Improving environmental quality through participation?
A Critical Perspective on the Effectiveness of Public Participation

Oliver Fritsch, Jens Newig
Osnabrueck University, Germany

Osnabrueck University
Institute of Environmental Systems Research
Barbarastrasse 12
49069 Osnabrueck
Germany
ofritsch@usf.uni-osnabrueck.de

Consensual and participative forms of environmental governance are becoming increasingly important and are increasingly institutionalized. We observe that the main motive for the current emphasis of public involvement in environmental decisions is the expectation of enhanced implementation and compliance. This is shown drawing on current international and EU developments (part 1). We argue that, as of now, this expectation is based on a claim that still remains insufficiently substantiated. The effects of participatory processes on implementation of and compliance with political measures have up to now neither been sufficiently conceptualized nor empirically explored in a systematic fashion. We propose a causal model that integrates different hypotheses regarding the conditions under which public participation is likely to enhance the environmental efficiency, or effectiveness, of decisions (part 2). This model serves as a conceptual framework for a comparative secondary analysis of existing case studies as part of an ongoing research project. First results are presented, highlighting different types of participatory settings and the problems of an appropriate notion of effectiveness (part 3).

1. Introduction

The issue of environmental decision-making has been hotly disputed among politicians, environmental activists and political scientists for about 30 years. While the early debate can be characterized by a polarisation between authoritarian and democratic-deliberative approaches disagreeing on the ecological judiciousness and political wisdom of state actors, societal forces and experts, today we observe a pragmatism being supporting new forms of decision-making. There are conflicts about the 'when', 'how' and 'why' of participatory modes of politics rather than about the 'whether'. Several scholars, however, argue that many Western societies are experiencing a *general* shift away from top-down approaches and adversial democracy towards less antagonistic forms of political organisation, from government to governance.

In this chapter we argue, that there are three lines of reasoning that justify the emergence of participatory decision-making. We demonstrate that the first and the third line of reasoning in particular – theory of the state and implementation research – provide many of the arguments anchored in current EU environmental legislation and highlight the improved quality of decisions and enhanced compliance to rules.

1.1 Three approaches towards participatory governance

In the past, theorists of three different disciplines aimed at determining impact, relevance and reasons of participatory governance. While scholars of public policy were primarily concerned about the nation state's capacities to fulfil the tasks it was expected to, democratic theorists reflected on new ways of legitimising democracy in states being currently in transition to postmodernism and post-industrialism. In contrast, researchers of administration and implementation considered how to improve civil society's acceptance of administrative acts in order to enhance implementation effectiveness. However, most representatives of these disciplines share the view that deliberative ways of decision-making might be an answer to the questions they have posed and a solution to the problems they have identified. Then again, due to the diversity of their motives they associated quite different hopes and expectations with citizen participation and, as a consequence, developed distinct notions of success and effectiveness.

Theory of the state

For two decades, theorists of the state have been discussing the transformation of the state, abandoning notions of a unitary, authoritatively acting state separated from civil society, as they had been dominant for a long time in public law and administration studies (Mayntz 1997). As empirical implementation research revealed disillusioning results regarding the effectiveness of state action (Mayntz 1979; 1993), these findings were reinforced by comments of systems theorists claiming that purposive state action was in general impossible and such attempts doomed to failure (Luhmann 1995). So the "failing state" (Jänicke 1990) faces a double loss of sovereignty: Hard-pressed by global economic actors and forced to concessions by transnational regimes it loses influence due to international developments; at the same time, however, new social movements question the state's authority and technological progress seriously challenges the state's range of action at the domestic level (Scharpf 1992). Henceforth, considering its impotency, the "disenchanted" state may just turn to "irony" (Willke 1983; 1992; Szerszynski 2005) and attempts to accept the global challenge by establishing supranational and international rule-making bodies. At the domestic level the state

resorted to cooperative and communicative ways of decision-making, thus returning power and influence to non-state actors. Subsequently, analysts of public policy identified various forms of regulation located between state, market and society. Policy networks, participatory and deliberative governance and the like are considered as ways to preserve regulatory capacities and to improve implementation of policy measures (Waarden 1992; Scharpf 1993; Jachtenfuchs 1997). Even if the phenomenon is not so new as some scholars might let us think - after all some European countries such as Germany or the Netherlands have been characterized for decades by a corporatist political landscape - the complexity and intensity is definitely rising (Kleger 1995). Regulatory forms such as negotiation, stakeholder participation, self-governance or hierarchical top-down procedures can be observed in varying depths of application in various fields of politics, establishing a coexistence of different modes of governance (Glasbergen 1995; Kohler-Koch 1999).

Democratic theory

A more normative stance is taken by the emancipatory approach of many democratic theorists, who discovered participatory decision-making as a new basis of legitimacy for the representative democracies of the late 20th century. Although there are significant conceptual differences between the approaches of scholars like Dryzek (1990), Bohman (1996) or Sirianni (2001), they all share two basic assumptions: On the one hand, traditional institutions of Western democracies have grown deficient and to a large extent miss reflexivity. The underlying thesis claims that traditional decision-making processes conceive of citizens as political agents who accept administrative decisions without challenge and who do not head towards further participatory engagement. That this kind of policy making might be inadequate in the era of risk society and reflexive modernity is a position not only taken by Beck (1992; 1996) - most notably as it completely ignores the transformed conception of active citizenship. On the other hand, it is exactly these risks that explain the demand for a modernisation of environmental democratic decision-making (Zilleßen 1993). Environmental crises reveal the inability of modern societies to maintain a non-destructive and non-instrumental relationship towards nature. The reason is that the tremendous powers to shape reality inherent in modern technologies come along with a type of risk whose potentials are both hard to calculate as well as compensate and lack specification on a geographical and temporal scale. Consequently, the insecurity of knowledge is on the increase; the ability to forecast impacts reaches fundamental limits (Funtowicz & Ravetz 1993; Voß et al. 1996). Thus, there is a dichotomy between decision-makers and those affected, making it an imperative to involve citizens in rulemaking and to reequilibrate democratic participation.

Administration and implementation research

Researchers of public administration and policy implementation interpret participatory governance as an extension or replacement of hitherto existing informal administrative practice (Hoffmann-Riem & Schmidt-Aßmann 1990). Point of departure is the observation that bureaucracy by no means acts as neutral and objective as Weber (1947) ideally conceived it and as its self-image so often suggests. Rather, state agents maintain diverse forms of informal contacts to stakeholders, whereby the logics of administrative dynamics and rationality might explain the varying quality and proximity of those interactions (Downs 1967; Niskanen 1996; Denhardt 2004). Consequently, citizens affected by forthcoming decisions often feel that their concerns are not adequately addressed. As a result, citizens take the matter before court, thus delaying or even forestalling political

decisions. By incorporating public concern and formalizing stakeholder interaction through participatory governance, scholars of public administration expect a reduction of public resistance (be it political or legal) and an improvement of acceptance towards administrative decisions leading to an enhanced implementation effectiveness (Enserink & Monnikhof 2003). Further, by intensifying communication some even anticipate an improved quality of decision as the integration of local and expert knowledge might initiate processes of social learning for all participants (Hofman 1998; Lemos 1998; Diduck & Sinclair 2001; Bulkeley & Mol 2003).

1.2 International and European Union developments

Taking the cue from theorists of the state as well as administration and implementation research, current international and EU environmental policies increasingly promote the participation of non-state actors in environmental governance as a means to improved quality of decision and efficient implementation. Based on the expectation that these two prerequisites are key for attaining policy goals, democratising environmental decision- making is thus expected to lead to a greater efficiency in terms of more effective improvements of environmental quality.

On an international level, principle 10 of the Rio declaration[1] has prompted a still continuing salience of participation and more 'democratic' decision-making as expressed in the declarations of most recent international environmental conferences. Since 1998, 40 states have ratified the Aarhus convention on access to information, public participation in decision-making and access to justice in environmental matters, legally implemented in the EU by the Public Participation Directive 2003/35/EC. In this spirit, three further EU directives were passed that explicitly demand public participation in environmental decisions. While the Directive 2001/42/EC on the Strategic Environmental Assessment and the new Environmental Information Directive (2003/4/EC) are purely procedural law, the Water Framework Directive (2000/60/EC; WFD) combines substantive requirements ('good water status') with procedural obligations, which include information and consultation of the public as well as its 'active involvement' (Art. 14 WFD).

The primary motive to promote participatory decision-making in these legal documents is to ultimately improve environmental quality. This can be shown by a text analysis of the WFD and the Aarhus convention. The WFD claims in preamble 14 that "the success of this Directive relies on close cooperation and coherent action at Community, Member State and local level as well as on information, consultation and involvement of the public, including users". More information on the rationale behind its public participation demands are given by the Guidance Document on Public Participation that accompanies the Directive. It clearly states that "the purpose of the participatory requirements of Article 14, including active involvement, is to support the effective implementation of the Directive" (EU 2002, p32). An overview of the results of the text analysis is given in Table 1. While

---

[1] "Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities ..., and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings ... shall be provided." (available at http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm).

motives of improved legitimacy play a certain role, the main and ultimate argument is the improved attainment of substantive environmental goals. In the Aarhus convention, too, all requirements for more 'democratic' decision-making are ultimately instrumental to the goal of reaching better environmental quality (Newig 2005a; 2005b).

Public participation motives and goals	Århus Convention	WFD (PP Gd. Doc.)
Improved attainment of substantive environmental goals	preambles 5, 6, 7, 9	pp. 7, 26
Improved quality of decision		
benefit from lay local knowledge	preamble 16	pp. 24, 26, 41
gain knowledge about opinions and acceptance on the part of the public		p. 24
Improved implementation		
increase environmental awareness, education, information	preambles 9, 14	p. 4, 26
build acceptance of and identification with decision	preamble 10	pp. 4, 26, 41
build trust among non-state actors and between civil society and the administration		pp. 26, 41
alleviate conflicts by mediation of interests		pp. 26, 41
Improved legitimacy of decision		
transparency of decision-making and control of state policy	preambles 10, 11	p. 26
pursuit of legitimate self-interests on the part of non-state actors	preamble 18	
deliberation and democracy	preamble 21	

Tab. 1: Typology of public participation goals as mentioned in different EU legal documents

However, the claim that more 'democracy' and participation brings about better outcomes is not undisputed. Even if one does not follow the pessimistic notion of participation as a "new tyranny" (Cooke & Kothari 2001), it is clear that participation cannot be obtained for free and its effects remain contentious up to now (see, e.g., Lee & Abbot 2003). In the end, it is an empirical question whether, to what extent, and under what conditions participative decision-making in fact leads to better implementation, improved quality of decision and therefore to a more sustainable environmental use. These issues shall be addressed in the next chapter.

2. Outcome effectiveness of participatory decision-making in its societal context: proposed causal model structure

In this chapter we argue that, as of now, the expectation of an improved outcome effectiveness through enhanced democratic decision-making is based on a claim that still remains insufficiently substantiated. The effects of participatory processes on implementation of and compliance with political measures have up to now neither been sufficiently conceptualized nor empirically explored in a systematic fashion. We propose a causal model that integrates different hypotheses regarding the conditions under which public participation is likely to enhance the environmental efficiency, or effectiveness, of decisions.

2.1 Towards an outcome-oriented evaluation of participatory governance

Although there is a growing body of conceptual and empirical literature on public participation, a major research gap remains for issues of evaluation (Blackburn 1995; Chess 2000; Lauber & Knuth 2000).

On the one hand, there is a remarkable uncertainty about the object of investigation itself. As Rowe & Frewer (2005) point out, key terms such as 'public participation' or 'stakeholder' often are only poorly defined in citizen involvement studies. Further, most scholars fail to differentiate functional equivalents when defining terms, so the literature can be characterised, after all, by an unclear, inconsistent and often contradictory nomenclature. As a matter of course, this does not support systematic and comparative evaluations (see also Goldenberg & Friederes 1986).

On the other hand, the issue of conceptualising 'effectiveness' causes major trouble since there is no universal and objective understanding of what might be an effective participatory decision-making process (Rowe & Frewer 2000; 2004). The expectations associated with citizen involvement quite often determine the notion of 'effectiveness'. Hence, the multitude of criteria found in the literature (for an overview, see Cowie & O'Toole 1998; Chess & Purcell 1999) quite exactly reflects the motives for participatory governance as they were discussed in part 1.1 - the more so as some positive assumptions directly contradict each other, e.g. the hope for a rapid implementation and for a high quality of solutions (Rowe & Frewer 2004).

What's more, participation research itself has refused evaluations for a long time. Todd (2001) asserts that there is a general conflict between the desire to promote participatory modes of governance and the necessity to evaluate objectively. As long as many classics of the discipline are published by authors anchored both in science and practice (e.g. as consultants), interest conflicts and biases are hardly to be avoided (Rabe 1988; Sipe & Stiftel 1995).

Following from these difficulties, many scholars have settled for conceiving effectiveness of participatory decision-making processes in terms of participant satisfaction (e.g. Rosener 1981; Potter & Norville 1983; Moore 1996). Admittedly, such research may provide interesting insights regarding what people think of and expect from participatory governance (McCool & Guthrie 1999; Tuler & Webler 1999)[2]. However, we maintain that these works refrain from empirically questioning widely held beliefs on and justifications for collaborative governance. Furthermore, developing effectiveness criteria ex-post is "analogous to shooting the arrow first, then painting a target around the point where it landed" (Todd 2001). Following established trends in literature, we rather suggest to generate theory-driven criteria before evaluation (Bartlett 1994), thus distinguishing between process-oriented and outcome-oriented accounts (Rosener 1978; Moore 1996).

Scholars proposing a process-oriented approach ('legitimacy approach' or 'rights approach') more often than not adhere to the democratic theory line of reasoning (see chapter 1.1). As they consider participatory governance as an end in itself,

---

[2] Santos & Chess (2003), e.g., report that the participants interviewed preferred high-quality political outcomes to fairness, equality and further process criteria.

these researchers develop effectiveness criteria such as fairness, representativeness, dialogue, consensus and equality – terms which are in close proximity to the Habermasian concept of an 'ideal discourse' (Renn, Webler & Wiedemann 1995; Lynn & Busenberg 1995; Jabbour & Balsillie 2003). We acknowledge that the gentle diffusion of deliberative policy arenas may also justify calls for a new debate on legitimacy. Furthermore, we are aware that evaluating outcomes falls short of providing convincing solutions for the normative challenges of democratic rule that arise due to the novel complexities of governance (Bartlett 1994). Yet we call into question the claim that participatory decision-making be legitimised solely by itself. Embedded in a broader process of legitimisation, these new modes of governance have to stand the test of time including a critical evaluation of the political outcomes (Lee & Abbot 2003; see also Geis 2005).

Approaches focussing on outcomes, implementation and the role of public participation in the policy process ('policy delivery approach') have so far received surprisingly little attention. Hence, the empirical evidence for the claim that, as we have seen, forms the basis for much of current EU legislation, is still extremely weak and scattered (see Diduck & Sinclair 2002; Beierle & Cayford 2002; Turner & Weninger 2005). To our knowledge, there is not a single systematic study available in English or German language covering this issue. Most studies that do mention issues of effectiveness, outcomes or implementation do this only casually, or as a by-product; underlying mechanisms are often only implicit. Hence, Beierle and Cayford in their highly cited study on public participation in environmental decisions demand that "(…) more research on implementation is needed. The value of public participation will ultimately be judged by its ability to enhance implementation and show demonstrable benefits for environmental quality. Understanding the links between participation and actions on the ground is a high priority. Research should focus on the specific links between public participation and the political, legal, and social forces that drive implementation forward" (Beierle & Cayford 2002, p76).

2.2 Causal model structure: context, process, decision

Against this background, this paper seeks to integrate existing assumptions on mechanisms in a causal model. This implies to clearly describe and link the different hypotheses regarding those mechanisms, according to which participatory decision-making leads to better environmental outcomes. The notion of 'more democratic', participatory decision-making or 'new forms of environmental governance' essentially refers to different forms and instruments of citizen and stakeholder participation. This includes public hearings, citizen juries, dispute settlement efforts, negotiated rulemaking as well as cooperative forms of problem solving, to name but a few. However, drawing on Rowe & Frewer (2005), we only take into consideration those public engagement processes which are shaped by mutual and reciprocal information flows between the public and the initiators of such processes (public participation) or those shaped by information flows from the stakeholders to public authorities (public consultation). Based on the observation that those public engagement processes solely defined by information flows from public authorities to societal actors (public communication) are in fact standard top-down procedures with improved PR yet without any change in the decision-making structure, these will be disregarded.

The causal model structure proposed in this chapter illustrates our basic assumption whereby the *outcome* of a political decision is dependent on the *decision-making process*, which in turn is embedded in and influenced by a *societal context*. The context may react upon the political outcome and, as a result, might change. This feedback refers to longer time scales and often has impact far beyond

single decision-making processes. Consequently, the outcome of a political decision may affect the context of subsequent decisions.
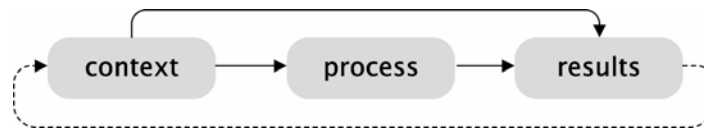

Fig. 1: Overview of model structure

Each of the three domains covers a multiplicity of variables affecting each other. Extracted out of classic works of public participation research, they represent the most commonly assumed influencing factors on the substantive outcome of citizen involvement processes. Due to the theoretical and methodological pluralism, relevance and effects of these factors are highly disputed. Even worse, the lack of any conceptual approach in some studies makes it difficult to comprehend their interdependence at all. As a result, the model portrays the variety of influencing factors without asserting definitive claims on their empirical relevance. Hence, the conceptual basis of our research is less determined by a certain theory that we would like to prove or disprove. Rather, the plurality of present approaches on the effectiveness of collaborative governance and its influencing factors only form the point of departure for our empirical meta-analysis of existing case studies. Figure 2 illustrates the causal model structure, whereby („+") and („−") denote increasing and decreasing effects, respectively. Correlations disputed in the literature based on the fact that theorists expect different or even contradictory impacts were depicted by „±".

In the subsequent parts of the chapter we discuss the model by outlining outcome effectiveness (2.3) and highlighting influencing factors on both the output of the decision and implementation effectiveness (2.4). Furthermore, we discuss influences of process design (2.5) and the impacts of societal context (2.6).
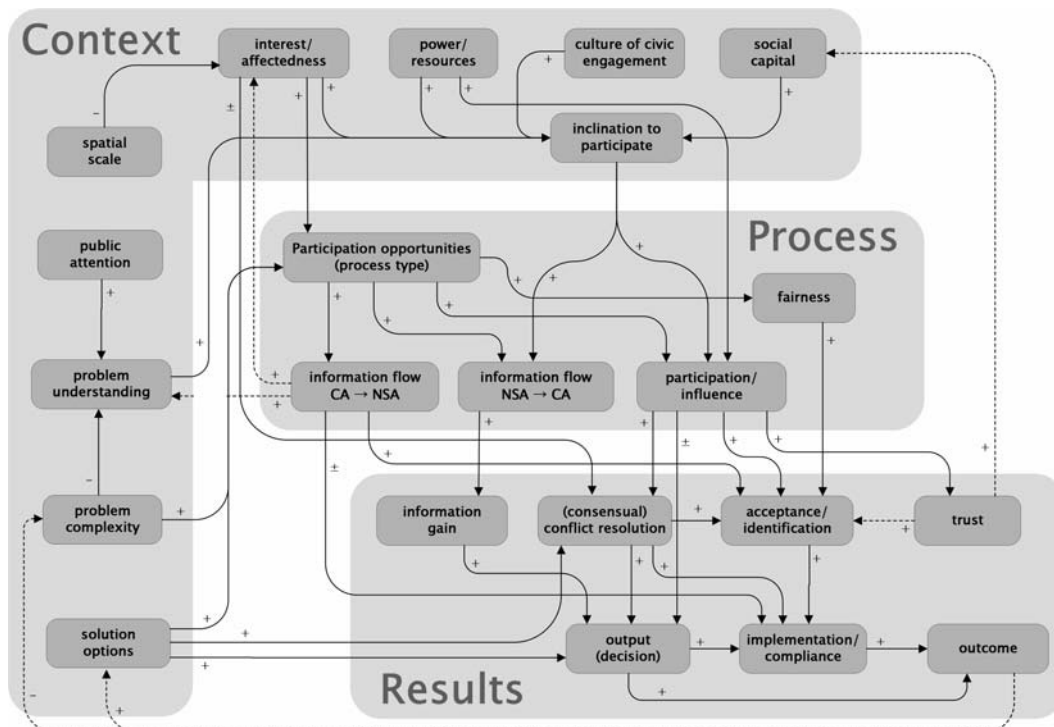

Fig. 2: Causal model structure. Arrows represent causal relationships, broken arrows illustrate temporarily delayed feedback loops.

2.3 Outlining outcome effectiveness

The starting point of our line of reasoning is a simple cause-and-effect chain which comprises the essential elements regarding outcome effectiveness, putting aside, in the first instance, the particular effects of participatory decision-making. This chain draws heavily on the traditional heuristics of implementation research and highlights 'policy design', 'implementation' and 'impact' (Pressman & Wildavsky 1984). At first sight, it might surprise that we obviously follow a classic top-down approach (Hill & Hupe 2002), for participation research tends to concentrate on those modes of governance that *differ* from traditional decision-making. Nonetheless, taking effective policy implementation and outcome effectiveness to be the central yardsticks to evaluate public participation, our research question already determines the direction of analysis: namely from the collective decision (by inclusion of non-state actors) leading to implementation and compliance by societal actors[3]. Key terms are:

- Output: The agreement or political decision resulting from the decision-making process usually comprises a goal to be achieved, certain pertinent measures in order to achieve this goal as well as incentives, sanctions and monitoring mechanisms to attain compliance. It is reasonable to assume that the final outcome is dependent on whether the agreement contains a well-defined environmental performance objective, which in turn represents a meaningful improvement in environmental performance. Further, the agreement should contain a credible mechanism for achieving the environmental performance objective (de Clercq & Suck 2002).

- Outcome effectiveness: Drawing on the rate of effectiveness introduced by the German legal sociologist Geiger (1964), this is the degree to which the substantive goal of a decision is attained. E.g. if a local ban of vehicles in a city centre is decided in order to reduce airborne particulate matter by 40 per cent, but only a 20 per cent reduction is actually achieved, then the outcome effectiveness is 50 per cent.

- Implementation effectiveness: While certain policy measures can be *potentially* effective – i.e., they have a high potential outcome effectiveness –, implementation deficits can lead to a far lower actual outcome effectiveness. Even given an appropriate policy output a certain policy goal can scarcely be attained if implementation is weak or non-existent This share of effectiveness is denoted implementation effectiveness.

Now what exactly do we understand by effectiveness? *Effectiveness* denotes the degree to which a policy action achieves the desired outcome. It is thus defined as the ratio of the achieved effect and the desired environmental outcome. For the sake of clarification, it is helpful to distinguish the different sorts of effects that play a role in our consideration (see figure 2).

---

[3] This does not, of course, exclude complex feed back or evolutionary mechanisms as being discussed since Majone & Wildavsky 1978.
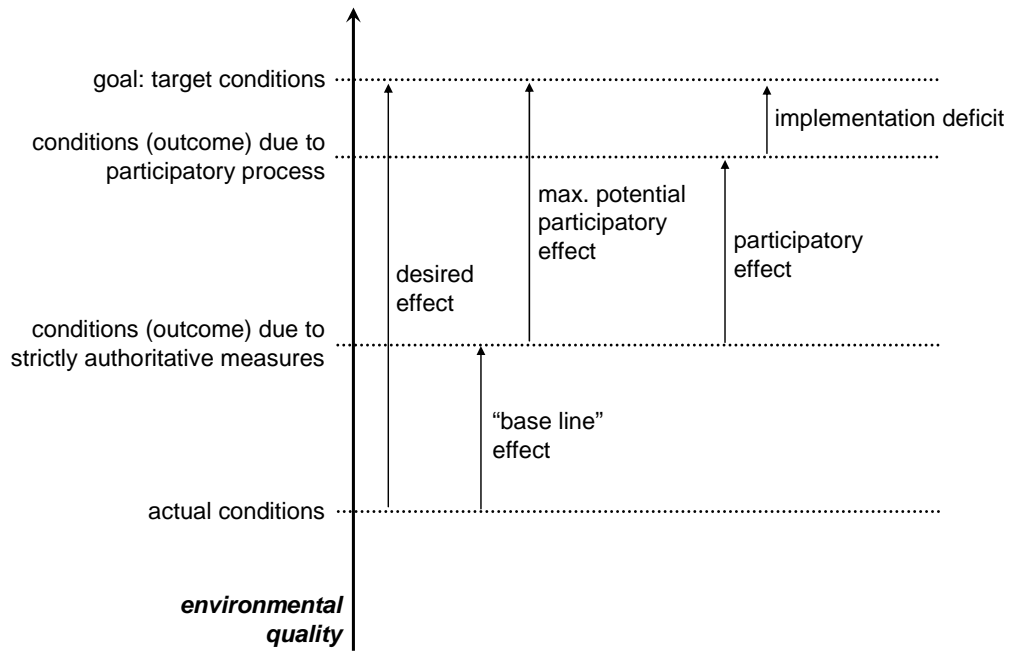
Fig. 3: Illustrating the notion of effectiveness (see text).

Assuming that for some dimension of environmental quality (e.g. the absence of nitrate in ground water) the current actual conditions shall be improved to a certain extent according to a given goal (target conditions)[4], then this desired improvement, the desired effect, is the fundamental reference value (i.e., mathematically, the denominator of the fraction) for the determination of effectiveness. Regarding the factual effect that the decided measures have achieved, or will achieve, we can conceptually distinguish those substantive outcomes that are realised due to strictly authoritative measures such as legal validity, enforcement rules, etc. ('baseline' effect) from those that are attained due to the effects of participation (participatory effect)[5]. The assumption is that the latter will be higher than the former, though the opposite may of course also be the case. The central concern of this paper regards the supposed *increased effectiveness through participation.* Here, the relevant reference value is that portion of the desired effect that participation can potentially produce (maximum potential participatory effect), thus deducing those non-participatory 'baseline' effects. Participatory outcome effectiveness is then defined by the factual participatory effect divided by the maximum potential participatory effect.

Hence, we maintain that the actual substantive effectiveness (outcome effectiveness) is a product of output quality and implementation effectiveness: Neither a bad output, even if it is well implemented, nor a good output, if not implemented at all, can lead to an effective outcome.

---

[4] This goal can either be formulated in the (local) (participatory) decision process, or be found in some higher-order law such as national or EU law.

[5] This is, first of all, an analytical distinction and does not imply that in each single case it will be possible to empirically separate the causal effects of participation from other effects.

2.4 Outcome: Improved quality of decision and implementation through participation?

As indicated previously, it is common knowledge in participation research that the two factors determining the outcome of collaborative governance, output and implementation effectiveness, are significantly conditioned by how non-state actors are involved in decision-making, what information flows are generated and how conflicts are dealt with. Yet, there is fundamental disagreement concerning the exact mechanisms and interactions:

Improved quality of decision due to social learning and integration of local knowledge

One school of thought argues that participation directly improves the output of decision-making. Based on the observation that citizens have an extensive and specialized knowledge about local affairs and problems (Thomas 1995; Steele 2001), proponents of this line of reasoning claim that participation may help incorporating new facts and data to the decision-making process previously dominated by abstract expert knowledge and disregarding local concerns. This mechanism might, in turn, enhance the substantial quality of the policy output (López Cerezo & González García 1996; Yearley et al. 2003). Opponents hold that public authorities usually resort to different and more reliable means for obtaining information, particularly when dealing with highly technological issues that require specialized expert knowledge (Kraft 1988; Munnichs 2004). Hence, public authorities constantly experience tensions due to contradictory goals:

 "Where the needs for quality are greater, there is less need to involve the public. Where, on the other hand, the needs for acceptability are greater, the need to involve the public and to share decision-making authority will be greater. Where both needs are substantial, there will be competing needs for public involvement and for constraints on that involvement" (Thomas 1995, p36).

It is obvious that this is a general debate about different notions of the role of knowledge in public life and of how knowledge is constructed. Other authors stress the positive effects emerging from close actor interactions in group processes. They argue that participatory settings are the precondition for social learning, thus enhancing the variety of perspectives discussed and the creativity of decision-making in general (Doak 1998; Pelletier et al 1999; Mostert 2003; Pahl-Wostl & Hare 2004). Yet group processes are a double-edged sword: While such learning processes may improve the quality of decision in general, there is uncertainty about who learns what in discursive processes. The substantive outcome of such processes seems to be highly dependent on the personal composition of the decision process and the participants' sociocultural background. Situations are easily imaginable in which a discursive process turns direction and entirely questions the policy objectives to deliberate on and, as a result, turns them right round. Moreover, Cooke (2001) claims that group processes are not essentially positive in themselves, and points to a series of socio-psychological aspects of consensus-oriented group processes, e.g. the tendency to risky decisions due to the lack of personal accountability or to establish some kind of group think excluding outsider positions.

Enhanced implementation effectiveness based on improved acceptance

'Acceptance' is widely regarded as the central mechanism for improving implementation effectiveness. Many scholars expect implementation, measured by

level of compliance and speed of transformation into action, to improve substantially if the legal addressees accept or even identify with the rule (e.g. Webler & Renn 1995; Bulkeley & Mol 2003). 'Acceptance', as we use the term, comprises approval of and identification with a public decision as well as the toleration in face of disapproval. The crucial indicator is that the adressees of the policy decision abstain from taking action against it. While this general issue is undisputed as yet, there is far less agreement regarding the conditions under which participatory governance enhances the acceptance of public rules.

Van Eeten (2001) holds that a straight and comprehensive information policy might modify citizen perceptions and, as a result, their interests and subjective affectedness. While this bears the danger of advocating public relations, or even propaganda, measures, we acknowledge the necessity to communicate details of a policy issue at stake including potential financial, temporal or substantive constraints in order to remove ill-founded reservations on the part of the addressees. However, legal sociologists have also pointed out that informing citizens could even result in a decrease of acceptance, as new information, facts or underlying values might disillusion idealised notions of state action (based on ignorance) and thus awake resistance (Cotterrell 1992). This is consistent with research on symbolic politics according to which actions pretending to integrate different, even contradictory aspects without revealing the real status quo can successfully stimulate support for public decisions (Arnold 1962; Newig 2004).

Furthermore, many scholars argue that fairness and an open style of communication improves acceptance and identification, even when the final agreement does not meet one's expectations (Creighton 1981; Thomas 1995). This can be explained by insights of procedural justice research (Lind & Tyler 1988; Tyler 1990) according to which fairness usually includes the notion of involving citizens into decisions instead of excluding them.

Moreover, authors exploring the relationship between knowledge and risk in modern societies hold that technical decisions are not that value-free and apolitical as often suggested. Rather, they are value-laden and highly politicised (Funtowicz & Ravetz 1993). They conclude that also technological decisions cannot be left to experts alone and that only deliberative processes build an atmosphere of trust in public decisions and increase acceptance (O'Connor & van den Hove 2001). Widely undisputed is the notion, that decisions involving many clashing interests gain far more acceptance when based on consensus or at least compromise instead of majority vote. Yet, this presupposes on the one hand a process design that allows for intensive discourses and on the other hand a range of interests that does not exclude consensual solutions (Renn, Webler & Wiedemann 1995).

2.5 Impact of process design

The design of a (participatory) decision process largely determines the opportunities for non-state actors to influence the decision. Consequently it affects both de facto participation of non-state actors and mutual information flows (Rowe & Frewer 2005). Thus, it seems plausible that the process design directly influences the quality of social learning processes. Other scholars reject this line of reasoning and claim that it is the societal context, i.e. ideas, interests, values and norms, that matters most in respect to outputs (Geis 2005). Furthermore, there is an ongoing debate whether and how the process type determines fairness aspects of citizen involvement, measured by indicators such as participant representativeness or equal chances to have a say (Webler 1995; Kinney & Leschine 2002). Further contested criteria are for instance: transparency, openness of communication, early

involvement, consensual agreement on the rules of the game as well as neutrality of mediators.

2.6 Impact of context

As a general hypothesis, we assume that the outcome effectiveness of public environmental decision-making largely depends on its natural, technological and societal context. Yet in the framework of this paper, estimating the impact of contextual variables upon the outcome of participatory decision-making in its entire complexity seems to be a hopeless endeavour – too large is the methodological variety of positions taken and too extensive is both the amount of prescriptive theories and empirically observed correlations. Nowadays it is common sense in the social sciences to regard contextual variables as central influencing factors for social actions. The amount of philosophical writings on the importance of culture and social environment, norms, values, ideas and ideologies as well as their relationship to power and preferences is vast, a multifacetedness also reflected in participation research. Hence, we will not discuss these issues in general, yet we want to direct attention to three contextual factors that are of particular importance for participatory governance.

Actor interests

The inclination of non-state actors to join participatory decision-making processes is, as some scholars argue, dependent on whether the issue at stake concerns one's aspects of life and to what extent the process allows for exerting influence. That is to say, participation is more likely when actors can link a clear benefit to their involvement (Buse & Nelles 1975; Rydin 2000). In this context, we argue that the geographic scale is most important - the larger the number of people involved, the less important a single voice in the process, thus favouring participation at the local level. Yet, we also point to determinants of political culture as, e.g., tradition of civil-societal engagement. A further crucial factor is the actor's power position (Lee & Abbot 2003). Turner & Weninger (2005) found that powerful, influential and financially strong actors participate more often than actors with a less favourable resource base.

Of particular importance not only for the inclination to participate, but for the chances of reaching a consensual decision, is the constellation of interests with respect to the collective good at stake, in particular when this leads to social dilemma situations and NIMBY phenomena as described first by Hardin (1968; see also Elliott 1984; Thomas 1995; Webler & Renn 1995). This concerns all matters which are settled on a scale that does not fit the scale of the problem (institutional misfit) (Young 2002; Moss 2003). Typically, matters with spatial or temporal externalities are decided locally under participation of local actors, such as siting of landfills (positive externalities) or decisions regarding CO_2 emissions (negative externalities) (see Feindt & Newig 2005).

Informedness of non-state actors

Informedness of non-state actors appears as one key aspect determining their inclination to participate. Apart from the interest structure and resources of particular actors, two further factors are relevant for informedness: On the one hand, media coverage turns issues of individual interest into issues of public attention (Newig 2004). On the other hand, information that is either not available or of too technical a nature as well as a lacking understanding of the interrelationships and processes are widely regarded as obstacles to public

participation (Kartez & Bowman 1993; Diduck & Sinclair 2002), because the more complex and ambivalent a problem, the more knowledge is necessary in order to understand possible solutions.

Problem structure

The problem structure not only affects the inclination to participation of non-state actors, but also may determine the choice of process design. Thus it is plausible that the lack of information when dealing with complex problems might motivate public agencies to establish highly intensive and open collaborative settings. On the other hand, the complexity and sensitivity of a political problem might be best dealt with in participatory arrangements that include only a selected group of participants and reduced participation options). The existence of technical, organizational or legal solution options as well as the necessary financial, material and personal resources is also decisive (Jänicke & Weidner 1995; Holzinger 1996). If these options do not exist, parties with conflicting interest will hardly find a consensual solution.

3. First results of the secondary case study analysis

In this chapter, we present first results of a still ongoing empirical analysis. The aim is to put the approaches discussed in the previous chapter to a first empirical test. Facing the alternative of conducting our own case studies or of drawing on the extensive set of studies that already exists in the literature, we chose the second option for a comprehensive meta-analysis. The basic reason is that in spite of many common central elements there is a wide range of differences in both context settings and ways of involving citizens in participatory decision-making. Consequently, we are convinced that only the analysis of a large number of cases promises reliable insights into the factors determining outcome effectiveness and into the interdependencies between different factors. Attaining such a large number of cases is far easier possible by drawing on existing case studies, which have as of now not been systematically analysed and compared.

Methodologically, we rely on qualitative and quantitative instruments of case study meta-analysis (Lucas 1974; Bullock & Tubbs 1987; Larsson 1993). By way of a comprehensive literature review we identified more than 200 in-depth case studies of deliberative governance focussing on environmental decision-making that were conducted in the past 20 years in Northern America and Europe[6]. A subset of 120 forms the final case study pool, while the remaining case studies will be selectively consulted for specific factors of interest (for more details on methodology see Fritsch & Newig 2006).

For the purpose of this paper, we selected and analysed 15 cases that reflect the plurality and multifacetedness of participatory environmental governance. The cases represent various geographic regions and political scales and different fields of environmental policy, e.g. waste policy, energy policy, water policy, or natural resources management. Furthermore, the cases comprise varying intensities of participation, duration and problem complexity.

---

[6] For reasons of comparability of context conditions, we intentionally exclude the vast variety of cases regarding participatory governance and projects in developing countries.

- Aargau Landfill Site (Switzerland) (Renn, Webler & Kastenholz 1996; Renn & Webler 1997; Renn et al. 1998)
- Airport Berlin-Brandenburg International (Germany) (Ulke 1994; Barbian & Zilleßen 1997; Barbian & Jeglitza 1998;
- Clean Air Regulated Negotiation (USA) (Coglianese 1997; Weber & Khademian 1997; Weber 1998)
- Dresden-Prague Motorway (Germany) (Schmidt-Lerm 2005)
- Fitchburg Water Supply Mediation (USA) (Edgar 1990)
- Foothills Case (USA) (Burgess 1983)
- Georges Bank (USA) (Howarth 1981; McLeod & Prescott 1982; Scott & Hirsh 1983;
- Inlands Northwest Field Burning Summit (Mangerich & Luton 1995)
- Jackson Case (USA) (Hill 1983)
- Monongahela National Forest (USA) (Steelman 1996; 2001; Steelman & Ascher 1997)
- Rotterdam Harbor (Netherlands) (van de Klundert & Glasbergen 1995)
- San Juan Forest Mediation (USA) (Tableman 1990)
- Sulphur Dioxide and Nitrogen Oxide Emmissions Covenant (Netherlands) (Immerzeel 2002)
- Varresbecker Bach Wuppertal (Germany) (Schmidt, Claus & Gremler 1994; Claus 1995; Linnerooth-Bayer 1995)
- Yosemite National Park (USA) (Buck & Stone 1981; Buck 1984).

Due to space constraints we do not intend to present and discuss these cases in detail. Rather, drawing on a detailed analysis of these 15 cases, we develop three hypotheses which shall be tested and improved during the future course of this research project. As public participation cases recorded in the literature are certainly only of limited representativeness for all public participation processes conducted, and as the 15 cases analysed in the scope of this paper are of limited representativeness for our case study pool as well, the theses reflect and illustrate our current work-in-progress but do not claim to anticipate our final research findings.

3.1 Thesis 1: Improved implementation effectiveness but decreased output quality

In chapter 2 we introduced several accounts on why deliberative policy-making enhances implementation effectiveness. Our analysis confirmed the widely held view that improving acceptance does in fact increase compliance and, as a result, implementation effectiveness. In most of the cases, the final agreement has been implemented in a reasonable timescale as compared to top-down approaches. However, due to the limited number of cases we are still unable to claw a conclusion about major influencing factors and central mechanisms.

Yet, far more interesting are our insights with regard to output quality. In the previous chapter, we sketched out the discussion in public participation research on whether and how citizen involvement improves the quality of decision. Many authors argued that extending the knowledge base as well as social learning processes and discursive communication will have a positive impact, yet they failed to substantiate the claim. According to our research, this position does not necessarily prove correct. More specifically, it appears to be much dependent on the particular definition of 'quality'. As long as quality criteria are that the decision is, one the one hand, based on a broad and well-balanced set of facts and values and is, on the other hand, the product of a truly critical discourse, we will not dispute this claim.

However, the picture looks different if we define 'quality' by the decision's substantive content. As we argued in part 1.2, current EU legislation and international environmental regimes expect an improvement of environmental output quality, that is they expect these policy-decisions to be more ecologically beneficial than classic top-down decisions. From our point of view, this expectation is not justified. Instead, we find that policy makers tend to face a serious loss of ecological quality when establishing participatory modes of governance.

The analysis of our case studies demonstrated that merely a few decisions had to solve a purely ecological problem. Rather, the overwhelming majority of cases also had a social or economical dimension. The consequence is that the options for decision indeed had an ecological impact, but the decisions were not made on purely ecological grounds, also incorporating social or economical perspectives. We identified two influencing factors: Of course, the nature of the problem under discussion plays an important role. However, the level of environmental consciousness and the preferences of participants appear equally important, as they are responsible for the fact that collaborative governance outputs rather end up in a compromise of several interests than in a high standard of environmental quality. In particular, this is observable when environmental agencies initiated public participation processes. Their ambitious ecological approach is regularly watered down by participants who neither share the agency's environmental awareness nor the will for rigorous implementation of ecological measures. Rather, participants brought social and economic considerations into discussion and, as a consequence, reduced the environmental quality of decision compared with outputs of top-down decision.

3.2 Thesis 2: You can't always get what you want

While the insights of implementation research and administrative studies have shown that traditional environmental policy was doomed to failure because of compliance deficits and lack of implementation, only few would claim that the policy output itself was inappropriate in respect to the performance objective. Implementation failed due to the resistance of societal agents who refused political compliance or reacted by way of litigation. As a result, when the outcome of a political decision is a product of output quality and implementation effectiveness, top-down approaches failed due to the implementation factor.

Following from our above claim, we argue that environmental participatory governance only conditionally promises a way out. Such modes of governance might significantly enhance implementation effectiveness, yet face limitations regarding the ecological quality of the policy output which are challenged by conflicting interests.

Assuming that output quality and implementation effectiveness determine outcome effectiveness, we argue that participatory decision-making fails regarding the 'output': We gain one thing but lose the other – the claim of a tension between democracy and effectiveness so often discussed in public policy seems to hold for participation research as well.

3.3 Thesis 3: Higher outcome effectiveness due to participatory governance

Yet, to conclude that participation research is wrong in claiming that citizen involvement might produce far more effective outcomes than classic top-down

approaches would be an error in reasoning. Rather, we underline the necessity to differentiate between benefits and losses with regard to their impact on the outcome. We argue that collaborative environmental governance tends to be superior to top-down approaches, because in an outcome-oriented perspective the implementation of an average output is far better than a weak or even non-implementation of a possibly high-quality output.

We intend to differentiate and improve these theses in the future course of our research. The analysis undertaken so far has revealed, however, that we have to select our case studies more systematically as there are two challenges which complicate our research:

4. Conclusion

Consensual and participative forms of environmental governance are becoming increasingly important and are increasingly institutionalized. The aim of this paper has been threefold:

We claimed, firstly, that arguments supporting participatory environmental governance can be drawn from three lines of reasoning: theory of the state, implementation research and democratic theory. We demonstrated that current international and EU legislation heavily advocate collaborative modes of governance stressing its instrumental character by taking up arguments predominantly of the first two strands. Accordingly, citizen involvement is regarded as a means to improved quality of decision and effective implementation. Based on the expectation that these two prerequisites are key for effectively attaining substantive policy goals, democratising environmental decision-making is thus expected to lead to a greater efficiency in terms of more effective improvements of environmental quality.

Secondly, we argued that, as of now, this expectation is based on a claim that still remains insufficiently substantiated. Although there is a growing body of conceptual and empirical literature on public participation, issues of effectiveness have never been on top of the research agenda and, as for now, have remained unresolved. We discussed different notions of effectiveness and proposed to question common expectations on participatory governance by focusing on outcome effectiveness. Subsequently, we proposed a causal model that integrates different hypotheses regarding the conditions under which public participation is likely to enhance the environmental efficiency, or effectiveness, of decisions. In the framework of the model, we conceptualised outcome effectiveness as a product of policy output and policy implementation.

Exploring 15 case studies as a first step of a comprehensive meta-analysis on the outcomes of and conditions for participatory environmental governance, we gained the following insights: Consistent with widespread claims in the literature, we, too, found that participatory decision-making appears to increase implementation effectiveness due to enhanced acceptance and compliance. Yet, we also observed that collaborative modes of governance apparently not only fail to improve output quality, but even tend to produce watered-down compromises owing to different sectoral interests, which actors pursue rather than best solutions for a particular policy problem. Although the claim of a tension between democracy and effectiveness so often discussed in public policy literature seems to hold for participation research as well, we hold that collaborative environmental governance tends to be superior to top-down approaches. For in an outcome-oriented

perspective an improved implementation of an average output outweighs a weak or even non-implementation of a possibly high-quality output.

That being said, there is still a lot of research left to do before the relation of efficiency and democracy can be determined in an informed manner. Firstly, many more cases need to be analysed in order to get a full picture of the range of influencing factors and to be able to draw statistically significant conclusions. It follows, secondly, that any 'verdict' on the outcome effectiveness of collaborative and participatory decision-making will most probably have to differentiate between different context settings. Not until this has been done should we be able to, finally, draw implications for the design of decision-making processes, and whether – in order to achieve efficient outcomes – they ought to be participatory or rather not.

References

Andeweg, R. B. & Irwin, G. A. (2005) Governance and Politics of the Netherlands, Basingstoke

Arnold, T. W (1962) The Symbols of Government, New Haven.

Barbian, T. & Jeglitza, M. (1998) ‚Das Beispiel Bürgerdialog Flughafen Berlin Brandenburg International', in: Zilleßen, H. (ed.), Mediation. Kooperatives Konfliktmanagement in der Umweltpolitik, Opladen: 108-136.

Barbian, T. & Zilleßen, H. (1997) 'Der Bürgerdialog Flughafen Berlin Brandenburg-International', in: Kerth, M. (ed.) Gutachten im Umweltbereich. Experten im Spannungsfeld, Berlin: 135-148

Bartlett, R. V. (1994) 'Evaluating Environmental Policy Success and Failure', in: Vig, N. J. (ed.) Environmental Policy in the 1990s. Towards a New Agenda, Washington: 167-187

Beck, U. (1992) Risk Society. Towards a New Modernity, London

Beck, U. (1996) The Reinvention of Politics. Rethinking Modernity in the Global Social Order, Cambridge

Beierle, T. C. & Cayford, J. (2002) Democracy in Practice. Public Participation in Environmental Decisions, Washington

Blackburn, J. (1995) 'Environmental Mediation Theory and Practice: Challenges, Issues and Needed Research and Theory Development', in: Blackburn, J. (ed.) Mediating Environmental Conflicts. Theory and Practice, Westport

Bohman, J. (1996) Public Deliberation. Pluralism, Complexity and Democracy, Cambridge

Buck, J. V. (1984) 'The Impact of Citizen Participation Programs and Policy Decisions on Participant's Opinions', Western Political Quarterly 37(3): 468-482

Buck, J. V. & Stone, B. S. (1981) 'Citizen Involvement in Federal Planning: Myth and Reality', Journal of Applied Behavioural Science 18(4): 550-565

Bulkeley, H. & Mol, A. P. J. (2003) 'Participation and Environmental Governance: Consensus, Ambivalence and Debate', Environmental Values 12(2): 143-154

Bullock, R. J. & Tubbs, Mark E. (1987) 'The Case Meta-Analysis Method for OD', Research in Organizational Change and Development 1: 171-228

Burgess, H. (1983) 'Environmental Mediation (The Foothills Case)', in: Susskind, L., Bacow, L. & Wheeler, M. (eds.) Resolving Environmental Regulatory Disputes, Cambridge: 156-221

Buse, M. J. & Nelles, W. (1975) 'Formen und Bedingungen der Partizipation im politisch/administrativen Bereich', in: Alemann, U. v. (ed.) Partizipation - Demokratisierung - Mitbestimmung. Problemstellung und Literatur in Politik, Wirtschaft, Bildung und Wissenschaft, Opladen: 41-111

Chess, C. (2000) 'Evaluating Environmental Public Participation: Methodological Questions', Journal of Environmental Planning and Management 43(6): 769-784

Chess, C. & Purcell, K. (1999) 'Public Participation and the Environment: Do We Know What Works?', Environmental Science & Technology 33(16): 2685-2692

Church, C. H. (2004) The Politics and Government of Switzerland, Basingstoke

Claus, F. (1995) 'The Varresbecker Bach Participatory Process: The Model of Citizen Initiatives', in: Renn, O., Webler, T. & Wiedemann, P. (eds.) Fairness and Competence in Citizen Participation: Evaluating Models for Environmental Discourse, Dordrecht, 189-201

Clercq, M. de & Suck, A. (2002) 'Theoretical Reflections on Negotiated Agreements', in: de Clercq, M. (ed.) Negotiating Environmental Agreements in Europe: Critical Factors for Success, Cheltenham: 9-64

Coenen, F. H. J. M. (1998) 'Participation in Strategic Green Planning in the Netherlands', in: Coenen, F. H. J. M., Huitema, D. & O'Toole, L. J. (eds.) Participation and the Quality of Environmental Decision Making, Dordrecht: 129-148

Coglianese, C. (1997) 'Assessing Consensus: The Promise and Performance of Negotiated Rulemaking', Duke Law Journal 46: 1255-1349

Cooke, B. (2001) 'The Social Psychological Limits of Participation', in: Cooke, B. & Kothari, U. (eds.) Participation: the New Tyranny?, London: 102-121

Cooke, B. & Kothari, U. (2001) 'The Case for Participation as Tyranny', in: Cooke, B. & Kothari, U. (eds.) Participation: The New Tyranny?, London: 1-15

Cowie, G. M. & O'Toole, L. J. (1998) 'Linking Stakeholder Participation and Environmental Decision-making: Assessing Decision Quality for Interstate River Basin Management', in: Coenen, F. H. J. M., Huitema, D. & O'Toole, L. J. (eds.) Participation and the Quality of Environmental Decision Making, Dordrecht: Kluwer: 61-70

Cotterrell, R. (1992) The Sociology of Law: An Introduction, London

Creighton, J. L. (1981) The Public Involvement Manual, Cambridge

Denhardt, R. B. (2004) Theories of Public Organization, Belmont

Diduck, A. P. & Sinclair, A. J. (2001) 'Public Involvement in EA in Canada: a Transformative Learning Perspective', Environmental Impact Assessment Review 21(2): 113-136

Diduck, A. & Sinclair, A. J. (2002) 'Public Involvement in Environmental Assessment: The Case of the Nonparticipant', Environmental Management 29(4): 578-588

Doak, J. (1998) 'Changing the World through Participative Action: The Dynamics and Potential of Local Agenda 21', in: Coenen, F. H. J. M., Huitema, D. & O'Toole, L. J. (eds.) Participation and the Quality of Environmental Decision Making, Dordrecht: 77-91

Downs, A. (1967) Inside Bureaucracy, Boston

Dryzek, J. S. (1990) Discursive Democracy. Politics, Policy and Political Science, Cambridge

Edgar, S. L. (1990) 'Fitchburg Water Supply Mediation', in: Crowfoot, J. E. & Wondolleck, J. M. (eds.) Environmental Disputes. Community Involvement in Conflict Resolution, Washington: 66-74

Eeten, M. J. G. van (2001) 'Recasting Intractable Policy Issues: The Wider Implications of the Netherlands Civil Aviation Controversy', Journal of Policy Analysis and Management 20(3): 391-414

Elliott, M. L. P. (1984) 'Improving Community Acceptance of Hazardous Waste Facilities through Alternative Systems for Mitigating and Managing Risk', Hazardous Waste 1(3): 397-410

Enserink, B. & Monnikhof, R. A. H. (2003) 'Information Management for Public Participation in Co-design Processes: Evaluation of a Dutch Example', Journal of Environmental Planning and Management 46(3): 315-344

Feindt, P. H. & Newig, J. (2005) 'Politische Ökonomie von Partizipation und Öffentlichkeitsbeteiligung im Nachhaltigkeitskontext. Probleme und Forschungsperspektiven', in: Feindt, P. H. & Newig, J. (eds.) Partizipation, Öffentlichkeitsbeteiligung, Nachhaltigkeit. Perspektiven der politischen Ökonomie, Marburg: 9-40

Fossedahl, G. A. (2005) Direct Democracy in Switzerland, New Brunswick

Fritsch, O. & Newig, J. (2006) 'Kontext und Kausalität bei der Case Survey Method. Methodologische Herausforderungen einer Metaanalyse zur Effektivität von umweltpolitischen Beteiligungsprozessen', Paper prepared for the conference „Mixed Methods im Forschungsfeld Politik – Möglichkeiten und Unmöglichkeiten", 12-13 May 2006, Hamburg

Funtowicz, S. & Ravetz, J. (1993) 'Science for the Post-Normal Age', Futures 25(7): 739-755

Geiger, T. (1964) Vorstudien zu einer Soziologie des Rechts, Neuwied

Geis, A. (2005) Regieren mit Mediation. Das Beteiligungsvrfahren zur zukünftigen Entwicklung des Frankfurter Flughafens, Wiesbaden

Glasbergen, P. (1995) 'Environmental Dispute Resolution as a Management Issue', in: Glasbergen, P. (ed.) Managing Environmental Disputes. Network Management as Alternative, Dordrecht: 1-17

Glasbergen, P. (1998) 'Partnership as a Learning Process. Environmental Covenants in the Netherlands', in: Glasbergen, P. (ed.) Co-operative Environmental Governance. Public-Private Agreements as a Policy Strategy, Dordrecht: 133-156

Goldenberg, S. & Frieders, J. S. (1986) 'Measuring the Effects of Public Participation Programs', Environmental Impact Assessment Review 6: 273-281

Hanf, K. & Koppen, I. (1998) 'Alternative Decision Making Techniques for Conflict Resolution – Environmental Mediation in the Netherlands', in: Weidner, H. (ed.) Alternative Dispute Resolution in Environmental Conflicts. Experiences in 12 Countries, Berlin: 340-374

Hardin, G. (1968) 'The Tragedy of the Commons', Science 162: 1243-1248

Hendriks, F. & Toonen, T. A. (eds.) (2001) Polder Politics. The Reinvention of Consensus Democracy in the Netherlands, Aldershot

Hill, S. (1983) 'Intergovernmental Grant Negotiation', in: Susskind, L., Bacow, L. & Wheeler, M. (eds.) Resolving Environmental Regulatory Disputes, Cambridge: 86-121

Hill, M. & Hupe, P. (2002) Implementing Public Policy: Governance in Theory and Practice, London

Hoffmann-Riem, W. & Schmidt, Aßmann, E. (1990) (eds.) Konfliktbewältigung durch Verhandlungen (2 vols.), Baden-Baden

Hofman, P.S. (1998) 'Participation in Southeast Asian Pollution Control Policies', in: Coenen, F. H. J. M., Huitema, D., O'Toole, L. (eds.) Participation and the Quality of Environmental Decision Making, Dordrecht: 287-305

Holzinger, K. (1996) 'Grenzen der Kooperation in alternativen Konfliktlösungsverfahren: Exogene Restriktionen, Verhandlungsleitlinien und Outside Options', in: van den Daele, W. & Neidhardt, F. (eds.) Kommunikation und Entscheidung. Politische Funktionen öffentlicher Meinungsbildung und diskursiver Verfahren, Berlin: 232-276

Howarth, R. W. (1981) 'Georges Bank: Fuel or Fish', Technology Review 83(3): 67-77

Immerzeel, E. (2002) 'Dutch Covenant Regulating the Reduction of Sulphur Dioxide and Nitrogen Oxide Emmissions by the Power Generations Industry', in: de Clercq, Marc (eds.) Negotiating Environmental Agreements in Europe: Critical Factors for Success, Cheltenham: 267-286

Jachtenfuchs, M. (1997) 'Conceptualizing European Governance', in: Jorgensen, K. E. (ed.) Reflective Approaches to European Governance, Basingstoke: 39-50

Jabbour, J. R. & Balsillie, D. (2003) 'The Effectiveness of Public Participation in Forest Management: A Case Study Analysis of the Morice Innovative Forest Practices Agreement', The Forestry Chronicle 79(2): 329-341

Jänicke, M. (1990) State Failure - The Impotence of Politics in Industrial Society, Oxford

Jänicke, M. & Weidner, H. (eds.) (1995) Successful Environmental Policy: a Critical Evaluation of 24 Cases, Berlin

Johnson, B. B. (1987) 'Public Concerns and the Public Role in Siting Nuclear and Chemical Waste Facilities', Environmental Management 11(5): 571-586

Kartez, J. D. & Bowman, P. (1993) 'Quick Deals and Raw Deals: a Perspective on Abuses of Public ADR Principles in Texas Resource Conflicts', Environmental Impact Assessment Review 13: 319-330

Kinney, A. G. & Leschine, T. M. (2002) 'A Procedural Evaluation of an Analytic-Deliberative Process: The Columbia River Comprehensive Impact Assessment, Risk Analysis 22(1): 83-100

Kleger, H. (1995) 'Verhandlungsdemokratie. Zur alten und neuen Theorie des kooperativen Staates', in Voigt, R. (ed.) Der kooperative Staat. Krisenbewältigung durch Verhandlungen, Baden-Baden: 93-117

Klundert, B. van de & Glasbergen, P. (1995) 'The Role of Mediation in the Process of Integrated Planning. Environmental Planning in the Area of the World's Biggest Harbor', in: Glasbergen, P. (ed.) Managing Environmental Disputes: Network Management as an Alternative, Dordrecht: 69-89

Knoepfel, P. (1998) 'The Wide Range of Negotiation Forms Used in the Resolution of Conflicts in Switzerland', in: Weidner, H. (ed.) Alternative Dispute Resolution in Environmental Conflicts. Experiences in 12 Countries, Berlin: 254-280

Kohler-Koch, B. (1999) 'The Evolution and Transformation of European Governance', in: Kohler-Koch, B. & Eising, R. (eds.) The Transformation of Governance in the European Union, London: 14-35

Kraft, M. E. (1988) 'Evaluating Technology through Public Participation: The Nuclear Waste Disposal Controversy, in: Kraft, M. E. & Vig, N. J. (eds.) Technology and Politics, Durham: 253-277

Larsson, R. (1993) 'Case Survey Methodology; Quantitaive Analysis of Patterns Across Case Studies', Academy of management Journal 36(6): 1515-1546

Lauber, T. B. & Knuth, B. A. (2000) 'Citizen Participation in Natural Resource Management: A Synthesis of HDRU Research', Human Dimensions Research Unit, Department of Natural Resources, Cornell University, HDRU Series Working Paper No. 007

Lee, M. & Abbot, C. (2003) 'Legislation: The Usual Suspects? Public Participation under the Aarhus Convention', The Modern Law Review 66(1): 80-108

Lemos, M. C. M. (1998) 'Popular Participation and Pollution Control in Brazil', in: Coenen, F. H. J. M., Huitema, D., O'Toole, L. J. (eds.) Participation and the Quality of Environmental Decision Making, Dordrecht: 267-286

Lind, E. A. & Tyler, T. R. (1988) The Social Psychology of Procedural Justice, New York

Linnerooth-Bayer, J. (1995) 'The Varresbecker Bach Participatory Process: An Evaluation', in: Renn, O., Webler, T. & Wiedemann, P. (eds.) Fairness and Competence in Citizen Participation: Evaluating Models for Environmental Discourse, Dordrecht: 203-221

López Cerezo, J. A. & González García, M. (1996) 'Lay Knowledge and Public Participation in Technological and Environmental Policy', Phil & Tech 2(1)

Lucas, W. A. (1974) The Case Survey Method. Aggregating Case Experience, Santa Monica, CA: Rand, Working Paper R-1515-RC, October 1974

Luhmann, N. (1995) Social Systems, Stanford

Lynn, F. M. & Busenberg, G. J. (1995) 'Citizen Advisory Committees and Environmental Policy: What We Know, What's Left to Discover', Risk Analysis 15(2): 147-162

Majone, G. & Wildavsky, A. (1978) 'Implementation as Evolution', in: Freeman, H. (ed.) Policy Studies Review Annual 1978, Beverly Hills: 103-117

Mangerich, M. K. & Luton, L. S. (1995) 'The Inland Northwest Field Burning Summit: A Case Study', in: Blackburn, J. W. & Bruce, W. M. (eds.) Mediating Environmental Conflicts. Theory and Practice, Westport: 247-265

Mayntz, R. (1979) 'Regulative Politik in der Krise?', in: Matthes, J. (ed.) Sozialer Wandel in Westeuropa, Frankfurt/Main: 55-58

Mayntz, R. (1993) 'Governing Failures and the Problem of Governability: Some Comments on a Theoretical Paradigm', in: Kooiman, J. (ed.) Modern Governance. London: 9-20

Mayntz, R. (1997) 'Politische Steuerung: Aufstieg, Niedergang und Transformation einer Theorie', in: Mayntz, R. (ed.) Soziale Dynamik und politische Steuerung, Frankfurt/Main: 263-292

McCool, S. F. & Guthrie, K. (1999) 'Mapping the Dimensions of Successful Public Participation in Messy Natural Resources Management Situations', Society and Natural Resources 14: 309-323

McLeod, G. C. & Prescott, J. H. (1982) Georges Bank. Past, Present and Future of a Marine Environment, Boulder

Moore, S. A. (1996) 'Defining „Successful" Environmental Dispute Resolution: Case Studies from Public Land Planning in the United States and Australia', Environmental Impact Assessment Review 16: 151-169

Moss, T. (2003) 'Solving Problems of 'Fit' at the Expense of Problems of 'Interplay'? The Spatial Reorganisation of Water Management following the EU Water Framework Directive', in: Breit, H. et al. (eds.) How Institutions Change. Perspectives on Social Learning in Global and Local Environmental Contexts, Opladen: 85-121

Mostert, E. (2003) 'The Challenge of Public Participation', Water Policy 5(2): 179-197

Munnichs, G. (2004) 'Whom to Trust? Public Concerns, Late Modern Risks, and Expert Trustworthiness', Journal of Agricultural and Environmental Ethics 17: 113-130

Newig, J. (2004) 'Public Attention, Political Action: The Example of Environmental Regulation', Rationality and Society 16(2): 149-190

Newig, J. (2005a) 'Erleichtert Öffentlichkeitsbeteiligung die Umsetzung (umwelt-) politischer Maßnahmen? Ein Modellansatz zur Erklärung der Implementationseffektivität', in: Feindt, P. H. & Newig, J. (eds.) Partizipation, Öffentlichkeitsbeteiligung, Nachhaltigkeit. Perspektiven der politischen Ökonomie, Marburg: 89-116

Newig, J. (2005b) 'Die Öffentlichkeitsbeteiligung nach der EG-Wasserrahmenrichtlinie: Hintergründe, Anforderungen und die Umsetzung in Deutschland', Zeitschrift für Umweltpolitik und Umweltrecht 28(4): 469-512

Niskanen, W. A. (1996) Bureaucracies and Public Economies, Cheltenham

O'Connor, M. & van den Hove, S. (2001) 'Prospects for Public Participation on Nuclear Risks and Policy Options: Innovations in Governance Practices for Sustainable Development in the European Union', Journal of Hazardous Materials 86(1-3): 77-99

Pahl-Wostl, C. & Hare, M. (2004) 'Processes of Social Learning in Integrated Resources Management', Journal of Community & Applied Social Psychology 14(3): 193-206

Pelletier, D. et al. (1999) 'The Shaping of Collective Values through Deliberative Democracy. An Empirical Study from New York's North Country', Policy Sciences 32: 103-131

Portney, K. E. (1991) Siting Hazardous Waste Treatment Facilities. The NIMBY Syndrome, New York

Potter, H. R. & Norville, H. J. (1983) 'Citizen's Participation and Effectiveness in Environmental Issues', in: Daneke, G. A., Garcia, M. W. & Delli Priscoli, J. (eds.) Public Involvement and Social Impact Assessment, Boulder: 35-44

Pressman, J. L. & Wildavsky, A. (1984) Implementation: How Great Expectations in Washington are Dashed in Oakland, Berkeley

Rabe, B. G. (1988) 'The Politics of Environmental Dispute Resolution', Policy Studies Journal 16: 585-601

Renn, O. & Webler, T. (1997) 'Steuerung durch kooperativen Diskurs. Konzept und praktische Erfahrungen am Beispiel eines Deponieprojektes im Kanton Aargau', in: Köberle, S., Gloede, F. & Hennen, L. (eds.) Diskursive Verständigung? Mediation und Partizipation in Technikkontroversen, Baden-Baden: 64-100

Renn, O., Webler, T. & Kastenholz, H. (1996) 'Procedural and Substantive Fairness in Landfill Siting: A Swiss Case Study, Risk: Health, Safety & Environment 7(2): 145-168

Renn, O., Webler, T. & Wiedemann, P. (eds.) (1995) Fairness and Competence in Citizen Participation. Evaluating Models for Environmental Discourse, Dordrecht

Renn, O. et al. (1998) 'Der kooperative Diskurs in der Praxis – Standortsuche für eine Deponie im Kanton Aargau', in: Renn, O. et al. (eds.) Abfallpolitik im kooperativen Diskurs. Bürgerbeteiligung bei der Standortsuche für eine Deponie im Kanton Aargau, Zürich

Rosener, J. B. (1978) 'Citizen Participation: Can We Measure Its Effectiveness?', Public Administration Review 38: 457-463

Rosener, J. B. (1981) 'User-Oriented Evaluation: A New Way to View Citizen Participation', The Journal of Applied Behavioral Science 17(4): 583-596

Rowe, G. & Frewer, L. J. (2000) 'Science, Technology and Human Values', 25(1): 3-29

Rowe, G. & Frewer, L. J. (2004) 'Evaluating Public-Participation Exercises: A Research Agenda', Science, Technology & Human Values 29(4): 512-556

Rowe, G. & Frewer, L. J. (2005) 'A Typology of Public Engagement Mechanisms', Science, Technology and Human Values 30(2): 251-290

Rydin, Y. & Pennington, M. (2000) 'Public Participation and Local Environmental Planning: The Collective Action Problem and the Potential of Social Capital', Local Environment 5(2): 153-169

Santos, S. L. & Chess, C. (2003) 'Evaluating Citizen Advisory Boards: The Importance of Theory and Participant-Based Criteria and Practical Implications', Risk Analysis 23(2): 269-279

Scharpf, F. W. (1992) 'Die Handlungsfähigkeit des Staates am Ende des 20. Jahrhunderts', in: Kohler-Koch, B. (ed.) Staat und Demokratie in Europa, Opladen: 93-115

Scharpf, F. W. (1993) 'Coordination in Hierarchies and Networks', in: Scharpf, F. W. (ed.) Games in Hierarchies and Networks. Analytical and Empirical Approaches to the Study of Governance Institutions, Frankfurt/Main: 125-165

Schmidt, H., Claus, F. & Gremler, D. (1994) 'Konfliktvermittlung im Varresbecker Forum', in: Claus, F. & Wiedemann, P. (ed.) Umweltkonflikte. Vermittlungsverfahren zu ihrer Lösung. Praxisberichte, Taunusstein: 119-136

Schmidt-Lerm, S. (2005) Entscheidungsprozesse und Partizipation in der Stadtentwicklung Dresden: eine umwelt- und sozialpsychologische Untersuchung zum Autobahnvorhaben A17 Dresden-Prag (1990-1995), Jena

Scott, T. J. & Hirsh, L. (1983) 'Managing Conflict in the Development of a Resource Management Process on George Bank', Environmental Impact Assessment Review 4(3/4): 561-576

Sipe, N. G. & Stiftel, B. (1995) 'Mediating Environmental Enforcement Disputes: How Well Does It Work?', Environmental Impact Assessment Review 15: 139-156
Sirianni, C. (2001) Civic Innovation in America: Community Empowerment, Public Policy and the Movement for Civic Renewal, Berkeley

Steele, J. (2001) 'Participation and Deliberation in Environmental Law: Exploring a Problem-solving Approach', Oxford Journal of Legal Studies 21(3): 415-442

Steelman, T. A. (1996) 'Public Participation in National Forest Management: A Case Study of the Monongahela National Forest, West Virginia', in: Technical Expertise and Public Decisions. Proceedings of 1996 International Symposium on Technology and Society, Princeton

Steelman, T. A. (2001) 'Elite and Participatory Policymaking: Finding Balance in a Case of National Forest Planning', Policy Studies Journal 29(1): 71-89

Steelman, T. A. & Ascher, W. (1997) 'Public Involvement Methods in Natural Resource Policy Making: Advantages, Disadvantages and Trade-Offs', Policy Sciences 30: 71-90

Szerszynski, B. (2005) 'Irony and the Political Subject of Environmentalism', Paper presented at the conference of the International Sociological Association, RC 24 Environment and Society, "Double Standards and Simulation: Symbolism, Rhetoric and Irony in Eco-Politics", 1-4 September 2005, University of Bath, Bath

Tableman, M. A. (1990) 'San Juan Forest Mediation', in: Crowfoot, J. E. & Wondolleck, J. M. (eds) Environmental Disputes. Community Involvement in Conflict Resolution, Washington: 32-65

Thomas, J. C. (1995) Public Participation in Public Decisions. New Skills and Strategies for Public Managers, San Francisco

Todd, Susan (2001) 'Dispute Resolution and Negotiations. Measuring the Effectiveness of Environmental Dispute Settlement Efforts', Environmental Impact Assessment Review 21: 97-110

Tuler, S. & Weber, T. (1999) 'Voices from the Forest: What Participants Expect of a Public Participation Process', Society and Natural Resources 12(5): 437-453

Turner, M. A. & Weninger, Q. (2005) 'Meetings with Costly Participation: An Empirical Analysis', Review of Economic Studies 72(1): 247-268

Tyler, T. R. (1990) Why People Obey the Law, New Haven

Ulke, B. (1994) Die Bedeutung von Kommunikation für innovative politische Entscheidungsverfahren. Der 'Bürgerdialog' zum geplanten Flughafenb Berlin-Brandenburg-International (BBI) als Fallbeispiel, Oldenburg

Voß, J.-P., Newig, J., Kastens, B., Monstadt, J. & Nölting, B. (2006) 'Steering for Sustainable Development – A Typology of Empirical Contexts and Theories Based on Ambivalence, Uncertainty and Distributed Power', Paper presented at the workshop "Governance for Sustainable Development. Steering in Contexts of Ambivalence, Uncertainty, and Distributed Control", 6-7 February 2006, Berlin

Waarden, F. van (1992) 'Dimensions and Types of Policy Networks', European Journal of Political Research 21: 29-52

Weber, M. (1947) The Theory of Social and Economic Organization, London

Weber, E. P. (1998) 'Successful Collaboration: Negotiating Effective Regulation', Environment 40(9): 10-15, 32-37

Weber, E. P. & Khademian, A. M. (1997) 'From Agitation to Collaboration: Clearing the Air through Negotiation', Public Administration Review 57(5): 396-410

Webler, T. (1995) '"Right" Discourse in Citizen Participation: An Evaluative Yardstick', in: Renn, O., Webler, T. & Wiedemann, P. (eds.) Fairness and Competence in Citizen Participation: Evaluating Models for Environmental Discourse, Dordrecht: 35-86

Webler, T. & Renn, O. (1995) 'A Brief Primer on Participation: Philosophy and Practice', in: Renn, O., Webler, T. & Wiedemann, P. (eds.) Fairness and Competence in Citizen Participation: Evaluating Models for Environmental Discourse, Dordrecht: 17-33

Willke, H. (1983) Entzauberung des Staates. Überlegungen zu einer sozietalen Steuerungstheorie, Königstein/Taunus

Willke, H. (1992) Ironie des Staates. Grundlinien einer Staatstheorie polyzentrischer Gesellschaft, Frankfurt/Main

Yearley, S. et al. (2003) 'Participatory Modelling and the Local Governance of the Politics of UK Air Pollution: A Three-City Case Study', Environmental Values 12(2): 247-262

Young, O. R. (2002) The Institutional Dimensions of Environmental Change. Fit, Interplay and Scale, Cambridge

Zilleßen, H. (1996) 'Die Modernisierung der Demokratie im Zeichen der Umweltproblematik', in: Selle, K. (ed.) Planung und Kommunikation, Wiesbaden: 115-128