

A SWIM AGAINST THE CURRENT RECENT EXPERIENCES FROM NORWEGIAN COASTAL ZONE MANAGEMENT

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Paper presented at Coastman's Second Workshop,
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¹ Nordland Research Institute, 8002 Bodø, Norway. Phone: +47-755-17608/600
Fax: +47-755-17234 / E-mail: Haakan.Sandersen@hibo.no

Abstract

In 1989 a national legislative reform made way for a comprehensive ICZM program in Norway, allowing communes and counties to plan their own coastal waters. The legislation and the institutional structure that was established seemed to fulfil most of the requirements inherent in the goals provided by ICZM, in terms of integration and user-group participation. However, experiences from the 1990's have shown that legislative shortcomings, institutional conflicts and lack of local resources and competences have reduced the expected benefits of the planning reform. This article outlines the Norwegian ICZM system and some of its current problems and dilemmas.

Keywords

Institutional Analysis, Integrated Coastal Zone Management (ICZM), Norway, Participation, User-conflicts.

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1. Introduction

Norwegian government agencies have in the last ten years increasingly made integrated coastal zone management a major issue and part of their rhetoric and practice. This is despite, or maybe because coastal zone management has until quite recently not been a distinct policy field in Norway. With a population of only 4.3 mill., a relatively scattered settlement structure, over 57 000 km of coastline, and a coastal zone comprising about 90.000 km², the pressure on the coastal areas and resources has been relatively low. In addition, most traditional use forms along the coast were rather transitory and multiple, causing few serious and lasting conflicts (Bennett 1996:202). Thus, until recently it was generally not necessary to reserve certain areas for particular purposes.

However, as in most other countries some parts of the coastal areas are gaining population more rapidly than the rest of the country. The resulting industrial and residential development, sewage disposal, water-based recreational activity, tourism, conservation of wildlife and habitat, etc. have led to increasing pressures. In addition to these general processes, the rapid expansion of farming of rainbow trout and salmon in open fish-cages during the 1980's put coastal zone management on the agenda, as this gave rise to new, exclusive and more permanent spatial claims, and introduced an element of private ownership into a traditional system of common rights. These changes were in conflict with the traditional principles of transitory use and common rights ("allemannsrett - all men's right") to the sea space and the coastal resources.

In order to cope with the increase in actual and potential conflicts, various coastal zone management initiatives were launched in the 1980ies by authorities on both communal, county, and regional state levels. These efforts were, however, fragmented and uncoordinated and limited in scope and modest in ambition. Then, in 1989, a comprehensive national ICZM program was established through a revision of the Planning and Building Act. Through this reform responsibility for planning in the coastal zone was delegated to the 280 communes (local government/rural municipalities) and 15 counties (provinces) in Norway with coastline.

Integrated coastal zone management (ICZM), an approach that many claim holds the promise of being a vehicle for progressing towards sustainable development, can be defined as

"..(t)he integrated planning and management of coastal resources and environments in a manner that is based on the physical, socioeconomic, and political interconnections both within and among the dynamic coastal systems, which when aggregated together, define a coastal zone." (Sorensen 1997:9)

Compared to the ambitions and requirements inherent in the ICZM concept, the structural and procedural elements in the established planning system appeared to be rather progressive and "up to date".

Nevertheless, throughout the 1990's it became increasingly clear that legislative shortcomings and institutional conflicts were slowing down attempts at vertical and horizontal integration both at commune and county levels. Obviously, ICZM is embedded in, and has to take place within, the surrounding institutional landscape that to a lesser or greater extent facilitates and enables the ambitions inherent in ICZM. An institutional arrangement is here understood as

"a composite of laws, customs, and governance structure which is established by a society to allocate scarce resources among competing interests" (Sorensen 1997:31).

In this article the emphasis is placed on the institutional arrangements and current problems and dilemmas in the Norwegian ICZM set-up. Our focus is on the "wetside" of the coast, even if most definitions and practical approaches to coast related issues also will have to deal with the "dryside"². Questions addressed are; to what extent is the current institutional framework adequate as a policy instrument for ICZM? To which challenges and dilemmas does the Norwegian ICZM frame have to provide answers? Is further development of the institutional and legislative mechanisms required to carry out the ICZM measures relevant in the Norwegian context?

The paper is organized as follows. In the second section, as a general backdrop to the Norwegian ICZM debate, some general considerations of ICZM based on a review of recent contributions are presented. In the third follows a brief outline of the emergence of ICZM in Norway. The fourth section describes how the Planning and Building Act forms the core, and the main planning tool, of the Norwegian ICZM system. This section also attempts to give a brief overview of the principles, organization and decision-making processes involved in the present institutional set-up. The fifth section addresses some of the most visible and debated problems and dilemmas within the current Norwegian ICZM regime. Section six describes some of the difficulties inherent in evaluating ICZM processes, and presents preliminary considerations of the possible benefits of ICZM so far.

2. Some considerations on Integrated Coastal Zone Management

The coast can briefly be defined as the border between land and sea, thus embracing many environmental gradients, a high spatial diversity of natural habitats and a temporal diversity due to dynamic processes. Thus, the coast is clearly among the most dynamic landscapes on earth³. It is now increasingly accepted that the natural coastal environment is a series of complex, multidimensional, and often non-linear systems. In the past, problems often were characterized by visible or relatively easy identifiable single factor cause-and-effect situations that could be dealt with through high-probability risk assessment. In contrast, in the present situation the dynamic, complex and multifaceted character of cause and effect in the coastal zone has been demonstrated. Consequently, it is necessary to place more emphasis on the doubts and the uncertainties, and thus on the precautionary principle (Kildow 1997:249).

Another feature of the coast that causes additional difficulties compared to many other sectors is that many coastal resources are so-called common pool resources. Common pool resources share two basic characteristics, indivisibility and interdependency, that both call for coordination or cooperation among the user-groups. First, such resources are difficult to put under private ownership control as they cannot be easily divided. Secondly, the actions of one party are affected by or affect the outcome of others' acts. Thus, the coast does not only cause uncertainties and complexity in terms of biology, it also dictates unusual and complex institutional arrangements (Clark 1997:192).

The tendency towards increased pressure and more mutually exclusive use forms is most likely to further increase. These processes cause, first, ever increasing tensions between

² According to Clark (1997:195), it is desirable to include in the term coastal zone all land areas effected by the sea and all coastal water areas influenced by the land.

³ In western Europe, more than 50% of all the indigenous plant species can be found in the coastal zones (Meulen & Udde de Haes 1996:402). The coastal zone account for 8% of the global surface area and probably as much as 25% of global primary production (Turner et al. 1996:161).

protection of natural resources on the one hand and economic development and other uses on the other. Secondly, the tensions between various contradictory uses and users are increasing. From international experiences, it is getting more and more clear that management schemes have to be able to serve both social and environmental needs. The question then is to what extent the institutional arrangements are capable of simultaneously coordinating multi-use competition and socio-economic development. The shift to systems thinking has required that new management strategies be more integrative. So far the most common tool in addressing these issues has been the ICZM approach.

The focus of ICZM is usually on conservation and management of the publicly owned common property resources of the "wetside" of the coast (Clark 1997:192). ICZM provides a platform for formal conflict resolution methodologies and constitutes a framework for resolution of arguments over how, when, where, and by whom, the coastal resources should be exploited. ICZM can be defined as a continuous, adaptive, day-to-day process that consists of a set of tasks, typically carried out by several or many public and private entities (Bower & Turner 1998:41). Most definitions of ICZM stress the dynamic nature of the ICZM process and its emphasis on sectoral integration (Olsen et al. 1997:157). In a meeting of GESAMP the goal of ICZM was defined as:

"to improve the quality of life of human communities who depend on coastal resources while maintaining the biological diversity and productivity of coastal ecosystems" (GESAMP 1996).

Thus, ICZM will usually aim at maximizing the long-term human benefits of the coastal zone by maintaining its fundamental ecological processes, and at the same time serve as a practical method of meeting short-term development objectives (Burbridge 1997:178). However, the resources in the coastal zone can generate a wide range of different "products" and "services", and as many of these are incompatible, conflicts are likely, and trade-offs are necessary. Both the number of different stakeholder groups and the sheer scale of the resource demands further complicates these management processes (Bower & Turner 1998:42). Multiple problems, limited resources and complexity will therefore virtually always be the point of departure. Therefore, coastal zone management requires balancing of a wide range of ecological, social, cultural, governance and economic considerations according to the socially/politically desirable mix and priorities the given ICZM decision-making body is aiming at. The challenge, then, is for ICZM to achieve viable agreements on compromises and social choices to support such multiple goals. In addition, the ICZM processes must be dynamic and adaptive in order to cope with changing circumstances in the coastal zone and with changing perceptions, knowledge, social priorities, and governmental policies, etc.

In the ICZM literature the word integration has encompassed meanings such as the horizontal integration of management tasks, disciplines, separate economic sectors, planning actors and user-groups, as well as the vertical integration of all levels of government and non-governmental organizations relevant to coastal zone management. The point of departure here is that far-reaching horizontal and vertical integration are necessary for efficient and effective planning and management of the coastal zone. As shown by Sorensen (1997:7) one of the most important lessons learned from the history of coastal zone management is that these two forms of integration are both the practice's keystone and its largest challenge. This is partly because such an approach requires a commitment to power sharing, and partly because disparate functions must be coordinated in a way that requires cooperation between previously narrowly focused sectoral agencies.

ICZM thus requires integration and coordination on many levels and in many directions. Jurisdictional levels, various governing agencies and policy- and decision-makers, sectors and stakeholders, scientists and disciplines have to be brought together.

"Integrated management has evolved from recognition that decision-makers should decide and act in a coordinated, integrated way to reduce costs and minimize the losses that result from uncoordinated, duplicative management. Integrated coastal management recognizes that the multiple units within and among governments, and the stakeholders they represent, must join together to embrace the appropriate boundaries of ecosystems or physical systems that need to be managed" (Kildow 1997:254)

Thus, ICZM encompasses political, administrative, economic and spatial elements in order to optimize the ability of multiple interests to reach consensus on complex issues in the coastal zone. A lack of coordination of the different resource uses and constraining policy regimes, together with inadequate knowledge of the dynamics of the coastal processes and systems, often result in inadequate overall management. Market failures often contributes governmental intervention failures, as resource allocation decisions frequently are made without the guidance of information on the externalities involved, and are therefore prone to economic and environmental loss or damage (Turner et al. 1996:166).

In the Norwegian context it is important to note that ICZ planning should be distinguished from ICZ management. Planning can be described as a tool that provides a structure for the systematic collection of information, and that guides policymaking and decision-making processes. Coastal zone planning is according to Sorensen a:

"process of comprehensively analysing coastal systems, environments, natural resources, and uses in order to produce a framework (or plan) to guide decision makers in the immediate and future allocation of scarce resources (e.g., space, land capital investments, fish, water) among competing interests (stakeholders)." (Sorensen 1997:9)

Management includes decision-making processes, the implementation of decisions, and the monitoring and policing of regulations. Sorensen (1997:9) claims that there have been at least three major motivations for planning in the coastal zone: to escape the tyranny (the cumulative impact) of small decisions, to reduce the administrative and political costs of permit letting, and to provide an arena and vehicle for community-based management. According to Sorensen (1997:9), the history of ICZM has shown that a management program, in addition to planning also should include applied research, education and public outreach.

3. The emergence of coastal zone management in Norway

The development of coastal zone management in Norway took place in a very incremental manner, taking its point of departure mainly in the professions, administrative practices and institutional frameworks used in spatial planning on land. The first sign of explicit coastal zone intervention was the temporary Shore Act of 1965, that later was build into and replaced by the Shore Planning Act of 1971⁴. This Act was intended to provide communes with the means to stop unwanted building development (mainly cabins) within 100 meter of the shoreline and to develop coordinated spatial plans for these areas. However, the Act was limited in scope, few plans were made, and a large numbers of exemptions were granted, and

⁴ In 1985 this Act was incorporated in the new Planning and Building Act as § 17-2.

the legislation was not very effective in alleviating development pressure (Bennett 1996:202). In the west and north of Norway the Act was criticized for being unsuitable, as it was not a relevant answer to the very different problems experienced in these sparsely populated regions, and thereby caused problems as the communes had to administer and follow up schemes they had hardly any use for or interest in.

Fish farming was made subject to license in the Aquaculture Act of 1981, and this provided the legal basis for controlling the size (max 8000 m⁵) of the farms, and ensured predominantly local ownership. The very growth of the industry led to a huge need for suitable locations. In addition, the area occupied by each operation became much larger due to various further regulations, such as requirements that boating not be permitted within 20 meters, and fishing within 100 meters of the farms. The need for space further increased when the industry was struck by diseases during the 1980's. The diseases developed partly as an unintended result of the form for production control chosen (volume) by the government, and partly as a consequence of the fact that farms in the early years were located in sheltered bays and inlets with insufficient current and flow of water. The diseases, the subsequent need for buffer zones and reserve locations, and the need to separate different generations of fish led to relocations and a drastic expansion of the spatial requirements of the industry. Since late 1980's, however, a general relocation of many of the farms to more open areas has taken place as a result of new technology and improved knowledge. To some extent this has reduced the conflict potential, even if the relocation has also created new conflicts in the short run.

In the mid-80s the rapid and rather uncontrolled growth of the fish farming industry led communes and counties to focus on how to plan, manage and coordinate the activity in their coastal waters (Bennett 1996:204). The industry both added to the pressure on the inherently sensitive, and in many cases already stressed, environments and led to increased competition over space and locations along the coast. The rapid growth led to management and commercial problems as these difficulties were not solved as fast as the industry developed. To address these emerging and expected problems the LENKA (Nationwide Assessment of the Suitability of the Norwegian Coastal Zone and Rivers for Aquaculture) project was established in 1987. This project covered the coast from Rogaland in the southwest to the Russian border in the northeast and was a major co-operative effort involving the Ministry of Environment, Ministry of Fisheries, and Ministry of Local Government and Labor. Its aim was to register and map the areas suited to open cage aquaculture of salmon and rainbow trout along the coast, and to facilitate efficient, balanced, and environmentally sound growth of the industry (Ibrekk et al. 1993:56).

Lenka's goal was to develop an efficient and standardized tool for coastal zone planning that would ensure development of the aquaculture industry without bringing about large-scale conflicts with other users and conservation interests. It also aimed to assist the planning process for the coastal zone and river systems at the level of county and commune by simplifying the application process for aquaculture permits. The point of departure was that these goals could be achieved by developing a methodology, based on criteria's for environmental conditions, user interests and infrastructure, for assessing the suitability of rivers and marine areas for fish farming (Ibrekk et al. 1993:56). The project, however, did not attempt to propose changes in the institutional structure.

⁵ From 1989 the maximum production volume permitted increased to 12 000 m³, and later () also the restrictions on ownership have been lifted.

The results of the LENKA program were an assessment of: the capacity of marine areas to tolerate organic loading; available areas for aquaculture activities; the risk of conflicts of user interests; and the need for investment in infrastructure. However, although the project generated large quantities of data, it was criticized for weak methodology, top-down and inflexible organization, and huge costs. The evaluation of the project was generally negative (Gulowsen et al. 1991). Few county planning authorities and communes made use of the gathered data and information, and in retrospect it is probably fair to characterize the project largely as a failure. However, as stated by Bennett (1996:205), the project did generate valuable discussions and critical awareness of issues and methods in planning in the coastal zone. Nevertheless, when the project terminated in 1990, the national focus was not upheld and much of the subsequent attention was concentrated on pollution problems of the Oslofjord.

Through the 1980's it also became increasingly clear that decisions on licensing and location of aquaculture plants could no longer be made on a piecemeal basis (Bennett 1996:204). Conflict potential with other uses of the coastal zone made it necessary to coordinate resource related and spatial issues within the framework of communal structure plans.

4. ICZM integrated in the Planning and Building Act (PBA)

The new Planning and Building Act of 1985 (Plan- og bygningsloven), after its revision in 1989⁶, provided communes with the power to produce spatial plans for the coastal areas, more or less in the same way as with structure plans on land. Coastal zone management was in this sense orchestrated from the top of government, even if the content of the reform was decentralization and devolving of decision-making power to the local level. According to Vassdal (1992) it is misleading to say that coastal zone planning began in 1989, as several initiatives and projects had been undertaken in the early and mid-1980's. However, these initiatives and projects were fragmented and limited in scope both in locus and focus, and bear no close resemblance to what we today understand as ICZM.

The general purpose of the PBA is to strategically coordinate physical, economic, social and cultural development within counties and communes. The communes are supposed to seek the advice and cooperation of superior authorities at an early stage in the planning and decision-making process. The plan is seen as a framing device for subsequent detailed planning, management and decision-making (Bennett 1996:206). Planning according to the Act has an iterative and bi-focal nature as both long-term and short-term planning is required. The plan requires a long-term section that outlines the goals and the guidelines for sectoral planning, and a spatial plan for the management of areas and resources. In addition, a short-term plan for sectoral operation is required.

In contrast to many other ICZM programs, each coastal commune and county in Norway is a relatively autonomous planning unit that sets its own measures, strategies and goals within the given institutional framework. The commune is both the lowest administrative level of the implementation apparatus of the state, and a local political institution in its own right with

⁶ Between 1985 and 1989 the Act was confined to harbour areas as defined under the Harbour Act, and planning could only take place in the areas the communes declared as harbour areas. However, such declarations made the commune responsible for maintenance of secondary buoyage, and thus made the communes reluctant to take the opportunity (Bennett 1996:204). The link to the Harbour Act was uncoupled by the revision of the Building and Planning Act in 1989.

substantial autonomy⁷. Thus, when it comes to planning the communes are free to do almost whatever they want as long as the proper procedures are followed, and their plan does not conflict with laws or national interests managed by the ministries, directorates, or the regional state branches. Thus, ICZM in Norway is not a bunch of uncoordinated projects or programs⁸, but rather a comprehensive national reform that is locally designed, implemented, and adapted through the ordinary political and administrative processes. The power of these 280 communes and 15 counties that make up the coastal zone is limited, however, to the designation of given area categories. The communes or the counties do not play an important role in monitoring, enforcing and policing of the measures decided upon.

The concepts and methodologies applied in coastal zone planning are basically taken from the planning and management approaches applied on land. Most communes had in place a (spatial) structure plan for land areas when the coastal zone planning enabling legislation occurred. Thus, most of the communes that have a coastal zone plan basically supplemented the structure plan with a spatial plan for the sea areas.

The basic purpose of Norwegian coastal zone planning is to control construction and other actions in the coastal zone, and is, thus, an attempt to guide future development as well as resolving current user conflicts. In the PBA planning in sea is defined as a right or entitlement, not an obligation, and the planning can only take place within the baseline (grunnlinje), which is defined as “a line connecting the outermost skerries and points of land” (Bennett 1996:201).

Coastal zone planning is discretionary, and as far as necessary the structure plan shall indicate:

“Areas for special use or conservation of sea and rivers, including areas for traffic, fishing, aquaculture, nature and recreation, either separately or in combination with one or several of the use categories mentioned”. (Planning and Building Act § 20-4, no. 5, as translated by Bennett (1996:207)

The legal meaning of these categories is unclear, and whether the list of categories is exhaustive, and whether or not the law allows supplementary rules to be attached to them has been disputed⁹ (Bennett 1996:207). Furthermore, the interpretation of their content and intention may vary between the communes (Jørgensen 1992).

“This situation carries a good deal of frustration for communes that see planning as a means to gaining greater control over local resources, but find, in attempting to use supplementary regulations, that they come up against special laws and sectoral fields of responsibility” (Bennett 1996:207)

Both counties and communes have asked for clarification of the relationship between the PBA and the special legislation. However, such a clarification requires a delimitation between several ministries and has so far not been fully undertaken.

⁷ The commune as a political body is governed by the commune council comprising elected lay people.

⁸ The "Oslofjord project" and the "Regional Coastal Zone Planning at Helgeland" are exceptions from this.

While the former was limited to solve problems in one particular area, the second was a regional pilot project of national interest.

⁹ Jørgensen (1992) argues that supplementary rules cannot be attached to any of the categories mentioned in § 20-4, no. 5. Such rules can only be applied in the sea by using § 20-4, no.1 *Building areas*, or to use local plans (reguleringsplaner) (Bennett 1996:207)

Organization, participation and decision-making processes

The core of the Norwegian ICZM system is the communes, and the responsibility for ICZM is thus fairly decentralized and built into genuine political arenas. However, decentralization and local orientation does not automatically imply public participation. Many of the questions that are involved in ICZM are bound to generate conflict, and will undermine the stakeholders' willingness to co-operate, unless the public will are incorporated in a proactive, participatory and conflict minimizing manner. The level of public support for regulations in the coastal zone generally corresponds to the level of community involvement in the planning and decision-making process. Thus, in ICZM it is of great importance to avoid paternalistic and positivist decisions and prescriptions based on expert-based analysis. Such decisions tend to ignore the potential for conflict, as they are foreign to the fundamental logic of these issues.

Also, the effectiveness of ICZM is undermined if too much emphasis is put on reiterating ends while failing to suggest means and argue the underlining principles for choosing them. Thus, democratic, bottom-up, and community-based management is required to address a number of the ICZM issues, as resource management and conservation rooted in local communities empowers them to conserve their own resources whenever they are capable. Actually, capacity building and institution building or strengthening are often cited as two of ICZM's achievements (Sorensen 1997:15). Interestingly, Christie & White (1997:162ff) even suggest that co-management and integrated coastal zone management are more or less synonymous.

The Norwegian Planning and Building Act conceives of planning as a continuous process that is required to be sequential and subject for revision every four years. The Act thus reflects a perspective which sees planning as more of a normative social process than a technocratic exercise, and social learning, openness, information and participation are heavily emphasized.

In Norway the planning authorities are instructed through the PBA to contribute to vertical and horizontal coordination by making contacts in the initial phase with all relevant public bodies, private organizations, and others that have interests in the issue subject to planning. The main issues in the structure plan must, while still in its draft stage, be communicated to the general public so that these issues can be openly debated. After the first approval in the commune council the plan is sent to the relevant authorities, organizations and others with a particular interest in the plan for comments, and is also made easy accessible to the broader public. When finally approved by the commune council, the spatial part becomes legally binding. The planning authorities are empowered to grant dispensations.

The Planning and Building Act provides a framework and a process in which key stakeholders have good opportunities to participate at early stages of policy formulation. Consultation with stakeholders is mandatory, and participatory and genuine political "bottom-up" processes are encouraged. The framework for consensus building and conflict resolution processes are thus institutionalised in the PBA. However, the PBA is not clearly formulated regarding the detailed requirements of public participation, and allows for variation in the way and extent public participation takes place.

Nevertheless, all in all it is probably fair to say that the participation of stakeholders in decision-making and the degree of democracy is formally well taken care of in the procedural

parts of the legislation, and the formal requirements for successful ICZM in Norway in terms of democracy and participation seem to be fulfilled.

5. Current problems and dilemmas

The enactment of ICZM legislation does certainly not guarantee the successful implementation of a ICZM program. ICZM provides a goal to which Norwegian coastal zone planning aspires, but despite a rather progressive, commune-based, and participatory Planning and Building Act, the Norwegian experiences in practice are so far, to put it carefully, mixed.

The need and relevance of local coastal zone planning in Norway

The national ICZM structure is defined in a rather flexible and broad way, and allow the various communes and counties to define their own planning needs, which is important when it comprises more than 300 planning actors along 57.000 km of coastline. Not only the tendency to plan, but also the motives for planning in the coastal zone reflects regional variations. In the east and south of Norway the need for planning is mainly related to development pressure and problems. In the west and north, on the other hand, planning is mostly related to management of marine resources and promotion of industrial development.

Conservation awareness is not very well developed along the coast of Norway, and particularly so in Northern Norway, where the coast traditionally has been seen as a source of livelihood, space for living and recreation, and as a waste disposal site all at once. Due to large areas and small population the need for conservation or environment friendly actions was simply not there or were already integrated in the traditional use-forms. The coastal population tend to regard their traditional coastal activities such as fisheries, whaling, egg gathering, hunting, etc. as environmentally friendly and sustainable, and to view most problems along the coast as related to new technology and modern harvesting techniques etc.

Research from the early 1990's showed that central urban communes and peripheral fisheries-dependent communes had a greater tendency to plan than others. The propensity to plan among central urban communes can to a large degree be explained by their larger planning resources, as the same tendency can be seen on planning on land. The propensity among fisheries-dependent communes mainly reflected the development and presence of fish-farming, but was also related to the general fisheries activity in the area (Vassdal 1992). However, today there are fewer differences as most communes along the coast are preparing or have prepared coastal zone plans. It is nevertheless worth noting that in a survey from 1992 over 1/4 of the communes reported that they had no intention of embarking on coastal zone planning. Most of these communes were located in inner fjords where there is virtually no competition for resources, or existing protection zones for wild salmon that made commercial aquaculture impossible (Bennett 1996:209). Also communes located to the most storm, wind and wave exposed areas, and therefore not very suited for fish farming, are generally less interested in ICZM.

Local capacity for ICZM?

In terms of capacity building, the situation in Norway is rather poor. Capacity-building is a process whereby existing capabilities are strengthened and enhanced, and may encompass knowledge-building, skill development, and institutional development, etc. In terms of

knowledge-building and skill development there is still a substantial way to go, even if the situation is rapidly improving. In local, regional and national governmental institutions, universities and research institutes, and among most actors along the coast, the knowledge of coastal zone planning and management is limited. Despite the fact that the Agricultural University at Ås, the Regional College of Nordland, and the Fisheries College in Tromsø have launched courses to educate candidates in coastal zone planning, a lack of competence prevails in many commune and county administrations. In most communes the responsibility for coastal zone management is simply assigned to the one already responsible for structure plans on land. Some also assign the responsibility to the persons responsible for environmental protection or industrial development. In most communes the person responsible for ICZM also has other tasks to perform in other fields. Also the local politicians have limited resources, time and attention to devote to coastal zone planning. Thus, a problem even larger than lack of competence is a severe lack of planning resources/capacity in many small communes. This reflects that even 10 years after the changes in the PBA, coastal zone planning is still a rather recent and peripheral thing to most communes and counties in Norway.

The question, then, is to what extent communes can presently live up to the expectations and requirements inherent in ICZM. Are the local institutions presently equipped and provided with measures that can allow them to live up to their growing responsibility in coastal planning and management? Obviously, when power is transferred, it will always take some time before the receiving institution can perform at expected levels. Competence is therefore more a question of time, than a question of principle. There is thus no reason to use the lack of competence as an argument against local coastal zone planning.

According to Clarke (1997:08), the local government should be involved as they govern where development takes place, where resources are found, and where the benefits, or lack of, are mainly to be felt. Unless resource use options are allowed to grow from within, it is unlikely that they will be successfully adopted. Nevertheless, local governments may also be very vulnerable to development proposals, because of the short-term economic benefits they can offer. In addition, conservation measures are generally poorly regarded by fishers and fish farmers if they restrict their actions and options, and in many communes along the coast these constitute strong and dominant interest-groups.

The problems of horizontal and vertical integration

A key to successful ICZM is horizontal and vertical integration whereby the disparate private and governmental sectors are brought into a single lateral framework. Thus, a major benefit of the ICZM approach over the traditional sectoral (single use) approach is that it highlights the necessity of integrated, multiple use instead of single use of the resources and areas in the coastal zone. ICZM is substantially a cooperative venture. However, the greater the number of sectoral divisions and user-groups the greater is the potential for conflict. As stated by Clark (1997:205), getting the coordination mechanisms working right is clearly the most difficult part of the creation of an ICZM-type program. And one of the frequent challenges most ICZM efforts face are inadequate and competing institutional and legislative frameworks. So also in Norway. Coastal zone management has not been unambiguously successful in terms of institutional integration, and particularly so on the regional state level. The dispersion and poor integration between administrative bodies at different levels and with different scopes, are striking.

As we have seen, prior to 1989 the coast of Norway was a transition zone where commune authority ended. Through the changes of the Planning and Building Act the communes authority was extended to the "baseline". However, the extension of the communes jurisdiction did not take place in an institutional vacuum. Several institutionalised actors were already there, such as fisheries, fish farming and traffic authorities. Thus, most issues in the coastal zone requires the involvement of several agencies at intermediate levels of government. And as most issues and systems are interconnected, these agencies rarely have total control over any of the issues and systems. Further, as in most countries, ICZM in Norway involves a strong central government role, as responsibility and authority for marine affairs inevitable rests there. Several coastal activities and forms of resource extraction are subject to special, sector related, legislation and are outside the scope of the PBA. Such superior-level legislation leaves little institutional room for local government in the coastal zone to manoeuvre.

The introduction of ICZM in Norway has led to a power struggle for the right to manage coastal resources. Many communes saw the revision of the PBA as a way to increase authority and control over local resources, and became very disappointed and frustrated when they discovered the restrictions put on their actions in the coastal zone by the special laws and sector authorities, and the inherent limitations in the PBA. This was particularly the case in Western and Northern Norway, where some fishery dependent communes wanted to develop their own communal fishery policies that protected the local small-scale fisheries from larger "foreign" vessels, like trawlers, purse-seines and long-liners. Some communes also wanted to reserve some fishing areas for tourist related fisheries. However, all such attempts were effectively blocked by the Fisheries Officer (regional state fisheries authority) with reference to the Salt Water Fisheries Act that regulate such issues.

With reference to such problems, several people - particularly those affiliated with the commune level - have suggested an institutional reform that involves a strengthening of the PBA at the expense of the sectoral legislation and sectoral interests. This will require changes in the legislation at the parliamentary level, and it is currently not very likely to occur as the political will and courage seem to be lacking. Such changes would undermine the authority of existing sectoral agencies, and such suggestions are met with heavy resistance by the "powers that be". As a result, the communes and the counties, which are the principal ICZM authorities in Norway, do not have much influence on the ministries and government agencies involved. Without any legislative power to coordinate these actors, such coordination is left to take place through voluntary measures, negotiations and deliberations.

At the county level, the coordinating role of county planning is as yet poorly developed. This is partly due to the weaknesses in the legislation referred to above, partly due to lack of resources. So far county planning has been more a source of information than a policy tool (Bennett 1996:211). Thus, there are currently severe limitations regarding what can be coordinated and integrated through the planning related legislation. The question is then, given the limitations, to what extent are the communes performing the integrative and coordinating role expected of them in the PBA?

The coastal systems are significantly affected by the cumulative impact of the decisions and actions taken by the local users and the concomitant decisions made by local, subnational or national government bodies (Sorensen 1997:6). Thus, in ICZM it is important to distinguish between the politically designated management area, the ecological area and the demand area (Bower & Turner 1998:48). The politically designated management area is the area politically designated to be managed by one or more public or private agency in accordance with

assigned management responsibilities (jurisdiction). The ecological area is the surface area that mirrors the range or spatial scope of a given ecosystem. The demand area is the area from which demands are exerted on the given resource. The very basic, but important, point made by Bower & Turner (op.cit.) is that the boundaries of these three areas rarely, if ever, coincide.

So also in Norway. Most coastal eco-systems extend beyond the local government's jurisdiction, and many even beyond the jurisdiction of the county and the nation. Also the demand area is usually larger than the commune, as fishing is a migratory and seasonal activity and as fish farming plants are often owned by firms outside the commune, and as tourists who use the coastal zone for recreational purposes often are from other countries or other parts of Norway. It is therefore clear that commune based coastal zone planning in Norway sometimes will have an insufficient spatial scope to deal with the problems, or may lead to negative and unintended side effects on aggregated levels.

When it comes to horizontal coordination between communes the picture is not very positive. Extensive cooperation on ICZM issues between communes is so far not very common. On the contrary, ICZM seems to have caused more conflicts between communes than it has solved. The PBA apparently gave the communes a sense of ownership to the corresponding sea territory that often has reinforced the polarization between "us" and "them". Some communes wanted to relocate open aquaculture cages owned by residents in the neighbouring commune when it was suddenly discovered, as a result of the ICZM processes, that the cages were on the wrong side of the "border".

All things considered, there are reasons to believe that empowering the communes generally works better than commanding them. The question is how to handle those situations where outside intervention is required to solve local institutional failure and coordination problems.

In several communes in Norway the coastal zone planning has been disturbed by a lack of inter-governmental integration, mixed or overlapping jurisdiction, and dispersal of authority. The sector-oriented government agencies are, in contrast to communes and counties, not very used to the coordination and consultation oriented style of working necessary in ICZM. These agencies defend their turf and yield authority and prerogative grudgingly. Regarding ICZM such problems have been particularly the case in issues involving the Environmental Protection Division (Miljøvern avdelingen - regional state environmental protection authority) and/or Fisheries Officer (Fiskerisjefen - regional state fisheries authority)¹⁰. On several occasions conflicts between these two parties have forced commune based coastal zone planning to an halt.

Time is required for these agencies to get used to the new institutional order in the coastal zone and to the new ways of working. The current institutional structure is frustrating for the communes in particular, but is probably as close to the "ideal" as possible, given the institutional restrictions. Jørgensen & Kjørsvik (1995) comment on the fact that commune-based ICZM efforts often become a battlefield of regional sector authorities, by stating that successful ICZM depends as much on solving conflicts between these as on local planning processes.

¹⁰The process around the Nordland coastal protection plan actually lead to fragmentation and inter-sectoral conflict rather than integration.

It is not clear who will win the on-going struggle between the fisheries authorities and the environment protection authorities. It is enough here to state that the hegemony and monopoly of the fishery authorities in the coastal zone are threatened both by the communes and the counties, as well as by the environmental protection agencies. Decentralization of management responsibility is on the agenda in many sectors, and may lead to additional support for strengthening the PBA at the expense of the fisheries legislation. Also, our perception of many coastal environments is changing rapidly, and the currently dominant perception of coastal areas puts a rising value on their environmental and cultural characteristics, which in the long run will make conservation prevail over development. Time will show how this institutional battle will end. However, as long as this struggle remains unresolved the communes have more room to manoeuvre and engage in strategic alliances with one of the parties. When these two parties become coordinated and harmonized the communes will have few options but to obey their decisions.

6. The benefits of CZM so far

The benefits and effects of ICZM can be most readily discerned if they are related to baseline conditions in the given coastal zone (Bower & Turner 1998:50). However, comprehensive and accurate baseline information is often lacking. Another critical problem is how to define the "baseline scenario", i.e., what would have happened in the absence of ICZM? The point is that the "business as usual" assumption is unrealistic as every system will be subject to continuous processes of adaptive changes, related to learning, technological, economic, demographic and ecological changes, etc.. In Norway coastal zone planning to some extent involves gathering of baseline data, as the planning is supposed to be based on knowledge of the local conditions. However, in practice the quality and the quantity of the data varies from commune to commune, and is often rather poor.

The pressures that influence or drive the outcomes that an ICZM program strives towards are numerous and complex, and it is difficult to establish which cause led to which effect. In addition, ICZM aims at a moving target as both the circumstances, objectives and priorities evolve and change over time, even if the goal of sustainable coastal development remains constant. Further, as stated by Olsen et al., the challenge for evaluating ICZM is:

"inherently complex since we must make judgments on a "process" that is designed to avoid conflicts and ecosystem degradation by identifying problems and opportunities proactively and acting upon them." (Olsen et al. 1997:160)

Another problem that emerges when evaluating ICZM is that many objectives which are set for ICZM are not clear and their interpretation often vary among different interest groups (Burbridge 1997:175). The trade-offs the various groups will accept may be different, and vary over time. Also, coastal management initiatives may be successful in fulfilling local needs which may not reflect national priorities. In Norway the core of the ICZM system is the communes and the counties. As relatively autonomous genuine political bodies these institutions may have as many various goals as there are coastal communes and counties. It is therefore impossible to evaluate the Norwegian ICZM system as one system with one uniform goal. The various plans and schemes have to be evaluated at the level where they operate. However, it is still possible to say something general about the processes and the procedures that takes place.

Further, social, cultural, economic and environmental consequences have to be addressed and incorporated in any ICZM evaluation scheme. The hard part, then, is to strike the right balance between the limitation of opportunities for economic development versus a socially acceptable reduction in environmental quality. As Burbridge (1997:178) points out, what constitutes an acceptable balance will vary among different communities and will also vary within a community over time.

Bower & Turner (1998:50ff) distinguish five main benefits of ICZM. 1) Mitigation benefits are comprised of damage reduction and restoration benefits. This type of benefit is mainly related to the preparations for and handling of natural hazards such as storms, floods, oils spills etc. Neither of these issues have formed an important part of the agenda regarding ICZM in Norway. This is rather surprising keeping in mind that oil is a major industry in Norway and is expanding north towards increasingly vulnerable areas in the Arctic. Northern Norway has vulnerable ecosystems as well as vulnerable fisheries and fish farming dependent communities, and both would be greatly affected by a major oil spill. However, the potential for using local coastal zone planning as an additional tool for handling the local aspects of oil spill warning, handling and clean-up have so far been neither discovered nor used.

2) Enhancement benefits are achieved through increased outputs from the coastal zone, either by increase in net output or by reduced conflicts among the users. It is currently premature to state whether coastal zone planning has reconciled multiple resource-use conflicts and led to more efficient resource use or resource enhancement in the Norwegian coastal zone. It is likely that most of the benefits in terms of solving user-conflicts will come in the years ahead. Nevertheless, coastal zone planning at the commune or county level is so far not a very relevant tool for sustainable management of marine resources such as fisheries and other harvest-based activities. This is because the legislative and regulatory power is currently insufficient and does not allow these public bodies to make decisions that are explicitly aimed at regulating resource extraction and user rights to such resources.

Public coastal zone planning has been particularly unpopular with the increasingly powerful and wealthy aquaculture industry. This sector has more or less objected to any measures that could be to their disadvantage. The industry has, nevertheless, at least some potential benefits to gain from the fact that coastal zone management is expected to speed up the location related application process. It is not unlikely that the fish farming industry all in all has benefited from communal coastal zone planning.

3) Preservation benefits are the benefits related to the preservation of an area or an ecosystem, and includes both use benefits and non-use (existence) benefits. As already stated, communal coastal zone plans do not significantly interfere with eco-systems or marine resources. And it is not within the scope of this study to state to what extent the PBA has been used to protect species and their habitats. The possibilities within PBA are limited in terms of reducing negative land use impacts to coastal resources or to reserve productive and scenic natural resources, national scenic areas, national parks, etc. It is, however, clear that communal coastal zone planning often contributes to secure public access to waterfront areas, to control building in the coastal zone, secure scenic qualities of coastal areas etc. It is likely that coastal zone planning has often contributed to the well-being of both locals and visitors.

4) Indirect economic (or secondary) benefits stem from "second round" effects of measures applied to produce benefits in the first three categories. So far there is reason to believe that the "second round" effects of coastal zone planning in Norway are rather modest. However, as

this form of planning develops and matures and the institutional conflicts are solved, the potential for indirect economic benefits may become substantial. It is, however, important to keep in mind that such effects always will be secondary, and not the primary goal of ICZM.

5) "Option benefits" refer to the potential gains from an ecosystem conservation policy which seeks to preserve as many future coastal resource use options as possible. Ecosystems may have qualities in the future, such as medical, historical, and scientific values - that are currently not valued or known. Thus, species and habitat protection is needed for reasons of both ethics and economic self-interest. In Norway such benefits are rarely explicitly mentioned in ICZM, and are in any case referred to as a preservation benefit. However, as environmental organizations generally gain strength and support, options benefits may be a relevant aspect of communal coastal zone planning in the near future.

7. Conclusion

It is difficult to make good judgments about what we can reasonably hope to accomplish at this stage of institutional development in the Norwegian ICZM program. Any ICZM program will have to walk before it can run, and it is important to recognize that programs undergo cycles of development, implementation and refinement. However, coastal zone planning on the commune level in Norway apparently provides a useful framework for coordination of a wide array of interests. My impression is that the present design of the Norwegian ICZM system is generally sound, even if some institutional adjustments are required. I thus agree with Bennett when he states that:

"communal planning seems to be fairly successful coordinated within the limitations that surround it,..." (Bennett 1996:211)

Thus the Norwegian ICZM effort is on a trajectory that leads in the right direction. It is, however, unlikely that the current institutional processes and structures will achieve sustainable forms of coastal development at significant scales.

Even if the level of citizen participation is already substantial, important improvements can still be made in this respect. The system is in need of a more integrated approach through more and improved coordination. A more cooperative and compromise-oriented attitude on the part of the regional state authorities may improve this. As in most other countries the legislation that regulates activities in the coastal zones in Norway is contradictory and insufficiently comprehensive to respond adequately to the complex relationships that exist. In order to avoid jurisdictional conflicts better demarcations between institutions within government have to be made.

It is, however, likely that institutional reform is also required to expand the space and potential for integration at the commune and county levels. The problem, then, is that an institutional reform that strengthens the Planning and Building Act in relation to the Salt Water Fishing Act or the Natural Protection Act may cause new problems just as serious and difficult. The ultimate question is how conservation principles, precautionary principles, principles of sustainable use, and principles of social equity and community participation can be combined and coordinated in one process and one institutional set-up?

The current institutional structure is, nevertheless, far better at integrating and coordinating stakeholders and public sector agencies, than at integrating scientific social and natural experts. There exist institutional barriers between the various disciplines that are involved in

coastal zone management, even though interdisciplinary and multi-sectoral approaches obviously are required.

The most serious conflicts have so far centered around the institutional problems related to the very establishment of coastal zone management, and less emphasis has been put on the usefulness or outcome of such practices. The spatially oriented and commune-based ICZM set-up in Norway appears also to some extent to be antagonistic to the existing social, cultural, legal and administrative fabric along the coast that traditionally treat the sea as open "commons" that are dealt with through functional, rather than spatial measures.

According to Clarke:

“The pathway to ICZM is strewn with roadblocks. All the usual resistance to government intervention may be there along with high levels of interagency strife and private sector interference and, often, low levels of scientific information and public support. The ICZM advocate must be cautious and willing to negotiate” (Clarke 1997:213)

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