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Examining Processes or Outcomes? – Towards a Combination of Evaluation Concepts in European Environmental Governance

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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);
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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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**Examining Processes or Outcomes? –
Towards a Combination of Evaluation Concepts in European
Environmental Governance**

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Abstract:

Evaluating environmental governance processes is a precondition for their improvement in contexts of change. In order to do so, one can (1) examine the outcome of a governance process, which consists of outputs and their consequences, or (2) look at the governance process itself. Outcome-oriented and process-oriented approaches have different strengths and weaknesses. This paper discusses the challenges associated with both options when applied to European biodiversity and water governance – namely the implementation of the Habitats and Water Framework Directives.

Current evaluation practice focuses mainly on outcomes. Can the process-oriented approach reduce or compensate for the weaknesses of outcome-oriented evaluation? We argue that there are three reasons why it makes sense to combine both approaches: a normative reason, relating to good governance; a substantive reason, relating to the complexity of governance; and a third, instrumental reason concerning the governance cycle. A combined approach makes it possible to evaluate governance processes convincingly with regard to all criteria associated with ‘good governance’. This paper also describes some of the challenges posed by such a combination; these require particular attention, given that existing concepts are not yet sufficiently sensitive to the distinctions between process and outcome orientation.

Keywords: Evaluation, water governance, biodiversity governance, participation

1. Introduction

European environmental policies prompt national and sub-national governments to change the way they manage their natural resources. In this article, we look at the implementation of two European environmental directives: the Water Framework Directive (WFD) calls for “good status” of European fresh water bodies by 2015, while the Habitats Directive sustains the EU-wide network of protected areas, Natura 2000.

Both directives require broad participation by stakeholders and cooperation between government actors from various sectors and across several jurisdictional levels. As settings differ across Europe, it is not clear how to design EU-wide rules that will guarantee their effective implementation at the level of protected areas and river basins. Where the issue is complex and settings are heterogeneous, blueprints do not work; hence the design and evaluation of specific governance processes become indispensable¹. The evaluation of governance processes is aimed at providing information about, learning from and improving governance processes, so as to enhance the fit between policies (and the administrative structures that sustain them) and the features of the social-ecological systems they address (e.g. Young 2002). In addition, EU member states have committed themselves through the Aarhus Convention (2001) to respecting a set of normative requirements for policy formulation and implementation. In this context, evaluation makes it possible to monitor compliance.

Research on governance has already produced a rich body of literature on the practice of evaluation (Rist and Stame 2005, Furubo et al. 2002), and on designing and evaluating processes of stakeholder participation (Webler & Tuler 2006a, Abelson and Gauvin 2006, Branch & Bradbury 2006). Furthermore, sets of criteria for good governance abound, both in academic literature (Abrams et al 2003, Knill 2004) and in policy documents. Good governance, according to the European Commission, is underpinned by five universal principles: *openness*, *participation*, *accountability*, *effectiveness* and *coherence*. Each principle is important for establishing more democratic governance. They [...] apply to all levels of government – global, European, national, regional and local.” (European

¹ By ‘governance processes’ we mean the interaction of individuals and institutions, public and private in implementing the directives (cp. Commission on Global Governance 1995).

Commission 2001). Challenges to evaluating governance processes are debated in the literature: they address, among other things, the evaluator's perspective (ex ante vs. ex post vs. ongoing); the question of who takes part in defining the aim of the evaluation and the selection of criteria (Sullivan & Stewart 2006); the organisation of the evaluation exercise itself (Steurer 2007); and the tension between a scientific realist and social constructionist worldview (Taylor & Balloch 2005). In the case of the two directives, the interplay of multiple governmental and non-governmental actors from various sectors and across several levels poses additional practical and methodological challenges (Galbiati et al. 2008, Dietz & Stern 2008).

How can we know whether a multi-level participatory governance process for implementing the WFD or the Habitats Directive is adequate in a specific setting? In this article, we attempt to provide a partial answer to this question by examining two different approaches to evaluation: outcome-oriented and process-oriented evaluation. Both evaluate governance processes ex-post or while ongoing, the former by looking at its outcomes and the latter by analysing features of the process itself.

What does it imply when an evaluation focuses on the quality of the process itself, on its output (e.g. a management plan), or on the consequences the process has for the issue at hand, i.e. water quality or nature conservation? We first explore current practice, looking at the selection of Natura 2000 sites and at WFD pilot projects (Section 2). We show that governance processes are not only complex but also highly contingent on the degree of success in implementation – a fact which is not reflected in current evaluation practice. In Sections 3 and 4 of the article we take up theoretical concerns about outcome-oriented and process-oriented evaluation. Comparing some of their features, we propose in Section 5 a synthesis of both approaches.

2. The implementation of European biodiversity and water policies

Implementing the Habitats Directive

European **biodiversity** policy has evolved considerably over the last three decades. During the 1970s, conservation policies such as the Birds Directive (1979) tended to be rather top-down and science-driven and were geared towards single species. Explicit references to sustainable development occurred increasingly from the early 1980s onwards until the adoption of the Habitats Directive in 1992, signalling a more systemic framing of conservation. Since then, the politics surrounding the establishment of the Natura 2000

network, a major part of the Habitats Directive, has witnessed a gradual shift from administrative hierarchy and exclusively ecological criteria towards attempts to democratise biodiversity governance, both with regard to the policy processes and the policy goals. While the selection criteria for Natura 2000 sites still focus on protection only – the directive provides lists of species and biotopes to be preserved – the formulation of management plans for the selected sites currently taking place is to be organised in a participatory way. This makes sense for a number of reasons. First, effective biodiversity conservation in Europe relies largely on collaboration with (farming) landowners; second, land tenure and land use is often fragmented because Europe is densely populated; and, third, a significant proportion of Europe's biodiversity has developed in traditional agricultural landscapes. Hence, Natura 2000 sites are not so much about setting aside islands of wilderness but rather about co-managing areas within biologically diverse landscapes in which humans play an integral part.

What was the practical experience with this directive? National authorities are free to organise the required processes in ways that seem appropriate to their institutional configuration. In many countries – e.g. Germany, Finland, France and Spain – the rather non-participatory selection of Natura 2000 sites has stirred up major conflicts between the sub-national authorities in charge of selecting sites, nature NGOs, and the farmers and mayors affected by this selection; it also subsequently caused friction between the EU and national authorities, which failed to present complete site listings on time. In Finland, for example, general EU scepticism and poor communication about the policy and its implications triggered national protests and hunger strikes among farmers – despite the fact that only 3% of the sites selected for Natura 2000 were not already protected under national legislation (Hiedanpää 2002, Björkell 2008). In France, the selection process had to be restarted twice, most recently in a participatory and more bottom-up way (Alphandéry and Fortier 2001, Pinton et al. 2006). In Germany (and, following this example, in many new Member States), nature protection NGOs by-passed the national and sub-national authorities and submitted to the European Commission so-called 'shadow lists' of sites eligible for selection (Weber & Christophersen 2002).

One reason for these difficulties is that the time and resources allocated by governments for involving stakeholders in the selection process were generally insufficient. A second reason is that, as selection preceded the formulation of concrete goals for the sites, this European project generated a considerable amount of uncertainty about the consequences of Natura 2000 designation: neither the administrations nor any other actor concerned had sufficient clarity about the management efforts that would be needed, the restrictions on socio-economic

development that would arise, or the financial resources that would be made available. While we cannot attribute responsibility for these difficulties to a single group of actors, such as the EU bodies involved or national governments, it becomes clear that the (sub-)national processes of implementing EU policies cannot be easily reshaped according to norms of participation, especially where such policies imply conflicts of interest and a high degree of uncertainty. This is exacerbated by the dynamics at work across the multiple jurisdictional levels involved in implementing and reporting back. In consequence, the conflicts about site selection have further reinforced calls for meaningful stakeholder involvement in formulating management plans (European Communities 2005, Rauschmayer et al. 2008) – and it can be expected that (sub-)national governments will dedicate more attention and resources to these processes. Overall, current practice can be characterised as a functional approach to participation (Renn 2008): the government selects in a rather top-down way the Natura 2000 sites whose effective protection should then be organised in a bottom-up way. It can be expected that this will be neither efficient nor effective.

Which form of evaluation is foreseen in the Habitats Directive? Evaluation requirements focus on outcomes only. During the selection phase, the most popular indicator was the percentage of national territory placed under Natura 2000 protection (http://ec.europa.eu/environment/nature/natura2000/barometer/index_en.htm). However, data gaps and political pressure often gave rise to listings which did not comply with the underlying goal of the Directive to conserve representative and viable samples of all European biomes. The site selection process as such was not subject to evaluation, and the complete Natura 2000 network, including the management plans, will again be monitored according to its effectiveness with regard to the conservation of the species and ecosystems listed in the Directive.

Implementing the Water Framework Directive

Rather like biodiversity policies, European policies on **water resources** have gradually moved from a focus on technical issues to an integrated approach over the last few decades. The Surface Water Directive (1975) and the Drinking Water Directive (1980) set binding quality targets for particular water types. Then, an emissions limit approach was developed to complement these policies, e.g. the Urban Wastewater Directive (1991). In February 1996 the formulation of a Water Framework Directive (WFD) was recommended, in response to the widely felt need for a more comprehensive approach to water policy; a broad consultative process informed this legal project, which came into operation in late 2000.

The WFD introduces innovative practices aimed at protecting aquatic and terrestrial ecosystems and encouraging sustainable water management with regard to both quantity and quality (European Commission 1997, 1998). The key objectives of the WFD are to enhance the status of the aquatic ecosystem, promote sustainable water use, ensure the reduction of groundwater pollution, and contribute to mitigating the effects of floods and droughts – thereby achieving “good water status” by 2015. The directive requires member states to establish institutional structures for governing water at the level of each river basin. At this level, public participation is required by the WFD, which distinguishes between *ensuring* public information and consultation, and *encouraging* active involvement of stakeholders in river basin management (RBM). Article 14 of the WFD calls on national governments to delegate some of their regulatory capacity both upwards to the EU level and downwards to the regional/local level. This shift leads to scale-dependent, multi-level forms of water governance (Swyngedouw et al. 2002).

European states vary in their capacity to adopt this shift. Countries like the UK, for example, which have pre-existing institutions (such as regional river authorities) and well established mechanisms for supporting or facilitating participatory processes, are more likely to follow the European water governance agenda than member states with more hierarchical governance structures, such as Greece - as various documents and reports indicate (Galbiati *et al.*, 2008 and 2005; PRB, 2007; De Stefano, 2004; Jordan and Liefferink, 2004).

The WFD requires that reporting be carried out on participatory processes, including an assessment of the extent to which stakeholder input changes the RBM plan. However, the guidance document concerning public participation in the WFD (EC, 2002) does not specify the tools or methods to be used for evaluating participation. It does offer some general recommendations, however: allocating sufficient time and resources to evaluating a participatory process; conducting this evaluation while the process is still ongoing; involving a range of stakeholders in the evaluation exercise itself; and using both formal and less formal evaluation methods according to the circumstances.

A series of guidance documents were developed as part of the 2001/2002 Common Implementation Strategy of the WFD². Set up on a project basis, a network of 15 Pilot River Basins (PRB) was established for testing these guidelines and for identifying further technical and managerial problems when implementing the WFD. In particular, the pilot cases were intended to provide governments with concrete examples of how to design and facilitate participatory RBM – a core feature of the WFD. The guidance documents also highlighted the

² http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/guidance_documents

importance of evaluating processes and outcomes during the testing phase, but without stipulating any specific mechanisms to do so.

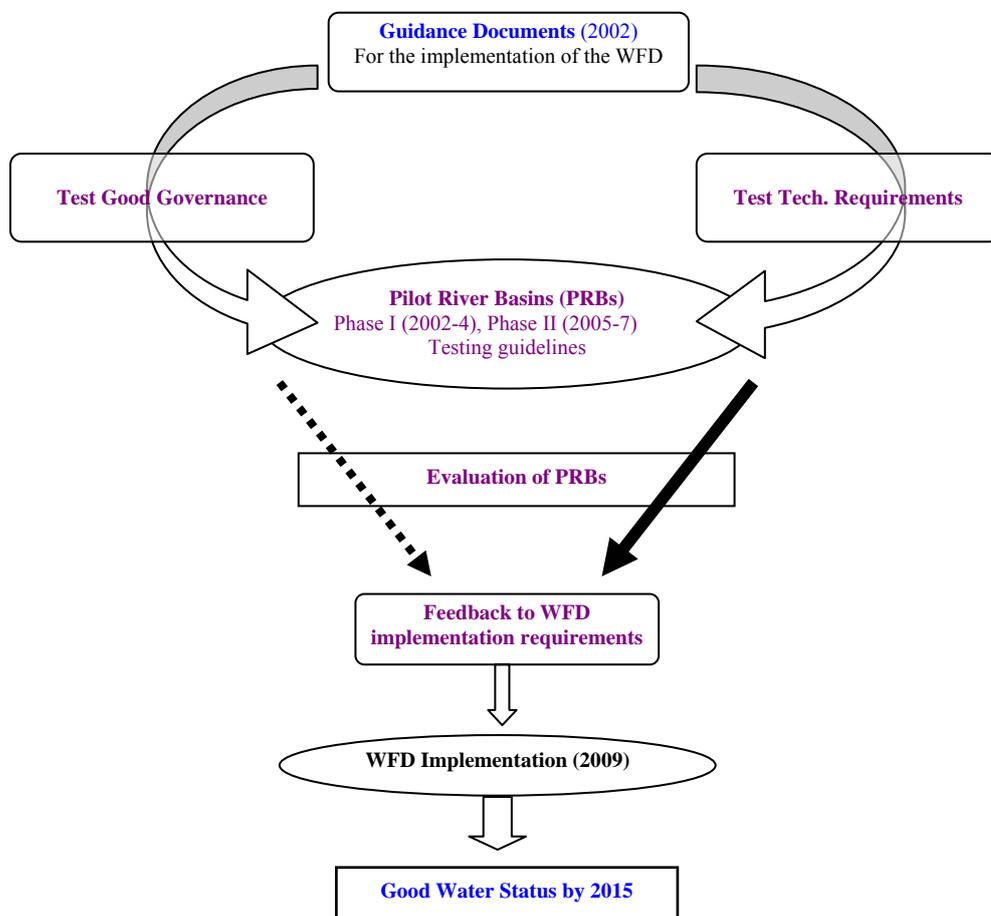


Figure 1: The WFD implementation process. The dotted line of the feedback arrow indicates the poor evaluation and reporting on the participatory processes in pilot river basin projects so far.

During a first phase (2002-2004) the PRBs focused on the long-term development of River Basin Management Plans. PRBs were encouraged to initiate participatory processes as soon as possible in the process. In practice, though, only 2 of the 9 PRBs testing the specific guidance document on participation (EC, 2002) involved stakeholders at an early stage. During the second phase of the project (2005-2006), PRBs focused on different aspects of implementation of the WFD, such as on reporting, chemical pollution, and agriculture. In principle, participation was acknowledged as a key ingredient for many RBM-related tasks – although conducting participatory management was considered a challenging task. According to the reports of the PRBs, there was insufficient time to evaluate the public participation measures taken during the first project phase while, later on, only preliminary assessments took place (Galbiati et al. 2008, PRB 2007, Galbiati et al. 2005). This is in line with the WWF’s conclusion that the evaluation of participatory processes was not significantly

advanced during the PRB project (De Stefano, 2004; WWF 2003a). In a more recent examination of WFD implementation in all EU member states, major shortcomings became evident with regard to WFD Article 14 on public participation (EC, 2007).

EU member states are still struggling to achieve the goals concerning public participation in the development of Natura 2000 management plans and in WFD river basin management. Governments have to cultivate a more sophisticated understanding of the required participatory practices that have become structural elements of the EU's environmental policies. One necessary component in how to serve this ambitious aim is an adequate evaluation of the relevant governance processes.

Box 1: The case of Pinios River Basin – Thessaly region, Greece

The Pinios PRB project in Greece¹ was in operation between 2003 and 2006. The project highlighted some indicative problems for the Greek context, and yet despite the difficulties encountered, the project was generally considered to be a success, as most targets were met and some useful recommendations made (Mahleras et al. 2007, PRB 2007, Galbiati et al. 2005, YPEHODE 2005).

The assessment and evaluation of public participation in this case are of particular interest. According to the initial document produced by the competent authority for the project, the Ministry of the Environment (YPEHODE 2003), public consultation and participation by local stakeholders and NGOs were seen as key requirements for the successful implementation of the project. However, the Ministry later reconsidered this stance, stating that “Public Participation (PP) may complicate negotiations, participatory processes could take a lot of time and money and there’s a lack of willingness to participate” (YPEHODE 2005). This position was reflected in the process itself, as only a few stakeholders and NGOs were closely involved in the project. Other regional authorities and stakeholders had also expressed their interest but their role remained rather limited. Local authorities, including water utilities, had been only briefly introduced to the whole project, and their awareness of the WFD’s requirements - and even general features of it - remained limited while the public remained uninformed (Zikos et al. 2005).

Unsurprisingly, the NGOs and stakeholders consulted stated that public participation was one of the key areas in which the project suffered greatly. Moreover, there was much concern about the inadequate involvement of local authorities, as this was seen as jeopardizing the successful implementation of the WFD ‘on the ground’ (WWF 2003a). All the PP criteria were evaluated as “poor” by the WWF (2003b), while participatory practices (identified as information, public consultation and active involvement tools) were assessed as very limited or non-existent (De Stefano 2004). Even data collection proved a rather problematic issue since information was scattered and fragmented, and in many cases the holders were unwilling to make it public (Mahleras et al. 2007).

However, these procedural problems relating to participation did not visibly impact the outcome of the PRB – and are hence barely reflected in the generally outcome-oriented assessment of the PRB projects and in their recommendations for future action (Galbiati et al. 2008, PRB 2007, Galbiati et al. 2005). Nonetheless, on 31 January 2008, Greece was condemned by the European Court of Justice for failing to comply nation-wide with the basic technical requirements for assessing the impact of human activities on surface and ground waters (art.5) and to submit summary reports in respect of certain river basin districts (art.15). Poor evaluation practice concerning participation was not at all considered. However, underlying initiatives and processes that took place during the PRB and that could be evaluated positively in a process-oriented way, only now show some results in terms of improved effectiveness of local governance in the shadow of hierarchy, revealing a dynamic at local and national level, that was not grasped in the evaluation of the PRB (e.g. mobilization of stakeholders, softening of conflicts, importance of informal governance structures, “democratization” of certain decision making processes, elements etc.) (Zikos and Dimadama, 2008).

¹ http://www.minenv.gr/pinios_river.html

3. Outcome-oriented evaluation

The previous section summarised the governance processes related to the implementation of the Habitats and Water Framework Directives and illustrated the current practice of outcome evaluation. This section deals with the challenges that occur if we seek to evaluate a governance process only by its outcomes. The outcome of a governance process can be analysed with regard to its direct *outputs* (e.g. a law or a management plan) and the *consequences* of such outputs with respect to the objectives being targeted (for example improving ecological status or biodiversity).

Outcome-oriented analysis is a widely accepted approximation for assessing environmental policies and governance processes. This evaluation is often applied within the DPSIR analytical framework (Maxim et al. forthcoming, Smeets and Weterings 1999, Gabrielsen and Bosch 2003). The DPSIR framework, an iterative cycle depicting environmental change in terms of Driver – Pressure – State – Impact – Response, is extensively used by organisations dealing with sustainability issues (such as the European Environmental Agency), by EUROSTAT, and also by researchers working in the field. It is appealing to policy actors because it pictures systemic change in a clear way and makes it possible to distinguish between policy options that may seek to influence the driver, alleviate direct pressure, or focus on changing the impact on society (Smeets and Weterings 1999, Giupponi 2005).

Uncertainty is a major challenge for the outcome-oriented evaluation of governance processes (Beierle and Cayford 2002). Often, we cannot establish a clear explanatory link between the output, i.e. the measure adopted, and the consequences that occur in the system to be governed (Conley and Moote 2003). It frequently escapes our understanding, for example, whether increasing forest cover within a protected area is the result of (i) a sound management plan which is closely adhered to, (ii) a poor management plan that is fortunately not being fully implemented (e.g. due to a lack of resources), (iii) a reduction in external land use pressures, (iv) some twist in the population dynamics of the bark beetle, or any other fortuitous positive consequences triggered by completely different factors than those foreseen by the management plan in the first place.

We identify scale issues and side effects as critical to governance evaluation in the context of uncertainty about causal linkages:

1. Are outcomes of governance processes and the structures of the governed issue on the same spatial scale (Young 2002)? “Most issue domains have a multi-scale nature of bio-geophysical and human systems, with the interactions between them across scales”

(Farrell and Jaeger 2005: 26). Hence, a governance process engenders consequences on various scales (Berkes 2002, Görg & Rauschmayer, in preparation). However, evaluating outcomes on different spatial scales is a costly and time consuming undertaking, and the results may be so diverse that it is not possible to present any overall conclusion.

2. In order to attribute changes in the system to a specific governance process we have to assess its influence over time. Long-term effects can be seen only after several years; the ex-post character of an outcome-oriented evaluation, for instance, may mean that guidance comes too late to make changes in the governance scheme that would avoid severe negative consequences. For example, conservation management (as in the Natura 2000 network) takes place in the context of continuous biodiversity loss, a phenomenon which requires adaptive management based on timely – albeit provisional – information. How, then, can the evaluation scheme take different time scales into account, such as rapid policy changes affecting slowly evolving ecological systems? When should an evaluation take place, and how often? Systemic approaches (Berkes 2004, Farrell 2007, Holling 2001) would suggest that adaptive iterative evaluation is useful as an ongoing learning exercise.
3. The outcome of a governance process is hard to isolate: a range of influences from multiple sectors intervene. Likewise, any one governance process prompts the creation of side effects in other settings and policy arenas. An outcome-oriented evaluation has to consider diverse causal linkages with a broad range of sub-systems, from tourism to the paper industry. We are unable fully to understand these linkages, due to ignorance and to a lack of control over known variables. If ‘side effects’ in other sectors are not captured, the evaluation risks becoming seriously biased and any number of intervening variables could be the major cause for the changes that occur, other than the intervention.

Uncertainty about causal linkages crops up as a problem in both the assessment of direct outputs and the evaluation of consequences in the system. If we look at the consequences we fail to assess the degree to which a specific intervention is responsible for the changed situation. If we examine the direct outputs of a governance process, i.e. the laws, rules, programmes, activities and budget allocations produced by the process, we will not be able to determine whether the outputs have had the intended effects.

Causal uncertainty also challenges comparisons of outcome-oriented evaluations across multiple cases: indicator values may become virtually meaningless when an indicator is appropriate in one setting but not in another. Comparisons based on large samples may disclose more valid correlations than those using small samples, as intervening variables tend to level off against each other. But for a single case evaluations geared towards such comparisons can be quite misleading. For example, if no distinction between different water uses is made, rather green Germany has three times more water stress than, say, Greece – at least according to the global 2008 Environmental Performance Index (Neßhöver et al. 2007). This makes little sense and emphasizes the need to develop situation-specific indicators for the WFD.

4. Process-oriented evaluation

Good processes contribute to good governance in different ways (Stirling 2006). First, good processes improve the substantial quality of the output through more and better information management and learning effects within the process. Second, a good process is instrumental for the implementation of the output – legitimate processes stand a better chance of getting their results accepted. The third argument, mentioned in the introduction and reinforced by the Århus Convention, focuses on the normative aim of certain characteristics of governance processes, such as openness and participation.

As mentioned in the second section, a common denominator of European water and biodiversity governance is the high degree of cooperation required among actors from different sectors and across various policy levels. Generally speaking, hierarchical modes of governance are not helpful for implementing decisions smoothly because the processes which produced them are often perceived as lacking in legitimacy (Engelen, Keulartz and Leistra 2008, Scharpf 2004). This became very clear, for example, in France, where the top-down designation of Natura 2000 sites provoked widespread protest (Alphandéry and Fortier 2001, Pinton et al. 2006).

As a high degree of cooperation is required between multiple actors, we focus here on participatory governance processes in environmental assessment and decision making. There are two main sources for the assessment criteria of a good participatory decision process (Abelson and Gauvin 2006, cp. Renn 2008 for a broader and updated overview): (a) political philosophy and (b) empirical research.

(a) Political philosophy has theoretically deduced diverse sets of evaluation criteria for which moral validity is claimed. We can only refer to a small sample here: Webler and Renn (1995) draw on ethical-normative and functional-analytic arguments for participation. “Taken together, they suggest that a public participation should manifest the general goals of fairness and competence” (Webler 1995: 38), as this guarantees normatively and substantively good processes. Drawing on Habermas’ work on **communicative rationality** (Habermas 1984, 1987), Webler defines 9 criteria for fairness and 25 criteria for competence.

Cooke (2000), by contrast, rejects most of the substantive and normative arguments for more deliberation. The only argument she retains as valid is that “**deliberative democracy** elucidates an ideal of democracy that is most congruent with ‘whom we are’” (ibid.: 954). This ideal comprises concepts of knowledge, the self and the good life. Cooke’s notions of reciprocity, transformation of preferences, and intersubjective autonomy can be translated into criteria for evaluating deliberative processes.

Pluralism with a “priority for democracy” (Bader and Engelen 2003: 396) constitutes the basis for constructing an evaluative framework for dealing more effectively with the existing institutional diversity. Bader and Engelen base their suggestions on criteria proposed by E. Ostrom (1996), proposing legality, democratic legitimacy, justice, efficiency, effectiveness and perhaps sustainability as criteria.

(b) A second source of assessment criteria for participatory processes comes from empirical research. Webler and colleagues focus on the **perception of stakeholders** and identify different perspectives on what the stakeholders consider to be “good process” in different contexts in North America (Webler and Tuler 2006b, Webler et al. 2001). These perspectives aim either at science-based stakeholder consultation, egalitarian deliberation, efficient cooperation, or informed collaboration. Webler and colleagues now challenge the concept of universally valid criteria for a sound participatory process and emphasize the critical nature of context (Webler and Tuler 2006b). In addition, various other sets of criteria combining general assumptions on good processes have been drawn from different debates and practical experience (e.g. Branch and Bradbury 2006, Dietz & Stern 2008).

Webler claims that for “new models of public participation or novel applications of old ones, procedural rules are the only basis for judgment” (Webler 1995: 42). However, irrespective of the set of evaluative criteria and of their sources, we identify at least two challenges to looking exclusively at processes in overall governance evaluation:

1. There are methodological difficulties – the normative basis is not clear and can never be so, as there is no clear subject-object divide. Process evaluators are always part of what they evaluate and cannot abstract from their own social constituency. Therefore, the importance of the normative assumptions that form the foundation of the evaluation is greater than in outcome evaluation, and it becomes difficult to objectively evaluate any selection of evaluation criteria.
2. Identification of the process to be analysed is not straightforward. Usually, different processes take place simultaneously at different levels and in different sectors. This makes it difficult to select the right level(s), sector(s) and time frame(s). For instance, when evaluating the process that led to the selection of German Natura 2000 sites, one might with good reason include, exclude or focus on the informal interactions between NGOs and the EC (Weber and Christophersen 2002).

5. Towards a Synthesis of Evaluation

Dietz and Stern (2008) distinguish the ongoing discourses upon the evaluation of public participation in two broad categories, depending on when and what to evaluate. As the process of participation goes through various stages from problem formulation and design to decision making and implementation and finally to the impact on the society and the environment, evaluation can be done at many different points in the process. But while public policy is ultimately concerned with the final impact on issues like environmental quality and economic activity and secondly with the output that implementation of policies relies on (like changes in regulations, laws, and policies and agencies' commitments and decisions), public participation processes do not influence such impacts and output directly or in a clear causal way. Especially concerning environmental quality, the effects of public participation are typically indirect with only few exemptions depending on the power of the participants to implement decisions, negotiate rule-making or when collective governance of common pool resources is feasible (Ditz and Stern 2008, Leach and Pelkey 2001, Ostrom 1990). As a result of the above particularity, Dietz and Stern (2008) argue that when a participation process is basically advisory (like in the WFD for example), results casually linked to the process can be observed only at, or shortly after, the end of the process. Such immediate results would include outputs, such as for example completing an assessment, and immediate outcomes, such as changes in attitudes, beliefs, knowledge and relationships of the participants. Most of the research and analysis so far has focused on the causal link from public participation activities to the results immediately expected. Indeed it is much more feasible to evaluate

participatory processes on this basis than face the challenge to analyse the entire causal chain. Despite the obvious value of an evaluation that would cover the whole causal chain, such an effort would require much more substantial investment in research on environmental decision making (Dietz and Stern 2008). Some of the above challenges on the evaluation are reflected in the public participation literature highlighting the lack of consensus between researchers and practitioners alike on which results are most important.

What has become clear thus far is that outcome-oriented and process-oriented approaches have different strengths and weaknesses. As shown in Section 2, current evaluation practice focuses mainly on outcomes – can the process-oriented approach reduce or compensate for some of the problems associated with outcome-oriented evaluation? We argue that three reasons speak in favour of combining both approaches: norms of good governance, the knowledge gaps involved, and the impact of evaluations within the governance cycle.

Normativity of good governance

The first reason for combining outcome- and process-oriented approaches relates to norms of good governance. In the EU context, good governance processes are those that comply with the five principles of “*openness, participation, accountability, effectiveness and coherence*” (EU 2001). Other definitions of good governance include similar lists of principles (e.g. UNESCAP 2007, UNHCR 2000). These principles address characteristics of the process itself and of its outcomes. To render them operational they can be translated into: (1) criteria referring to the process itself, such as the spectrum of stakeholders included, the mechanisms applied to generate conclusions or decisions, or responsiveness to changes; (2) criteria referring to the direct output, such as compatibility (of the measures taken/conclusions drawn) with laws and with budget constraints; and (3) criteria referring to the consequences of such measures, i.e. assessing their effectiveness, efficiency and equity implications by looking at the changes induced by them.

Furthermore, some governance criteria are better measured through outcome-oriented approaches, others through process-oriented ones. Measuring the *effectiveness* of a compensation scheme for use restrictions in a Natura 2000 site is best done by examining ex-post the payments made in the light of the actual changes brought about. On the contrary, the degree of ‘inclusion of stakeholders’ in a planning process is hard to assess by looking ex-post at who signed the plan in the end – other criteria referring to the quality of the planning process are required, e.g. the distribution of speaking time or the uptake of new concerns raised during the process. Still other criteria, e.g. accountability, can be understood and

assessed from both perspectives: who is accountable for the process, or, does the output of the process state clearly who is accountable for the implementation? Is the concern for accountability responded to effectively? Thus, for the EU principles of good governance, a combination of both evaluation approaches seems to us more appropriate for capturing the required evidence than any single approach.

A heuristic framework developed by Wittmer and colleagues (2006) which presents a set of evaluation criteria is adapted in Table 1 to indicate their respective focus on process or outcomes.

The framework was developed for the purpose of assessing environmental conflicts and evaluating methods of environmental conflict resolution (Wittmer et al. 2006, Rauschmayer and Wittmer 2006, cp. Adger et al. 2003 for another, more conceptual approach).

Main criteria	Sub-criteria	Focus
Knowledge Management	<ul style="list-style-type: none"> • Integrating different types of information • Dealing with uncertainty • Dealing with complexity 	Mainly process-oriented
Social dynamics	<ul style="list-style-type: none"> • Changing behaviour, changing perspectives/ learning • Agency/ empowerment • Respect/ relationship • Facilitating convergence or illustrating diversity 	Mainly process-oriented
Legitimacy	<ul style="list-style-type: none"> • Legal compatibility and integrating procedural knowledge • Inclusion/ representation • Transparency of rules and assumptions for insiders and outsiders • Accountability 	Process-and output-oriented
Effectiveness	<ul style="list-style-type: none"> • Ecological state • Cost-effectiveness, including costs of the process 	Oriented towards consequences

Table 1: **Criteria for evaluating governance processes, related to process/outcome (adapted from Wittmer et al. 2006)**

Framework criteria cover four different themes which are key to environmental governance processes and which together can only be employed in a combined approach towards evaluation. Knowledge management refers to the various and distinct ways in which the various knowledges are elucidated and integrated, and how the governance process addresses issues of uncertainty and ignorance. Social dynamics, as the second mainly process-oriented criterion, is of special significance in participatory processes involving individuals at the local level. Legitimacy combines process- and output-oriented indicators and deals with accountability, representation issues, rule of law, and transparency. With regard to the fourth

criterion, effectiveness, outcomes are at the centre of attention and emphasis is laid on the state of the system to be governed.

This framework is intended as a heuristic device, guiding empirical research. It has been used for evaluating participatory processes in fisheries management (cp. Berghöfer et al. 2008), and also in the context of conflicts related to species conservation within the EU (Rauschmayer et al. 2008). It can be adapted to different contexts, and is currently being further developed in the European Training and Research Network GoverNat (www.governat.eu) for water and biodiversity governance.

Currently, only a small number of the requirements of good governance – whether in line with the European Commission’s White Paper (EC 2001) or with the table above – are fulfilled by evaluation efforts in biodiversity and water governance. Issues of knowledge management and social dynamics are absent, and legitimacy and even effectiveness are dealt with only partially.

Substantively addressing knowledge gaps

There is a second reason for combining outcome with process-oriented evaluation: to a certain extent, both approaches can compensate for each others’ uncertainties, in particular with regard to the knowledge gaps concerning the site specific appropriateness and feasibility of the measures adopted.

Insights about the process can to some extent improve and correct our judgement of the outcomes. By looking at the process we learn about the social dynamics involved, about the kinds of information which were considered or ignored, about the depth of the deliberation that took place, about the (potential) conflicts among those involved and about other obstacles which implementation will have to face.

More specifically, insights about the process enable us to ascertain whether an output has been developed or at least adapted to the social and political specificities of a given setting. Looking at the process allows us to draw conclusions about the site specific appropriateness of an output, even without knowing the site in detail. Examining the quality of the knowledge input and of the planning and deliberation process is a sound proxy: generally, outputs will be locally appropriate if they result from a good, locally informed process.

Looking at the process also provides important clues about the potential consequences of the measure in terms of changes in the system to be governed. If the management plan for a Natura 2000 site has been developed in a joint effort which is perceived as fair and which clarified various opinions and types of knowledge about the area, then these procedural

features indicate that the management plan has a good chance of being broadly accepted (Paavola 2004). Thus, process characteristics reveal insights which can reduce the uncertainty between output and consequences (Figure 1). This is of particular importance because implementing Natura 2000 and WFD requires various governmental and non-governmental actors to collaborate across different sectors and policy levels. Here, outputs and consequences on the system to be governed are highly complex and therefore very difficult to evaluate from an outcome-oriented perspective only.

Considering both approaches also enables us to choose those sources of information which in each case appear more convincing; although this heterogeneous use of information sources makes direct comparison across cases more difficult, it substantially enhances the precision of the conclusions drawn in each case.

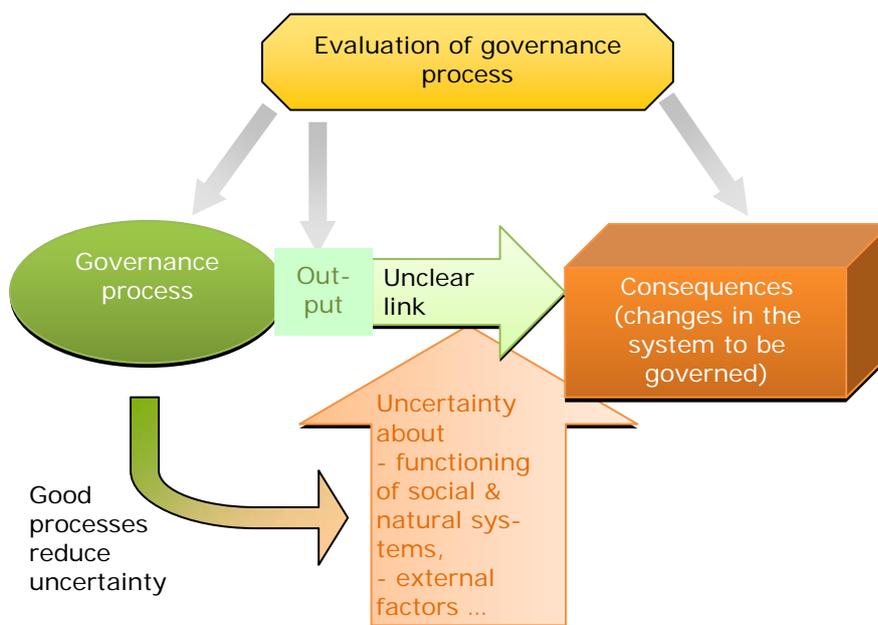


Figure 2: Evaluating governance processes

(1) Evaluation of governance processes needs to refer to three elements: the process itself, output, and consequences. (2) Good processes reduce certain uncertainties and thereby improve the reliability of outcome-oriented evaluation.

The impact of evaluations within the governance cycle

A third reason for combining both types of evaluation concerns the role evaluations play in the governance cycle: a timely evaluation has more influence on the governance process itself as a corrective device. In particular, developments in the social system can be detected through process-oriented evaluation at an earlier stage than if they are detected only once they have become visible ex-post in an outcome-oriented evaluation of the natural system to be

governed. This allows for learning within the governance process and facilitates more timely reactions to recent developments. For example, the increased use of pesticides and fertilisers due to the boom in agrofuels will significantly affect water quality in Europe; whether this is appropriately anticipated in river basin management today can only be assessed by a process-oriented evaluation.

Likewise, the focus on process characteristics underlines the fact that outcomes are not the only thing that counts. If processes are evaluated, those responsible for carrying them out will pay more attention to their quality. Evaluation exercises focus our attention, such that a combined approach to evaluation will prompt more continuous learning for the organisation concerned and for facilitation of the governance processes. This widens the role and utility of evaluation within the governance cycle.

Caveats

Irrespective of these arguments in favour of combining both approaches, there are several caveats to such a combination. Firstly, while mixed methodological approaches are increasingly common within the social sciences (cp. Axinn and Pearce 2006), approaches combining methods from the natural and social sciences are to be dealt with very cautiously. Assumptions, data and methodologies differ substantially, as scholars of transdisciplinarity are all too aware (Hirsch Hadorn et al. 2008).

Secondly, both evaluation approaches have quite different implications for the role of the evaluator. While the outcome-oriented evaluation requires a sound understanding of the context and of data processing techniques, the process-oriented approach calls for evaluators to intervene in the process itself. Here we have the problem of the (at least partially) lacking subject-object divide, constitutive of many research settings in the social sciences. This means, that (i) assessments are highly dependent on the perception of the researchers involved, and that (ii) the evaluating practice itself affects the future course of the process. Combining both approaches therefore means two different roles for the evaluator.

Thirdly, there is the problem of multi-scale processes and multi-scale evaluation: linking evaluation processes on different scales poses different challenges to outcome- and process-oriented approaches. For the former, up and downscaling methods must be available if one wants to use, e.g., the results of a local observation for a whole river basin, and for the latter, the entanglement of governance processes at different levels must be evaluated additionally to the individual process evaluations. To our knowledge, the theory of multi-level governance does not yet allow for an evaluation of cross-level interaction (Rauschmayer et al. 2007).

Fourthly, there are differences regarding the object of analysis in each approach. The object of analysis is more easily identifiable in an outcome-based evaluation. Aimed at river basin and habitat quality, the WFD and the Natura 2000 network have specific objectives which can be translated into outcome-oriented evaluation criteria. By contrast, the object of analysis in process-oriented evaluation of governance processes is often fuzzy. For example, the EU Natura 2000 network is not implemented in a single, distinct participatory process. Rather, we see a meandering history of several dynamic streams of collaborations, consultations and lobbying struggles. Where official and unofficial modes of stakeholder involvement, networking or inter-administrative coordination take place, in parallel and/or across jurisdictional levels, it becomes difficult to define the object of analysis.

6. Conclusions

In this paper we have explored the potential of and caveats associated with outcome-oriented and process-oriented approaches to evaluating governance processes. We have concluded that a combination of both approaches is useful for at least three reasons: jointly, both approaches (i) cover the broad spectrum of normative principles for good governance, (ii) compensate for each other's methodological weaknesses, in particular concerning site specific appropriateness and feasibility, and (iii) widen the function and utility of evaluation within the governance cycle, facilitating more continuous learning about the application of the directives and about the organisation of the required governance processes. The challenges to such a combination require particular attention and can be used to improve existing concepts that have not yet sufficiently addressed the distinctions between process and outcome orientation.

What are the policy implications of this conclusion for environmental governance in the EU? Both the current task of the Natura 2000 network (the development of management plans) and the WFD place considerable emphasis on good governance, in particular with regard to participation. Both have their mechanisms for evaluation in place, but these are focused primarily on outcomes.

The case of the Pinios River Basin shows that this does not capture the essence of good governance: the relevant authorities reported on this pilot project for implementing the WFD on the basis of output-oriented considerations. But evaluation reports failed to note that public involvement was needed at the very beginning in order to establish effective mechanisms for collaboration. This initial, albeit crucial, step was more time consuming than subsequent testing of the WFD guidance documents on the governance process, but remained unreported (PRB 2007, Galbiati et al. 2005).

It becomes clear that existing evaluation practices need to be advanced so as to accommodate the various aspects of good governance more effectively. There are some issues to consider, however.

So far, the debate about the pros and cons of process-oriented evaluations of governance presented in Section 4 is very much limited to academia and has not yet had much impact on tangible procedures within environmental governance. Thus, installing such process-oriented evaluations might have higher incremental costs than simply doing more outcome-oriented evaluations. Also, they still bear methodological and methodical uncertainties, and no indicators exist on which to base such an evaluation. A combination of both approaches encounters other difficulties, as mentioned above.

Finally a word of caution for the evaluation process itself: a governance process involves multiple actors with multiple preferences leading to multiple goals. Both approaches to evaluation are confronted with those preferences and goals. A certain outcome and a certain process might meet the preference of a group of actors while not achieving the goals of others. Outcomes and processes can therefore hardly be evaluated in general, but rather only for a specific group of people. This calls for a participatory evaluation process in which, for example, weights expressing preferences might be used (Choo et al. 1999, Munda 2004).

These policy implications limit somewhat the prospects for a swift reform of evaluation practices. Nonetheless, current efforts to improve environmental policy making within the EU would greatly benefit from a shift in evaluation practice by including process-oriented approaches.

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