

21. Group report: reflections on the application of integrated assessment

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Abstract

This group report gives an overview of applications of and issues in integrated assessment (IA) applied in the coastal zone area in Europe. We conclude that there are various reasons why IA is sometimes not successful. For instance, integrated assessment tends to be highly specific, dialogues are seldom an integral part and environmental thresholds are uncertain. A way forward would be to have an alternative framework that could fulfil some of these needs, which is proposed at the end of the chapter.

Introduction

Previous chapters (16-20) have highlighted the views on and use of integrated assessment (IA) by a number of important sectors and stakeholders along the European coasts. Most are local cases and have a sectoral perspective. The need was felt to place these in a wider, reflective, framework. Justification of our choice for real-world cases of IA lies in the practical needs of coastal practitioners. What can be learned? What can be improved? What will be necessary in the light of probable future changes? (e.g. Rotmans 1998).

In previous chapters examples of IA were given from different sectors and regions. Here we present some lessons learned and a list of basic requirements for a specific model for inclusive participation within IA. Our discussion attempts to

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aggregate sector-wise cases from the previous chapters into a comparative analysis of variation in issues and impact mechanisms as well as common gaps and successes. In contrast to previous group reports (Moschella et al. this volume, Lise et al. this volume, Rochelle-Newall et al. this volume, Nunneri et al. this volume) the discussions on IA were only structured in a general sense in order to facilitate the brainstorm character of the group session. With hindsight, we notice that our considerations remain close to the cases presented in previous chapters (16-20) and the compromise between overarching generalisations and realistic detail was difficult to forge. The present chapter gives more general conclusions that were drawn from the accumulated experience of the group rather than conclusions based on published literature, which makes this chapter somewhat different from previous ones.

In this concluding chapter we chose to use the framework for analysis and drivers that were identified by Turner (this volume). We have aggregated tourism with the expansion of the built environment, and have not included the issue of climate change (Table 1). We will use these major drivers to first assess the major sectoral problems. Second, we discuss the success of IA. Finally, we present some lessons learned and a possible way forward.

Table 1. Seven of the major drivers for changes in the coastal area (adopted from Turner this volume)

Primary	Secondary
Expansion of the built environment	Climate change
Tourism	Agricultural change
Industrial development and trade	Provision and supply of energy
Fisheries and aquaculture	

Experiences in different sectors

Tourism and the expansion of the built environment

Expanding tourism over the last centuries has emphasised and exacerbated weaknesses in national level spatial planning and regulation, for instance particularly apparent in Mediterranean countries (see e.g. Sarda et al. this volume). Along the Atlantic shores the tourist centres are conditioned by accessibility from the urban centres and traditional tourist seasonality. The pressures of urbanisation and expansion of the built-up area as a result of tourism are localised, since authorities at the local level act as regulators. People from northwestern Europe tend to buy secondary houses along the Mediterranean coast, and these are also increasingly often used for more permanent residence. This trend of an increasing number of secondary residences has also been encouraged by the attempts of local politicians to increase the number of tourists in the low season (winter). At the same time the peak in the number of visitors in summer remains constantly high.

The tourism sector is flexible and can adjust to changes in for instance demands from tourists. In Italy the sector swiftly responded to changing demands as people from Eastern Europe started to visit the country more frequently. Tourism is diversifying, e.g. scientific tourism that is being attracted by the building of conference halls.

Individuals as well as companies are buying out large parts of villages. This can be observed along the Mediterranean, but also along the Black Sea, where people buy secondary houses. In Greece, a new law on spatial planning appears to be quite promising and also includes a chapter on coastal planning. While in Finland the problems with the development of secondary (vacation) houses occurred about 50 years ago. New regulations determine the standards for turning secondary houses into permanent houses.

Because of high prices along the coast tourism urbanisation expands into the interior. The apparent deadlock situation in spatial planning leads to unsustainable inland expansion.

Industrial development and trade

Both industry and trade concentrate along the facilities of major ports. Sea-ferry transport is concentrating towards large ports because of the possibilities for scale expansion in logistic facilities. Ports and harbours around Europe are expanding because of increasing volume of goods transported worldwide and because of increasing competition among ports. Safety and waste disposal issues that arise because of this expansion can be solved, but regulation and legislation are needed to force harbour management and industry to take action (see also Vellinga and Eisma this volume), a legal basis is thus conditional. It should also be noted here that industry and port authorities do not necessarily share interests and responsibilities equally.

A case of particular interest in the UK is the locating of a new harbour in Southampton, where environmental issues are to be taken into account. Germany utilises a comparable legal compensation mechanism to that of harbours in The Netherlands (Rotterdam) and Belgium (Antwerp), but expansions of harbours is not so pressing an issue in these countries. For most German harbours, such as Hamburg, Bremerhaven and Wilhelmshaven, the maintenance and increase of access depth and consequent dredging is the largest environmental problem.

When looking at regulation, the infrastructure to control the development and expansion of ports and harbours in Europe appears to be in place, also because there is usually a (single) authority to address. This is in contrast with tourism where a wide range of sub-sectors and enterprises are confronted with considerable local and temporal variation in regulations and management institutions.

Fisheries and aquaculture

Near-shore and coastal fisheries often have remained small-scale across Europe with few notable exceptions (e.g. cockle trawling in The Netherlands). The larger high sea fisheries of Europe have expanded their reach across the Atlantic Ocean, whilst being subject to sectoral adjustment as well as strong attempts to regulate overexploitation (e.g. EC 2002). Employment losses due to restricted fishery quota underline the need for alternatives. Such alternatives can be for example tourism, resulting in a new set of pressures (which are not the same as the pressures of fisheries). This shift from fisheries activities to tourism and the consequent urbanisation pressure has been occurring along the Mediterranean coast since the 1950s.

Fisheries are turning to aquaculture across the Mediterranean. Aquaculture is a competitive sector, which is sensitive to subtle market changes such as enterprise upscaling: small groups have to work together to make it profitable. Both as an economic activity and its resulting pressures on natural ecosystem, aquaculture has little more in common with fisheries than its basic resource.

Fisheries in Europe have moved from small-scale community-based to corporate organisations, leading to short-termism which rapidly turns natural capita into potential short-term financial profits. In macroeconomic terms, the European fishery sector is not economically very significant, but at the same time it is a powerful political force as witnessed from the quota negotiations. Disappearance of the community-based fisheries sector allows the big companies to enter the market.

At the World Summit on Sustainable Development in Johannesburg it was decided that a new marine stewardship should be put in place by the year 2005. This could give a new opportunity for European researchers to liaise with stakeholders and major players. An example is the support that could be given to companies, for example large food enterprises to review future environmental economics and resource acquisition, also in relation to agriculture (Gerbens-Leenes and Nonhebel 2002). Sustainability aspects, such as the linkage between the driving forces of climate change and energy production and provision should be looked at closer.

Agricultural change

Major developments in the agricultural sector in Europe will include a continued movement towards “green” farming with a reduced nutrient and pesticide consumption, and the expansion of the EU in 2006 that will lead to a reduction in subsidies. There is a trend within industrialised urban regions of the EU to assign the farmer the task of steward of the countryside landscape and to cater for recreational needs in urban centres.

How declining EU subsidies will impact on the coastal area is uncertain, but much depends on the location and the precise configuration of the changes. One scenario is that the accession countries will suffer an intensification of agriculture over large areas, leading to increasing nutrient input from Central and Eastern Europe to the Baltic Sea and Black Sea.

Provision and supply of energy

In the context of energy provision windmill development in particular is relevant for the coastal area. Cross-boundary issues and communication, e.g. between Denmark and Germany complicate the formulation and implementation of the required integrated assessment, (see also Kannen this volume). The development of windmill parks can lead to an uneven distribution of risks and benefits at different scales. Benefits are experienced at the national level, or international level e.g. greenhouse gas emission reductions, while the risks, damages and nuisances are experienced at the local scale.

Success of integrated assessment

When looking at integrated assessment, some important factors appear to determine its success:

- Integrated assessments tend to be less successful when they are highly specific and are too narrowly framed in time and scale;
- There appears to be a lack of dialogue with and identification of opinion formers and politicians. Perhaps integrated assessments should be taken on in another way; by going to stakeholders, and assess what they exactly need;
- The understanding and communication of the ecosystem and its thresholds is an important part of the process of an integrated assessment, in order to be able to communicate outcomes of different strategies and scenarios with the stakeholders.

The message should be logical and simple; overly complex situations are difficult to understand, more communication and more simple regulation is needed. For example, NAM/Shell failed in the discussion about gas exploration in the Waddensea area, because although the technical details were perfectly in order and dialogues had been set up, public opinion changed because of failing political support, first on the regional and then on the national level. Stakeholder mapping should be maintained throughout the exercise, this was not done in the NAM/Shell case.

The science is often pushed aside in discussions where large economic interests are at stake; e.g. in the case of the port of Venice. In the end the stakeholders have to execute the plans; good “scientific” arguments do not necessarily cover the interests of the manager.

The Black Sea integrated assessment was successful in the sense that it generated \$0.5 billion of new resources. But it was not successful in other terms: local stakeholders have not been involved, and the institution that was created (the ministry of environment) had isolated itself (Mee 2001). IA could identify the root causes and create ownership, not only scientific excellence. For instance, from stakeholder mapping preceding the G8 Summit in Evian, France in 2003 it became clear that second subject of concern in almost all countries is the environment, but this was not addressed by the summit (G8 2003).

A code of practice is needed for integrated assessment in the coastal zone, or a framework for IA. We could be more sensitive to (changing) social and ecological interests. The stakeholder participation should not be a sequential part but it integral to the process. More room could be created for different options, for different styles of governance and different styles of delivery of products and outcomes. Integrated assessment could also be more “interactive”, not merely represent a set of “ready-made” alternatives. The limits of tolerance of ecosystems should be a given, and then strategies to best adapt the most affected livelihoods should be explored (e.g. alternative use of boats in case they can’t be used for fishing for some time).

A classic case is the North Sea fisheries; although the EU regulations have changed, negotiations have resulted in a continued over-catch. The lesson is that the stakeholder should be involved in the setting of the regulation, and only when dialogue has failed should regulation be imposed.

Another example is the habitat directive; activities have to be justified economically, and consequently impacts have to be compensated for and mitigated. This forces people to create win-win situations where they otherwise would remain dormant. An example is the compensation of every hectare of port reclamation.

If the stakeholder is convinced of the long-term interest of conservation and if alternatives from livelihood and income are sought, they are more willing to comply. The process should be looked at as a self-organising response mechanism; guidance and adaptive responses from local stakeholders should be encouraged

Conclusions, lessons learned and a possible way forward

Past and current developments in particular locations in Europe can serve as examples for integrated assessments that can be or should be undertaken elsewhere. One example is the regulation in Finland for secondary houses, which aims at specific requirements for water and energy use. Such a regulation might serve as an example for other coastal regions where the increased water and energy use is not yet an issue, but might soon become one. Another example is the shift in Spain of employment from fisheries to tourism, which might relieve environmental pressure due to fisheries activities. Such a shift can set an example for regions where tourism is not (yet) well developed.

Across Europe a common framework could be developed, that takes into account the inclusion of stakeholders. This framework needs to be supported with a code that will ensure consideration of cultural and political variation across Europe. Such a protocol would help to legitimise the political process, and to build trust and accountability. There could also be a notion of mutual respect for different opinions, a notion of shared understanding of a vision of coastal future and a notion of fairness of treatment and a feeling for joint responsibility for outcome. Cultural and political variations across Europe are very important. A particular problem here is the fact that in the southern parts of Europe there is a strong mistrust in the government. Here the stakeholder participation should or could per-

haps play a different role, namely the gaining of empowerment. The aim is to look for a general framework and then build in the sensitive local elements.

Such a protocol is an example of a more or less ideal and harmonic situation, and the actual situation often proves much more difficult. Alternatives include for example a conflict model. A number of basic requirements are listed below (Table 2).

Table 2. Suggested requirements for a code of practice for integrated assessment

1.	Initiation of the procedure
2.	Vision exercise
3.	Mutual trust
4.	Openness and transparency
5.	Accountability and adjustment
6.	Media friendly
7.	Creation of networks of community forums (spatial and functional)
8.	Independent audit and validation
9.	Set specific political and cultural characteristics
10.	Aim for an outcome that all parties (can) accept

Consensus is not necessarily needed; an exploration of the differences that exist already can be very useful. Items that could be added include the necessity to identify the relevant stakeholders in the earliest stages, including national and international bodies and groups.

A stakeholder that has an interest usually initiates an IA, or there is a problem that forces policymakers to act. The initiation can be forced by an economic incentive or a statutory obligation. The process should then be taken over in at a very early stage by a neutral facilitator, in order to maintain equality.

The scale of the problems and issues is an important aspect for the code for integrated assessment, as models and processes have different boundaries and boundary conditions at different scales. Meaningful scales for the various parameters should carefully be chosen.

In addition to this list of requirements for a code of practice, different steps and tasks in the process of IA can be suggested. In each of the steps, ranging from agreeing on the rules of the procedure in the first step, setting up of joint-fact finding to the preparation of response options, intensive consultation between representatives of the different stakeholder groups should take place.

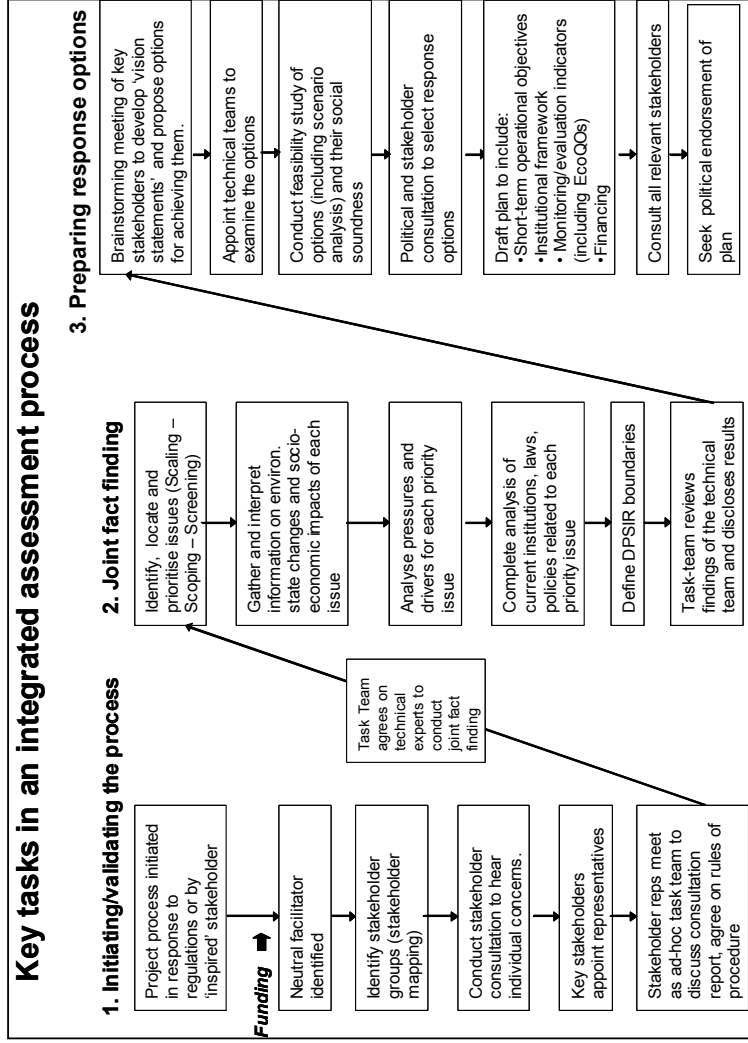


Figure 1. Key tasks in integrated assessment (adapted from Mee 2004)

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