

Coastal zone management from the social scientific perspective

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Abstract. 'Integration' was one of the most frequently used words at the San Feliu Euroconference but the participants did not always use it in the same way. Integration is one of the key notions discussed in the subsequent papers by *Salz, Green & Penning-Rowse*, *Köhn & Gowdy* and *Davos*. A short introduction to these papers is presented, where some of the views expressed by the authors are compared with related conceptions which can be found in social sciences literature.

Keywords: Culture; Dichotomy; Institution; Integration; Management.

Abbreviation: ICM= Integrated Coastal Management.

Introduction to the papers

Social scientists in Western Europe have joined the multidisciplinary discussion on coastal management only recently and they did so not on their own initiative but on the invitation of natural scientists. On a global scale, the scope of ecological sustainability has been broadened to include sustainable socio-economic development after the Brundtland Report and the UN Earth Summit of 1992. Thus, there is a growing number of international projects, conferences and literature dealing with the possibilities and difficulties integrating the different social and natural scientific approaches. One of the buzz words here is 'integration'.

Pavel Salz in his contribution welcomes the inclusion of a social scientific perspective as a part of what he calls an 'integrated environmental analysis'. His use of the term seems close to what the conference organizers prefer to call a transdisciplinary analysis, and differs from the meaning Colin Green and Edmund Penning-Rowse attach to the term. They understand integrated coastal management as the institutional and administrative coordination between different sectoral departments, and between different administrative levels. Because of the complex nature of this process, they fear that such integration 'tends to be interpreted as a more centralized form of management'.

In the first case, the word integration seems to be

applied in a rather idiosyncratic manner, which does not fully coincide with the meaning usually given to the term in the context of coastal management (Sorensen 1997). Especially in the case of new encounters between different disciplines, the establishment of a common understanding of the concepts used is conditional to the development of a transdisciplinary approach. *Green & Penning-Rowse* are critical of the effect of what Sorensen (1997, p. 5) summarizes as the first two meanings of the word 'integrated' in the Integrated Coastal Management (ICM) literature:

- The horizontal integration of separate economic sectors (such as fisheries, tourism, transportation) and the associated units of government which significantly influence the planning and management of coastal resources and environments.
- The vertical integration of all levels (national, state/province/region, local) of governmental and non-governmental organizations which significantly influence the planning and management of coastal resources and environments.

Further, integration can be understood to mean:

- A planning and management perspective which combines land-use and sea-use processes.
- Analyses and assessments which cut across scientific disciplines.
- A program which consists of planning, education, and applied research components (Sorensen 1997, p. 6)

Social and natural scientists who are actively engaged in transdisciplinary ideas will probably agree with my seemingly paradoxical experience, i.e. that one learns from transdisciplinary analysis to ask new questions within one's own discipline. In the field of environmental studies it is important to distance ourselves from so-called Cartesian dualisms (Milton 1996, p. 11) which have dominated Western thought since the age of Descartes; of mind-body and nature-culture. Natural scientists often assume that nature exists in a positivist sense, and that science offers us a realistic model of how it is different from culture (Ellen 1996, p. 12). Social scientists would say that both 'nature' and 'culture' are man-made concepts, even if it is assumed that nature exists. Consequently, there are many variations of the cultural construction of 'nature' or 'environment'.

Moreover, such dichotomies are far from universal. In Asia and Africa many people regard the socio-cultural world of (living) men and women as subordinate to the forces (gods, spirits, ancestors) of the natural world. The Dogon of West Africa (Milton 1996, p. 120) provide a good example of what can also be observed in many Asian societies, who regard the bush as the source of all power, knowledge and life. Respect is an essential component of the relationship between the Dogon and their environment, but they take whatever they need from the forest without trying to replace it. Indeed, from their point of view it would be inappropriate and 'illogical' to try to replenish what is the source of all power and life. Consequently, a Western-oriented environmental NGO will have a hard time convincing these people of the necessity of environmental management by man, since it is the environment which 'manages' people.

In the contributions to this volume we encounter yet another interpretation of the word 'integrated'. At the level of implementation of coastal management, Davos refers to the methodology and approach needed to have the different stakeholders in a particular coastal zone area cooperate in the implementation of a project as an integrated approach. Stakeholders are individuals or groups with vested interests in the access to/use of resource(s) of the coastal zone. The interests of those who are directly involved (an oil-drilling company, the city harbour authorities, fishermen, tourists) or indirectly involved (government officials, scientists, World Bank, national courts) are often (partly) conflicting. Aggregation of interests takes place in institutions, whether these are a local church organization, a non-governmental organization, a labour union or a fisheries department.

Köhn & Gowdy discuss different approaches to decision-making. They present an indicator based on calculating an ecological footprint to guide decision-making in spatial and economic planning. This is discussed in the context of different theories of decision-making - from simple cost-benefit analysis through to ethical discourse. In negotiations, networking and discourse the communication medium is not necessarily the price system.

Davos' contribution focuses on an option which, in a process-oriented approach, should result in cooperation between stakeholders in order to obtain 'higher gains for all stakeholders instead of competitive strategies that may maximize individual benefits'. In *Green & Penning-Rowsell's* view 'choice is conflict', especially 'conflicts between the interests of the economy and those of the environment'. What is probably meant here is that the economic and ecological interests of the different stakeholders, including scientists and government officials,

create conflicts between them in terms of short-term private or economic interests and the long-term public interest of sustainable resource use.

What *Davos* calls cooperation is the process of accommodation of interests between all stakeholders who are, directly or indirectly, involved in coastal management.

ICZM-research can contribute to finding optimal solutions, within the conditions of a particular social, economic, cultural, and political setting. But there are no 'best' or 'right' solutions to everyone involved. Moreover, in a given context, what appears to be the optimal management solution for the coastal zone as a whole, may be a sub-optimal solution for particular stakeholders. Even the definition of what is 'optimal' in a particular setting depends on whose definition is going to be accepted. In other words, if they agree to cooperate, stakeholders should be (made) aware of the social risk of a possibly sub-optimal decision regarding the realization of their interests. This seems to be an essential condition in what *Davos* calls 'compensation analysis'. Yet the idea that coastal zone managers want to make the 'right' decisions, conceived in terms of what is 'correct' or 'just', seems rather stubborn especially to those who favour an expert-driven, top-down approach to ICZM. There is no universal logic or 'reason' in the way of decision-taking, neither by government officials and scientific experts nor by 'the public' (*Green & Penning-Rowsell*). The public, that is the various stakeholders, may be acting on the basis of different rationalities, though not irrationally. From a social science point-of-view the dichotomy between scientific and public rationality should be regarded as unscientific, and be abandoned immediately.

Meanwhile, the stakeholders have often been left out of the policy-making process on coastal zone issues, as they are often negatively looked upon by government officials. Although this is a general feature (Grindle 1980), it is especially true for coastal inhabitants in many developing countries who are often unduly regarded as the 'rough' or 'uncivilized' part of society (also in the romantic way, see B. Groult's novel *Les vaisseaux du coeur*). However, the VALCOAST research (*Davos*) clearly shows that coastal zone stakeholders do indeed want to become involved in the policy-making and implementation process, despite the negative image officials have of them, and of which they are aware. It also shows that in three out of four cases government officials and the different groups in society hold similar goals or values, which is a sound basis for the accommodation of their respective interests. In other words, for the social sustainability of coastal zone management.

Social sustainability should be differentiated from environmental sustainability, but it is equally relevant for the successful implementation of coastal management.

Social sustainability depends on cooperation between stakeholders and the aggregation of their interests. It also involves the mutual recognition of long-term decisions concerning the access and use of coastal zone resources by the different parties.

The many, often conflicting ideas, values, and interests of individuals, groups and institutions constitute a highly dynamic arena. Often, the management of coastal zone access and use is presented in the form of a policy or a political tool for planning. But, such a tool is inappropriate in a socially and institutionally very dynamic setting such as the coastal zone and is an illusion kept very much alive by positivist thinking. Instead, transdisciplinary coastal zone research which includes the social sciences should focus on:

- (1) the different perceptions and ideas of the stakeholders,
- (2) the institutional conditions which cause the various incompatibilities between them.

Moreover, it should be kept in mind that many of the parties involved have a long history of negotiation and mutual image building, e.g. fishermen and state departments, which are not always positive and which might influence present interactions. Coastal zone research should be based on the understanding that 'nature is culture'. In other words, environmental qualities and characteristics are not autonomous 'natural' facts. They are always part of an interpreted reality according to social, cultural, economic or political perceptions and ideologies. Integrated coastal management is people's work; it is working with people.

Social scientists distinguish two different kinds of institutions. An institution may have a visible, formal structure such as a government organization or a local common pool resource organization. An institution may also be viewed as a perception, a set of values or a cultural pattern of behaviour when its 'tangibility' is much less, as in the case of the labour bond of poor fishers with an economically and politically strong patron, or cultural ideas and practices concerning the (prohibition of) access to resources through time and place. Whether organizations or not, institutions can be defined as complexes of behaviour and ideas that persist over time by serving collectively valued purposes (Uphoff 1984) or as social rules of action (Ostrom 1991).

In the ICM literature only the first type of institutions is recognized as such. The second type of institutions is mentioned, if ever, under the collective heading of 'culture'. Transdisciplinary research should abandon this dichotomy.

A few observations are important here:

1. Institutions as organizations are far from static blocks. Interests may differ within, and between, organizational levels (e.g. national vs. provincial levels or the departments of forestry versus agriculture).

2. Specialists who are working at the implementation level are often more interested in effectiveness, whereas their superiors are more interested in safeguarding the continuity of financial flows (Quarles van Ufford et al. 1988). Finally, the articulation of the different interests and diverging perceptions of what constitutes a problem and what a solution, has more to do with policy-making and politics. (Grindle 1980; Migdal 1988).

3. Socio-cultural forms which are not necessarily organizations, such as knowledge, use values (other than market-economic values) and normative ideas and should also be regarded as institutions. (cf. Salz, who calls them non-formal institutions). Likewise, enduring social relationships, e.g. kinship, old-boys networks, nepotism and forms of leadership are also considered to have institutional characteristics. These greatly influence the manageability of a coastal zone.

So, institutional dynamics are part and parcel of social and cultural dynamics. Government administrators and their perceptions and priorities are as important as the perceptions of private entrepreneurs, fishermen and their wives or the environmental movement. Coastal zone boundaries are primarily an analytical tool, both in spatial and temporal terms. Ecosystem or geophysical boundaries do not necessarily coincide with administrative boundaries, for example in the case of watershed management. Labour migration and seasonal fluctuations in the availability and price of a resource may cause mobility of the resource appropriators beyond these boundaries. Finally, human behaviour cannot be planned nor predicted within a given time frame of 20, 50 or 2000 yr.

Why is it important to focus on institutions as the primary units of socio-cultural analysis in a transdisciplinary context? An institution can be analysed, contrary to actual behaviour, at a high level of aggregation: its characteristics can be integrated qualitatively or even quantitatively into a model or scenario for coastal zone management. See, for a recent example, the results in the form of the RamCo model developed by J.L. de Kok of the Buginesia Project in Sulawesi, Indonesia (Anon. 1998).

But there also exists the danger of reifying or 'making' an institutionalized pattern of social interaction 'into a thing' which performs specific functions. Institutions can not be constructed (nor dismantled) overnight because of the underlying cultural ideas and power relationships. Institutions always depend on other institutions for their survival. Even those institutions which take the form of organizations, such as a rural credit group or a 'horizontal' organizational structure, are linked to past experiences and to persistent notions of leadership and hierarchy.

Consequently, institutions as organizations cannot by themselves be regarded as tools in problem solving or conflict resolution. They themselves 'do' nothing, only people do. Thus, the power holders within the organizations and institutions, and the representatives of the different social groups involved, together provide the basis for the accommodation of conflicting perceptions and priorities.

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