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DOES PUBLIC PARTICIPATION IN ENVIRONMENTAL DECISIONS LEAD TO IMPROVED ENVIRONMENTAL QUALITY?

Towards an analytical framework

Jens Newig

1. *Changing Rationales*

In recent years, environmental law and policy have been undergoing a change of governance modes, shifting from central state, top-down regulation to more transparent, local decision-making structures involving private companies, non-governmental organisations, concerned citizens and interest groups. While at the international level, following the lead set by the Rio Earth Summit¹ in 1992, almost every sustainability conference closes with a unanimous commitment to improved citizen participation, and while 40 nations have signed the Århus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters², four recent European Union directives³ passed since the year 2000 have set new legal standards. For some EU Member States, this implies a paradigm change for state administrative action induced by European law (Hölscheidt 2001). Whereas in German administrative procedural law, for instance, the right to participate used to require that the person be directly and individually concerned, the new community law provisions not only strengthen third-party rights to participate, but furthermore oblige state authorities to “actively” involve citizens in environmental decisions (EU 2002). The fact that the current implementation of the Water Framework Directive has enabled societal actors to participate in numerous citizens’ forums, regional councils and steering groups (Newig 2005b) demonstrates the current relevance of the outlined development.

¹ Principle 10 of the Rio Declaration reads: “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.”

² Although not an EU law, the Convention was signed within the framework of the United Nations Economic Commission for Europe (UNECE) and thus applies only to (geographically) European countries. Signed in 1998, the Convention entered into force on 30 October 2001.

³ The Water Framework Directive (2000/60/EC), the Strategic Environmental Assessment Directive (2001/42/EC), the new Environmental Information Directive (RL 2003/4/EC) and the Public Participation Directive (2003/35/EC).

The discussion regarding ‘more participation’ is not new. In Germany, the debate that ignited in the 1960s and that has never been extinguished is now being rekindled. Besides a thematic shift towards sustainability issues, an important change in the normative rationale has taken place: with both Habermas’ concept of deliberative democracy (Habermas 1991 [1962]) and then-Chancellor Willy Brandt’s plea to “dare more democracy”, an emancipatory motif was prevalent in the societal discourse, which still plays a role today (Renn, Webler & Wiedemann 1995; Feindt 2001; Fisahn 2002; Mostert 2003). The current emphasis on participation, on the other hand, seems to be predominantly rooted in a certain disillusionment with the effectiveness of governmental efforts to take the lead in the face of the continuing implementation deficits of state environmental policy (Minsch et al. 1998; Steele 2001; Voßkuhle 2001; Lee and Abbot 2003). It expresses both a hope and an expectation that participatory processes will lead to improved compliance and implementation (measured against the agreed environmental goals) due to a more sound knowledge-base and an improved acceptance of decisions – in short: an enhanced *effectiveness* of the pursued policy (Coglianese 1997; Coenen, Huitema and O’Toole 1998). Moreover, some observers generally expect that an increasingly complex society requires poly-centric and participatory modes of governance (Ostrom, Tiebout & Warren 1961; Minsch et al. 1998; Heinrichs 2005).

Yet these expectations have not remained unchallenged. Even if one does not follow the pessimistic view of participation as a “new tyranny” (Cooke and Kothari 2001), participation is of course costly, and a number of research findings suggest that these new forms of governance in fact fall short of their ambitious expectations (see, e.g., Knill and Lenschow 1999; Lee and Abbot 2003). A critical stance toward the dominant rhetoric of effectiveness would therefore seem to be called for. In any case, it is still an open *empirical* question as to the extent to which participative processes actually contribute to an improved implementation of environmental policy and thus to a more sustainable usage of the environment. Should it turn out that this were not quite the case, the extension of participation advocated would be more difficult to justify – at least insofar as participation is explicitly called for in order to improve outcome effectiveness (Lee and Abbot 2003).

The question posed in this paper is thus of particular importance with regard to the current extent of citizen and stakeholder participation in public environmental decisions. Quite deliberately, the title of this contribution is formulated as a question. At present, it is not possible to give an answer to this question and nor do I intend to do so. Rather, in this paper I aim to show possible ways of how improved understanding can be achieved. It is most likely that this will require a sophisticated answer: it can reasonably be expected that the ‘success’ of a participatory process not only depends on the actors involved and the design and mediation of the process, but likewise on a multitude of influencing factors including the political and economic context of the decision. Thus the aim is to explore *which conditions* and *which modes of participation* affect outcome effectiveness – as measured by the achievement of a given environmental goal – *in which manner*.

Although the overall field of participation research has now reached a welcome degree of differentiation and variety, the question of outcome effectiveness has so far received surprisingly little attention. Consequently, the empirical basis is still weak and, above all,

fragmented (see Diduck and Sinclair 2002; Beierle and Cayford 2002: 58, 76; Turner and Weninger 2005; for international comparative policy research Kern and Bratzel 1996: 28 et seqs., 54). To my knowledge, there is not a single study in English or German that systematically addresses this question. Moreover, systematic conceptualisations of relevant causal mechanisms are also lacking. Although a considerable body of empirical and theoretical knowledge exists, this lies scattered throughout a large number of single (case) studies, most of which – if at all – only touch upon aspects of outcome effectiveness; the underlying mechanisms are often only implicitly assumed. Thus, Beierle and Cayford in their seminal study on public participation 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 and Cayford 2002: 76)

Against this background, this paper attempts to integrate existing knowledge on mechanisms into a causal model. The aim is thus to clearly construct and integrate hypotheses on the mechanisms through which participatory processes lead to better implementation of decisions and better environmental outcomes.

This paper uses a rather open definition of 'public participation', ranging from public consultation by the competent authority to cooperative decision-making, thus including different forms such as public hearings, consensus conferences, regional forums, councils, citizens' juries or stakeholder platforms, to name but a few (see Rowe and Frewer 2005; Newig 2005b; Fritsch and Newig 2006). This excludes not only mere public relations exercises that do not enable information flows from the public to the authority, but also non-public decision-making such as participation in business firms, as well as participation in elections and civic engagement that does not aim to reach a binding collective decision.

The second part of this contribution will set out by exploring the rationales for extended public participation in current EU directives and their accompanying documents, with a special emphasis on grounds of effectiveness as opposed to grounds of legitimacy. The third part proposes a variable and hypothesis-based model structure, which is meant as a conceptual framework for further qualitative and semi-quantitative analysis. The final section is devoted to suggestions as to how the proposed model can be used for a systematic secondary analysis of existing case studies in the field.

2. *Between Effectiveness and Legitimacy*

Current rationales for public participation in current international and EU policy have been analysed, drawing on three documents that have set important new standards regarding participation rights (and obligations). As the principal *procedural* regulations, (1) the EC Public Participation Directive (PPD) and (2) the Århus Convention (the implementation of which is one main goal of the PPD) are analysed. As an important *substantive* regulation with extensive participation requirements, (3) the EC Water Framework Directive

(WFD) is studied. Since the text of the WFD itself lacks a clear motivation for participation (see Newig 2005b), the analysis mainly draws on the Guidance Document on “Public Participation in Relation to the Water Framework Directive” (EU 2002), which was published as part of the Common Implementation Strategy for the WFD (CIS).⁴

The analysis shows that all rationales for public participation put forward in these documents – as complex as they are – may be subsumed under one of the two basic categories of effectiveness or legitimacy.⁵ Whereas the former refers to a more effective attainment of environmental goals, the second implies more inclusive and thus more ‘democratic’ and legitimate decision-making. Often, both lines of argument are found to different degrees. This, of course, is not to say that no other motivations for an increase in public participation could be found, in particular with respect to a certain symbolic or ‘alibi’ dimension: some authors have noted, for instance, the current focus on public participation in administrative procedures as a compensation for the various democratic deficits of the EU on the community level (thus Kaika 2003; Kaika and Page 2003; Hilp 2003). Not surprisingly, such motivations are not found among the official statements.

Effectiveness refers to the outcome of a decision in relation to a given goal (see section 3.2). This implies that an effectiveness can only be determined if there is a relevant reference point such as, for instance, the “good ecological status” of a water body according to the criteria of the WFD. In this context, the analysed documents mention on the one hand the quality of a decision, and on the other hand the quality of its implementation as important factors for attaining effectiveness (see table 1). All of the documents analysed – the Århus Convention, the PPD, and the WFD – stress the importance of an improved *quality of decision-making* through an improved information base, as the knowledge of mostly lay local actors, which is otherwise not available to the competent authority, can be drawn upon. Furthermore, the documents accompanying the WFD point to the relevance of information on the values and attitudes of the actors involved, i.e. knowledge regarding the extent to which planned measures are likely (or not) to be accepted by those affected by the planned decision. This knowledge can be very important in terms of how measures should be shaped in order to be accepted and observed by the addressees. The goal of public participation that is probably most often mentioned is the *quality of implementation*. For instance, according to preamble 14 WFD, “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 specifically, the WFD guidance document on public participation states that

⁴ The CIS – an unprecedented institution for fostering and ensuring the coherent implementation of an EU directive – has produced 14 thematic guidance documents which were agreed by representatives (‘water directors’) of all 15 Member States at that time and the Commission. On the legal nature of these documents see Newig (2005b).

⁵ Different terms can be found in the participation research literature. For instance, Webler and Tuler 2000 distinguish “effective policy outputs” from “democratic expectations”. Similar terminologies are found in Lee and Abbot (2003: 81). It should be noted that the concept of effectiveness, contrary to the usage in this paper, is also used by some for the achievement of different goals of participation that do not necessarily relate to substantive outcomes (see, e.g. Rowe and Frewer 2005; Fritsch and Newig 2006).

“[p]ublic participation is not an end in itself but a tool to achieve the environmental objectives of the Water Framework Directive”
(EU 2002: 6)

As the “fundamental rationale” for carrying out public participation, the document emphasises the need

“to ensure the effective implementation and achievement of the environmental objectives of water management (good status in 2015)”
(EU 2002: 21)

Rationales for public participation		Århus Cn.	PPD	WFD-GD	
effectiveness	improve environmental quality, reach environmental goals	preambles 5, 6, 7, 9	preambles 1, 2	pp. 7, 26	
	quality of decision	make available lay local knowledge to the CA	preamble 16	preamble 3	pp. 24, 26, 41
		make available knowledge regarding attitudes and acceptance on the part of the NSA to the CA			p. 24
	quality of implementation	increase environmental awareness, education, information on the part of the NSA	preambles 9, 14	preamble 3	p. 4, 26
		build acceptance of and identification with a decision on the part of the NSA	preamble 10	preamble 3	pp. 4, 26, 41
		build trust among NSA and between NSA and CA			p. 26, 41
		alleviate conflicts by mediation of interests			pp. 26, 41
legitimacy	transparency of decision-making and control of state policy and governmental decision-makers	preambles 10, 11	preamble 3	p. 26	
	pursuit of legitimate self-interests on the part of the NSA	preamble 18			
	strengthening democracy	preamble 21			

Table 1: Different rationales for public participation as they appear in different European legal documents, each stating the respective source (preamble or page). Århus Cn.: Århus Convention; PPD: Public Participation Directive; WFD-GD: Public Participation Guidance Document relative to the Water Framework Directive.

All three documents assume that participation will enhance the understanding of the problem on the part of the actors involved and also improve their environmental awareness. In this context the Århus Convention and the PPD mention the aspect of environmental education. Very importantly, participation is expected to improve the acceptance of and identification with the decision on the part of the actors involved and, therefore, to facilitate implementation. Notably, the WFD guidance document on public participation states that participatory processes will mediate conflicting interests at the forefront of a decision and thereby reduce the potential for future litigation and in turn the associated costs. Moreover, improved mutual trust both among the non-state actors and between these and

the authorities is expected, which in the long run is likewise supposed to lead to an improved implementation of decisions.

Rationales of *legitimacy* are on the whole less important in the analysed documents, although they figure quite prominently in the Århus Convention. The main argument here is the transparency of decision-making in the sense of a monitoring of state decision-makers. This, however, also touches upon an aspect of increased effectiveness. A further rationale mentioned in the Århus Convention is the non-state actors' legitimate pursuit of self interests – albeit only with respect to access to the courts. Perhaps the most important argument of legitimacy, namely the “strengthening of democracy”, is only touched on in the Århus Convention.

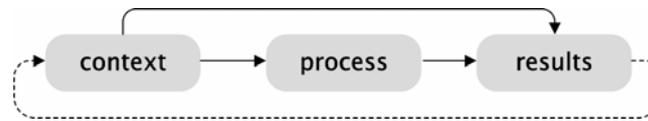
Of course, numerous cross-linkages exist between arguments of effectiveness and those of legitimacy. For instance, a decision that leads to an effective improvement of environmental quality might be considered more legitimate than a mere alibi measure. Conversely, and perhaps even more importantly, a legitimate decision seems likely to be accepted more easily and thus implemented more easily by its addressees than one that is felt to be illegitimate. Thus, all of the Århus Convention's preambles express – as the ultimate goal of all participation – contribution to improved environmental quality, even though this is from the clearly anthropocentric perspective of a human right to a healthy environment (preamble 7).

To conclude, the main rationale for the reinforced involvement of citizens and interest groups in environmental decision-making – at least in current European legislation – appears to be the expectation of a facilitated and more effective implementation of political goals and measures. In order to underline the instrumental character of participation – as opposed to participation as a goal in itself – this shall be denoted as *implementation effectiveness*.

3. Explaining Outcome Effectiveness of Participatory Processes in their Societal Context

3.1 Elements of the Model: Context, Process, Results

The proposed model structure is the result of a literature review regarding possible and plausible mechanisms of how participation enhances – or could enhance – the environmental outcomes of political measures. It is based on the assumption that the result and the effectiveness of a decision depend on the type of decision-making process (and how it is carried out), which, in turn, happens within, and is influenced by, the societal context. Ultimately, the outcomes of a decision-making process – changes in environmental quality but also in the social system – feed back to the context. These feedback effects partly happen over longer time scales and can thus transcend single decision-making processes. Thus, the outcomes of one process may affect the context of future decisions.



Each of these domains embraces a number of variables (see table 2), which interact with each other in a particular way.

Context	Process	Results
<p>Problem structure</p> <ul style="list-style-type: none"> - problem complexity (expertise and time required for understanding) - spatial scale - possible solutions (technical and other, costs) <p>Actors</p> <ul style="list-style-type: none"> - interest, concern - power/resources - informedness / understanding of the problem - willingness to participate <p>social structure</p> <ul style="list-style-type: none"> - public attention towards the issue - collective social capital (generalised trust) - social norms 	<p>Process design</p> <ul style="list-style-type: none"> - opportunities for NSA to participate (process type as given by CA) - fairness (representativeness, etc.) <p>Process realisation</p> <ul style="list-style-type: none"> - information flow from CA to NSA (measure of relevant information that is provided) - information flow from NSA to CA - actual participation and intervention on the part of NSA 	<p>Direct results of the participation process</p> <ul style="list-style-type: none"> - information gain for the CA - consensual conflict resolution? - NSA's acceptance of and identification with the decision - strengthening of trust relationship among NSA and between NSA and CA <p>Substantive output and outcome</p> <ul style="list-style-type: none"> - result of decision (suitability of measures; incentives, sanctions, implementability) - implementation and compliance by the addressees - environmental outcomes (measurable effects according to the stated goal)

Table 2: Domains and variables of the model. CA: competent authority; NSA: non-state actors.

Figure 1 gives an overview of the complete model structure as a systems diagram, or causal loop diagram. Each causal relationship between two factors (variables) is to be understood as a hypothesis. As with systems diagrams⁶, for each relationship it is noted whether it is regarded as a strengthening ('+') or a diminishing ('-') effect⁷. In as much as different, perhaps contradictory, causal relationships can be assumed for the same pair of variables, the symbol '±' is used. For a better orientation, all relationships between variables have been marked with a number in squared brackets, both in the graph and in the text.

In the following, the model will be described in more detail. We will begin with what is the focus of this article, namely the substantive output and outcome of the process, and will work backwards to the immediate results of the participation process on the process and context variables.

⁶ This representation may bring to mind Easton's (1965a; 1965b) input-output models of the policy process, but it does not share Easton's organic-functional approach.

⁷ A strengthening relationship does not inevitably imply that the value of the respective dependent variable is increased, as a low value of the independent variable may cause the value of the dependent variable to decrease.

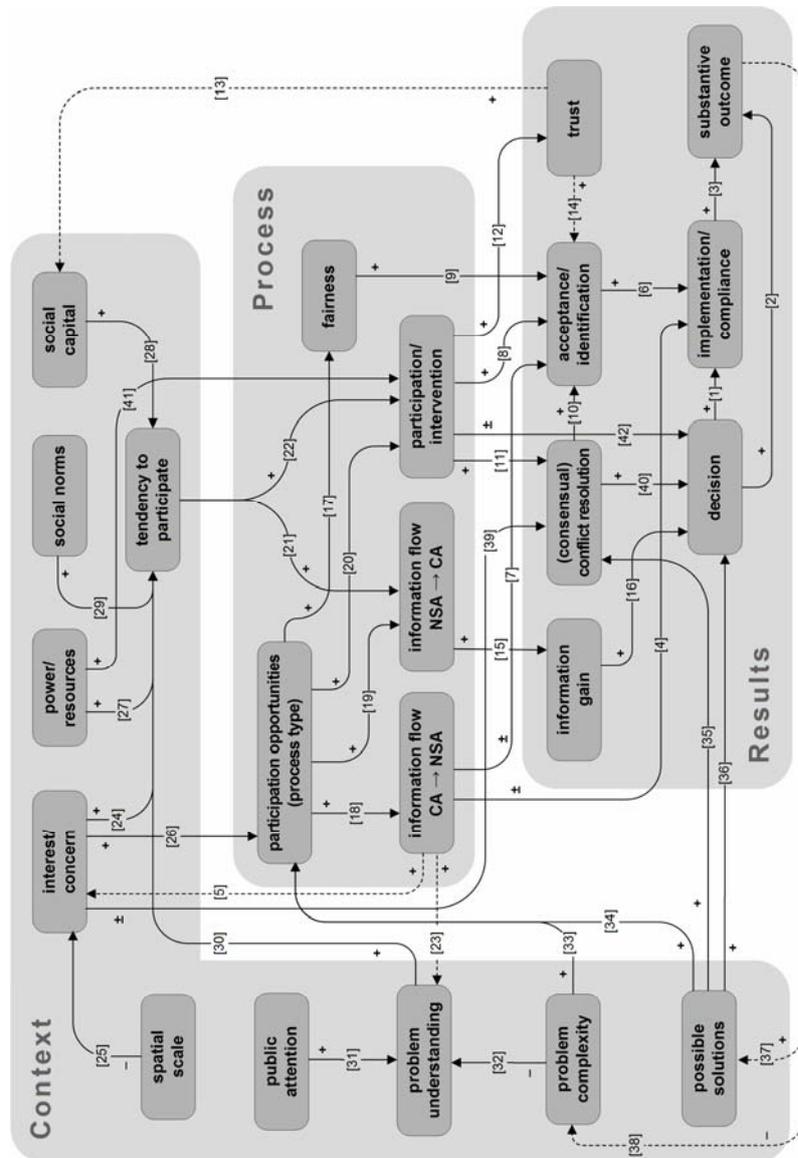


Figure 1: Systems diagram of causal model structure. Arrows denote assumed causal relationships, broken arrows delayed feedbacks. Numbers in squared brackets relate to the hypotheses as mentioned in the text. Adapted from Newig (2005a).

3.2 Outcome Effectiveness

The conceptual starting point of the model is given by a simple causal chain, which comprises the principal factors of implementation effectiveness, leaving aside, in the first instance, the effects of participation. It is in line with the traditional heuristics of implemen-

tation research in the sense of policy design – implementation – impact, as has been known since the 1970s (see, e.g. Pressman and Wildavsky 1984; Mayntz 1980) and thus ultimately follows a top-down approach (Hill and Hupe 2002, 44 et seqs.). This may be surprising at first sight, since participation research focuses precisely on those forms of decision-making that differ from the traditional authoritative mode. Since, however, *effective policy implementation* constitutes the goal and the yardstick for (successful) participatory processes, the direction of the analysis can only be from the decision of a state authority (which may or may not involve non-state actors) through to implementation and compliance by the legal addressees⁸.

Let us first consider the output of the (participatory) decision-making process: the decision. It typically comprises:

- a goal or objective (if this is not already externally given), such as the attainment of a certain maximum concentration of airborne particulate matter, or the renaturation of a water body;
- certain substantive measures in order to attain the above goal, such as a local traffic ban or particular structural measures to restore near-natural hydromorphological conditions;
- enforcement rules, including incentives or sanctions.

Measures can be more or less suitable to attain the desired goal; likewise, the sanctioning and enforcement rules can be more or less appropriate to ensure the implementation of the decision; their complete absence is often an indicator of the unfeasibility of the decision's goal. The appropriateness of the substantive measures as well as the sanctioning mechanisms constitutes a measure of the potential effectiveness of a decision relative to the desired goal.

Adding to this, substantive outcomes also depend on compliance with and implementation of the substantive measures. Complete implementation means that the policy goal is fully attained. Frequently, however, an implementation deficit is encountered, such that the outcome does not (fully) meet the desired goal. Not surprisingly, socio-legal research has found that the implementation of measures is positively dependent on the incentives, sanctions and enforcement rules provided by a decision (Friedman 1972: 222-3; Cotterrell 1992: 61-2, 143) [1]. In sum, the substantive outcome depends positively on both the suitability of the substantive measures [2] and on the compliance rate [3].

Drawing on the current EU rationales as outlined above, the central assumption of the model is that both variables that significantly determine outcome effectiveness – i.e. decision (output) and implementation/compliance – are in turn positively dependent on the way in which non-state actors are involved in the decision-making process, which information flows could be generated in this manner, and whether conflicts could be settled prior to the decision. As early as over 20 years ago, German administrative research found that citizens' participation improves the accountability and foreseeability of a decision-making process, therefore serving the realisation of plans, and thus performing an 'effectuation

⁸ This model does not, of course, exclude the existence of complex feedback effects or evolutionary mechanisms, as have been discussed since the works of Majone and Wildavsky 1978.

function' (von Mutius 1981: 164). Comparative policy research has even observed that only a participative policy style can lead to a comparatively high effectiveness of environmental policy, as measured by the level of pollutant emissions and resource use (Zimmermann 1997: 427-8; see also Lemos 1998; Hofman 1998). Generally, participation is expected to enhance the quality of a decision by preventing implementation problems (Bulkeley and Mol 2003: 151).

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 to the desired environmental outcome. For the sake of clarification, it is helpful to distinguish between the different types of effects that play a role in our consideration (see figure 2).

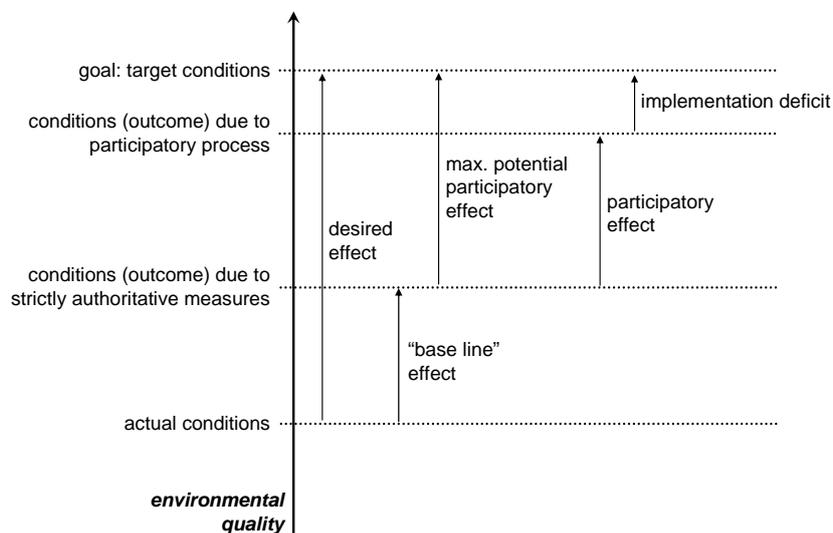


Figure 2: Illustrating the notion of effectiveness (see text).

Assuming that for some dimension of environmental quality (e.g. the absence of nitrate in ground water) the currently existing conditions are to be improved to a certain extent according to a given goal (target conditions)⁹, 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 between those substantive outcomes that are realised due to strictly authoritative measures such as legal validity, enforcement rules, etc. ('baseline' effect) and those that are attained due to the effects of participation (participatory effect)¹⁰. The assumption is that the latter will be

⁹ This goal can either be formulated in the (local) (participatory) decision-making process, or can be found in some higher-order law such as national or EU law.

¹⁰ This is initially 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.

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 deducting those non-participatory ‘baseline’ effects. Participatory outcome effectiveness is then defined by the factual participatory effect divided by the maximum potential participatory effect.

3.3 *Better Decisions through Participation?*

It is claimed that participation enhances the quality of decisions. The main mechanism that can be assumed is that, in the course of the participatory process, information is generated or made available that would not have been so otherwise, and that, further, the decision benefits from this information, i.e. the information is actually incorporated into the decision [16]. Thus, it seems plausible that environmental decisions can profit from the factual knowledge of involved actors about their (local) conditions (López Cerezo and González García 1996; Pellizzoni 2003: 218 with further references; Yearley et al. 2003), assuming that those who are closest to a problem develop the best understanding of it (Steele 2001, 437; Thomas 1995, 10). Other authors, however, contest this claim and hold that it is rather the authorities who have different and usually more reliable means of information gathering at their disposal (Fisahn 2002), especially as regards highly technical issues and the consequent need for specialised expert knowledge (Munnichs 2004: 127). In those cases in which the public – e.g. due to professional standards, or budget restrictions – cannot provide information that could contribute to a ‘better’ decision, there will regularly be rivalling goals on the part of the authority:

“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, 36)

Then again, there may be information that ‘emerges’ from the close interaction of actors in a group process [42]. Many authors stress the positive effects of social learning, the plurality of perspectives and the greater creativity in decision-making as characteristics of participatory decision-making (Linder and Vatter 1996, 181; Doak 1998; Mostert 2003; Pahl-Wostl and Hare 2004). Yet group processes also have the potential to produce adverse effects. For instance, Cooke (2001) points out problematic findings from social psychology regarding consensus-oriented group processes, such as the tendency towards taking risky decisions or becoming immune to independent and critical arguments. Which of these mechanisms prevails in a given context seems to be unclear at present.

Another type of information from which decisions could profit is information regarding the extent to which planned measures will be accepted by the addressees. In this respect, participation becomes an “instrument for the anticipation of resistance to planning and implementation” (Linder and Vatter 1996, 181).

3.4 *Better Implementation through Participation?*

The claim that participation leads to enhanced compliance and implementation of environmental decisions translates to two broad sets of mechanisms: better compliance through better information, and better compliance due to enhanced acceptance.

Plausibly enough, the addressees of a decision must know of it in order to be able to implement it – obey rules, comply with requirements. If future addressees are thoroughly informed about upcoming decisions, a higher rate of compliance can reasonably be expected, as any necessary measures of reorganisation and adaptation to new (regulatory) conditions, which usually take some time, can duly be taken [4]. However, some authors hold that, on the contrary, thoroughly informing the addressees about regulatory matters, their background and the rationale behind it as well as the uncertainties involved (de Garis, Lutt and Tagg 2003) can even lead to reduced acceptance of state action, as this might disillusion a possibly existing overly idealistic, transfigured notion of state action [7]. In other words, symbolic state action that integrates different, perhaps even contradictory aspects while leaving the recipients in the dark about the actual situation (Newig 2003; Newig 2005c), may in fact bring about acceptance (Cotterrell 1992: 172 et seqs.). In any case, it is to be expected that thorough information will change recipients' perception and understanding of a problem and thus their interests and – subjective – concern [5, 23].

Perhaps the most important – and most influential – claim that is being made holds that the implementation of and compliance with a decision depends positively on the degree of acceptance¹¹, or even identification, on the part of the addressees [6] (see, e.g. Webler and Renn 1995: 23 with further references; Bulkeley and Mol 2003: 151). Since the 1980s, different findings have increasingly suggested that the complexity of problems in the public sphere and the risks involved have become virtually incomprehensible for lay citizens. Numerous public projects – major projects such as airport expansions, or nuclear power plants, in particular – are thus increasingly rejected by the population, resulting in the situation that many environmental decisions will nowadays simply fail to be implemented without widespread acceptance among the population (for examples in Germany see Dollinger 1986: 40; Würtenberger 1996; Voßkuhle 2001: 202).

Acceptance may, firstly, be improved by providing the interested actors with early and comprehensive information [7]. This may prevent actors from feeling left out or passed over and create a sense of involvement and belonging. Also, certain educational effects, e.g. in the sense of improved environmental awareness, can play a role (Ryffel 1972: 240-1). Moreover, an intensive involvement of the affected parties in a decision-making process that is perceived as fair and based on mutual communication is expected to enhance the acceptance of the decision [8]. This even holds when the result does not correspond to the actors' expectations (Creighton 1981; Thomas 1995: 8-9; Würtenberger 1996, 98 et

¹¹ Acceptance, as the term is used in this context, ranges from mere toleration despite a lack of approval up to support of and identification with a decision. Following Luhmann (1978: 33), a decision is accepted if “those concerned take the decision as a premise of their own behaviour and adapt their expectations accordingly”. The decisive factor is whether those concerned refrain from proceeding against the decision.

seqs.), as procedural justice research has found that the acceptance of a decision crucially depends on aspects of fairness of the decision-making procedure [9] (Lind and Tyler 1988; Tyler 1990; Bulkeley and Mol 2003; Murphy 2004). Furthermore, a decision that involves conflicting interests [40] is more likely to be accepted by the different parties if it is based on either a consensus or at least a compromise to which most of the parties agree [10]. This in turn most likely requires an intensive participatory process that allows the actors concerned to effectively claim their stakes [11], but also a spectrum of interests that does not fundamentally rule out any consensual solutions [39].

Furthermore, in the medium and long term, the building of trust relationships both among the non-state actors involved and between non-state and state actors through participation [12] (Shindler and Aldred Cheek 1999; Mostert 2003) can lead to an increased regional collective social capital and can thus influence the context of future decision processes [13]. In particular, the building of trust can improve acceptance of and thus the willingness to comply with measures [14], as empirical studies in other contexts have shown (Murphy 2004).

3.5 *Importance of Process Design and Characteristics*

The choice of the process type and design basically determines whether, for instance, a mere roadshow, a public hearing, or a forum with large possibilities for public involvement (such as a citizens' jury) is carried out (see, e.g. Feindt 1997) and thus largely influences both actual participation and the intervention of non-state actors [20] as well as the mutual information flows (Rowe and Frewer 2005) [18, 19]. Moreover, the process design plays an important role in securing the fairness of the procedure, as measured, for example, by a fair representation of all concerned actors or equal opportunities for all participants to voice their concerns (Webler 1995) [17]. 'Success criteria' that are frequently mentioned in the literature include the transparency of the process, open communication, early involvement, joint determination of process rules, impartiality of the mediation (Thomas 1995). A basic premise for all of the mentioned criteria is, of course, that there is sufficient openness regarding the decision to be made. If, on the other hand, the participants get the impression that decisions have already been taken ('foregone conclusions'), then the motivation to participate and, ultimately, acceptance of the decision, is expected to remain rather poor (Selle 1996a, 177-8; Diduck and Sinclair 2002, 579, 583) [20].

3.6 *Importance of the Context*

While the way in which a participatory process is actually carried out, on the one hand – as mentioned above [18, 19, 20] – depends on the process design as determined by the authority, it is, on the other hand, also largely influenced by the tendency and willingness of the non-state actors to participate [21, 22]. Tendency to participate implies the situative willingness for engagement, co-operation and intervention, which is not necessarily identical to a fundamental disposition to participate (Buse, Nelles and Oppermann 1978).

Interest and concern

Research since the 1970s suggests that the tendency of non-state actors to participate – and thus to invest time and other resources – is primarily a function of the degree to which an actor perceives a problem to touch his own interests, combined with the degree of perceived chances to influence the output of the decision process (Buse and Nelles 1975: 52; Opp 1996: 357 et seqs.) [24]. Only a clear expected benefit makes participation probable (Selle 1996a: 177). This can also include motivations extraneous to the problem at stake (such as the desire for recognition), so long as participation in a process promises to fulfil such needs (Buse and Nelles 1975: 51-2). Conversely, a potential barrier to participation lies in a lack of interest in the matter at hand (Diduck and Sinclair 2002: 579). However, a lack of participation does not necessarily imply disinterest: rather, actors may feel that their interests and concerns are already sufficiently represented in the process (Diduck and Sinclair 2002: 584). Regarding the relation of interest and participation, research suggests that actors with more extreme positions tend to participate to a greater extent (Lüdemann 2001: 53; Turner and Weninger 2005).

Empirical research has provided evidence that the interest, or stake, of actors in a decision process is also dependent on the spatial scale of the decision context (Urfei and Budde 2002). More specifically, concern declines with the distance of actors from a geographically localisable object of concern (Hannon 1994: 161). Second, the more actors there are involved in the decision context, the less influence each single actor will have on the decision in question and thus the less she will be interested in participating. Thus, the larger the scale of the decision and the further an actor is away from the object of concern, the lower her concern and interest in the matter and therefore the lower her tendency to participate in resolving it [25].

Of special importance not only for the tendency to participate, but also for the potential of (consensual) conflict resolution, is the constellation of actor interests and, in particular, whether or not there is a social dilemma situation. Also known as ‘tragedy of the commons’ (Hardin 1968), or ‘common pool resource dilemmas’ (Ostrom 1990), the typical situation is that the collective rationality is not met with individual rationality. A special case is the so-called ‘NIMBY’ (‘Not In My Back Yard’) situation that appears regularly in siting decisions, when the advantages of a collective good (e.g. a waste incineration plant that is publicly recognised as necessary) are, for the potential neighbours of the plant, outweighed by (perceived) disadvantages (odours, etc.) (Elliott 1984: 397; see also Hirschman 1982; Thomas 1995: 185; Webler/Renn 1995: 27; Pahl-Wostl 2002: 4). Even financial compensation and a fair decision process may not, in severe cases, lead to a decision accepted by those immediately concerned [39].

Alongside the influence of actors’ perceptions and interests on their tendency to participate [24], the process design will often be organised at least partly according to the concerns of the actors [26].

Power and resources

Another decisive factor for both the tendency to participate [27] and actual participation and intervention is the power position – i.e. the resources – of each actor [41] (Lee and Abbot 2003). Research has found a higher degree of participation among dominant, influential and financially powerful actors (e.g. large companies) (Turner and Weninger 2005) and those with a high level of other resources, including individual social capital (Lüdemann 2001: 52) and education (Thomas 1995: 5). Conversely, a lack of resources – for individuals, these are mostly time and money – is considered to be a substantive barrier to participation (Selle 1996a: 177; Diduck and Sinclair 2002: 579 et seqs.). Processes with strong power asymmetries among the participants may therefore risk suppressing the interests of weaker actors more than would be the case in an authoritative decision (see, e.g. Cupps 1977; Selle 1996b: 72-3; Turner and Weninger 2005; Hilp 2003).

In this context, social capital as a collective resource in the sense of generalised trust and social cohesion is assumed, following Putnam (1995), to foster the willingness for (political) participation [28]. Likewise, social or moral norms and institutions may positively influence the tendency to participate [29]. Thus, it may be possible to distinguish regions, or countries, according to their ‘culture’ of participation.

Problem understanding and issue complexity

Informedness of actors is regarded as a further crucial factor in the tendency to participate (see Buse and Nelles 1975: 52) [30]. A lack of information, or overly-technical information, or a lack of understanding of the intricacies of environmental issues are commonly regarded as stumbling blocks for participation (Kartez and Bowman 1993; Webler, Kastenholtz and Renn 1995; Diduck and Sinclair 2002: 579 et seqs.). Although the actors’ level of information is most likely to increase in the course of a decision-making process (indicated in the systems diagram by the feed-back arrow [23]), understanding of a problem is here rather conceived as a context variable and not as a result variable.

The actors’ understanding of a problem is in turn influenced by two other context factors. Firstly, public awareness of an issue, as reflected in the media coverage, is assumed to foster the availability of information on the issue, thus decreasing information costs and furthering the informedness of actors (Newig 2004) [31]. Secondly, the degree of complexity of a problem is likely to hamper the actors’ level of information [32]. The more ambivalent, multifaceted and uncertain a problem is and the more knowledge is necessary for its understanding, the poorer the degree of information is likely to be (Newig 2003: 114-5, 121 et seqs.).

Problem structure

Not only does the problem structure affect the non-state actors’ tendency to participate, it is also likely to influence the process design. It can be assumed that the degree of problem complexity positively affects the information needs of the competent authority [33] and thus the consultation of the relevant actors. Moreover, the design and potential ‘success’ of

a participatory decision process is most likely to crucially depend on the existence of possible solutions – be they of a technical, organisational or legal nature, including the involved financial and other costs for their realisation (Holzinger 1996: 269). If these do not exist, a consensual resolution of conflicts in the case of conflicting interests will hardly be achievable [35]. Regardless of the participatory instruments, the output of the decision process is likely to depend (also) on the possible solutions [36].

Finally, it should be mentioned that both problem complexity and possible solutions may very well change due to the effective implementation of agreed measures and thus change the frame for future policy processes [37, 38].

4. *Conclusions and Outlook for Further Research*

Recognising that consensual and participative forms of governance, especially in environmental decisions, are gaining in importance, and are increasingly legally institutionalised, this paper first elaborated the relevant rationales for public participation as they appear in the current European legislation. The rationale and goal of achieving better and more effective implementation of environmental and sustainability policy measures figures most prominently. Based further on the observation that the substantive outcomes of participatory processes have until now remained insufficiently conceptualised and empirically researched, this paper has sought to identify relevant mechanisms and systematise these in a causal model. The proposed model, structured into context, process and result variables, is primarily conceived as a conceptual framework for the analysis of the existing – but fragmented and widely scattered over different single case studies – empirical material. I propose the following steps for further research:

- Complete operationalisation of variables by defining suitable indicators and – possibly – quantitative scales. For instance, the variable ‘public awareness’ could be measured and quantified by the number of newspaper articles per time unit (Newig 2004). Perhaps a further deconstruction of variables may be necessary, e.g. splitting the variable ‘decision’ into goal, measures and enforcement rules, as proposed in chapter 3.2.
- Comprehensive and thorough meta analysis of existing empirical case studies in the fields of participation and implementation research. While participation research partly also provides (mostly rather marginal) results regarding the achieved outcomes, implementation studies also regularly provide information regarding the mode of governance and thus on the effects of participation on implementation. The causal model presented in this paper lends itself to code the single case studies accordingly.
- Analysis of the structured empirical material thus gained with multivariate statistical methods in order to elucidate the interrelations among the variables and the relevance of the presumed causal factors. This will help us gain a thorough and sound insight into the governance modes, and the conditions under which environmental decisions lead to effective substantive outcomes.
- By applying the proposed model structure to and comparing it with empirical reality, the model itself will be adapted by reorganising, refining or aggregating the model structure according to empirical reality.

Admittedly, the proposed research strategy will entail serious challenges, which shall only be sketched here with the three keywords of causal attributability, quantifiability and comparability of single cases. However, this gives us the opportunity of gaining for the first time an integrated understanding of the conditions under which participatory processes lead to improved environmental quality.

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