areas of improvement, using our multi-level analysis of multi-level problems. For putting the results of the project into practice, the involvement of stakeholders at the local, national and international level is crucial. In each participating country, the transfer into practice is ensured either through the participation of stakeholders as project partners or through existing contacts with stakeholders who are not formally included as partners. GoverNat aims at the wide **dissemination** and will implement a dissemination strategy (WP 5) articulated along different target groups, including national or local workshops. A special effort will be given to disseminate results into CEE countries and to train doctoral fellows in dissemination (see B4.4). Fellows will be trained in science/policy interfaces, and will undertake national dissemination strategies as an integrated part of their research. This will enhance the chances that future projects undertaken by the GoverNat alumni will help to bridge the gap between science and policy.

4.4 Regional Integration

GoverNat includes two research partners and two praxis hosts from rather new member states and one praxis host from a new neighbouring country (Belarus). Integrating the different experiences in environmental and participatory governance in EU is a major aspect of GoverNat. This is relevant in particular in East- and Central-European countries, where decision making is affected by 40 years of command and control (top-down) approach, and where bottom-up processes are still relatively poorly developed. In the course of their work on specific case studies, the doctoral fellows in GoverNat will develop specific ties with local, regional, European or even international decision-making institutions. This will allow for direct integration of the research in policy-making areas at various levels. Including a partner from a new EU neighbour state, will on the one hand demonstrate the need for and difficulties in environmental co-operation between EU member states and non-member states. Furthermore, due to its very weak democratic tradition, it constitutes an extreme example in Europe for governance modes, especially participation, and herewith accentuates the focus on the differences between Western European countries and Central and East European countries in environmental governance.

5 State of the project

All positions of doctoral fellows have been filled in a two-level procedure, scientists from the partner institutes are jointly writing first review articles on the topic to give fellows (and other governance students) a good basis for their respective research projects, and prepare the first of the three schools taking place in July in Leeds, UK.

6 Annex: Partner List: Research partners and praxis hosts

The GoverNat consortium is constituted by contractual research partners and by committed praxis hosts.

List of Contractual Research Partners:

Part nr.	Participant Organisation legal name and Department	Disciplinary /activity orientation	Type of activity	Country
1.	**UFZ**, Centre for Environmental Research, Division of Social Sciences & Dpt. of Conservation Research	Economics, political, legal sciences, ecology, hydrology	Research	Germany
2.	**ECOMAN-FFCT**, New university of Lisbon	Ecol. management, analytical tools, economics	Research	Portugal
3.	**NERI**, National Environmental Research Institute	Political sciences, ecology, hydrology	Research	Denmark
		Water management	Admin	Denmark
4.	**SRI**, Sustainability Research Institute, Leeds University	European policies, multi-level governance, ecol. economics	Research	UK
5.	**UAB-ICTA**, Universitat Autònoma de Barcelona (UAB) - Institut de Ciències y Tecnologia Ambientals	Economics, ecology	Research	Spain
6.	**CSWM**, Centre for Sustainable Water Management, Lancaster University	Sustainable water management, philosophy, political sciences	Research	UK
7.	**UStutt**, University of Stuttgart, Research Unit for Risk, Governance and Sustainable Technology Development	Participatory processes, sociology	Research	Germany
8.	**SAV**, Slovak Academy of Sciences, Institute for Forecasting	Economics, rural development, biodiversity	Research	Slovak Republic
9.	**IELM-SIU**, Institute of Environmental and Landscape Management, St. Istvan University	Economics, particip. rural development, agro-biodiversity, land use planning	Research	Hungary
10.	**IREAS,** Institute for Structural Policies	Economics, rural development, networking	SME	Slovak Republic

List of Committed Praxis Hosts:

1.	**SERI**, Sustainable Europe Research Institute	Economics, European governance, decision support tools	SME	Austria
2.	**Symlog**, Institut Symlog de France	Social psychology, risk communication, participation	SME	France
3.	**INAG**, Instituto Nacional da Água	Water management	Admin.	Portugal
4.	**SRNAP**, Slovenský Raj (National Park)	Biodiversity management	Admin.	Slovak Republic
5.	**Ecoproject**	Environmental Research	NGO	Belarus
6.	**BUND**, Bund für Umwelt- und Naturschutz	Interest group on biodiversity and water policies	NGO	Germany

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