

Winfried Osthorst, Hellmuth Lange

**Integrated Coastal Zone Management (ICZM)
as a Challenge to Spatial Planning:
On Vision-Building and Decision-Making.
An Empirical Evaluation of Applied Planning
in Germany.**

**artec-paper Nr. 147
Dezember 2007**

ISSN 1613-4907



Forschungszentrum Nachhaltigkeit (artec)

Universität Bremen
Seminar- und Forschungsverfügungsgebäude (SFG)
Enrique-Schmidt-Str. 7
Postfach 33 04 40

28334 Bremen
Telefon: +49-421-218-61800
Telefax: +49-421-218-9861800

www.artec-uni-bremen.de

Ansprechpartnerin: Andrea Meier Tel: +49-421-218-61800
e-Mail: andrea.meier@artec.uni-bremen.de

Das Forschungszentrum Nachhaltigkeit ist eine Zentrale Wissenschaftliche Einrichtung der Universität Bremen. Es wurde 1989 zunächst als Forschungszentrum **Arbeit und Technik** (artec) gegründet. Seit Mitte der 90er Jahre werden Umweltprobleme und Umweltnormen in die artec-Forschung integriert. Das Forschungszentrum bündelt heute ein multi-disziplinäres Spektrum von - vorwiegend sozialwissenschaftlichen - Kompetenzen auf dem Gebiet der Nachhaltigkeitsforschung. „artec“ wird nach wie vor als ein Teil der Institutsbezeichnung beibehalten.

Das Forschungszentrum Nachhaltigkeit gibt in seiner Schriftenreihe „artec-paper“ in loser Folge Aufsätze und Vorträge von MitarbeiterInnen sowie ausgewählte Arbeitspapiere und Berichte von durchgeführten Forschungsprojekten heraus.

Integrated Coastal Zone Management (ICZM) as a Challenge to Spatial Planning: On Vision-Building and Decision-Making. An Empirical Evaluation of Applied Planning in Germany.

Winfried Osthorst, Hellmuth Lange
Research Centre Sustainability, University of Bremen

Abstract

Integrated Coastal Zone Management (ICZM) as a means of enhancing sustainability has been the topic of a model project promoted by the EU during the late 1990s. Meanwhile, all member states are urged by an EU recommendation to develop national ICZM strategies, based on a set of criteria derived from this model project. The most prominent rationale of the criteria is a request to reassess existing spatial planning procedures and routines, in order to make them more participative and to strengthen and diversify the role of civil society actors.

However, before ICZM was promoted, many European countries had already developed more or less complex features to include a growing number of actors in various stages of spatial planning processes: In concept building, decision making, and implementation. As a consequence, the EU recommendations have not been unanimously appreciated. One of the main arguments against them claimed that already existing schemes and procedures (i) provide a wide array of participative elements, and that (ii) participation has thus been a core element of spatial planning, even before ICZM appeared on the scene.

Against this background, our study evaluated the performance of the German spatial planning system, in terms of integrating and co-ordinating different stakes into planning procedures of large scale infrastructure projects in the German coastal zone. The mechanisms for ensuring participation were assessed as well. The research was part of the development of a German National Strategy for Integrated Coastal Zone Management, a reaction to the EU recommendation. Based on the assumption that the established German spatial planning and approval system fulfils a decisive role in environmental regulation, regional economic development and the co-ordination of sectoral policies, the connection between ICZM and spatial planning will be discussed, with reference to the theoretical discussion about sustainable governance.

The study thus helps to understand the prerequisites for participative management, and the relation between formal and informal administrative, as well as political, processes in countries with highly developed administrations and tightly applied regulations for decision-making. To introduce sustainability-oriented governance concepts, such as ICZM, in countries like Germany requires the government to combine instruments of spatial planning with participatory forms of vision building, in order to create new governance arrangements.

1 Introduction

Since sustainability has become an official political objective with the UNCED-Declaration of Rio de Janeiro in 1992, the reconciliation between economic development, social responsibilities, and ecological carrying capacities has been a permanent political challenge. Any specification of this demand is highly controversial, and requires policies which translate sustainability into effective political programs and instruments.

However, there have been serious doubts whether it will be possible to introduce complex political programs in order to reorganise the interdependencies between state and societal actors, within society, and between society and nature. This topic has become subject of a debate on environmental governance. Resultantly, both, the understanding of the national governments' abilities to regulate social relations, and the effectiveness of single political instruments need to be reconsidered.

In regard to coastal and marine areas, ICZM has been discussed as one possible governance concept because it not only refers directly to sustainability but also shows a high degree of correspondence with its emphasis on vision building, policy integration, inclusion and participation.

The recent discussion about an ICZM strategy for Germany, which is a result of the respective EU recommendation, provides, both, an occasion and resources for the development of new approaches to introduce instruments for ICZM, and to evaluate their effects. Not surprisingly, the discussion shows the same ambiguity as the governance debate in general.

Of crucial importance proves to be the relation of ICZM to the established spatial planning and approval system which fulfils a decisive role in environmental regulation, economic regional development and the co-ordination of sectoral policies. This interface is still contested. On the one hand, political and administrative actors generally acknowledge the importance of, both, formal and informal participation, and inclusive management when confronted with complex challenges. But on the other hand, diverging interests and conceptual uncertainties have led to considerable conflicts, concerning inner-state and state-society relations. Resultantly, varying and at least partially incompatible understandings of ICZM are under discussion.

Against this background, the project RETRO ("Retrospective analysis of large-scale planning procedures in the coastal zone in terms of ICZM suitability") evaluated the performance of the existing German spatial planning system, by using indicators derived from the European discussion about ICZM. The study investigated how participation works within the existing institutional context, and what its appropriate scope ought to be. The findings are not only instructive in terms of the role the spatial planning system can play within ICZM in Germany, they also shed light on conditions for introducing sustainability-orientated governance instruments in countries with highly developed administrations, and tightly applied regulations for decision-making in general. The study thus helps to understand the prerequisites for participative management, and the relation between formal and informal processes in these settings.

In the following section, the article discusses the state's ability, in light of the recent governance debate, to accomplish sustainability objectives, while treating the concept of ICZM and its introduction into the political process in Germany as a particular case. The

discussion emphasises that sustainability requires participation, and highlights how important adaptive structures for decision-making processes are. The third section presents the approach and empirical findings of the retrospective evaluation of planning and approval procedures in the German coastal area, according to criteria on which ICZM processes should ideally be based. Reflecting the core results of the empirical study, the discussion in the fourth section distinguishes between aspects of sustainability which can be achieved in political and administrative processes (such as spatial planning procedures), and those which should be treated in new governance arrangements (such as networks), therein still requiring the leading role of government agencies. The conclusion highlights that sustainability-oriented governance has to cover all elements of decision-making chains. A narrow understanding of ICZM as a mere planning instrument is therefore judged to be inappropriate.

2 Sustainability as a Challenge for Governance

The Agenda 21 following the Rio conference claims that it attempted to place environmental politics as a crucial task on the global agenda, and that it tried to develop a differentiated conceptualisation of various environmental issues. In regard to oceans and coasts, chapter 17 of the Agenda 21 requires the integrated management and sustainable development of coastal and marine areas, including the respective so-called "Exclusive Economic Zones" (EEZs). Still, conceptual problems of integrating the diverging sub-objectives into a comprehensive political framework and of resolving the related conflicting interests led to increasingly diverging interpretations of sustainability (Brand 2004). Recent concepts, especially, underline the crucial importance of economic development, by placing it in the centre of the "triangle of objectives", next to environmental and social issues. At the same time, a comparison of Agenda 21 concepts in Europe showed that participation as a means of integration filled the blank position, underlining its eminent role, both, as a material objective, and as a means of integration (BMU 2002). An important argument for participation or democratic decision-making in general, is that a high degree of openness of the political decision-making process makes it more likely that potentially conflicting societal interests are heard and considered, and thus provides an essential prerequisite for policy integration.

The emphasis on participation and integration can be seen as a reaction to the increasing scepticism, concerning the ability of the state - as a principal agent of collective action in modern societies - to ensure the development and implementation of suitable and effective policy instruments. The diagnosis of "state failure" (Offe 1987) was based on various theoretical assumptions and different empirical observations. For instance, sociological systems theory assumes that internal logics of societal subsystems make it impossible for politics to purposefully steer other subsystems. At best, politics can take the role of a moderator between separate spheres (Wilke 1992).

A different perspective analyses the effects of, both, globalisation and internal fragmentation on the state's ability to govern. This line of argument suggests that the growing importance of global markets and European institutions, the increasingly restricted financial resources of state protagonists, and socio-cultural changes within modern societies that restrict commitments to traditional forms of interest representation through large-scale

organisations, all result in a reduced effectiveness of hierarchical and legal forms of governmental control of societal developments. This perspective's essential conclusion is that the dissolution of a central controlling body - which was, of course, always in part fictional - into a multitude of mutually dependent decision-making bodies reduces political accountability for decisions, as well as democratic control of governmental decisions (Kooiman 2002, Pierre 2000).

In contrast, empirical political sciences investigate various forms of policies and their effects, thus considering the precise institutional setting of the respective subject or issue. With respect to the German context of intra-state federalism which is characterized by a high degree of responsibilities that involve multi-level and multi-sectoral governing, a focus of analysis always laid on the interdependencies between the state actors involved. The problems of the "joint-decision trap" resulting from interwoven policies and politics (Scharpf 1988) were initially considered to be a specific weakness of the German institutional structure. As such, they led to a blockade of necessary political change, not only, but significantly, in the case of environmental policies (Jänicke 1986). Over time, governance theory agreed that even a radical reform with a separation of responsibilities would not reduce the complexity of political processes. The argument is that the underlying interdependencies cannot be eliminated, and consequently require an involvement of various levels and sectors of government (Benz 2001a).

This approach therefore focused on mechanisms to improve interactions between different government levels and agencies, as a way of increasing the governments' capability to act. Cooperation with societal actors in various sectors was also increasingly recognised as crucial for the state's ability to regulate - "to steer" in German parlance (Mayntz, Scharpf 1995; Braun 1993). With regard to environmental policy, analysis proved that a number of important German environmental regulations were introduced as forms of co-operative horizontal governance (Weidner 1989, 1995). Particularly network-type forms of co-operation and forms of sectoral self-regulation are regarded as an important supplementary form of state-societal relations on all levels of government. Still, recent analysts of German environmental regulation conclude that national governments are still the decisive and indispensable actors of environmental policies and sustainability. Ensuring effective regulation remains thus within the responsibility of national policy-making, and the use of traditional or new governance arrangements is a matter of institutional choice to be decided according to specific requirements (Jänicke 2003).

A topic which always served as an example for multi-level policy co-ordination is the system of spatial planning. In Germany, it mirrors the national legal culture, and the constitutional fragmentation and interdependencies of various political actors (Scharpf 1973; Newman, Thornley 1996). With its regulative and developmental function, the spatial planning system is one of the central tools to define binding procedures for policy integration, and the interaction between state and society in spatial terms. It is an important interface in the application of environmental regulation on the one hand, and the resolution of conflicting economic, social and environmental claims, related to the use of space and political decision-making about regional development, on the other hand. As a result, planning procedures are frequently highly controversial, and have in all stages the character of a political process, despite their administrative appearance (Fürst 2002b). A major issue is that although, theoretically, spatial plans are keystones of the planning process, empirically, project-related planning approval procedures, initiated by sectoral authorities in co-operation with economic

actors, are really the decisive elements of the system (Fürst 2002a). As a consequence, co-operation in sectoral networks, and claims to include additional actors in the planning process, have become important issues in order to enhance sustainability in planning.

While these tensions within the spatial planning system contributed to a debate about the "communicative turn in planning" (Healey 1993), networks are discussed as instruments of regional development (e.g., to achieve joint strategies for sustainability). The use of such local and regional forms of governance is considered to be essential, as a link between various actors and disciplines from state and society who are involved in regional issues. They are also considered important in order to create the capacity for collective action and social capital. However, apart from the many possibilities that such developments offer for developing integrated approaches, uncertainties also arise, concerning the regulatory competencies of the various territorial and political levels. This naturally leads to ambiguities, regarding the legitimacy of decisions (Nischwitz et al. 2002: 25). Projects which address regional environmental policy goals in particular, prove how important it is to include all relevant actors, and to create an atmosphere of trust through transparent, comprehensible decision-making procedures, as a basis for co-operation between conflicting interests. A key factor for joint learning processes is the development of a shared, long-term vision (Fichter, Moss 2001).

Further problematic aspects of network governance are the following:

- As a consequence of increasing organisational interconnectedness (e.g., in Public-Private Partnerships and networks), a merging of state and private organisations can be observed that reinforces the fragmentation of public spheres. This trend blurs the demarcation lines between private and public; and interactions in formal and informal decision-making bodies tend to be increasingly determined by influential actors, resulting in an increased selectivity and exclusiveness of such institutions (Hirst 2000; Kooiman 2002). A substantial number of important actors are organisations that are not accountable to those affected by their actions (Schmitter 2002).
- When decisions are prepared and implemented, considerable differences in expertise, and the ability to assess complex information, become increasingly significant. This is true, both, for the disparity between professional organisations (like businesses or specialised authorities) and citizens' groups, and for the differing capacities of economic actors and state institutions.
- Apart from the problem of power imbalances between the actors involved, the often existing overlaps between various decision-making bodies and levels also create considerable difficulties when a judgement has to be made which sections of the citizenry would be affected by a specific decision, and should therefore be able to participate democratically, in their capacity as a *demos* (Abromeit, Schmidt 1998).

3 ICZM Between Spatial Planning and Networks

Integrated Coastal Zone Management and its implementation in Germany provides an illustrative empirical case, as to how these tensions and ambiguities are practically relevant for the development of strategies to promote sustainability and improved management concepts.

ICZM serves as an umbrella term for various concepts which were developed in different countries, in response to the growing recognition of the extreme vulnerability of the coastal areas' eco-systems. Over the past ten years, the particular importance of these areas for numerous forms of human activities has triggered attempts all over the world to harmonise human interests with environmental protection measures and policies.

The purpose of ICZM is to manage and co-ordinate the various, and often contradicting, forms of human use of the coastal areas. Besides the reconciliation of conflicting societal interests, the long-term preservation of natural resources, and the protection of the coastal eco-systems are of particular importance (Burbridge, Humphrey 1999: 1). With its orientation towards integrating conflicting economic, social, administrative and environmental demands along the coastal areas, ICZM is intended to contribute to the realisation of sustainability objectives in these regions.

In an ICZM demonstration program carried out between 1997 and 1999 by the European Commission, it was established that a comprehensive approach would be essential for a successful sustainable management of the European coastal zones. Specific local circumstances, ecological processes, and the demands of all the protagonists and pressure groups in each respective area (such as fishing, tourism, agriculture, shipping, ports, environmental conservation) would have to be taken into account, while guaranteeing co-operation between all relevant state institutions.

These key principles require binding negotiation processes between all affected interest groups. Appropriate instruments and procedures are necessary, as a basis for mutually accepted visions for the respective region, and to negotiate compromises between economic, social and environmental objectives (EU-Commission 1999: 15 pp). Inclusive or participatory bargaining comprise both, co-operation between administrative institutions, and the participation of non-governmental actors. One important outcome of the demonstration program was the specification of requirements for applying the principles of participatory bargaining procedures to the specific circumstances of network-type ICZM projects.

Politically, all these activities resulted in an EU-recommendation which required the member states to develop a national ICZM strategy until spring 2006 (EU 2002a). Because of its simultaneous orientation towards sustainability, integration and participation, the recommendations concerning the practical ICZM application can be interpreted as contributing to an environmental policy that seeks to achieve *environmental integration* at the European level. At present, this policy is an important stimulus for changes in legal provisions that may contribute to a wider notion of participation when applying German administration and spatial planning law. The consequences of the Aarhus Convention, the EU Water Framework Directive (2000/60/EC) and the Directive on Strategic Environmental Assessment (SEA - 2001/42/EC), in particular, have started a lively domestic debate among German experts and practitioners.

Like in other European countries, the discussion about ICZM gained momentum only recently in Germany, as a result of the EU recommendation (Howlett, Rayner 2005). Compared to the binding character of European directives, the recommendation can be characterised as a weak instrument which even allows for non-commitment of single member states. Thus, ICZM provides an example of the diffusion of policies and legal instruments in multi-level-systems (Kern 1998, Kern et. al. 1999). In 2003, the Federal Ministry for Transport, Building and Housing (BMVBW), also responsible for spatial

planning at the federal level, initiated the stocktaking of coastal issues and responsibilities requested by the EU recommendation. The Federal Ministry of Research (BMBF) funded two large network-orientated projects, as part of its research and development activities, to promote sustainability. In 2004, the responsibility for developing the national strategy shifted to the Federal Ministry of the Environment (BMU), reflecting the responsibility of the Directorate of the Environment on the EU level. In 2005, the Federal Agency of the Environment (UBA, a BMU agency) discussed the drafts of the national German strategy with a committee of stakeholders and various sectoral and regional authorities from the five coastal *Länder* (i.e., states).

Through this process, it became immediately apparent that a crucial part of the strategy was to define the connection between ICZM principles and informal instruments on the one hand, and the existing legal framework and institutional setting on the other hand. Since the integrative principles of ICZM require involvement of all state levels and various sectoral administrations, spatial planning proved to be the suitable framework, once again, because it ensures the integration of all constitutional bodies, maintains their autonomy, and provides a legally defined interface between participation and legally based decision-making (see, for instance, the corresponding recommendations of the BaltCoast Project, in BaltCoast 2004). Practitioners within various administrations were also concerned to prevent the emergence of new tasks, the blurring of territorial or sectoral responsibilities, and additional budgetary obligations. This is why participatory instruments (like forums) faced resistance from many directions. Especially the *Länder* institutions emphasised that their co-operation with economic actors for regional development should not be hampered by environmentalist regulation and blockades, resulting from pluralistic stakeholder involvement. Resultantly, ICZM was defined as a vision, influencing the existing framework of spatial planning in the long-run.

The central importance of spatial planning within the context of coastal governance and ICZM was further underlined by the amendment of various laws in 2005, regulating the application of spatial planning procedures in the EEZ. As a result of the promotion of renewable energy production, the planning of offshore wind energy projects boomed, despite technical and environmental uncertainties. The lack of effective legal instruments to coordinate and regulate the development of this new technology thus became an important topic in the discussions about coastal issues in Germany (Gee et. al. 2003: 53pp.). The adaptation of the legal and institutional framework clearly underlines the relevance and flexibility of spatial planning regulation, both, for ICZM, and for problem solving capacities in general.

Spatial planning professionals' and academics' influence in ICZM is also a characteristic of the *Länder*. In the case of Schleswig-Holstein which was the forerunner concerning ICZM in Germany, ICZM received attention in connection with the amendment of the Schleswig-Holstein National Park Act, which led to conflicts between protagonists from coastal protection, the tourist industry, and environmental associations. These experiences were reflected in a study by *Kannen*, which identified key factors for putting ICZM into practice (Kannen 2000). The objective of his investigation which was conducted within the context of developing coastal protection strategies for Schleswig-Holstein (Fahrenkrug et al. 2001) was, once again, the promotion of spatial planning.

Developing the interface between the spatial planning system's established decision-making processes and administrative routines and extended forms of participation and improved integration thus appears to be the main challenge within the context of ICZM. But is there really a need for an extension of existing practises and additional instruments? What effects do current forms of participation, co-operation and integration have within the existing spatial planning framework? Answers to these questions might not only be helpful to develop ICZM within the specific German context, but also for sustainability-orientated governance settings in general.

This as background, the findings of the RETRO study, which was also funded by BMBF within the context of preparing the national strategy, provided interesting insights into the character of participation and integration *within* the spatial planning system, and its effects on decision-making.

4 Findings From the Analysis of Planning Approval Procedures According to ICZM Criteria

Approach

As already mentioned, the preparation of the national German ICZM strategy provided the background for various research activities which investigated institutional and organisational settings for ICZM in Germany¹. In this context, the aim of the RETRO project was to investigate the qualities and deficiencies of existing planning instruments, by means of a retrospective analysis of the compatibility of completed planning approval procedures with ICZM. The basic assumption was that the then existing practice did already, at least partially, fulfil the nationally and internationally developed requirements for ICZM, while substantial and methodological deficits were to be expected in other areas. On the basis of the empirical findings, the project team developed policy recommendations for the implementation of ICZM within the German institutional framework. This approach differs from the majority of projects presently carried out, in so far as those primarily endeavour to set up networks or forums, as innovative communicative platforms for ICZM implementation.

The RETRO study was mainly based on the analysis of conclusive plan approval documents of 10 large-scale infrastructural schemes from the coastal areas, with a view on establishing how sociological, economic, environmental, and legal aspects were taken into account, as the projects progressed. This included a summary of the schemes' histories, a mapping of the interests involved, an examination of the political and administrative systems' and other actors' roles, and of the processes of evaluation and compromising.

The large-scale infrastructural schemes examined were selected according to the criteria of representative regional distribution, the type of scheme and the type of procedure applied. This included not only projects in the Northern and Baltic Sea areas with their distinctive

¹ Further important activities are, for example, the project on "Integrated Coastal Zone Management: Strategies for Spatial Planning in the Coastal and Marine Areas" (funded by the Federal Ministry of Traffic, Construction and Spatial Planning (BMVBR), cited as Gee et. al. 2003) which made an inventory of all current interests in the German coastal areas, and two large research consortiums seeking to implement regional ICZM concepts ("Coastal Futures", situated in Schleswig-Holstein", and "Oder Estuary", situated in Mecklenburg-Vorpommern). The latter are financed through the ICZM-oriented program of the Federal Ministry of Research and Education (BMBF), through which RETRO was also funded.

geological, environmental and economic situation, but also examples involving the federal level and, given their differences in administrative structures, all five coastal Länder which hold major responsibilities for spatial planning and project approval procedures. Furthermore, the sample had to cover the major types of approval procedures, since some types concentrate all issues and responsibilities in one procedure ("*Planfeststellungsverfahren*"), while others require various permissions from different administrations. This involves a succession of procedures which might not necessarily be mutually binding. Finally, the selected projects had to cover the most important forms of infrastructure projects in the coastal region².

The schemes selected were: A dyke extension (Augustgrodden); the extension of the container terminal in Bremerhaven (CT III); the off-shore wind farm at Butendiek; the Ems flood barrier; the Elbe deepening; the German coastal section of the EUROPIPE gas pipeline, from Norway to Germany; the construction of a motorway section along the coast (Section 1 of the A20 near Lübeck); the German coastal section of the Konntek electricity cable (Denmark-Germany); the extension of the Airbus factory into the Elbe river plain, in Hamburg (Mühlenberger Loch); and the construction of a marina at Kühlungsborn, near Rostock. The procedures thus included all five German coastal states, both, international and national cross-border schemes, as well as the complete planning procedures for major public schemes, covering all legal steps, subjects ("*Planfeststellungsverfahren*") and authorisation procedures for smaller projects ("*fachrechtliche Genehmigung*"). In most cases, state (Land) authorities were responsible for the procedure, in some cases federal authorities.

To assess the selected schemes in terms of their ICZM compatibility, we derived criteria pertaining to *participation*, *integration* and *environmental sustainability* from the results of the EU demonstration program. Each of these criteria was further differentiated, using a set of indicators, and combined in a checklist (presented in Schuchardt et al. 2004). Although the RETRO project concentrated largely on the procedural aspects of ICZM, the effectiveness of the affected eco-systems' protection was also analysed in a subproject.

The study of the 10 major infrastructural schemes in the German coastal areas revealed a pattern of commonly recurring features, despite all differences in the types of scheme, approval procedures, and/or their size or location. This pattern was used, together with the findings drawn from the particular features of each individual case, to draw up an empirical *profile of strengths and weaknesses* of planning approval procedures in the German coastal area, in terms of ICZM requirements. This profile served as the basis for policy recommendations.

Dimensions of Participation

A central finding was that in the cases investigated, bargaining was restricted to discussions between state and societal actors on how to deal with uncertainties. The elimination of such uncertainties was required for the successful (in the sense of: professional, legally binding, and conflict-free) implementation of the scheme. While *participation in implementation* is, by all means, relevant, our empirical research also highlights the importance of *participation in decision-making processes*, and – decisively – openness to their outcomes. Moreover, the

² Because of a private investor's resistance, we were not able to include a sand mining project, located in the EEZ, into our sample, leading to the only relevant blank position concerning project types.

schemes were predominantly oriented towards the realisation of sectoral objectives, and, in most cases, already decided in preliminary political negotiations between, for example, influential economic actors and state government representatives. The remaining actors were referred to the limited possibilities of interest conciliation within planning procedures. Rather than nurturing a holistic culture of mutual learning for all actors involved, this approach tended to encourage conflict-oriented participation through legal representation. Nevertheless, even in more controversial procedures, the various parties still regularly displayed, at least a minimum amount of confidence in the possibilities of procedural participation, and consideration of their interests.

In detail, the following results were relevant, concerning the assessment of participation:

All planning procedures were characterised by the broad participation of societal, political and administrative actors, corresponding to the complexity and size of the schemes, and representing all identifiable affected interests. However, the status of these actors and interest groups varied. Those with good legal titles, and effective institutional backing, who were thus politically influential, had a strong position, while diffuse or weakly organised interest groups were frequently at a disadvantage. This was often true of those representing various aspects of the residents' quality of life. Whether, and to what degree, these weak interests were asserted during the procedures, also depended on the existence of alternative concepts, which in all cases were proposed by environmental associations. These organisations enjoy a very special status in the German legal system, since the Federal Environment Preservation Act and most of the corresponding state legislation recognise them as representatives of environmental interests. Since environmental aspects were always affected, and since the environmental organisations had good legal standing, due to legal requirements concerning environmental impact assessments and protected areas, these associations played a central role in the majority of the cases examined.

Altogether, this underlined the importance of legal and political veto power. Additionally, it became increasingly obvious that unorganised affected interests regularly lacked conceptual competencies.

In the planning processes, several distinct **forms of co-operation and actor constellations** were identifiable:

In all cases, the approval authorities were able to rely on *collaborators* whose expertise and contributions reduced areas of uncertainty, and facilitated the drawing up of planning specifications. This was regularly the role of the respective authorities, in most cases municipalities, but in some cases also environmental associations.

By contrast, *supporters* of the projects did not regularly take active part in the procedures. This could be attributed to the approval procedures being restricted to implementation, which promoted controversial bargaining over compensation for affected interests. Thus, to a large extent, societal support for the schemes remained invisible. In odd cases, environmental associations played a supportive role in procedures in which schemes were purposefully designed, as models for resolving long-standing conflicts about environmental interests.

Depending on the type of scheme, different actors and societal groups participated who were affected by the schemes, and who felt their interests encroached upon, in one way or another:

In the cases of *large-scale schemes in rural areas* (river deepenings, coastal protection, dyke building, etc.) space requirements affected farming land and forestries. Here, residents and

businesses were rarely involved, due to low population density. Their interests were effectively represented by associations, public institutions, and their close connections with local and regional political bodies. Another important aspect was that conflicts regularly arose between agricultural and environmental interests, about the size and extent of environmental compensation measures. In the cases under study, these secondary conflicts about the use of land were dealt with in different ways by the respective approval authorities.

Where schemes affected *densely populated areas*, residents were, in some cases severely, affected by noise from construction or machinery, landscape alterations, or restricted opportunities for local recreation. In such cases, those whose property (land or buildings) was encroached upon had comparatively good legal standing, and consequently better chances of compensation or settlement. Compensation for impairments by noise, traffic and the loss of local recreational areas, however, was very limited (e.g., through minor measures for improving local recreation amenities), or in strict compliance with the narrowly defined legal limits (e.g., soundproofing strictly in accordance with the threshold limits, as stipulated in the pollution control regulations). It frequently proved to be difficult to co-ordinate these interests, since the effects of such measures on the individual's quality of life were so diverse and negligible in relative terms and, moreover, the affected population first had to form competent collectivities. In none of the cases under study was it possible to enforce a claim related to the gradual degradation of quality of life.

The primary stake affected by development schemes in coastal marine areas (cable laying, pipeline construction, off-shore wind farms) was the tourist trade, which is locally often the chief source of income, and regionally of major significance as well. Given this importance, it was easy to organise interest groups. The existing tourism development associations and the many local hoteliers and lessors have traditionally been involved in political and administrative negotiations, both, at the local and regional level. They were thus able to profit from institutional support. In all the marine projects (i.e., including estuaries) small numbers of fishermen suffered from substantial income losses through spatial or temporal restrictions. With only one exception, the approval authorities refused to acknowledge the legal standing of the affected fishermen. Nevertheless, in light of the strong public attention given to fishing interests, in most cases, investors were prepared to offer compensation without the fishermen having to resort to official procedures.

In the majority of cases, the environmental associations, as *project opponents*, were the only interest group that went beyond the representation of individual concerns, by developing concepts which challenged the objectives of the respective scheme, and by making alternative proposals, thus questioning the official justifications. Their legal status enabled them, in some cases, to place environmental issues at the centre of the conflict.

The environmental organisations varied their participatory strategies according to different criteria, such as: The ecological and symbolic significance of the issue at stake, its legal protection status, political and public support for the proposed scheme, as well as their own organisational potentials. They thus revealed themselves to be the most versatile of all the participants in drawing up strategies. Altogether, their relation to the approval authorities showed elements of what might be called "antagonistic co-operation".

The active inclusion of the public, and their access to essential information – in other words, the transparency of the procedures – mainly depended on the plurality of public opinion-formation processes, the necessity for the protagonists to justify their position to the public,

as well as the media attention these controversies attracted. While the major, controversial schemes always attracted such attention, some crucial information (such as cost-benefit analyses) was unavailable, or inaccessible to the public.

The highly specialised expertise of professional actors frequently stood in stark contrast to the limited qualifications and resources of affected actors, giving them less scope to protect their interests. Only a small portion of the substantial resources provided for the planning and approval process were selectively available for the encouragement of participation.

The technological terminology used during the actual procedures – both written and oral – was applied to clarify areas of uncertainty concerning the implementation, but it also prevented involvement in the procedures' outcome. Such terminology thus contributed towards establishing legal certainty for the schemes in question, co-ordinating details with relevant authorities, municipalities and other actors. To a certain extent, it also helped to reach agreements on compromises between conflicting interests. Temporal options available during the approval procedures were primarily used to support the realisation of the project.

This predominant style of participation was encountered almost throughout, and generally proved to be conducive to the implementation of the schemes, although it also remained restricted to this function. According to the definition of participation in German procedural law, participation *primarily* serves to provide information to the relevant authority on the one hand, and the involved citizens on the other, but it also serves to conciliate between affected interests, and to provide preliminary legal protection and guarantee a legal hearing (see, for instance, Bora 1994: 310). In the cases examined, the inclusion of most actors involved in the procedure was successful, and the legal regulations were accepted as a framework for participation and negotiation. This acceptance ended, however, if a controversy with a high or even very high degree of conflict potential developed around the central objective of the scheme. In such cases, both, the close co-ordination between approval authorities and investors, and the restriction of participation to implementation were deemed unacceptable by the opponents of the scheme (though not necessarily by the other actors). In some cases, the limited entitlement of associations to sue constituted a restriction of the legal scrutiny of administrative decisions through courts.

The variations in the design of the procedures under study also suggested that the approval authorities used the full scope of procedural law to influence the course of the procedure, in favour of implementing the projects. This finding points to the danger of excessive administrative control, which is incompatible with the intentions of participative negotiations.

Dimensions of Integration

As to integration, the findings of our investigation differed from those about participation. To a large extent, both *vertical* and *horizontal* integration were successful. For complex schemes in particular, this can be seen as the main benefit of planning procedures. Negative aspects that are worth mentioning in this context were, first, the sectoral orientation of the schemes, which restricted co-ordination mainly to the elimination of legal and technical uncertainties, and secondly, the accumulation of temporal and spatial negative effects, which were neither sufficiently taken into account, nor integrated into holistic visions.

Especially in the case of extensive, complex schemes, the approval procedures were specifically geared to liaise between local and supra-regional concepts and plans. Even then, however, the contributions of local authorities remained restricted to the project's implementation, and its adaptation to local circumstances. In cases, in which local and supra-regional objectives differed substantially, on more than a few single aspects, municipalities regularly had to give in to supra-regional interests.

While the sectoral policies, as well as state and public specialist institutions, were regularly, and to a considerable extent involved in the proceedings, the approval authorities were highly selective and restrictive in regard to other authorities with whom they sought more intense forms of co-operation. Such co-operation was also primarily restricted to dealing with legal and technical ambiguities. The chief outcome of this practice was the legal and technical integration of existing public infrastructures into the planning procedures, as well as the adaptation of relations and responsibilities governed by public law.

This form of co-operation can be labelled "negative co-ordination", meaning that a large number of authorities adjusted their policies to meet the criteria of the respective approval authority, thus reducing co-ordination costs. In contrast to so-called "positive co-ordination" which involves intense, multilateral negotiations, "negative co-ordination" is less costly, and a sound "second-best" solution for horizontal – and clearly also vertical – co-ordination (Scharpf 1992: 627). While planning theorists recently predicted an increase in consensus-oriented, multilateral forms of co-operation in response to a changing understanding of spatial planning (Fürst 2002: 149pp.), our research results revealed a prevalence of sector-oriented policies and networks, rather than integrated approaches.

In general, the necessary preparatory legal measures (e.g., international treaties) were taken to ensure that the schemes and respective procedures fitted flexibly into the existing jurisdictional structures and the graded spatial planning instruments. Existing planning requirements had hardly any regulatory effect on the schemes, however. To the contrary, where inconsistencies occurred, the spatial planning objectives were adjusted to suit the schemes.

As to *territorial integration*, important differences were identifiable in cases which also affected the Exclusive Economic Zone (EEZ), or the territorial sea (coastal sea area within the 12 nautical mile zone). Multiple jurisdictions led to a separation of the planning process into a number of interdependent procedures. In some cases, this resulted in a limited assessment of alternatives, and reduced co-operation between different jurisdictions. It also led to a lack of sufficient attention paid to the land-sea-line, and the demarcation of areas under consideration.

In general, assessments of alternative locations for the schemes were of a high standard, while investigations of conceptual alternatives showed deficits, due to foregone decisions, narrowly defined approaches to the issue at hand, or lack of standards for comparison.

Long-term effects on the natural environment, in particular, were not taken into account by sectoral plans with economic objectives. In these cases, the plans' underlying vision even expressed a clear bias in favour of developing the respective areas as economic locations. Even accumulations of environmental damage from other projects located nearby, occasionally remained unheeded.

Environmental Dimensions

The findings of the environmental sub-project showed that environmental impact assessments of the projects predominantly included all aspects, which were relevant in specific situations, and that they were appropriately conducted. Further, the settled measures for compensation, and for monitoring project-related effects on ecosystems resulting from these assessments, were also appropriate, as long as the assessed impacts were above legal threshold value.

In many cases, compensatory measures were adopted in accordance with the narrowly defined limits of the respective legislation (e.g., the pollution protection law in the case of noise prevention). Compensation for negative effects on the environment varied to a high degree in the different schemes. For several major schemes, compensatory measures were implemented through an "ecological upgrading" of other areas. In some cases, however (for example in the enlargement of shipping lanes in river estuaries), even extremely elaborate compensatory measures were not able to offset the negative effects on central environmental parameters (in this case the higher velocity of flow). Occasionally, the measures decided upon were even completely inappropriate, since they were designated for areas that were already of high ecological value. For several marine projects, no compensatory measures were implemented at all (whereby true compensation is hardly possible anyway, in these cases).

As to the dimension of integration, an important reason for the insufficient attention paid to environmental impacts resulted from neglecting the accumulation of project effects in temporal and spatial terms. Despite good standards in recording environmental effects, the so-called "final weighting", which justifies the approval authority's decision, insufficiently recognised the value of environmental dimensions.

To sum up, the essential practical strength of the approval procedures under study was the effective political, planning-related, legal and technical implementation of the schemes. The following aspects were of particular relevance in regard to ICZM criteria:

- There was broad inclusion of state and societal actors.
- Interests between the actors involved, in terms of their legal and political veto positions, and the effectuation of procedural acceptance, were conciliated.
- Compensation and monitoring of side-effects related to the schemes were limited.
- A graded planning system with differentiated legal instruments existed.
- There was a high degree of flexibility in ensuring vertical and horizontal integration, particularly in very complex procedures, which, unfortunately though, remained mostly restricted to forms of "negative co-ordination".
- The assessment of environmental impacts was appropriate.

The essential weakness of the examined approval procedures, in terms of ICZM criteria, proved to be their sectoral bias in favour of economic interests. Moreover, the participatory style was primarily used to ensure the efficient implementation of the project. These aspects affected the planning procedures in the following ways:

- The close co-operation between economic actors, political decision-makers and approval authorities tended to result in foregone decisions on the schemes, prior to the conclusion of the procedures.
- Spatial and temporal side-effects of the schemes were not taken into account sufficiently; conceptual alternatives were only given cursory attention.
- Various aspects of quality of life, and the environment were impaired, both of which could only be compensated to a limited extent.
- In the planning procedures, various important dimensions of participation were put into practice to a limited degree only (e.g., in terms of flexible schedules, information, resources, conflict management through negotiations, the existence of conceptual competencies, a mutual learning culture).
- Spatial planning was determined to a considerable extent by sectoral interests; thus its potential as a regulatory instrument for general spatial and regional planning was restricted.
- As a result of different jurisdictions, the territorial integration of project planning procedures in the EEZ and the territorial sea area faced problems.

Illustration 1: Empirical profile of planning approval procedures in the German coastal areas

	Strengths	Weaknesses
Major issues	Effective political, planning-related administrative, legal and technical implementation of projects.	Biased sectoral orientation, in favour of economic interests Participatory style focused on efficiency
Single aspects	Broad participation of state and societal actors Conciliation of interests - in terms of legal and political veto positions Generally appropriate assessment and compensation of environmental and social impacts, if above legal threshold values Establishment of procedural acceptance Existence of a graded planning system Flexible practice of vertical and horizontal integration	Foregone decisions about schemes, as a result of close co-operation between economic actors, political decision-makers and approval authorities Reduction of quality of life in various dimensions Insufficient attention paid to accumulation of project effects in temporal and spatial terms; only cursory examination of alternatives Limited use of essential dimensions of participation Strong influence of sectoral planning on spatial planning Problems with territorial integration of plans in the EEZ and the territorial sea

5 Suitable Procedures for Distinct Levels of Decision-Making

Our empirical analysis of planning and approval procedures for major schemes in the German coastal area revealed that the spatial planning system provides opportunities for participation and integration. However, one aspect that became particularly clear is that the different types of actors, with their conflicting interests and motives, have very different standing and opportunities for influencing the respective projects. Moreover, the comparative study of different planning procedures, in terms of ICZM criteria for participation and integration, identified typical constellations of conflicting interests and actors. These findings facilitate a subtly differentiated perception of the relations between the various political, administrative, commercial and civil society actors within the spatial planning system and political decision-making in general. Essentially, the analysis of these processes highlighted the importance to distinguish between *participation in agenda-setting*, or concept-building on the one hand, and *participation in project implementation* on the other hand.

Obviously, access to the agenda-setting process exists primarily for actors with resources and privileged connections to the states' political management and sectoral administrations which are attractive partners in project development. Especially economic actors fulfil these conditions. During project implementation, however, the involvement of affected interest groups is needed, to adjust the projects to local conditions. Unfortunately, their possibilities to pursue their interests remain limited, and are, by and large, determined by already established co-operative relationships with local political decision-makers and authorities.

Thus, the disparities between the resources available to these actors (such as time, money, power and knowledge) are accompanied by inequalities in power and access to decision-making circuits. Within these circuits, which extend across all sectors and levels, the shaping of projects is primarily determined by the contributions that partners from the private sector, civil society or the state can provide (Gabriel 2000, Stoker 1995). This confirms the essential findings of participation research, in terms of criteria for the success of, and typical obstacles to, participation in planning processes (e.g. Schmals 1997).

As to sustainability, these inequalities are rather problematic because the dominance of sectoral approaches, inadequacies in the search for alternatives, insufficient consideration of accumulative effects, and reductions in quality of live and the environment are clearly connected. Sectoral agenda setting thus undermines the objective of integration, which is essential for sustainability.

On the positive side, the study also showed that the German spatial planning system provides an effective setting for managing conflicts of interest, and assessing environmental impacts, in a narrow sense, during project implementation. Essential prerequisites are a professional planning administration and the design of procedures which provide at least some effective legal veto power to stakeholders, such as local citizens and environmental associations. These findings confirmed assumptions that governance arrangements which are expected to produce effective outcomes in regard to a sustainable regulation of natural resources, require a relatively high capacity of societal actors (such as NGOs) vis a vis business interests (Howlett, Rayner 2005: 18). One precondition for such a high involvement of NGOs are legal regulations and applied practises to ensure that the co-operation of public and private actors in local or regional development regimes will not predetermine the outcomes of the

procedures. This is a demanding task which contributed to a vast body of law literature discussing the characteristics of neutrality.

Since only one of the two needed types of participation is sufficiently ensured within the German spatial planning system, questions remain as to where and how the identified inadequacies should be dealt with. To what extent can they be dissolved within the spatial planning system? What role can new governance arrangements play, and what understanding of ICZM may then be appropriate within the German setting?

One possible solution derived from the governance debate is, that the spatial planning system might be expanded into a fully functional decision-making arena in its own right (Abromeit, Schmidt 1998, Benz 2001a) to ensure co-ordination of various contradicting claims of different societal sectors and actors, through state-guaranteed negotiation procedures. At present, by connecting subject-related functional co-operation with territorial regulation, planning procedures have the special function of assessing the repercussions of usage forms on other interests, through reactive monitoring (Fürst 2001: 89). To develop them beyond this function would mean to understand them, first, as interfaces between representative democratic decisions, informal forms of participation, and societal conflict management processes, and, secondly, as a co-ordination point between different policies and levels. In this way they would combine the benefits of non-hierarchical types of governance in containing conflicts, with those of state regulation in distributing limited resources, and guaranteeing substantive and procedural standards.

The problem is that within the German constitutional system, the preparation of such projects constitutes an original component of the respective state governments' political tasks while decision-making is genuinely parliamentary. Expanding the role of planning procedures might thus blur the tasks of constitutional decision-making structures, and lead to over-complexity. Furthermore, the conflict underlying the adequate interpretation of sustainability is basically a political conflict between contradicting interests. Obviously, the constant conflicts concerning insufficient participation in agenda-setting are a consequence of "blame avoidance" strategies, in which governments reject claims of stakeholders for participation by referring to planning procedures, while planning authorities reject them as genuinely political, thus leaving a blank position. Offering a forum to negotiate and reconcile them requires inclusive vision building on the part of political actors which would nevertheless remain "in the shadow of hierarchy" (Scharpf 1992). Therefore, ensuring participatory agenda setting has to be linked to political institutions, and should precede planning procedures. Within these forums, the effects of power imbalances between the participating stakes can at least be discussed and dealt with in front of the public, and within the political sphere.

Defining participation in agenda-setting as a political issue, does not mean that there is no need for substantial regulations to counter-balance the strong position of economic interests at the front end of planning procedures, through procedural instruments and extended forms of participation in project implementation. As our empirical findings indicate, improvements are especially necessary in regard to (a) the *neutrality* of the approval authorities, (b) the introduction of *affirmative action* for producers of counter-expertise in the field of environmental preservation and beyond, (c) *capacity-building* measures for actors with scarce resources, and (d) the extended use of evaluation and review instruments (see Schuchardt et al. 2004). Partially, these issues are already addressed by the recent

implementation of European regulations, such as the EU Water Framework Directive (2000/60/EC), the Directive on Strategic Environmental Assessment (SEA - 2001/42/EC), and the regulations resulting from the Aarhus Convention. At present, this policy is an important stimulus for changes in German law on administration and spatial planning, which thus confirms the importance of multi-level-structures for the diffusion of environmental policy instruments.

Concerning the relation of ICZM and the existing German institutional setting (or, generally speaking, sustainability oriented governance arrangements in contexts which are characterised by tightly applied formal regulations), our conclusion is that ICZM cannot just be interpreted as a tool applicable at the local or regional level. Rather, the quality and the development of the complete arrangement of administrative and political decision-making procedures and their legal regulation are essential components of ICZM. Therefore, ICZM in a country like Germany requires the flexible but purposeful combination of participatory policy formulation, spatial planning instruments, and accompanying local activities as an integrated governance arrangement.

6 Conclusion

The analysis of the development of an ICZM strategy in Germany revealed that a reorientation of decision-making towards sustainability questions the established practises of participation and interest reconciliation within contemporary political and administrative structures. In countries with highly professional administrations, developed and applied environmental regulations, and established routines of multi-level and multi-sectoral co-ordination, the tasks of policy integration is usually ensured through formalised and practised forms of co-operation between various institutions. In the German as well as in other Western cases, the spatial planning system provides one of the main veins for these forms of internal co-ordination. Since this system also ensures societal participation in territorial planning, it seemed reasonable to attach ICZM as a tool for improved integration and stakeholder participation to this system.

However, the empirical investigation of planning approval procedures indicated that despite elaborated practices of integration, impact assessment and monitoring, the driving force behind planning was predominantly sectoral.

With regard to participation, the distinctions between agenda-setting and implementation proved to be essential. Participation in the planning system was restricted to project implementation. Compared to recent practices in Germany, some important improvements are necessary to ensure the impartiality of approval authorities, and to balance unequal resources. In general, spatial planning provides an effective setting for participation in implementation. However, participation in agenda-setting remains a genuinely political task, and therefore requires the political determination to introduce governance instruments which ensure the involvement of stakeholders in these processes.

To introduce sustainability-oriented governance concepts, such as ICZM, in countries like Germany, requires to take all parts of the political decision-making system into account, and to combine spatial planning instruments with participatory forms of vision building on the

part of the government, in order to create new governance arrangements. An understanding of ICZM as a mere planning tool is inappropriate.

At this point, some important differences between the preconditions for ICZM, and other forms of natural resource governance in countries with highly developed government capacities, and in tropical countries should be kept in mind. In the latter, ICZM is often introduced as a substitute for insufficient administrative capacities, or weak internal ties within administrations, or in order to support collective action, if the state's regulatory capacities are inadequate.

7 References

- Abromeit, Heidrun; Schmidt, Thomas (1998): "Grenzprobleme der Demokratie. Konzeptionelle Überlegungen", In: Kohler-Koch (Ed.) (1998): 293-320.
- BaltCoast (2004): "Framework for the co-ordinated use of offshore water areas around the Baltic Sea. Conclusion and recommendations". Essen.
- Benz, Arthur (2001a): "Der moderne Staat", München, Wien.
- Benz, Arthur (2001b): "Vom Stadt-Umland-Verband zu 'regional governance' in Stadregionen". In: Deutsche Zeitschrift für Kommunalwissenschaften, 2-2001, 55- 71.
- BMU (2002): "Lokale Agenda 21 und nachhaltige Entwicklung in deutschen Kommunen", Berlin.
- Bora, Alfons (1994): "Schwierigkeiten mit der Öffentlichkeit". In: Kritische Justiz, 306-322.
- Brand, Karl Werner (2004): "Akteur-Netzwerk-Theorie". In: Voß, J.-P.; Bauknecht, D. (Ed.): Steuerung und Transformation. Überblick über theoretische Konzepte in den Projekten der sozialökologischen Forschung. Querschnittsgruppe Steuerung und Transformation im Förderschwerpunkt sozial-ökologische Forschung des BMBF. Diskussionspapier 01: 83-92.
- Braun, Dietmar (1993): „Zur Steuerbarkeit funktionaler Teilsysteme: Akteurtheoretische Sichtweisen funktionaler Differenzierung moderner Gesellschaften“. In: Héritier, Adrienne (Ed.): „Policy-Analyse. Kritik und Neuorientierung“. Politische Vierteljahresschrift - Sonderheft 24, Opladen 1993, 199 – 222.
- Buchstein, Hubertus; Jörke, Dirk (2003): "Das Unbehagen an der Demokratietheorie". In: Leviathan, Vol. 31, 4-2003, 470-495.
- Bundesministerium für Verkehr, Bau- und Wohnungswesen; Bundesamt für Bauwesen und Raumordnung (Eds.) (2004): "Auf dem Weg zur nationalen Integrierten Küstenzonenmanagement-Strategie. Perspektiven der Raumordnung", Berlin, Bonn 2004.
- Burbridge, Peter; Humphrey, Sarah (1999): "Planning and management processes: Sectoral and territorial cooperation". Thematic study for the European Demonstration Programme on ICZM, University of Newcastle, Department of Marine Sciences and Coastal Management.
- Daschkeit, A.; Sterr, H. (2003): "Integriertes Küstenzonenmanagement (IKZM) - Forschungen und Arbeitsperspektiven für die Geographie". In: Essener Geographische Arbeiten 35: 159-167.
- EU DEMONSTRATION PROGRAMME ON ICZM (2002a): "Schlußfolgerungen aus dem Demonstrationsprogramm der Europäischen Kommission zum integrierten Küstenzonenmanagement (IKZM)".
- EU (2002b): "Empfehlung des europäischen Parlaments und des Rates vom 30. Mai 2002 zur Umsetzung einer Strategie für ein integriertes Management der Küstengebiete in Europa" (2002/413/EG) 6.6.2002 L 148/24 Amtsblatt der Europäischen Gemeinschaften DE.
- Europäische Kommission (1999): "Eine europäische Strategie für das integrierte Küstenzonenmanagement (IKZM): Allgemeine Prinzipien und politische Optionen. Ein

Reflexionspapier“, Generaldirektionen Umwelt, nukleare Sicherheit und Katastrophenschutz, Fischerei, Regionalpolitik und Kohäsion, Luxemburg, Amt für amtliche Veröffentlichungen der Europäischen Gemeinschaften.

- Fahrenkrug, Katrin; Melzer, Michael; Ulrich, Erk; Wittekind, Jürgen (2001): "Integriertes Küstenzonenmanagement (IKZM) - Eine Strategie für Schleswig-Holstein. Gutachten im Auftrag des Ministeriums für ländliche Räume, Landesplanung, Landwirtschaft und Tourismus des Landes Schleswig-Holstein", Projektbearbeitung: Institut Raum & Energie, Wedel.
- Fisahn, Andreas (1996): "Beschleunigungsgesetzgebung und Bürgerbeteiligung - ein tendenzieller Abbau des Umweltschutzniveaus?" In: Unabhängiges Institut für Umweltfragen e.V. (Ed.): "Mehr oder weniger Demokratie? - Stand und Perspektiven der Bürgerbeteiligung im Umweltschutz", 10-22.
- Fürst, Dietrich (2001): "Stadt und Region – Schwierigkeiten, die regionale Selbststeuerung nachhaltig zu machen". In: Deutsche Zeitschrift für Kommunalwissenschaften, 2-2001, 84-96.
- Fürst, Dietrich (2002a): „Landes- und Regionalplanung“, Hannover 2002 (Manuskript, Institut für Landesplanung und Raumforschung, Universität Hannover).
- Fürst, Dietrich (2002b): "Coordination in spatial planning". Conference paper, University of Hannover.
- Fichter, Heidi; Moss, Timothy (2001): "Vom städtischen Umweltschutz zu regionalen Nachhaltigkeitsstrategien". In: Deutsche Zeitschrift für Kommunalwissenschaften, 2-2001, 37-54.
- Gabriel, O.W. (2000): "Democracy in big cities: The case of Germany". In: Gabriel, O.W.; Hoffmann-Martinot, V.; Sacitch, H.V. (Eds.): "Urban Democracy", Leske & Budrich, Opladen 2000, 187-260.
- Gee, Kira; Glaeser, Bernhard; Kannen, Andreas; Sterr, Horst (2003): „Integriertes Küstenzonenmanagement (IKZM): Raumordnungsstrategien im Küstenbereich und auf dem Meer. Teil I: Themen, Trends und Herausforderungen im Küstenraum“, Berlin.
- Grote, Jürgen R.; Gbikpi, Bernard (Eds.) (2002): "Participatory governance. Political and societal implications", Opladen.
- Healey, Patsy (1993): "The communicative turn in planning theory". In: Fischer, F.; Forrester, J. (Eds.): The argumentative turn in policy analysis and planning. Durham / N.C.
- Hirst, Paul (2000): "Democracy and Governance". In: Pierre, Jon (Ed.) (2000), 13-35.
- Howlett, Michael; Rayner, Jeremy (2005): "Does internationalization drive policy convergence? Lessons from new governance arrangements in forest and coastal zone management policies in Canada and the European Union". Conference Paper, ECPR - Joint sessions, Granada, April 14-19, 2005 Workshop 20.
- Jänicke, M.(1986): „Staatsversagen: Die Ohnmacht der Politik in der Industriegesellschaft“, München.
- Jänicke, Martin (2003): „Die Rolle des Nationalstaates in der globalen Umweltpolitik. Zehn Thesen“. In: Aus Politik und Zeitgeschichte, 30. Juni 2003: 6-11.
- Kannen, Andreas (2000): "Analyse ausgewählter Ansätze und Instrumente zu Integriertem Küstenzonenmanagement und deren Bewertung", Manuskript, Universität Kiel.
- Kern, Kristine (1998): „Horizontale und vertikale Politikdiffusion in Mehrebenensystemen“, Berlin: FFU-Report 98-6.
- Kern, Kristine; Jörgens, Helge; Jänicke, Martin (1999): „Die Diffusion umweltpolitischer Innovationen. Ein Beitrag zur Globalisierung von Umweltpolitik“, Berlin: FFU-Report 99-11.
- King, Graham (1999): "Participation in the ICZM processes: Mechanisms and procedures needed". Thematic study for the European Demonstration Programme on ICZM, Hyder Consulting.
- Kohler-Koch, Beate (Ed.) (1998): "Regieren in entgrenzten Räumen", Opladen.

- Kooiman, Jan (2002): "Governance. A social-political perspective". In: Grote, Jürgen R.; Gbikpi, Bernard (Eds.) (2002): "Participatory governance. Political and societal implications", Opladen, 71-96.
- Majone, Gianiacomo (1998): "Temporal consistency and political credibility: Why democracies need non-majoritarian institutions". In: Theys, Jacques (Ed.): "L'environnement au XXI siècle", Paris.
- Newman, Peter; Thornley, Andy (1996): "Urban planning in Europe: International competition, national systems and planning projects", London.
- Nischwitz, Guido; Molitor, Reimar; Rohne, Silvia (2002): "Local and regional governance für eine nachhaltige Entwicklung in der Region", Schriftenreihe des IÖW 161/02, Berlin.
- Osthorst, Winfried (2002): "Abfall als Ware. Vom Entsorgungsnotstand zur Liberalisierung der Abfallentsorgung", Bremen (edition polis).
- Pierre, Jon (Ed.) (2000): "Debating governance", Oxford, New York.
- Pierre, Jon (2000): "Understanding governance". In: Pierre, Jon (Ed.) (2000), 1-10.
- Scharpf, Fritz W. (1973): „Planung als politischer Prozeß“. In: Scharpf, Fritz W. (Ed.): „Planung als politischer Prozeß“. Frankfurt, 33-72.
- Scharpf Fritz W. (1988): 'The joint decision trap: Lessons from German federalism and European integration', Public administration, 66, 3, 239-278.
- Scharpf, Fritz W. (1992): "Die Handlungsfähigkeit des Staates am Ende des zwanzigsten Jahrhunderts". In: Kohler-Koch, Beate (Ed.): "Staat und Demokratie in Europa", Leske und Budrich, Opladen, 93-115.
- Schmals, K. M. (1997): "Partizipation und Raumplanung. Begriffsentwicklung und Diskussion ausgewählter Partizipationsmodelle". Unv. manuscript, Dortmund, 1997.
- Schmitter, Philippe C. (2002): "Participation in governance arrangements: Is there any reason to expect it will achieve 'Sustainable and innovative policies in a multi-level context'?" In: Grote, Jürgen R.; Gbikpi, Bernard (Eds.) (2002): "Participatory governance. Political and societal implications", Opladen, 51-69.
- Stoker, G. (1995): "Regime theory and urban politics". In: Judge, D.; Stoker, G.; Wolman, H. (Eds.): "Theories of urban politics", London, New Dehli (Thousand Oakes), 268-281.
- Schuchardt, B.; Bildstein, T.; Lange, H.; Lange J.; Lee, C.; Petske, S.; Osthorst, W.; Schirmer, M.; Wille, D.; Winter, G. (2004): "Retrospektive Analyse von größeren Planverfahren in der Küstenzone unter der Perspektive IKZM-Tauglichkeit" (RETRO), published as Coastline Reports 3-2004, edited by EUCC - The Coastal Union; online: http://www.eucc.de/infos/RETRO_online.pdf. (In German with English abstract.)
- Theys, Jacques (2002): "Environmental governance: From innovation to powerlessness". In: Grote, Jürgen R.; Gbikpi, Bernard (Eds.) (2002): "Participatory governance. Political and societal implications", Opladen, 213-244.
- Umweltgutachten 2004, Rat der Sachverständigen für Umweltfragen (2004): „Umweltpolitische Handlungsfähigkeit sichern.“
- Weidner, H. (1989): „Die Umweltpolitik der konservativ-liberalen Regierung im Zeitraum 1983-1988“. WZB-paper FS II 89-304.
- Weidner, H. (1995): "25 years of modern environmental policy in Germany". WZB-paper FS II 95-301.
- Willke, Helmut (1992): „Ironie des Staates: Grundlinien einer Staatstheorie polyzentrischer Gesellschaften“. Frankfurt a.M. (Suhrkamp).

artec-paper
im Zeitraum Oktober 2002 – Dezember 2007

Winfried Osthorst

From Environmental Conflict to Liberalization: The Uncontrolled Deregulation of the German Waste Management System Questions the Modernisation Successes of the Early 1990s, 14 S.

artec-paper Nr. 149, Dezember 2007

Winfried Osthorst, Bastian Schuchardt, Regina Birner

Interdisciplinarity in Integrated Environmental Research in Germany: Lessons From an Empirical Evaluation, 17 S.

artec-paper Nr. 148, Dezember 2007

Winfried Osthorst, Hellmuth Lange

Integrated Coastal Zone Management as a Challenge to Spatial Planning: On Vision-Building and Decision-Making. An Empirical Evaluation, 21 S.

artec-paper Nr. 147, Dezember 2007

Christel Kumbruck

Geschlechterverhältnisse und Ethos fürsorglicher (Pflege-)Praxis im Wandel - Literaturbericht und Problemskizzen zur Tradition weiblichen Dienstes in der Diakonie

artec-paper Nr. 146, Oktober 2007

Mechtild Rumpf

Geschlechterverhältnisse und Ethos fürsorglicher (Pflege-)Praxis im Wandel - Literaturbericht und Problemskizzen zu häuslicher Pflege (Kurzfassung 57 S.)

artec-paper Nr. 145, Oktober 2007

Mechtild Rumpf

Geschlechterverhältnisse und Ethos fürsorglicher (Pflege-)Praxis im Wandel - Literaturbericht und Problemskizzen zu häuslicher Pflege (Langfassung 156 S.)

artec-paper Nr. 144, Oktober 2007

Hellmuth Lange

"Consumerist Predators"? Emerging lifestyles between McDonaldization and sustainability perspectives: the case of highly qualified employees (HQEs) in India

artec-paper Nr. 143, Oktober 2007

Guido Becke

Gesundheitsförderung in flexiblen Arbeitsstrukturen der `digitalen Wirtschaft` - Problemfelder und Gestaltungsperspektiven bei abhängiger und alleinselbständiger Erwerbstätigkeit

artec-paper Nr. 142, September 2007

Guido Becke/Eva Senghaas-Knobloch (Hg.)
Flexible Arbeitsformen aus der Perspektive sozialer Nachhaltigkeit. Eine Dokumentation von Beiträgen zur Fachkonferenz am 27./28. April 2007 an der Universität Bremen
artec-paper Nr. 141, Mai 2007

Matthias Ruth
Entropy, Economics, and Policy, 19 S.
artec-paper Nr. 140, Januar 2007

Eva Senghaas-Knobloch
Si vis pacem cole justitiam - Die Herausforderungen des IAO-Programms für menschenwürdige Arbeit weltweit, 24 S.
artec-paper Nr. 139, Januar 2007

Hans Dieter Hellige
Die Geschichte des Internet als Lernprozess, 42 S.
(Stark erweiterte Neubearbeitung von artec-Paper 107, Nov. 2003)
artec-paper Nr. 138, November 2006

Christel Kumbruck, Eva Senghaas-Knobloch
Das Ethos fürsorglicher Praxis im Wandel – Befunde einer empirischen Studie, 50 S.
artec-paper Nr. 137, November 2006

Matthias Ruth
Managing the Interrelations Among Urban Infrastructure, Population, and Institutions, 46 S.
artec-paper Nr. 136, Oktober 2006

Matthias Ruth
Integrative Environmental Research and Education 14 S.
artec-paper Nr. 135, September 2006

Britta Utz
Die OECD-Leitsätze für multinationale Unternehmen: Eine erste Bilanz der Wirkungsweise des Vermittlungs- und Schlichtungsverfahrens der Leitsätze anhand der abgeschlossenen Beschwerdefälle bei Nationalen Kontaktstellen 2000 bis 2005, 205 S.
artec-paper Nr. 134, Juli 2006

Roland Bogun
Umwelt- und Risikobewusstsein als Voraussetzung für Verhaltensänderungen in Richtung Nachhaltigkeit, 40 S.
artec-paper Nr. 133, Juni 2006

Bernd Jastorff, Georg Müller-Christ, Bastian Behrens, Doris Sövegjarto-Wigbers
EMAS an Hochschulen. Ökologische und technologische Innovationen durch anspruchsvolles Umweltmanagement, 113 S.
artec-paper Nr. 132, Mai 2006

Georg Müller-Christ

Frames, Nachhaltigkeit und Wandel der Managementrationalitäten, 70 S.
artec-paper Nr. 131, März 2006

Hans Dieter Hellige

Walther Rathenaus naturwissenschaftliches Studium: Verlauf, Resultate und Bedeutung für sein Nachhaltigkeitsdenken, 51 S.
artec-paper Nr. 130, November 2005

Hellmuth Lange

Klimawandel und präventives Risiko- und Küstenschutzmanagement an der deutschen Nordseeküste (KRIM) – Teilprojekt IV - Politisch-administrative Steuerungsprozesse (PAS), 155 S.
artec-paper Nr. 129, November 2005

Hellmuth Lange

Intern@work. Interessenregulierung in der New Economy, 210 S.
artec-paper Nr. 128, Oktober 2005

Hellmuth Lange

Retrospektive Analyse größerer Planverfahren in der Küstenzone unter der Perspektive „IKZM-Tauglichkeit“, 121 S.
artec-paper Nr. 127, September 2005

Martina Schäfer

The contribution of a regional Industrial sector toward quality of life and sustainable development: Indicators and Preliminary Results, 30 S.
artec-paper Nr. 126, September 2005

Guido Becke

Überlebensfähigkeit durch radikalen Unternehmenswandel – Balanceakt zwischen Veränderungsdynamik und reproduktiver Stabilität, 47 S.
artec-paper Nr. 125, September 2005

Ulrich Dolata

Soziotechnischer Wandel, Nachhaltigkeit und politische Gestaltungsfähigkeit, 31 S.
artec-paper Nr. 124, September 2005

Georg Müller-Christ, Bastian Behrens, Brigitte Nagler

Best-Practice, Kommunikation und Effizienzfalle: Ein Problemaufriss der Transferschwierigkeiten von Umweltmanagementsystemen in die Praxis, 90 S.
artec-paper Nr. 123, Mai 2005

Hellmuth Lange

Lebensstile. Der sanfte Weg zu mehr Nachhaltigkeit?, 17 S.
artec-paper Nr. 122, Mai 2005

Eva Senghaas-Knobloch, Guido Becke

Forschung in Aktion - Betriebliche Veränderungen im Dialog, 81 S.
artec-paper Nr. 121, November 2004

Lucia A. Reisch

Nachhaltiger Konsum: Aufgabe der „Neuen Verbraucherpolitik?“, 15 S.
artec-paper Nr. 120, November 2004

Hellmuth Lange

Rapid Change in Agricultural Policies. The BSE-Crisis in Germany (2000-2001), 21 S.
artec-paper Nr. 119, Oktober 2004

Carsten Rachuy, Tobias Warden

Probleme und Chancen der Benutzerschnittstellen bei Wearable Computern, 25 S.
artec-paper Nr. 118, Oktober 2004

Guido Becke

German Works Councils under Pressure. Institutional Learning as a Pathway to Enhance Their Capacities of Action, 66 S.
artec-paper Nr. 117, September 2004

Guido Becke

Indirect Regulation: A Remedy to Cure the Defects of European Environmental Policy? – The EMAS-Regulation, 57 S.
artec-paper Nr. 116, September 2004

Wilhelm Bruns

Hyper-Bonds – Applications and Challenges, 16 S.

artec-paper Nr. 115, Juli 2004

auch als pdf erhältlich

Yong-ho Yoo

Bi-directional Mixed Reality Electric Circuit - Virtual Equivalence, 10 S.

artec-paper Nr. 114, Juli 2004

Eva Senghaas-Knobloch

Global Economic Structures and „Global Governance“ in Labour Regulation Policy, 24 S.

artec-paper Nr. 113, Juli 2004

William T. Markham

Überleben in schwierigen Zeiten. Deutsche Umweltorganisationen im 20. Jahrhundert, 15. S

artec-paper Nr. 112, Juni 2004

Jörg Richard, Wilhelm Bruns

Mensch und Maschine im Spielraum.

Technische Praxis und ästhetische Erfahrung, 24 S.

artec-paper Nr. 111, April 2004

Ulrich Dolata

Unfassbare Technologien, internationale Innovationsverläufe und ausdifferenzierte Politikregime. Perspektiven nationaler Technologie- und Innovationspolitiken, 35 S.

artec-paper Nr. 110, März 2004

Roland Bogun

“Umweltsünder“ oder “Vorreiter“? Über Bewertungs- und Motivationsprobleme im Umweltmanagement an Hochschulen, 38 S.

artec-paper Nr. 109, Februar 2004

Hans Dieter Hellige

Zur Genese des informatischen Programmbegriffs: Begriffsbildung, metaphorische Prozesse, Leitbilder und professionelle Kulturen, 30 S.

artec-paper Nr. 108, Dezember 2003

Hans Dieter Hellige

Die Geschichte des Internet als Lernprozess, 24 S.

artec-paper Nr. 107, November 2003

auch als pdf erhältlich

Eva Senghaas-Knobloch

Globale Wirtschaftsstrukturen und "Global Governance" im Politikfeld Arbeit - Auftrag und Möglichkeiten der Internationalen Arbeitsorganisation (IAO), 25 S.

artec-paper Nr. 106, November 2003

Guido Becke (Universität Bremen, artec), Brigitte Nagler (Universität Bremen, artec), Walter Punke (KDA, Stade), Eva Senghaas-Knobloch (Universität Bremen, artec), Gerhard Wegner (KDA, Hannover)

Balanceakt Begeisterung - mit Leib und Seele in der Arbeitswelt, 14 S.

artec-paper Nr. 105, November 2003

Hellmuth Lange, Julia Blinde (artec), Stefanie Böge (artec), Hiltrud Burwitz (ZWE), Günter Warsewa (ZWE)

"Informieren – Anbieten – Verordnen. Wege zu nachhaltigen Konsummustern zwischen Konflikt und Konsens", 159 S.

artec-paper Nr. 104, November 2003

Eva Senghaas-Knobloch

Interdependenz, Konkurrenz und Sozialstandards. Probleme und Strategien bei der internationalen Normendurchsetzung, 26 S.

artec-paper Nr. 103, Januar 2003

F. Wilhelm Bruns, Hauke Ernst, Martin Faust, Paulo Gata Amaral, Hermann Gathmann, Sven Grund, Ian Hadfield, Jürgen Huyer, Ulrich Karras, Rainer Pundt, Kai Schmudlach

Distributed Real and Virtual Learning Environment for Mechatronics and Tele-service. Abschlussbericht zum EU-Forschungsprojekt DERIVE, 50 S.

artec-paper Nr. 102, Dezember 2002

Khaled Abdelrahimsai-Pjau, Vahit Bilmez, Denis Böhme, Frank Euhus, Marcus Fahrer, Torsten Fröhling, Thomas Gnewuch, Mathias Liebert, Daniel Mutis, Jörn Raffel, Ersin Ürer, Oliver Weickmann

Theater der Maschinen: Ein studentisches Projekt, 140 S.

artec-paper Nr. 101, November 2002

Forschungszentrum Arbeit-Umwelt-Technik (artec) (Hg.)
**Kooperation. Eine fach- und professionsübergreifende Gestaltungsaufgabe.
Tätigkeitsbericht für den Berichtszeitraum 2000 – 2002**, 170 S.
artec-paper Nr. 100, November 2002

Hans Dieter Hellige
**Wissenschaftsgenese und Wissenschaftskonzepte der informatischen
Disziplin Computerarchitektur: Modelle der Artefaktstruktur, des Designraums
und der Designkonflikte, Bericht des Theorieprojektes**, 132 S.
artec-paper Nr. 99, November 2002

Forschungszentrum Arbeit-Umwelt-Technik (artec) (Hg.), Redaktion Brigitte Nagler
**Gute Arbeit? Gute Umwelt? Gute Technik? Symposium anlässlich des 12-
jährigen Bestehens des Forschungszentrums Arbeit-Umwelt-Technik (artec)
am 11. und 12. Oktober 2001, Universität Bremen,
Dokumentation der Beiträge**, 116 S.
artec-paper Nr. 98, Oktober 2002

Weitere „artec-paper“ sind unter www.artec.uni-bremen.de/paper/paper.php zu
finden.