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Policy Instruments for ICZM in Nine Selected European Countries

Final Study Report
Prepared for the Dutch National Institute for Coastal & Marine Management
RIKZ

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Contents

1. Introduction

The National Institute for Coastal & Marine Management in the Netherlands - RIKZ is currently involved in the preparation of policy documents concerning the Dutch coastal zone. It is working at a very strategic level, looking towards the next fifty years.

An initial review "Spatial Planning in European Coastal Zones" was commissioned in 1998 by RIKZ to describe spatial planning, coastal policy and coastal defence regulations in the countries of the European Union and Baltic States. The main contractor of this study was Delft Hydraulics in co-operation with the European Union for Coastal Conservation (EUCC).

In order to inspire national policy development, this further study has been commissioned to gain an insight into how other countries manage their coastal zones and to provide an initial view on the effectiveness of these approaches.

The objectives of this study are to:

- present an overview of national policy and legislation relevant to ICZM (Integrated Coastal Zone Management) in nine selected countries, in order to set the context; to
- examine how well these national frameworks work at the local implementation level, using selected case studies as examples; and
- indicate the extent to which the existence of nationally defined set-back lines help or hinder the effective implementation of integrated coastal zone management

Each of these objectives is covered in a different section of this report. The first section - National Frameworks for ICZM, provides the summary of the national-scale legislative and policy framework, which includes summary matrices of legislation and non-statutory plans and the sectoral interests they cover. The next section - Local Integration & Implementation, discusses the level of integration and implementation at the local level of these national frameworks. The final section - Policy and Use of Set-back Lines, focuses specifically on the national policy and use of set-back lines in the management of coastal zones for all selected countries.

Linda Bridge, Research
Albert Salman, Project management

2. Approach & Methods

The study addresses three topics relating to the development and implementation of ICZM in nine different European countries:

- National Frameworks for Integrated Coastal Zone Management
- Local Integration and Implementation
- Policy and use of Set-back lines

Each section of the study makes a comparative assessment of the topic in the nine selected countries: Denmark, England, Finland, Germany, Norway, Poland, Spain, Sweden and Turkey.

To address the issues of the extent to which national frameworks of legislation and policy help or hinder the reality of the local implementation of ICZM in the selected European countries, the approach of identifying not just national (often governmental) but local ICZM contacts was used and case studies based on their bottom-up experience were compiled.

To do this, through national contacts and other sources of published and unpublished information a number of case study locations were identified and contact sought with those undertaking ICZM in these areas. It was planned that there would be at least one case study presented for each of the nine countries under examination. In practice this proved extremely challenging, not only because of the major time-constraints in rapidly developing such a knowledge network wholly by telephone and e-mail contact (see below), but also because many contacts were unwilling to give their personal views and understanding of the quality of ICZM delivery in their local areas in a form in which their contribution would be clearly identified. This was largely because these view were often at considerable variance with the top-down national (governmental) view of ICZM implementation in that country.

In some instances a case study was identified for its experience of a very specific point or issue. These are given as boxed case study examples supporting the relevant part of the text dealing with local integration and implementation of national frameworks and the policy and use of set-back lines. Some case studies, however, cover a range of issues and cross-sectoral points, and a structured summary of these is given in Appendix 1. Specific points are drawn from these as boxed text examples.

Although the use of contacts and case studies was essential to establish the views of the reality of national and local ICZM, and how the use of set-back lines actually works in different countries, using this approach has been a major challenge in this study, for three reasons:

1. It rapidly became clear that to ensure the accuracy of the national ICZM frameworks (see below) using the advice of respected national contacts was essential;
2. Of the eleven national contacts identified in the project tender, under the timing and time-scale of this project, only two proved willing and able to assist. This required the rapid identification and engagement of other authoritative national experts; and
3. Case study expert input from each country did not form part of the initial project brief: the number of contacts that were needed to be made to help deliver the revised project brief thus proved to be substantially more (and to take more time and resources) than was originally anticipated.

Nevertheless, without using this approach it would not have been possible to tease out the issues between national and local ICZM processes.

Section 1- National Frameworks for Integrated Coastal Zone Management

In order to set the context for the examination of how well National Frameworks operate at the local implementation level it was essential to ensure that information on both the legislation and policy for the nine selected countries was accurate and up-to-date. It was anticipated in the project brief that this information would, in part, come from the previous Phase 1 RIKZ report (WL/Delft Hydraulics & EUCC, Spatial Planning in the European Coastal Zones, January 1999**).** However, it rapidly became clear that this report contained, for at least some countries, information that contained substantive errors and inaccuracies. It therefore became essential to recheck, this information. National Contacts were chosen for each country and contacted for their agreement to contribute to the report. A full list of these contacts is provided under Acknowledgements.

Existing legislation and policies most relevant to ICZM for all the countries were identified in order to establish frameworks more rigorously. Matrices of these legislation and polices were drafted, drawing on information from a wide range of published and unpublished sources, including *inter alia*: Gibson (1999); NORCOAST (1999); Cicin-Sain & Knecht (1998); and CIA (1995). A standard set of sections were compiled for each country, describing the:

- *Planning & Administrative Context;*
- *Definition of the Coastal Zone;*
- *Set-back Line Policy;* and
- *Additional Information*

These were then sent, together with the relevant framework matrix, to each of the nine National Contacts for approval and confirmation. Any comments, modifications, deletions or additions

provided by National Contacts were incorporated into the final text and tables. This section concludes with a comparative national summary of the key features of these national frameworks.

Section 2 - Discussion: integration of national frameworks

A further set of contacts in each selected country was approached to provide case studies to illustrate how the national legislation and policies were implemented at the local level. Forty-five experts were contacted, but many were unable to contribute, largely because of the tight time-frame for the report. Of the twenty who indicated a willingness to assist, only eleven proved able to provide information within the available time. Nevertheless, these include (as with the national contacts) a number of key experts highly experienced in the development and implementation of ICZM in Europe. Liaison with these contributors was undertaken via e-mail and telephone. Case studies were drafted and sent back to the contributors for comment and confirmation. This information provides the basis for the discussion of how integration is approached in each of the selected countries, with short boxed examples drawn from the case study information where appropriate. A full list of these contacts is provided under Acknowledgements.

Section 3 Policy and use of Set-back lines

This section draws together the information included in the first section under the *Set-back line policy* entry for each country, and includes additional information obtained through telephone interviews. Categories of set-back lines were established and national approaches to implementation and enforcement of such policies were analysed. Boxed examples of case studies are included where appropriate. Table 3 makes a summary comparison between countries of the existence of national coastal set-back lines and, where they do exist, their key features. From these analyses, the strengths and weakenesses of set-back lines, and their many different variants, are evaluated.

Appendix: Case Studies

Where sufficient information was available, more detailed multi-issue case studies were drafted and again sent out to the relevant contacts for comment and verification. These are included as an Appendix so as to provide additional contextual information of implementation at the local level.

3. National Frameworks for Integrated Coastal Zone Management

Introduction

This section summarises the national scale legislative and policy framework that directs and guides the implementation of coastal zone management for nine selected countries:

Denmark
England
Finland
Germany
Norway
Poland
Spain
Sweden
Turkey

For each country, the range of legislation (laws) and non-statutory plans is tabulated with an indication of which sectoral interests they cover. Both coastal (terrestrial) and marine legislation is included.

The approach and mechanisms within each country for implementing coastal zone management is described under standard headings that summarise the planning system and administrative context for ICZM, the national definition of the coastal zone and of set-back policy where these exist. There are additional comments on the current status and developments relating to the coastal zone management mechanism.

This section illustrates the considerable variation that exists in Europe in the generally very complex national approaches to coastal zone management. These national descriptions provide the context for the examination in the next section, using case studies as examples, of how well the national frameworks are integrated and operate at the local implementation level.

Country Analysis - Denmark

Planning System & Administrative Context for ICZM

Denmark has a highly decentralised system of public administration, with a high level of public participation and increasing sectoral integration. The Ministry of Environment & Energy is the national government department responsible for environmental and planning policy, supported by various specialist agencies such as the Danish Environmental Inspection Agency. Statutory spatial planning only covers the terrestrial areas: there is no spatial planning for the marine area.

County Councils are responsible for regional planning, and municipalities or communes are responsible for local planning. The main instrument is the Planning Act of 1992, amended in 1994 and 1997, which requires counties to produce regional plans which provide a framework for municipal planning. The Planning Act defines a coastal planning zone extending 3 km inland from the coast. There are specific regulations relating to this zone which vary in urban, summer cottage and rural areas, and which must be implemented by both county and municipal authorities. No separate planning for the coastal zone is required: these regulations are integrated into the general planning process. Municipalities must produce local detailed plans with land use regulations that must comply with national and regional guidelines and directives. Increased sectoral integration, environmental impact assessment and public participation are also key elements of the Planning Act. National aims for coastal zone planning are to protect the undeveloped coast and to ensure full public access to the coast.

The Nature Protection Act 1992, amended 1994 and 1997, establishes a 300 metre protection zone along the Danish coast. This was reduced to 100 metres in summer cottage areas but since 1999 has been increased to 300 metres. The Summer Cottage Act of 1972 was introduced to control the expansion, and regulate the use of, summer cottages along the coast. The Environmental Protection Act gives responsibility to county councils for water quality up to a 6 metre depth or 1 nautical mile offshore.

Definition of Coastal Zone

There is no formal definition of the coastal zone. Terrestrial planning starts from the start of continuous land vegetation.

Set-back Line Policy

The national Planning Act of 1994 designated a 3 km development protection zone inland, in which planning for new activities is restricted. The Nature Protection Act amendment of 1994 designates a 300 metre inland beach protection zone which prohibits building (apart from a few exceptions where a coastal location is necessary), erecting fences or parking caravans. It also ensures public access to the coast.

Additional Information

Although integration is generally good, both between sectors and administrative scales, there are still some conflicts of interest and contradictions between legislation, particularly for the marine area. There is no legal basis for integrating planning across the intertidal shore. Management of the marine area is the responsibility of the State and is subject to sectoral legislation.

Denmark, together with Germany and the Netherlands, is a member of the Trilateral Co-operation on the protection of the Wadden Sea and has designated (in 1982, with further amendments) the whole of its part of the Wadden Sea (Vadehavet) as a nature and wildlife reserve.

Denmark

Legislation	Sectoral Interests									
	Industry & Energy	Agriculture	Coastal defence	Cultural Heritage	Urbanisation & second homes	Tourism & Recreation	Transport Ports & Shipping	Fisheries & Aquaculture	Nature conservation	Water Management
Planning Act 1991	✓	✓		✓	✓	✓	✓		✓	✓
Nature Protection Act 1992	✓	✓		✓	✓	✓		✓	✓	✓
Marine Environment Protection Act 1993	✓						✓			
Harbour Act 1999							✓			
Fishery Act 1999						✓		✓		
Raw Materials Act 1991	✓	✓		✓					✓	✓
Coast Protection Act 1988			✓						✓	
Hunting & Game Management Act 1993		✓				✓			✓	
Environmental Protection Act 1991	✓	✓						✓		✓
Water Supply Act 1978	✓	✓			✓					✓
Forest Act 1989		✓		✓		✓			✓	
Agricultural Act 1967		✓								✓
Summer Cottage Act 1972					✓	✓				
Crown Estate Decree 1963			✓				✓	✓		
Continental Shelf Act 1971	✓							✓	✓	
Policies & Plans										
Regional Plans	✓	✓		✓	✓	✓	✓	✓	✓	✓
Municipal Plans	✓			✓	✓	✓	✓		✓	
Trilateral Co-operation for Wadden Sea	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Action Plan for Aquatic Environment 1987		✓		✓				✓	✓	✓

Country Analysis - England

Planning System & Administrative Context for ICZM

There is no overall national coastal zone legislation for England. A range of different statutory and non-statutory instruments cover either the terrestrial or the marine parts of the zone and there is a complex spatial overlap of these instruments. The statutory spatial planning system only covers terrestrial areas above the mean low water mark. The main instrument is the Town & Country Planning Act (1990), which covers much, but not all, of the inter-tidal zone. Some maritime legislation, for example, Sea Fisheries & Wildlife Conservation Act (1992) includes powers covering the inter-tidal as well as the sub-tidal zones.

There is no statutory national land-use plan. Rather, central government sets out its priorities in documents known as Planning Policy Guidance (PPGs). There is a specific PPG for the coast - PPG 20 Coastal Planning and Policy Guidelines for the Coast (1995), which sets the general context for policy and identifies policies which cover conservation, economic and social development, risks, environmental assessment and quality and improving the environment. Local authorities prepare development plans known as Structure Plans at the county/regional level and Local Plans at the district/municipal level, certain Unitary Authorities prepare Unitary Development Plans,these must conform with national and regional guidance. Most development and land-use changes require planning permission issued by the local planning authority. It is generally accepted that development which does not require a coastal location should normally take place inland. Where it does require a coastal location, the developed coast should provide the best option. Planning should seek to protect and enhance the natural character and landscape of the undeveloped coast.

In general there is no national cross-sectoral legislation, local government is, however, encouraged to integrate across the sectors. To bring sectoral interests together, National Coastal Fora (separately for England, Wales & Scotland) have been set up by national government. These are designed to encourage communication, collaboration and debate between the sectors to assist the ICZM process. The adoption of similar voluntary cross-sectoral approaches at local government scale is varied and patchy.

Definition of Coastal Zone

There is no official national definition of the coastal zone for England. For planning purposes the seaward limit is generally the mean low water mark. There is no statutory planning offshore.

Set-back Line Policy

There is no official development set-back line policy or protected zone for the coast. Recently, however, there have been several instances where an informal 5 metre contour line has been recognised, specifically in relation to dealing with coastal erosion and flood defence.

Additional Information

The statutory planning system in England is predominantly top-down in character, with full public consultation but limited public participation. A new Planning Policy Guidance note for the coast is currently under review.

In addition to local government, there are a number of other organisations and agencies actively involved in the development and implementation of a more integrated and sustainable planning and management of the coastal zone; notably English Nature, The Countryside Agency and the Environment Agency in the statutory sector, the Royal Society for the Protection of Birds (RSPB), World Wildlife Fund (WWF) and the Wildlife Trusts in the voluntary sector.

There is a plethora of non-statutory plans and initiatives ongoing in coastal areas with very variable levels of success in relation to implementation, cross-sectoral integration and public participation. The more successful ones have frequently been funded through EU initiatives, *eg* the Demonstration Programme on ICZM.

NB - this information is for England only, not the UK, as particularly since recent devolution the situation is slightly different in Wales and Scotland as well as in Northern Ireland.

England

Legislation	Sectoral Interests									
	Industry & Energy	Agriculture	Coastal defence	Cultural Heritage	Urbanisation & second homes	Tourism & Recreation	Transport Ports & Shipping	Fisheries & Aquaculture	Nature conservation	Water Management
Coast Protection Act 1949	✓	✓	✓		✓	✓	✓		✓	✓
Conservation Regulations 1994		✓						✓	✓	✓
Continental Shelf Act 1964	✓									
Control of Pollution Act 1974	✓	✓						✓		✓
Crown Estate Act 1961			✓			✓	✓	✓	✓	
Environment Act 1995	✓	✓	✓		✓	✓	✓	✓	✓	✓
Environmental protection Act 1990	✓							✓		
Fisheries Act 1981			✓							
Food & Environment Protection Act 1985		✓							✓	
Harbours Act 1964				✓		✓	✓		✓	
Land Drainage Act 1994		✓	✓		✓				✓	✓
Merchant Shipping Act 1995							✓			
Merchant Shipping & Maritime Security Act 1997							✓			
Petroleum Act 1998	✓									
Protection of Military Remains Act 1986			✓	✓		✓			✓	
Protection of Wrecks Act 1973				✓			✓	✓	✓	
Salmon & freshwater Fisheries Act 1975								✓		
Sea Fisheries Act 1968			✓					✓	✓	

England continued

Sea Fisheries (Shellfish) Act 1967								✓	✓	
Sea Fisheries - Wildlife Conservation Act 1992								✓	✓	
Town & Country Planning Act 1990	✓		✓	✓	✓	✓	✓		✓	✓
Town & Country Planning (EIA) Regulations 1999	✓		✓			✓	✓	✓		
Transport & Works Act 1992	✓									
Water Industry Act 1991	✓									
Water Resources Act 1991	✓	✓			✓	✓			✓	✓
Wildlife & Countryside Act 1981 (1985)		✓	✓		✓	✓			✓	✓
Policies & Plans										
County Structure Plans	✓	✓	✓	✓	✓	✓	✓		✓	✓
Local Plans	✓		✓	✓	✓	✓			✓	✓
Planning Policy Guidance Note 20 1992	✓		✓	✓	✓	✓	✓	✓	✓	
LEAPs [1]	✓	✓	✓					✓	✓	✓
SMPs [2]			✓		✓	✓	✓		✓	
EMPs [3]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BAPs [4]		✓	✓			✓		✓	✓	✓
CHAMPs [5]		✓	✓						✓	✓

[1] Local Environment Agency Plans

[2] Shoreline Management Plans

[3] Estuary Management Plans

[4] Biodiversity Action Plans

[5] Coastal Habitat Management Plans

Country Analysis - Finland

Planning System & Administrative Context for ICZM

There is no overall national legislation specifically for coastal zone planning in Finland. The Ministry of Environment is responsible for national environmental policy whilst the Ministry of Agriculture and Forestry is responsible for all water resources. Both ministeries are supported by the Finnish Environment Agency. Planning control is decentralised and in most cases undertaken at municipality level following the tradition of local autonomy. There are approximately 100 coastal municipalities.

The main legal framework to date has been the Building Act of 1958, which was amended in 1997 to ensure all areas produce Plans (master plans, town plans, building plans or shore plans). This act, in its later amended form, requires planning in the coastal zone and stipulates that all new development in coastal areas or extraction of land resources in shore areas must be based on a master plan. This replaced the previous situation where landowners had a right to build unplanned, dispersed structures on the shore, which had led to a proliferation of development, especially of summer cottages, along the coast. The new Nature Conservation Act (1997) also amends the Building Act to require all land-use planning to take nature carefully into account and promote the preservation of biodiversity and landscape conservation.

A new Land Use and Building Act has been recently approved which will come into force on 1 January 2000 and will replace the existing Building Act. Currently all regional councils are renewing their strategic regional plans in co-operation with the municipalities and these plans should promote the ideals of sustainable development. Master plans are generally prepared in co-operation with regional councils and regional environment centres and have to be ratified by the regional environment centres and the Ministry of Environment.

Definition of Coastal Zone

There is no formal national definition of the coastal zone. It is decided on a case by case basis, usually at municipality level.

Set-back Line Policy

There is no definitive set-back line policy in Finnish law. Guidelines issued by the Ministry of Environment stipulate that development should be controlled by a planning requirement on a 100 metre strip along the coastline, which can be increased to 200 metres. The local Master Plan determines how near to the shore development can take place and authorises exemptions.

Additional Information

In Finland there is a non-legislative tradition of public access which is a common right known as "Everyman's Right" and which includes the right of access on all undeveloped shores and to use water areas for boating and swimming although fishing rights are limited.

Some areas in Finland have established "archipelago zones" for planning which include the marine area.

Finland

Legislation	Sectoral Interests									
	Industry & Energy	Agriculture	Coastal defence	Cultural Heritage	Urbanisation & second homes	Tourism & Recreation	Transport Ports & Shipping	Fisheries & Aquaculture	Nature conservation	Water Management
Land Use & Building Act 1997 (1999)	✓		✓	✓	✓	✓	✓		✓	
Nature Conservation Act 1996		✓			✓	✓			✓	
EIA Act 1994	✓		✓	✓		✓	✓	✓		
Forest Act 1996	✓	✓			✓	✓			✓	
Fishing Act 1982			✓					✓	✓	
Wilderness Act 1991	✓			✓	✓	✓			✓	
Protection of Rapids Act 1987	✓					✓		✓		✓
Water Act 1961	✓	✓			✓	✓		✓	✓	✓
Policies & Plans										
Development Programmes	✓	✓	✓	✓	✓	✓	✓			✓
Environmental Programmes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Municipal Development Programmes	✓		✓		✓	✓	✓			
Master Plans for Coastal Zone	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Detailed Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Shore Plan Building Orders			✓		✓	✓	✓	✓	✓	

* A new Land Use & Building Act has been approved which will come into force on 1 January 2000

Country Analysis - Germany

Planning System & Administrative Context for ICZM

Germany is a federal State and the Basic Law for the Federal Republic of Germany (the Constitution) divides legislative competence between the national government and the federal states (Länder). The coastal states are Schleswig-Holstein, Niedersachsen, Mecklenburg-Vorpommern and the city states of Bremen and Hamburg. Under the Basic law both national government and federal states have joint responsibility for most areas of environmental protection, including *inter alia* coastal fishing and shipping. For regional planning, nature conservation and water management each of the states has its own legislative structure and laws, with most of the regional policy acts based on national government framework legislation. There is an Environmental Code under preparation by national government but various problems have halted its passge through the legislative procedure. It aims to harmonise and consolidate federal environmental law.

The Federal Ministry of Transport, Building and Housing is responsible for providing national guidelines and co-ordinating planning policy, with each state adopting its own planning legislation. The planning principles under the 1998 Federal Regional Planning Act are confined to the terrestrial area and coastal defence (the marine area is not mentioned in the act). There is no regional or local planning in the marine area.

There are Federal State Planning Programmes which aim to outline strategies for development and are valid up to the 12 nautical mile limit. These plans are designed by all involved authorities and municipalities, including NGOs, and are legally binding. Each state requires the counties to establish binding Regional Planning Programmes/Plans incorporating federal guidelines. Under the principle of subsidiarity much power is vested at the municipality level, including the production of land use plans for spatial planning which are used as the basis for municipal Building Plans. Counties and municipalities are responsible for issuing permits for development according to the 1998 Federal Building Code which has incorporated the principle of sustainability into the planning guidelines.

There are also several Special Administrations responsible at both national and state levels whose main tasks are to administer, control and maintain their specific objectives in both terrestrial and marine areas, although they tend to be sectoral in their approach lacking in integrated management. For example the Federal Water & Shipping Administration has autonomy to administer the whole

marine area seaward of the mean high water mark and all navigable rivers and canals legally declared federal Waterways. Its main task is to guarantee the safety and facility of navigation

Definition of Coastal Zone

There is no official definition of the coastal zone. For terrestrial planning purposes on the local level, responsibility generally ends at the mean high water mark.

Set-back Line Policy

In Lower Saxony there is a protected strip of 50 metres behind the dikes which prohibits building of any kind, to ensure access for construction and maintenance of dikes and for coastal defence. Schleswig-Holstein has established a 100 metre inland protected strip along the coast, and Mecklenburg-Vorpommern has established a 200 metre inland protected strip.

Additional Information

Germany, together with Denmark and the Netherlands, is a member of the Trilateral Co-operation on the Protection of the Wadden Sea.

Under the UN Law of the Sea Convention, responsibility for the Exclusive Economic Zone beyond state boundaries lies with the coastal state government. Currently, national state authorities take responsibility as it is unclear whether it is national government or federal state government that should be in charge of admisistration of EEZs.

The situation for ICZM in Germany is complicated due to its political structure and each federal state having its own legislative and administrative structure which does not encourage co-ordination between states.

Germany

Legislation	Sectoral Interests									
	Industry & Energy	Agriculture	Coastal defence	Cultural Heritage	Urbanisation & second homes	Tourism & Recreation	Transport Ports & Shipping	Fisheries & Aquaculture	Nature conservation	Water Management
Basic Law - Federal Republic of Germany (Grundgesetz)										
Federal Nature Conservation Act 1993	✓	✓	✓	✓	✓	✓	✓		✓	✓
Federal Regional Planning Act 1998	✓	✓	✓	✓	✓	✓	✓	✓ (inland)	✓	✓
Federal Building Code (renewed 1998)	✓				✓	✓	✓		✓	✓
Environmental Impact Assessment Act	✓	✓	✓		✓	✓	✓	(✓) inland waters		✓
Federal Water-Ways Act	✓		✓			✓	✓	✓	✓	
Water Act								(✓) inland (marine ?)		✓
Waste Water Charges Act 1976	✓	✓			✓	✓	✓	✓		✓
Federal Emission Control Act	✓	✓			✓	✓	✓			
Waste Act	✓	✓			✓	✓	✓			
Federal Soil Protection Act	✓	✓			✓	✓	?			
Environmental Information Act										
Environmental Liability Act	✓				✓		✓			
Policies & Plans										
Federal State Plans (Länder level)	✓	✓	✓	✓	✓	✓	✓	?	✓	?
Regional Plans (County level)	✓	✓	✓	✓	✓	✓	✓	?	✓	✓
Municipal Land Use Plans	✓	✓	✓	✓	✓	✓	✓		✓	✓
Municipal Building Plans	✓			✓	✓	✓	✓			

Germany continued

	Sectoral Interests									
Policies & Plans (cont.)	Industry & Energy	Agriculture	Coastal defence	Cultural Heritage	Urbanisation & second homes	Tourism & Recreation	Transport Ports & Shipping	Fisheries & Aquaculture	Nature conservation	Water Management
Municipal Landscape Plan	✓	✓	✓	✓	✓	✓	✓	(✓) inland waters only	✓	✓
Trilateral Wadden Sea Plan (Lower Saxony & Schleswig-Holstein)	✓	✓	✓	✓	✓	✓	✓	✓	✓✓	✓
Coastal protection Plan L.Saxony; Sch-Holstein Meckl.-Vorpommern		✓	✓		✓				✓	✓
County Landscape Plan	✓	✓	✓	✓	✓	✓	✓	(✓) inland waters only	✓	✓

*NB Each Länder has differing structure and legislation and policy re ICZM *e.g.*

Lower Saxony - Dike Law; Coastal Protection Plan; Sea Mussels management Plan; Development Plan for National Park Lower Saxony Wadden Sea

Schleswig Holstein - Landscape Programme; National park Act

Mecklenberg- Vorpommern - Nature Protection Law (specifically #19 concerning set back lines).

Country Analysis - Norway

Planning System & Administrative Context for ICZM

Although there is no overall national legislation specifically for coastal management in Norway, the Planning and Building Act 1985 (PBA) does provide for a unitary system of planning. It applies to the whole country, including watercourses and into the marine area as far as a defined baseline. This baseline is a line drawn between the outermost skerries along the coast at low tide and is usually between 2 km to 15 km from the mainland. Norway is one of the few countries which promotes an integrated planning system for both terrestrial and marine areas, although in practice implementation has often been problematic and it has taken considerable time to develop and agree new methods for planning in the marine area. The situation is further complicated by several sectoral laws and one of the main planning challenges is the integration between these laws. The Ministry of Fisheries and the Ministry of Environment have both produced guidlines encouraging integrated and sustainable planning in the coastal zone.

County councils have a responsibility to produce regional plans - a County Plan, which consists of a set of objectives and long-term guidelines for development in the region. These plans are not strictly legally binding but are intended to guide the municipal level (the communes), in their actions and planning and may be used as basis for objections to the legally binding municipality plans. The framework of the Planning & Building Act is sufficiently flexible to allow County plans to adapt national policies to the regional and local conditions and allow for alteration to accommodate changing circumstances. Each commune is required to produce a Commune or Master Plan for the onshore area and, although not mandatory, they are strongly advised to include the marine area. These plans are legally binding and have built in mechanisms for public participation. They follow the tradition of decentralisation by placing planning responsibility in local communities. Since 1985 the final approval of commune Master Plans has been delegated to the communes themselves, providing national and county authorities do not object to the plans.

Several counties have prepared Coastal Zone Plans in association with communes and sectoral interests, particularly fishing. . The intention is to use these coastal zone plans as a base for the more detailed commune or Master Plans. The experience of preparing these plans has highlighted the need for co-operation and integration between sectors and levels of administration and especially across municipal and county boundaries.

Definition of Coastal Zone

There is no precise national definition of the coastal zone. For planning purposes the outer seaward limit of jurisdiction of the coastal zone is defined as the baseline, and the terrestrial limit is defined by the county or commune dependent upon the local needs.

Set-back Line Policy

There is a national policy guideline stating there should be no development within 100 metres from the shoreline. The Ministry of Environment is working towards producing stronger protection through national guidelines for areas from the border with Sweden up to the county of Rogaland as a response to too many dispensations being granted by municipalities.

Additional Information

There has been a great interest in coastal zone planning in Norway recently, mostly motivated by the huge increase in the numbers of fish farms which led to the first initiatives for planning in marine areas. There is no problem of coastal defence as most of the shoreline is very steep hard rock.

Norway

Legislation	Sectoral Interests									
	Industry & Energy	Agriculture	Coastal defence	Cultural Heritage	Urbanisation & second homes	Tourism & Recreation	Transport Ports & Shipping	Fisheries & Aquaculture	Nature conservation	Water Management
Planning & Building Act 1985*	✓		✓	✓	✓	✓	✓		✓	
Nature Conservation Law		✓			✓	✓			✓	
Aquaculture law								✓	✓	
Salt Water Fisheries Law						✓		✓	✓	
Policies & Plans										
County Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Municipal Master Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Local development Plans	✓		✓		✓	✓	✓	✓	✓	✓
Building Development Plans	✓		✓		✓	✓	✓			
County Coastal Zone Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
National Policy Guidelines (Ministry of Environment)	✓				✓	✓			✓	
National Policy Guidelines (Ministry of Fisheries)						✓		✓	✓	✓

* Although Norway is not part of the European Union, the Planning & Building Act incorporates Environmental Impact Assessment regulations in line with EC Directive 97/11

Country Analysis - Poland

Planning System & Administrative Context for ICZM

There is no overall national coastal zone legislation for Poland. There are a large number of legal instruments which cover either the terrestrial or marine parts of the coastal zone. Many of these are recent Acts introduced as part of the major changes in political and administrative structures in Poland over the last decade. In January 1998 a new administrative system was introduced, which *inter alia* reduced the number of provinces from forty-nine to twelve, as well as changing to a more "bottom-up" approach with greater involvement of municipalities especially with regard to spatial planning.

The most important instrument for spatial planning is the Act on Physical Planning (1994) which requires land-use plans to be developed at local and province level. However, due to insufficiently detailed regulations and changing legal structures, combined with lack of resources and technical competence, few plans have yet been completed. There is no requirement for planning in the marine area.

The Act on Marine Areas of the Polish Republic and Maritime Administration (1991) sets out the range of competence for management of both the marine areas and the newly established "coastal strip" (see "set-back line policy" below). The main authorities responsible for these areas are the three regional Maritime Offices based in Gdynia, Slupsk and Szczecin, which are under the auspices of the Ministry of Transport and Maritime Economy of central government.
In general, it is accepted that the present legal structure for effective management of the coastal strip is sufficient, especially when the amendments to the Planning Act giving authority for issuing building permits within the protected zone to the Maritime Offices are incorporated. This will mean that there will only be one authority responsible for protection of the coastal strip. However, there are still no mechanisms or institutions to facilitate the co-ordination of all activities in the coastal zone, and consequently there are still conflicting sectoral interests.

Definition of Coastal Zone

There is no precise legal definition of the entire coastal zone. The variable landward boundaries of the Protective Belt (see below) are used for terrestrial planning purposes. The seaward boundary of the Technical Belt (see below) is established as "on the water line at mean sea level" by regulation of the Prime Minister. The lower part of the intertidal and the marine zone are thus outside this definition, although the small tides in this part of the Baltic Sea mean that the width of intertidal shore below this line is generally narrow.

Set-back Line Policy

The Act on Marine Areas of the Polish Republic and Maritime Administration (1991) established a protected coastal strip running the length of the Polish coastline, including internal marine areas *e.g.* Vistula Lagoon, Szczecin Lagoon. This strip comprises the Technical Belt and the Protective Belt, both geodetically established, which must be marked on all Land Use Plans.

The Technical Belt has been established for the whole Polish coastline and extends up to 200 m inland, according to the type of coast. In dune areas it is up to 200 m landward of the dune ridge; for cliffs it is up to 100 m landward of the upper edge of the cliff; and lagoons - up to 200 m landward of the shore. In some areas it has been increased to as much as 1 km wide, but in urban areas and along the shores of lagoons it can be much narrower. According to the 1991 Act it is "an area designed for maintaining the coast in a state conforming with the requirements of safety and environmental protection". All uses of this strip must be approved by the relevant Maritime Office. It is primarily intended for coastal and environmental protection.

The Protective Belt extends generally up to 2 km inland from the landward boundary of the Technical Belt, but in some places it widens to 5 km. In urban areas it can be much narrower. The Belt is intended to limit the impact of human activities on the Technical Belt and consequently there are restrictions on land use and development to ensure they do not have a negative influence on the state of the Technical Belt. All permissions for building within these zones must have the approval of the relevant Maritime Office. In essence it is acting as a buffer zone.

Additional Information

Establishing the boundaries of the two belts required individual agreements with the municipalities affected. At times this has been problematic as many municpalities felt that they were relinquishing newly won powers to a central authority - the Maritime Offices. Since its inception, however, it has generally been regarded as a useful instrument for managing and rationalising the use of the coastal zone. It is currently being suggested that: a) the Technical Belt should have its seaward boundary extended out to the 15 - 20 m depth contour along the coast, and that the Maritime Offices should develop marine area-use plans, and b) the Protective Belt should have a variable width of between 200 m and 5 km according to local conditions, and that Vovoids, in agreement with the Maritime Offices, should draw up land-use plans specifically for this zone.

Poland

Legislation	Sectoral Interests									
	Industry & Energy	Agriculture	Coastal defence	Cultural Heritage	Urbanisation & second homes	Tourism & Recreation	Transport Ports & Shipping	Fisheries & Aquaculture	Nature conservation	Water Management
Act on Physical Planning (1994)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Act on Marine areas of the Polish Republic and Maritime Administration (1991)	✓		✓	✓	✓	✓	✓	✓	✓	✓
Act on Management of Immovables (1997)	✓				✓	✓				
Mining Law (1994)	✓		✓							
Act on Nature Conservation (1991)									✓	
Act on Protection and Shaping of Environment (1980)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Water Law (1974)	✓	✓	✓		✓	✓	✓	✓	✓	✓
Construction Law (199	✓		✓		✓	✓	✓		✓	
Energy Law (1997)	✓							✓		
Act on Inland Fishery (1985)								✓		
Act on Forests (1991)			✓		✓	✓				
Hunting Law (1995			✓						✓	
Act on Protection of Animals (1997)		✓				✓			✓	
Act on Protection of Agricultural and Forest Soil (1995)		✓			✓	✓			✓	✓
Act on Wastes (1997)	✓	✓			✓	✓	✓	✓	✓	✓
Act on Environmental Inspection (1991)	✓	✓			✓	✓	✓	✓		✓

Poland continued

Legislation	Sectoral Interests									
	Industry & Energy	Agriculture	Coastal defence	Cultural Heritage	Urbanisation & second homes	Tourism & Recreation	Transport Ports & Shipping	Fisheries & Aquaculture	Nature conservation	Water Management
Act on Protection of Cultural Heritage				✓						
Act on Pollution of the Sea from Ships (199	✓		✓				✓	✓	✓	
Act on Public Roads (1985)	✓						✓			
Act on Rail Transport (1997)							✓			
Act on Municipal Economy (1996)	✓	✓		✓	✓	✓	✓	✓	✓	✓
Act on Municipal Selfgovernment (1990)	✓	✓		✓	✓	✓	✓	✓	✓	✓
Act on County Self government (1998)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Act on Selfgovernment in Voivodships (1998)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Act on Central Administration in Voivodships (1998)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Policies & Plans										
Local Land-use Plans	✓	✓	✓	✓	✓	✓	✓		✓	✓
Plans of Protection (for national parks, nature reserves, areas of protected landscape)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Country Analysis - Spain

Planning System & Administrative Context for ICZM

There is no overall national legislation for coastal management in Spain. Indeed until recently there was a marked lack of interest by central government in the management of coastal areas: for example it took eleven years to adopt the regulations of the 1969 National Shores Act. However, there are now new legal instruments in place which allow for better integration of economic development and the conservation of coastal resources. The most important of these is the new National Shores Act (1988), amended in 1991. This primarily addresses state ownership of the terrestrial-marine contact strip, including public access to the coast and the delimitation of the coastal zone boundary so as to define the extent of "coastal public property" (DPMT - Domino Publico Maritimo Terrestre).

The 1978 Constitution ceded basic powers to regional administrations (The Autonomous Regions), and includes *inter alia* the following related to coastal areas:

- territorial & coastal planning (including demarcation of the shoreline)
- ports (commercial fishing and pleasure)
- urban planning
- authorisation for waste disposal at sea
- management of the protection zone (authorisations & concessions)

There is no uniform structure for The Autonomous Regions (AR) and many do not have a specific body responsible for the planning and management of coastal areas that is comparable with the national Directorate General for the Coasts (Direccion General de Costas). Interestingly, this body was included in the new Ministry of Environment created in 1996 and there are Regional Coastal Departments for each coastal Autonomous Region. Many ARs produce Regional Coastal Zone Guidelines which could provide the basis of a good legal instrument, but in practice it seems that they are very rarely applied.

At the local level, municipalities or local councils are responsible for producing land use plans with the Town Planning Act providing the basic legal framework. Political pressure to increase development solely for economic growth has frequently resulted in local councils openly contradicting the most basic tenets of the Act in relation to coastal areas. Few municipalities have the technical and economic resources, or sufficient powers, to facilitate the uptake of a more integrated approach to coastal management.

Definition of Coastal Zone

The National Shores Act definition covers the shore of the sea and its inlets, including the foreshore between high and low water marks of equinoctial tides (or up to the limit of the largest storm waves), the banks of tidal rivers and low-lying land (such as wetlands, lagoons and marshes) that is at least occasionally flooded by the action of the sea. It also applies to natural and artificial beaches and deposits of sand, gravel and pebbles, including escarps, berms and dunes. Land added to the shore by accretion or as a result of works, as well as land flooded by encroachment of the sea becomes State coastal public property. National government has a statutory procedure to approve the boundaries of coastal public property in association with the Autonomous Regions, municipal councils, landowners and other interested parties.

Set-back Line Policy

The National Shores Act defines different "easements" adjacent to coastal public property which impose restrictions on development and the exercise of private property rights:

- an "easement of protection" extends for a minimum of 100 metres from the landward limit of the shore, which can be extended to 200 metres by national government if the Autonomous Regions and municipal councils agree. Most types of development are prohibited in this zone, although developments that cannot be located elsewhere or which provide necessary services may be authorised by national government, and exceptions may also be granted for reasons of public utility or economic importance.
- an "easement of passage" covering a 6 metre strip from the landward limit of the shore must be left permanently clear for pedestrian access and for search and rescue vehicles. This may be enlarged to 20 metres where passage is difficult or dangerous.
- an "easement of free public access to the sea" must be incorporated into all land-use and town zoning plans. Outside protected areas, vehicular access roads must be a maximum of 500 metres apart, with pedestrian access at least every 200 metres.
- an "influence zone" with a minimum width of 500 metres from the landward limit of the shore must be included in land-use plans which should ensure sufficient car parking space to guarantee all parking is outside the "easement of passage" area and building density must not exceed the average allowed for urban or potential urban land in the municipal area to avoid over-development.

Additional Information

One of the main problems affecting planning and management of the coastal zone is a lack of co-ordination and integration between public administrations, both between different scales and sectors. It is also paradoxical that whilst one political party has dominated the political stage, there has been no agreement on:

a) coastal priorities
b) strategies to be implemented; or
c) identification of who can validate an integrated management process.

Spain

Legislation	Sectoral Interests									
	Industry & Energy	Agriculture	Coastal defence	Cultural Heritage	Urbanisation & second homes	Tourism & Recreation	Transport Ports & Shipping	Fisheries & Aquaculture	Nature conservation	Water Management
National Shores Act 1988 (amended 1991)	✓		✓		✓	✓	✓	✓	✓	✓
Constitution of Spain 1978				✓					✓	
Law on Natural Areas, Wild Flora & Fauna Protection 1989 (1997)								✓	✓	✓
Ports & merchant navy Act 1992 (1997)	✓		✓				✓			✓
Water Law 1985									✓	✓
Royal Legislative Decree on EIA 1986	✓						✓			
Hunting Act 1970								✓	✓	
Land Law 1985 (1998) Urban Planning	✓	✓			✓	✓	✓		✓	
Atmospheric Environment Protection Law 1972	✓									
Toxic and Dangerous Wastes Law 1986	✓	✓					✓		✓	
Energy Conservation Law 1980	✓								✓	
Royal Decree - Game Species Protection 1989								✓	✓	
Policies & Plans										
National Pollution Control Plan 1992	✓	✓	✓		✓		✓	✓	✓	✓
Regional Guidelines for the Coastal Zone 1992 Andalucia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Country Analysis - Sweden

Planning System & Administrative Context for ICZM

There is no overall national legislation specifically for coastal zone planning in Sweden. The main instrument for physical planning is the Planning and Building Act (1987) which applies to both terrestrial and marine areas and extends as far as the 12 mile limit. National Central Government provides the national level of planning with the Ministry of Environment responsible for all national environmental policy and Central Agencies or Boards dealing with various sectoral interests. The counties, operating at a regional level, each have County Administrative Boards which are responsible for the regional level and act as an intermediary between the national level and municipal (commune) level. The responsibility for planning is at this local, commune level. All municipalities must produce a comprehensive plan that covers their entire area and can be used as a decision making tool. The commune can adopt legally binding regulations on land use and new areas of development in detailed plans or special area regulations.

The national government adopts laws and guidelines which the municipalities use to inform their comprehensive and detailed plans. It is mandatory that the communes consult with the County Administrative Board who provide guidance and strategic analysis and also approve the final plans and grant permissions. These boards also have the responsibility for co-ordinating the use of land and water in the region. Due to the long tradition of local autonomy, municipalities enjoy the freedom to enact their own decisions within the national and regional framework. Regional plans are seldom used and have no judicial function. County Administrative Boards have no mandate to produce regional plans; this can only be done by associations of municipalities. To date there has been little co-operation between municipalities.

Since 1 January 1999 a new Environmental Code has come into force which amalgamates fifteen previous laws (see matrix) and includes special provisions for the management of land and water areas. A major part of the coastal zone has been identified as an area of special interest. The code also establishes legally binding principles, including the “polluter pays” principle and the precautionary principle. The Natural Resources Management Act of 1987 has been directly incorporated into the Code including its special management provisions for coastal areas. These include guidance on siting new industrial installations, tourism and recreational functions and restrictions on summer cottage developments.

Definition of Coastal Zone

The whole of the coastal zone is incorporated within the planning system, including the marine area up to the 12 nautical mile limit.

Set-back Line Policy

Under the new Environmental Code a shore protection area, or set-back line, is defined. This generally extends to 100 metres both inland and offshore from the shoreline, and is reserved for outdoor recreation and nature protection. This can be extended to 300 metres in individual cases. Within this area there is a prohibition on all development, including the construction of new buildings, fences or piers, although exemptions may be granted.

Additional Information

In Sweden there is a tradition of public access which is a common right known as “Everyman’s Right” which entitles any person to roam freely, even on private property (excluding gardens close to houses). It includes the right to navigate or swim, moor a boat temporarily, go ashore anywhere (except close to private houses or where entry has been prohibited by the local authority) and fish with a rod or hand tackle.

Sweden

Legislation	Sectoral Interests									
	Industry & Energy	Agriculture	Coastal defence	Cultural Heritage	Urbanisation & second homes	Tourism & Recreation	Transport Ports & Shipping	Fisheries & Aquaculture	Nature conservation	Water Management
Environmental Code 1998	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Planning & Building Act 1987	✓		✓		✓	✓	✓			
Exclusive Economic Zone Act 1993	✓							✓	✓	
Policies & Plans										
Regional plans/guidelines	✓	✓	✓	✓	✓	✓	✓		✓	✓
Comprehensive plans	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Development plans	✓				✓	✓	✓		✓	
Environmental Bill 1998	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Environmental Code amalgamates all previous Acts which refer to the coast e.g.:
Nature Conservation Act 1974
Environment Protection Act 1969
Marine Dumping prohibition Act 1971
Environmental Damage Act 1986
Natural resources Act 1987
Water Act 1983

(*Also makes consequential amendments to more than 50 other laws)*

Country Analysis - Turkey

Planning System & Administrative Context for ICZM

Turkey has a strong central government with sixteen State Ministeries and seventeen Special Function Ministeries. In addition to the State Planning Organisation, who prepares five-year comprehensive plans, there are several sectorally based ministeries dealing with activities in the coastal zone. There are eighty provinces each administered by a Governor who is appointed by central government. Each town with a population of more than 2,000 has a municipal structure with the mayor and municipal council elected by local residents and not appointed by central government, although central government acts in a supervisory capacity to ensure national laws are abided by. Municipalities are empowered to carry out a number of functions directly relevant to coastal zone management such as, detailed town planning, infrastructural works, waste management and water quality control.

The Turkish Constitution states that shores are under the jurisdiction and responsibility of the State and "benefit to the public is primarily sought". One of the main pieces of legislation relating to coastal areas is the Shore Law of 1990, amended in 1992, which sets out principles for the protection of the sea, natural and artificial lakes, river shores and the shore strips "by paying attention to their natural and cultural characteristics and for their utilisation towards public interest, open for the society to benefit". This is not a comprehensive coastal management law. Municipalities have the responsibility for enforcing the Shore Law in their boundaries and annexed areas whilst the provincial governors have responsibility for all other areas. The Ministry of Public Works & Settlements has the final authority for planning in these areas, except in areas declared as tourism centres where the authority is transferred to the Ministry of Tourism.

The Tourism Incentives Law of 1982, amended in 1993, was enacted for encouraging, guiding and regulating tourism development, most of which takes place in coastal areas. The Council of Ministers can declare by decree "tourism regions, areas and centres" and all State land in these areas is given to the disposal of the Ministry of Tourism, who can also expropriate private land. There were various financial incentives for developers included in the law which has resulted in a significant increase in frequently inappropriate tourism development with adverse impacts on the Aegean and Mediterranean coasts.

Definition of Coastal Zone

The Shore Law provides definitions of the shore and the shoreline. The *shoreline* is defined as "the line along which water touches the land at the shores of the seas, natural or artificial lakes and rivers, excluding the inundation periods". The *shore edge line* is defined as "the natural limit of sand and gravel beaches, rock, boulder, marsh, wetland and similar areas which are created by water motions in the direction of land starting from the shoreline". The shore is defined as the area between the *shoreline* and *shore edge line*.

Set-back Line Policy

The shore strip must have a minimum width of 100 metres, starting from the 'shore edge line'. In the first 50 metres of the shore strip, no building is allowed, apart from those which are exempt due to a coastal location being required and having planning permission. This area must be planned and used for public access and recreational purposes. In the remaining 50 metres (or more), roads, recreational and tourism facilities (other than hotels) open for public access and public waste treatment plants are allowed subject to planning permits. The Shore Law also outlines the rules for areas gained through land reclamation and drainage.

Additional Information

Whilst it is important to delineate the shore edge line in order to manage coastal development, the definition is far from being clear and exact (Ozahn, 1996).

The rapid growth of the tourism industry and its associated infrastructure, combined with a rapid shift of the population to the coast and increased industrial and agricultural development have resulted in serious negative environmental impacts in the coastal zone over recent years. A number of international organisations have co-operated with the national government in response to these problems, notably the Regional Activity Centre of the UNEP-MAP for Priority Actions Programme, the OECD, the World Bank and the Global Environment Facility (GEF). They have provided both technical and financial assistance and undertaken several projects aimed at improving vertical and horizontal integration for ICZM. Still, there is a clear lack of cooperation and coordination between different governmental sectors (horizontal integration).

Over the last decade the role and contribution of environmental NGOs has increased substantially with several being actively involved in finding solutions for coastal zone management issues.

Turkey

Legislation	Sectoral Interests									
	Industry & Energy	Agriculture	Coastal defence	Cultural Heritage	Urbanisation & second homes	Tourism & Recreation	Transport Ports & Shipping	Fisheries & Aquaculture	Nature conservation	Water Management
Constitution of Turkey 1982	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Coastal Security Force Law 1982			✓	✓		✓	✓	✓		✓
Tourism Incentives Law 1993				✓	✓	✓			✓	
Environmental Law 1983 (includes EIA)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Environmental Law 2000 (includes EIA) *	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
National Parks Law 1983				✓		✓			✓	
Law for Protection of Cultural & Natural Wealth 1983				✓		✓			✓	
Bosphorus Law 1983				✓	✓	✓			✓	
Settlements Law 1985	✓	✓			✓	✓	✓			✓
Shore Law 1990 (Amendment 1992)			✓	✓	✓	✓		✓	✓	
Harbours Law 1923						✓	✓			
Forestry Law 1956						✓			✓	
Fisheries Law 1971 (1986)	✓							✓		✓

Turkey continued

	Sectoral Interests									
Policies & Plans	Industry & Energy	Agriculture	Coastal defence	Cultural Heritage	Urbanisation & second homes	Tourism & Recreation	Transport Ports & Shipping	Fisheries & Aquaculture	Nature conservation	Water Management
Council of Ministers' decree for establishment of Agency for Specially protected Areas 1989	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Local Environmental Board 1993	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Municipality (Local) Structure Plans	✓	✓	✓	✓	✓					✓
State Planning Organisation (includes shoreline, wetland and coastal habitat management plans and biodiversity action plans) **	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* The final draft of the Environmental Law (including EIA) , 2000 is ready.
** The final draft of the eighth five-year plan for the years 2000 – 2005 is ready.

Summary:

Key features of national coastal zone management frameworks

There are 10 key points that can be drawn from the analysis of national frameworks for ICZM in nine European countries. The extent to which these affect the ability to deliver ICZM at the local scale is evaluated in the section on local integration and implementation.

1. None of the nine countries have enacted overarching national legislation specifically for the integrated management of coastal zones.

Instead, each country has a great diversity of planning instruments, legal systems and administrative frameworks at the national scale. Although the precise nature of these is different in each country, their common features are:

- their considerable complexity; and
- that they are generally sectoral and not well co-ordinated.

Typically there are at least 8-15 national laws highly relevant to the planning and management of part or all of the coastal zone, plus up to eight types of other planning instruments (Table 1). Of those countries examined, England has the greatest complexity (at least 26 laws plus eight other instruments); and Sweden the simplest - notably since the introduction of its 1998 Environmental Code, which has amalgamated more than fifty previous laws.

Table 1. Numbers of laws and policies and plans highly relevant to planning and management of the coastal zone (summarised from national tables).

Country	No. of laws	No. of categories of policies & plans
Denmark	15	4
England	26	8
Finland	8	6
Germany	13	8
Norway	4	7
Poland	25	2
Spain	12	2
Sweden	3	3
Turkey	13	4

- This complexity alone can cause difficulty and confusion, but is further complicated by the increasing importance and diversity of supra-national legislation (e.g. EC Directives) and inter-governmental conventions applicable to the coastal zone.
- Although there is a variety of legal systems, the problems arising from these are similar:
- Laws are often applicable at differing levels, national, regional or local, which can result in inconsistencies or conflict between the differing tiers of jurisdiction.
- This is particularly an issue in federal States such as Germany, where each Länder has a different system.

2. Land-use planning is the chief mechanism for management of the coastal zone.

- This is especially strong in the Nordic countries (Denmark, Norway, Sweden and Finland).
- The main limitations of relying on the land-use planning system for coastal management are that it is usually terrestrially based, with poor linkage to marine and sectoral planning and decision-making systems, and frequently has a narrow development control (rather than a broader integrated land-use) perspective.

3. Many countries have different legislative arrangements for their terrestrial and marine areas.

- Laws are predominantly sectoral, especially in the marine area, and have frequently been drawn up in isolation from each other.
- Combined with the largely terrestrially-based land-use planning in the coastal zone, this makes cross-sectoral and marine/terrestrial integration in planning and management very complex to achieve, often involving many responsible authorities.

4. Few, if any countries, have a precise or legal definition of *the coastal zone*.

- This follows from the absence of national coastal zone legislation.
- Many countries, however, consider that such a definition is not desirable due to the dynamic nature of the coast.
- Most countries do, however, have some *de facto* definitions of parts of the coastal zone, mostly associated with the seaward limit of statutory land use planning legislation (see also below). Within Sweden's planning system the coastal zone extends from a shore protection area of up to 300 m inland from the shoreline out to the 12 nautical mile limit.

- The lack of clear definitions, or reliable deliniations, of elements of the coastal zone, e.g. the location of the "shoreline" in turn affects the reliability and validity of applying rigidly defined "set-back lines" since these generally depend on the delineation of the shore or shoreline as their starting point.

5. The seaward extent of terrestrial legislation varies between countries, with most delimitations crossing parts of the naturally-functioning coastal systems (see Table 2)**.**

- in many countries the boundary is somewhere in the intertidal zone *sensu lato*, but this ranges from the start of continuous land vegetation (Denmark), to mean high water mark (Germany), mean low water mark (England) and low water of equinoctial tides (Spain).
- the complexity of the statutory definitions of e.g. *shore* (Spain) or *shoreline* and *shore edge line* (Turkey) make on-the-ground deliniation of these zones hard to make - or to agree with all sectoral parties;

6. For most countries terrestrial planning powers cease at the land-sea interface, but:

- for municipalities in Sweden they extend to the 12 nautical mile limit, and
- Norway and Finland give municipalities and counties the option for planning in the marine area up to the archipelago limits.
- Denmark encourages a more comprehensive spatial planning system, particularly at the regional level where it promotes cross-sectoral approaches.
- Finland has recently revised its planning policy and new legislation comes into force in January 2000: all regional councils and municipalities are renewing their strategic plans with sustainable development now being treated as a major priority.

7. The importance of public participation in the planning process is now recognised in many countries.

- It is particularly strong in the Nordic countries where there is a long tradition of local community involvement in government.
- Most countries now incorporate consultation into the planning process, but
- they are now increasingly acknowledging the need for greater public participation and stakeholder involvement.
- Through such strengthening of local ownership, implementation and enforcement is aided, and a more genuinely sectorally-integrated system more likely to be achieved.

8. Most countries recognise the importance of cross-border co-operation, both at the local and international level, although few have mechanisms in place to facilitate this:

- In Norway, however, there is a statutory right to consult neighbouring communes, as well as sectors and local associations, in local development plans.
- A number of EU Directives and international conventions and agreements include strong mechanisms and support for co-operation in trans-national environmental issues.
- Recognition and acceptance of an ecosystem management approach is increasing and should result in more trans-boundary collaboration.

9. Management of the coastal zone has to work within existing national and local institutional and political structures:

- Legislation should facilitate collaboration and co-operation between levels of government and sectors, but this does not always appear to occur (see section 2).
- Many countries, e.g. England, rely heavily on the voluntary approach, and use non-statutory policies and plans to support and direct ICZM. This approach has recognised strengths and weaknesses:
- Strengths: non-statutory mechanisms can be incorporated into the planning and management system much more quickly than can legislation; and they do not require legal amendments to alter or adapt them to each situation.
- Weaknesses: notably that enforcement is sometimes problematic as there is no legal mechanism to ensure compliance.

10. The diversity of different national approaches to set-back lines mirrors the diversity of overall ICZM approaches.

- Set-back lines in current use vary greatly in their stated purpose, definition and delimitation.
- Many appear to present practical implementation difficulties at local scale, either because
- they are too rigid (e.g. a fixed distance from a shoreline) to cope adequately with local topography and infrastructure needs; or in contrast
- so many easements or exemptions are permitted or applied as to render the set-back zone largely meaningless for delivering its stated purpose.

- lack of coastal zone and shore/shoreline definitions make delimitation of set-back lines practically contentious.
- These and other issues concerning set-back lines are covered in more detail in the final section on policy and use of set-back lines.

Table 2.

Existence and definitions of the coastal zone for purposes of coastal planning and management in different European coastal countries.

Country	Statutory definition(s)?	Definitions/comments
Denmark	No	Terrestrial planning responsibility generally landward from start of continuous land vegetation. In practice this means generally above the limit of highest astronomical tides.
England	No	Terrestrial planning responsibility generally landward from mean low water (MLW) mark; no statutory planning below MLW.
Finland	No	Planning focuses on terrestrial, where guideline is development restriction generally in 100 m coastline strip, but some places now have "archipelago zones" which include marine.
Germany	No	Terrestrial planning responsibility generally landward from mean high water (MHW) mark. Whole marine area seaward of MHW administered by Water & Shipping Directorates.
Norway	No	Planning is a unitary system covering all land, watercourses and the marine area out to a *baseline*, defined as a line drawn at low tide between the outermost skerries along the coast. Terrestrial limit of coastal zone defined locally depending on local needs.
Poland	No	In practice Maritime Offices have planning responsibility in both sea area and terrestial parts of coastal zone; latter being defined as a shoreline-linked techical belt of up to 200 m landward of the mean position of waves (Baltic Sea has no tide) and a protective belt up to 3 km landward, there are individul arrangements for urban areas.
Spain	No	The National Shores Act provides a definition of the shore, the sea and its inlets. The *shore* includes the foreshore between high and low water marks of of equinoctial tides, banks of tidal rivers and low-lying land that is at times flooded by the sea, and also all natural and artifical beaches, shingle deposits and dunes. Delineation of the boundaries of the shore (for the purposes of defining coastal public property) is a statutory consultative procedure.
Sweden	Yes	Within the planning system, coastal zone includes the marine area out to the 12 nautical mile limit, and the shore and terrestrial area including a shore protection area a minimum of 100 m (max. 300 m) from the shoreline.

Turkey	Yes	*Shoreline*: the line along which water touches the land at the shores of the seas, natural or artificial lakes and rivers, excluding inundation periods. *Shore*: the area between the shoreline and the *shore edge line*, defined as: the natural limit of sand and gravel beaches, rock, boulder, marsh, wetland and similar areas which are created by water motions in the direction of land starting from the shoreline. Note that these definitions cover both coastal and inland (freshwater) shores. Although the definition is precise, in practice the delineation of the *shore edge line* on the ground often proves difficult.

4. Local Integration & Implementation

Introduction

The previous section has summarised the structure of the generally complex national legislative and policy frameworks for the management of the coastal zone in different selected European countries. Whilst the legislation is generally national (or federal state) level), the statutory and non-statutory delivery of management of the coastal zone - particularly in the terrestrial part of the zone - is very largely the responsibility of local government. The success of the current delivery of ICZM therefore depends greatly on how well the current national structures serve the needs of those implementing at the local scale.

Drawing on the views of local contacts and other sources, supported by local case studies, a number of issues identifying difficulties, and successes, of local implementation are described. Since the overall issue is the attempts to improve the integration of managment in the coastal zone, the assessment focusses on two broad aspects of integration:

- *governmental and administrative integration*, (vertical concertation) focusing particularly on the issues of liaison and the transfer of knowledge between the different levels, national to local;
- *Cross-sectoral integration* (horizontal concertation), both at national (ministerial) level and locally, including issues arising from the general lack of linkage between the process of managment and decision-making in the terrestrial and marine parts of the zone.

Since the focus of this section is the experience of local implementation of national frameworks and this is very much dependent on local circumstances, attitudes and mechanisms the information below is summarised as 10 identified generic issues rather than by country. It is also important to note that although, as reported in section 3, national frameworks in different European countries have a number of similarities these do not necessarily lead to similar patterns of local implementation or similar implementation issues - much depends on local historical and cultural attitudes to local autonomy, decision-making, the coast and its values and uses.

Generic Issues

1. Vertical integration issues

In all of the selected countries there were problems of vertical integration between governmental levels and administrations. This was perceived to be more of a problem at the local rather than national level, in that many municipalities felt removed from central government, often with poor understanding or knowledge of how the system actually operated at national level or who were the key players. The more complex the administrative systems the more the problem arose, with confusion as to which department or Ministry had responsibility for which area or sector.

Helgeland, Norway

A pilot experiment for implementing coastal zone management plans in eighteen minicipalities on the north-west coast of Norway identified poor planning experience and minimal knowledge of the responsibility of the different authorities at both regional and national level as a priority issue for the municipalities concerned. As the project advanced, disagreements between the local authorities responsible for the environment and those responsible for fisheries and aquaculture caused many problems. The problem would have been considerably less serious if there had been prior agreement between the relevant competent authorities at the national level. The experiment demonstrated the need for consultation between local, regional and national levels at an early stage of the planning process.

Konyaalti, Turkey

Although provisions for integration between ministries having different (sometimes conflicting) interests are included in most of the laws, these have not proved to be strong enough to activate sufficient levels of discussions and compromise, which are essential for integrated management. Moreover, a permanent institutional arrangement for coordination between different sectors for facilitating integrated management is absent..

Three ministries (Environment, Forestry, and Culture) are responsible for conservation through three different laws, dealing with specially protected areas, national parks and other designations, cultural and natural sites. There are no arrangements for coordination of these efforts which causes confusion at the local level.

2. National level constraints/problems

National level government frequently has a more sectoral approach than the local level, with little horizontal concertation. This is frequently identified as a matter of concern in local implementation: ministries tend to be sectoral because this is where their legislative powers lie. This sectoral implementation leads to conflicting guidance/requirements at the local implementation level.

Storstroms, Denmark

The County has experienced contradictions between different national legislation and policie. For example, the Coast Protection Act and the Environmental Protection Act. One of the methods to achieve the aim of the Danish Action Plan for Aquatic Environment (under the Environmental Protection Act - water quality) is to re-establish a 16,000 ha area of coastal wetlands in Denmark as these can help reduce pollution of the coastal zone with nitrogen from agriculture. Yet, under the Coast Protection Act, 24% of the coast of the county is to be protected by building and maintaining dams and dikes which preclude any re-establishment of wetlands and preserving a natural coastline.

Southern Coast of Finland

Seven coastal municipalities, in co-operation with regional administrations, have been looking at how to implement the new Land Use & Building Act which came into force 1 January 2000. The situation is complicated by requirements to incorporate the recent amendments to the Nature Conservation Act, the Forest Act and the Water Act as well as the Act on Environmental Impact Assessment Procedures into the planning process.

In circumstances where rapid changes in national legislation and frameworks are taking place, as is the case in pre-accession eastern European countries (with wider issues as the EU expands) local implementation is more fraught with difficulties.

Poland

There have been many changes in political and administrative structures throughout the 1990s. It is an evolving situation, especially regarding implementation as there are so many new Acts of legislation. Currently, any decisions which affect the state of the "technical belt" or the marine area must first obtain the agreement from the relevant Maritime Office. However, there is no formal mechanism or institution to facilitate co-operation and integration of the local municipalities, the Voivods (regions) and the Maritime Offices.

3. Local relevance of national decisions

A frequent perception is that national level decisions have little bearing on local situations. National government tends to be more involved with international and national overviews whilst local authorities inevitably focus more on local issues. It is widely felt that there is a need to improve communication and co-operation between all levels of government to enhance harmonisation of policy development and implementation.

England, Coastal Forum

The Coastal Forum was launched in December 1994, chaired and serviced by the (then) Department of the Environment (now Dept. of Environment, Transport and the Regions). It meets twice yearly with the aim of providing a forum for an exchange of views, by a wide range of interested bodies, on all issues relating to the coastal zone in England. In particular it seeks to build on existing liaison arrangements between the local, regional and national levels. Forum proceedings are reported to government ministers. Separate fora now exist for Wales, Scotland and N Ireland.

4. Local-level autonomy

There are both advantages and disadvantages of local level autonomy in decision-making for the management of coastal zones, for example by autonomous municipalities as is the case in many Nordic countries.

Although below there is a focus on elaborating the actual and potential problems of local autonomy, as identified by the local experts, it is axiomatic that without local acceptance and ownership of coastal

management decisions, the national framework, no matter how well-structured and sophisticated, it is most unlikely to succeed in meeting its objectives at this local level.

Advantages include:

- greater stakeholder involvement, public participation and ownership, which facilitates implementation and enforcement;
- better and direct knowledge of the local conditions; and
- greater local accountability of decision-makers;

Disadvantages include:

- often limited capacity, resources and technical expertise;
- the cumulative effect of frequent local decisions taken without an understanding of the wider repercussions at the regional and national scale;
- systems open to local misuse of influence and political manipulation, and
- local sectoral, economic, revenue and social pressures on politicans and other decision-makers creating a climate of factional power *contra* the intent of national environmental policy.

Gulf of Finland, Finland

In the Gulf of Finland it has been recognised that local authorities are "inclined to empathise" with local land-owners. This can clearly create problems when it is the local municipality who is in control of development and issuing permits.

Atlantic Living Coastlines, Devon & Cornwall, England

Although there is no statutory requirement for coastal zone planning in England and minimal autonomy at the local level, the Atlantic Living Coastlines Project has been developed by two regional (county) authorities in the west of England; Devon and Cornwall. The project, part of the CoastLink network, aims to produce an ICZM framework for Devon & Cornwall and involves approximately 35 organisations interested in coastal management in the area, including all the local coastal municipalities (District and City Councils). Over the past year and a half an extensive consultation exercise has been undertaken to gauge local opinions regarding the future management of the coastline and encourage stakeholder involvement. Attention has been focused on a number of key themes: participation techniques, frameworks and networks for ICZM, sustainability indicators,information exchange and the interrelationship of coastal plans and projects at the local level.

Norway

According to the Department of Environment, municipalities tend to grant too many dispensations and allow building within the national policy guideline of a 100 metre set-back line. The Dept. of Environment are now working towards a national guideline advocating stronger protection for the set-back zone to control development, from the border of Sweden up to the county of Rogaland.

5. Local issues of politics

Local politics and lack of political will can affect implementation or adoption of agreed national policies. This at times affects not just local but also regional bodies. In some regions many of the decision-making bodies are each under different political affiliation or control. This can lead to failure to co-operate or reach agreement on the local implementation of coastal management.

Bermeo, northern Spain

In Bermeo municipality, the Basque region, north-eastern Spain, difficulties in implementing a management plan for a Biosphere Reserve have been encountered due predominantly to the many different levels of government involved:

- *Coastline: Central State*
- *Ports and territorial Planning: Basque Government*
- *Roads: Provincial Government of Biscay*
- *Nature Management: Urdaibai Biosphere Reserve Trust*
- *Urban Planning: Bermeo municipality*

Each of these levels and organisations are controlled by different political parties and there is a tendency to allow these differing political approaches and short term political gains to override management principles for the area.

Kent CoastLink Project, south-east England

The Kent project notes that political sensitivity increases at lower levels of administration. At local government level, conflicting views are brought sharply into focus, not least because votes are at stake. The paradox is that multi-sectoral initiatives must obtain local political support if they are to be successful yet it is at the operational level that sectoral pressures on local politicians are greatest.

6. Local capacity and expertise

Problems with local municipality capacity arise in many places due to the small numbers of staff involved. This means that no matter how competent such key personnel are, they inevitably cannot cover all areas of expertise required. Thus the local capacity and involvement in ICZM can be highly dependent on two interlinked factors:

1. the interest and understanding of ICZM of key planning officers; and
2. the extent to which coastal management is a priority issue for the municipality, given that resources are invariably limited and subject to intense competition from other sectors e.g. housing, education and health.

This is especially the case where there is no statutory requirement for ICZM, so that the extent of implementation is at the discretion of the local authority. In such situations the priority is inevitably more often reactive to changing local conditions (e.g. a major oil spill) than pro-active motivated by national policy.

In England the strongest local ICZM initiatives can generally be traced to a combination of a priority issue coupled with strong interest and expertise within the local planning system.

UK Coastal Management Directory (Bridge & Gee 1998)

In compiling the Directory, all local authorities with coastal responsibility in the UK were contacted to establish the contact points and responsibilities for ICZM. There was a very wide range of response, with competency varying from a good knowledge of who does what and under which powers, to complete ignorance of the national policies and guidance on integrated coastal zone management. The planning department of one major seaside holiday resort in north-east England even claimed that it had no coastline to manage. Another eastern England authority with coastal planning responsibility for a significant part of one of the most internationally important parts of Europe's estuarine coast, responded "it's only a load of old mud - nobody cares about that. Toxic chemicals could be washed up and we would never know." It was clearly evident that much depended upon the interest and motivation of the staff responsible for coastal management.

7. Regional input to local implementation

In many countries a strong regional, intermediate scale level of administration assists vertical integration between local and national levels. This level is seen by the EU as an increasingly important level in the planning process since it is the basis for subsidiarity. However, at local level there are starkly contrasting views about the benefits and difficulties of regional involvement in integrated coastal planning and management.

Regional involvement can be regarded as an impediment, by creating an extra layer between national and local levels, leading to increased complexity and confusion over roles and powers (although in some, e.g. Nordic countries, regional decision-making powers are at most extremely limited).

Local level concerns over regional powers include:

- a. shift of power and/or authority away from local level
- b. reduction/constraint of discretionary powers; and
- c. perception of an additional cost/resource burden without additional resources or other local benefits.

Helgeland, Norway

The Norwegian project on "Local management plans for the Norwegian coast" was a municipal level ICZM initiative. During the project problems emerged regarding conservation and fisheries conflicts. Due to the inability of these conflicts to be resolved at the local/municipal level a new ICZM project was initiated, this time at the county/regional level. Although it was accepted that this regional level would be in a better position to resolve such issues, concerns were expressed at the local level regarding a possible future shift of power or authority to the county, despoite the long tradition of local autonomy.

However, regional authorities are increasingly frequently also viewed as assisting local implementation of ICZM through:

- their provision of expertise and technical advice - capacity that is generally lacking at local level;
- their ability to establish a wider geographical view and a more strategic approach that still retains (compared with the national level) an understanding and relevance to the local areas;
- their distance from any local political issues; and

- their ability to assist in cross-border integration (between municipalities)

Dorset, southern England

Dorset opted for the county level as the appropriate level for co-ordination of their ICZM initiative, since many national organisations and agencies are administered through county units, which feed into the local and national levels. The choice was based upon a conviction that a local level lead could lead to parochial views being over-represented, whilst a higher level lead could lead to problems of a lack of ownership at the local level.

Sweden

In Sweden, the national government recognises the need for better co-ordination between municipalities in land-use local planning, as well as between infrastructure planning and environmental issues. County Administrative Boards facilitate dialogue between local and national levels and provide municipalities with guidelines, strategies and information and advice on the planning process. Furthermore it is now mandatory for municipalities to carry out a complete analysis of their comprehensive plan and to analyse the consequences of all proposed actions, so that in this area the principles of Environmental Impact Assessment (EIA) importantly are applied to policies and plans, rather than just to major development proposals. The County Administrative Boards assist municipalities in fulfilling this requirement where local capacity is a problem. However, only regional associations of municipalities can apply for the right to establish regional plans, and the County Administrative Boards have no mandate to make such regional plans.

8. Local cross-sectoral collaboration

The lack of horizontal concertation/integration of sectoral interests at local level is noted by all countries. This situation is often perpetrated by national level sectoral authorities working in isolation from each other, an attitude which then filters down to the regional and local levels. Sectoral pressures and conflicts are widespread in the coastal zone due to the large number of actors involved. In most countries the statutory planning system does not cover many of the most important sectoral interests.

In some countries certain sectoral interests have been granted special status to promote economic development in the coastal area. Tourism plays this role frequently, notably in Spain and Turkey.

Turkey

The Tourism Incentive Law of 1982 (amended 1993) in Turkey provides for the designation of "tourism areas" where tourism takes priority over all other uses of coastal and marine resources which has led to considerable negative impacts.

Local Agenda 21***** initiatives are a mechanism to involve different levels and sectors and are increasingly being used in some countries as a bottom-up approach which can kick-start both vertical and horizontal integration and communication.

*****(Agenda 21 - At the Earth Summit in Rio de Janeiro in June 1992, world leaders signed a global environment and development action plan called Agenda 21. Over two thirds of Agenda 21 cannot be delivered without the commitment and co-operation of local government and the key role of local authorities is set out in Chapter 28. Each local authority was encouraged to adopt, by 1996, its individual Local Agenda 21 - its own sustainable development strategy at the local level, involving partnerships with other sectors, including businesses, community and voluntary groups.)

Storstroms County, Denmark

The inhabitants of the island of Bogoe are working with the municipality and a project team from the County to develop a Local Agenda 21 action plan for the whole island. There has been great interest in the project and a workshop for the future development of the island will be held at the end of January 2000 with 50 participants, including those from the national level. The project will run for two years with professional and financial assistance from the County. This type of approach builds upon the strong levels of public interest and participation in local government prevalent throughout Denmark.

Agenda 21 Littoral de la Janda, South-west Spain

A recent coastal Agenda 21 initiative has been established by the Province of Cadiz in association with the University of Cadiz and is the first of its kind in Spain. Its main objective has been to bring together all the sectors and administrative levels involved with coastal issues in the area to elaborate a strategy for the sustainable development of the coast. Working Groups have been set up under the following themes:integrated management; environmental education; capacity building; integrated land-use planning; water management; sustainable tourism; industry and coastal resources; artisanal fishing and intensive agriculture.

9. Land-sea integration

Most countries agree that the spatial planning systems for terrestrial areas function relatively well with effective land-use regulation and legislation and policies for protection of the environment. However, this is not the situation for the marine zone. Even in those countries with planning competence in the marine area (*e.g.* Sweden and to a lesser extent, Norway and Finland), there are still problems of co-operation and co-ordination of sectoral interests. One of the problems contributing to the discontinuity in management arrangements for the land and sea is the lack of legal definitions of the coastal zone and its precise seaward boundaries.

Activities in the terrestrial areas are largely controlled by planning legislation implemented at the local level. In contrast, activities in the marine area are largely controlled by sectoral legislation implemented at the national level.

Storstroms County, Denmark

The Danish Ministry of Environment and Natural Resources has proposed the development of a windmill park in an offshore area which Storstroms County feels is inappropriate - migratory bird flyways, opposite areas of natural coastline, on the boundary of an SPA etc. The regional plan has specified this as an undisturbed area and proposes that the wind park be located in a less sensitive area, but the county has no competence in the marine zone. Current expert opinion is that turbines will not conflict with the reasons for designation of the SPA, since the local issue is considered aesthetic.

10. Consensus building to achieve integration

A consistent theme to emerge from local-scale attempts to improve cross-sectoral integration of palnning and management is that it is complex and time-consuming to build trust and consensus between the many formerly adversarial sectors, and that the time-frames and resources to achieve this are usually underestimated and may take considerably longer than the relatively short time-frames of most funding instruments available to support such initiatives.

Greater Thames Estuary Strategy

Based on a North Kent Marshes Study published in 1993, the Medway Estuary & Swale Management Plan (MESP) was drawn up two years later. A further two years of acrimonious debate followed, leading finally to the abandonment of the Plan and the break-up of the partnership. The reborn MESP dates from January 1999. It is currently considering a new strategy for the estuary with, by and large, the same stakeholders, chaired by a representative of Kent County Council. Why the process first faltered and what might make the difference the second time around are questions which go to the heart of ICZM and prospects for the European Spatial Development Perspective (ESDP). Meanwhile, the Thames Estuary Partnership has been progressing the development of an action plan for the Thames, reaching from the heart of London to the remote outer marshlands.

Summary:

Key features of local integration & implementation

National approaches to political systems, institutional arrangements and legislative frameworks differ. Even in those countries with similar systems, local implementation varies. Social and cultural attitudes, combined with socio-economic status, fundamentally affect the extent of acceptance and application of national and regional policy frameworks. Building positive working partnerships among the different levels of government and the sectors involved is essential to implement an ICZM process effectively.

1. Implementation of national frameworks varies greatly

Local ICZM contacts for this study confirm that the often very complex national ICZM frameworks are:

- difficult and confusing to implement at the local level
- often implemented inconsistently within a country or region

2. Integration is the key to effective implementation.

- Mechanisms to facilitate integration need to be tailored to meet each individual country's situation and requirements.

3. Vertical integration is necessary for overall understanding of how the ICZM system operates, and of the local relevance of national decisions (and vice-versa).

- Statutory or voluntary mechanisms are needed to facilitate co-ordination and co-operation between the local, regional and national levels of government.
- It is critical to have all levels involved in the planning process, to advance harmonisation.

4. Horizontal integration of sectoral interests is necessary at all levels and scales.

- National-level government is frequently more sectorally based than the regional or local levels: better harmonisation policies at ministerial level can assist in developing awareness of who is doing what and where.
- Local Agenda 21 initiatives are an appropriate mechanism to enhance horizontal integration at the local level.

5. Local level autonomy can have both advantages and disadvantages.

- Advantages include:
    - greater stakeholder involvement, public participation and ownership which facilitates implementation and enforcement;
    - better and direct knowledge of the local conditions; and
    - greater local accountability of decision-makers.
- Disadvantages include:
    - often limited capacity, resources and technical expertise;
    - the cumulative impact of local decisions taken without an understanding of the wider repercussions; and
    - systems open to local misuse of influence and political manipulation.
- Increased local autonomy and decision making powers for ICZM are seen by some sectoral interests, notably tourism, fisheries and aquaculture, as a threat to their current legislation-based autonomy and powers.

6. A regional/county level of administration can play a pivotal role.

- Regional administrations can assist vertical integration between local and national levels, local capacity problems and cross-border integration between municipalities.
- Regional frameworks can provide a wider geographical view and a more strategic approach that still retains an understanding and relevance to the local area.
- Increased involvement of the regional level is sometimes perceived as shifting power away from the local level and reducing the amount of discretion available to local autonomous municipalities.
- Adding an extra layer of administration can impose additional costs and/or other burdens on the local level without provision of commensurate benefits.

7. Local politics or a lack of political will can affect implementation or adoption of agreed national policies.

- Interesting and involving politicians (at all levels - local, regional and national) and ensuring agreement between differing political factions is crucial for effective implementation and enforcement.
- Politicians generally take a short-term view and can be influenced by local sectoral economic interests and social priorities such as housing and transport.
- Increased public participation and public awareness of the ICZM process can motivate local politicians to become involved.

8. Integration between terrestrial and marine areas is generally minimal.

- A lack of legal definition of the coastal zone and precise seaward jurisdictional boundaries are a practical hindrance to land-sea integration.
- In most countries activities on the terrestrial side are controlled largely by planning legislation implemented at the local or regional level. In the marine area activities are, in contrast, controlled by sectoral legislation implemented from the national level.
- In only a few countries, notably Sweden and to a lesser extent Norway and Finland, are mechanisms in place to link coastal planning across the land-sea interface.

9. Building trust and consensus to improve cross-sectoral integration of planning and management is complex and time-consuming.

- The approach needs to be both top-down and bottom-up with involvement and exchange in both directions: it is an iterative process and requires substantial time and resource allocation.
- When an ICZM initiative is taken by one sector unilaterally, other sectors are frequently suspicious of motives and wary of collaboration, so hindering or even halting the process. The choice of lead partner or chair is important and must be agreed by all concerned.
- Gaining the confidence of vested interests cannot be rushed.

5. Policy and Use of Set-back Lines

Introduction

Many countries have established set-back lines, although they are for a variety of reasons (see Table 3). Some are incorporated into legislation and policy, others are of a more informal nature. The policy instrument of set-back lines is of particular interest to the National Institute for Coastal & Marine Management in relation to their actual or potential ability to control development near the shore. This is because the success or failure of implementing and enforcing such a policy can provide valuable lessons for the Netherlands.

A development set-back line is generally defined as a prescribed distance from a landscape feature such as a cliff top, water course, shoreline or line of permanent vegetation, within which all or certain types of development are prohibited (Cambers, 1997). Set-back lines may be defined for one or more of several distinct functions, generally:

- protection of development from natural hazards, *e.g.* flooding, erosion
- control of development, especially ribbon development, along coastlines
- establishment and protection, of sensitive areas or those of conservation status
- ensuring public access to the shore
- maintenance of cultural land and seascapes

Whilst for much of coastal Europe there is no supra-national basis for set-back line implementation, of major importance for the Baltic Sea States is the HELCOM Recommendation 15/1 on the protection of the coastal strip, adopted in March 1994. This Recommendation requires states to establish a generally protected strip extending 100 - 300 metres both seawards and landwards from the coastline. In addition there should be a planning zone inland from the coast of at least 3 km in width.

Concurrently, HELCOM also adopted Recommendation 15/5 which aims to establish a network of protected coastal and marine areas and Recommendation 16/3 concerning the preservation of natural coastal dynamics. In October 1996 Ministers responsible for spatial planning and development in the Baltic Sea Region adopted common guidelines for planning of the coastal zone incorporating these Recommendations. Practical implementation of these policies is, however, so far variable.

In contrast to these HELCOM developments, OSPARCOM, covering the marine environment of the north-east Atlantic, has no such recommendations for control of development in the coastal margin.

In those countries where sea level rise and/or erosion is a major issue, set-back lines are increasingly being used to provide a buffer zone for coast protection measures. These are frequently informal, with no statutory or legal backing, introduced at the regional or local level often for very specific situations.

Categories of set-back line

Three categories of set-back line are in current national practice in Europe:

- a) Shore-parallel linear
- b) Contour
- c) Exclusive Economic Zones

a) Shore-parallel linear

A fixed distance strip defined, usually in metres, from a supposedly precisely defined point along the land-sea continuum.

In Europe this is the most common type of set-back line, especially in Baltic States as a result of the HELCOM Recommendations. A common problem occurs, however, in delimiting and mapping the line when there is no precise definition of the coastal zone. The baseline varies greatly between countries, depending on whether or not there is a precise legal definition of the coast/shore/shoreline. The width of the strip ranges, in the nine selected countries, from 6 m to 3 km. Some countries e.g. Spain, have several parallel lines with restrictions easing the further they are from the baseline. Denmark is the only country to have fully implemented the HELCOM Recommendation 15/1 (see introduction) by incorporating a 3 km wide planning zone from the shoreline into their national planning system. This category of set-back line is most frequently used for control of coastal development, especially ribbon development.

b) Contour line

A variable distance line from the shore, based on elevation.

This type of set-back line varies according to the topography of the area, and is often the 5 or 10 metre contour line. If it is being utilised predominantly for flood defence measures, the highest tide line should be taken into consideration. This approach is recently being used in eastern parts of England,

particularly for flood defence where previously claimed land is now allowed to flood to mitigate damage to developed areas (managed retreat). Problems can occur when the terrestrial contour line is set by the O.S. baseline, which may have changed since its establishment due to changes in sea level.

c) Exclusive Economic Zones (EEZs)

The United Nations Convention on the Law of the Sea (UNCLOS), which came into force in November 1994, divides the sea into zones of different legal regimes, including EEZs. UNCLOS can serve as a legal basis for national laws and policies, with the declaration of an EEZ extending the national jurisdictional zone from the former maximum of 12 nautical miles of territorial sea to a maximum of 200 nautical miles. This grants sovereignty of all natural resources to coastal states, including the responsibility for protection of the marine environment and sustainable use of such resources. Currently there are a number of uncertainties as to which laws, policies and regulations apply in EEZs, but it is becoming accepted as a legal instrument, particularly to aid conservation in marine areas, notably in relation to the implementation of Natura 2000 (through the EU Birds and Habitats Directives) for EU Member States.

A recent legal case (November 1999), has centred on the UK Government's decision to limit the application of the EU Habitats Directive to only 12 nautical miles from the coast rather than to the full 200 mile extent of its EEZ in which it licences oil exploration. The ruling in this case has been that all future offshore oil licencing is illegal until the Government properly applies the Habitats Directive to the full extent of the EEZ. It is generally considered that this landmark ruling will have major marine policy implications for the future management of at least the UK seas and possibly throughout coastal Europe.

Summary of implementation

In the countries selected for this study, category a), shore-parallel set-back lines, have been developed in eight of the nine countries (the exception is England). There is increasing informal use of category b), contour set-back lines, in England. The role of category c), EEZs and their use as a set-back line in the marine zone is only just being developed. Sweden, however, has specific legislation in its Exclusive Economic Zone Act 1993. There is some dispute in Germany as to which level of government, national or federal state, should administer EEZs. Poland has selected ecologically important areas in its EEZ for offshore Baltic Sea Protected Areas (BSPAs). Denmark has declared SPAs which are partly in the EEZ.

National approaches

There are a wide variety of local and national approaches to the concept of set-back lines as well as the mechanisms for, and strengths of, enforcement. Frequently these depend upon socio-cultural attitudes as well as legal contexts. The issue of land ownership and compensation is particularly important in establishing or widening a zone bounded by a set-back line. The reason why a set-back line is initially established can have a profound effect upon the subsequent levels of implementation and enforcement at the local level.

The set-back situation in each of the nine countries in this study is summarised below:

Denmark;

There are two levels of set-back lines; a 300 m protection zone and a wider 3 km planning zone. Building is restricted in the 300 m zone to constructions that require a coastal location and cannot be situated elsewhere, with restrictions on planning for new activities in the wider planning zone. There is a general tolerance and understanding of restrictions (without compensation) for the sake of nature conservation or aesthetic appeal. This tends to be the case for both individuals and local authorities, even where councils will realise a revenue loss arising from a reduced tax base.

Egense Skanse, Denmark:

In Egense Skanse, Sejlflod Municipality, a plan was developed in the min 19990s to improve the recreational facilities of the small marina built in the early 1980s. Part of the plan was to construct a hotel with berthing for yachts, which would enhance local economic development and tourism potential. In 1991 a 3km planning zone was introduced and in 1997 the set-back line was increased from 100m to 300m. The proposed development was now seaward of the set-back line. Although the local plan was approved at county level, the national authority refused the plan since the only permitted exemption from the set-back line restriction would be for development directly associated with operation of the harbour. An alternative plan was then proposed, but to date the municipality has failed to interest private investors in the project. The decision by the national authority has, however, been fully accepted by the municipality.

Spain;

The National Shores Act provides for set-back lines of varying width, predominantly in non-urban areas. These protected strips focus primarily on public access and recreational use of the coast rather than for development control or nature conservation interests. There is an option under the 100 m "easement of protection" for it to be increased to 200 m, to date no local authority has taken up this option.

Barcelona, Spain

In Barcelona, local authorities would like to protect an area of private land located on the coast near the airport. The area has high conservation value but is threatened by development pressures. The protected zone under the National Shores Act is unable to be implemented due to the land being defined as urban land, and therefore exempt.

Norway;

According to the Department of Environment, municipalities tend to grant too many dispensations and allow building within the national policy guideline of a 100 metre set-back line. They are now working towards a national guideline advocating stronger protection for the set-back zone to control development, from the border of Sweden up to the county of Rogaland.

Hordaland County, Norway

In Hordaland County fishing and aquaculture are very important industries. Many municipalities experience aquaculture and recreational interests competing for space in the coastal zone. Over the last two decades fish-farming has had a major impact on the landscape of coastal areas in Norway. Fish are kept in separate net cages reaching to a depth of approximately 10 m below the surface water, each with a volume of 12,000 m^3 or more. A farm of just 12,000 m^3 can occupy an area of over 6 hectares, resulting in large marine areas being reserved for this activity in several communes. Their local plans have given priority to aquaculture for local economic development over public access for recreation and granted too many dispensations for the establishment of fish-farms in the protected zone.

Sweden;

The Protected Shoreline Regulations which stipulated a set-back line have been incorporated into the new Environmental Code which came into force on 1 January 1999. Unusually, the protected zone covers both the marine and terrestrial area. It is defined as a 100 m strip inland and offshore from the shoreline, which can be increased to 300 m in both directions. Exemptions, which are issued by the County Administrative Boards, are required for any new building within the zone. The regulations are rigidly enforced and exemptions are rare.

Turkey;

Turkey's 100m set-back line is divided into two zones; the first 50m - no building (exemptions are possible where a coastal location is essential) and the landward 50 m (or greater) - infrastructure and tourism facilities are permitted subject to planing permission. Again, the focus here is on public access and recreational facilities and many municipalities have a very lenient attitude to exemptions if it will promote local economic development.

Konyaalti, Turkey

The Konyaalti -Antalya coastal area is an important tourism area but recently has experienced a large number of conflicting land-use activities. Adjacent to the shore, there is a large gravel and rock quarry, petrol storage and filling installation, a main highway running along the coast, a ferrochromium and cement storage area, a free trade zone and sea port, a planned waste water treatment plant and many high rise buildings for both residential and tourism use. Despite the fact that there is a 100 m set-back line, planning permission is still being granted for further building just a few metres from the shore. Enforcement of the set-back line is hampered by the sectoral character of the administrative and legal system, combined with too many responsible bodies.

Poland;

There are two elements of the set-back line policy in Poland, both shore-parallel linear. The "Technical Belt" has a varying width according to the type of coast; dunes - up to 200 m landward of the dune ridge; cliffs - up to 100 m landward of the upper edge of the cliff; and lagoons - up to 200 m landward of the shore. In some areas it has been increased to as much as 1 km wide, but in urban areas and banks

of lagoons it can be much narrower. Its main intention is to protect the coast for safety reasons, flooding, erosion *etc.*, and maintain its environmental integrity.

The "Protective Belt" generally extends up to 2 km inland, but in some places it widens to 5 km from the landward boundary of the Technical Belt. It is considered as an area where human activities can directly influence the state of the Technical Belt, and as such there are restrictions on land use and development. In effect it acts as a buffer zone for the more strictly controlled Technical Belt. All permissions for building within these zones must have the approval of the relevant Maritime Office, which is a State Agency under the Ministry of Transport and Maritime Economy.

Leba, Poland

In the early 1990s a private group of Dutch investors approached the Maritime Office in Slupsk to discuss the possibility of a joint venture to develop a small marina on the site of an old quay alongside the river Leba. Due to inconsistencies in the legislation, lawyers advised that it was impossible for a State Agency to enter into a contract with a private developer to rent or purchase state owned land within the harbour area. Consequently, despite local support for the project, the development has not gone ahead

Finland;

Guidelines issued by the Ministry of Environment stipulate that development should be controlled by a planning requirement on a 100 metre strip along the coastline, which can be increased to 200 metres. Each local Master Plan determines how near to the shore development can take place and authorises exemptions. Of interest is the approach to property building rights and compensation for land-owners in protected areas.

Virolahti, Finland

In Virolahti Municipality, the local Master plan has aimed at establishing larger zones than just the narrow linear protected strip along the coast to better control development in the area. These larger zones were also based on an ecosystem approach. In order to protect the unbuilt landscape and the Vilkkilantura wetland, it was decided to allow building rights of land owners in that area to be transferred. They would be given permission to transfer their building rights to a nearby village, which was a popular tourist area. This supported a further objective of the Master plan, to support local economic development in village areas.

Germany;

Each federal State has different legislation regarding set-back lines. These vary from 50m landward of the dikes in Lower Saxony, to 100m inland from the coast in Schleswig Holstein, and 200m inland from the coast in Mecklenburg-Vorpommern.

England;

There is no system of shore-parallel linear set-back lines in England or indeed the UK. Recently there has been an interest in the use of contour lines as a form of set-back in areas prone to flooding and at risk from sea level rise. There is an informal recognition of the 5 m contour line approach. To date this has been primarily promoted by the Environment Agency who have recently been given strengthened responsibilities for coastal defence, but it also has considerable potential for use as a planning tool in coastal flood plains.

Blackwater Estuary, England

The Blackwater Estuary in Essex, is a test bed for a new approach to management of coastal zones in low lying areas, at risk from flooding. In recognition of global warming and sea-level rise it has been decided by the local authorities to allow the coast to respond and evolve in a more natural way. The increased cost of maintaining sea defences and the changes in agricultural policy have facilitated this more innovative and sustainable approach. The loss of areas of agricultural land, threatened inter-tidal habitats and proposed recreational facilities has been accepted. Poor planning decisions in past years have allowed too much coastal development in areas at risk of both erosion and flooding, but the costs of maintaining defences to protect land are now too high in many of the non-urban areas. The issue remains of coping with increased flood risk in low lying areas where large developments and infrastructure has been permitted.

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Table 3.

Existence and definitions of national coastal set-back lines in different European coastal countries.

Country	Statutory set-back line(s)?	Definitions	Notes
Denmark	Yes	1. 300 m inland beach protection zone 2. 3 km development protection zone inland.	1. Prohibits building (with a few exceptions where coastal location necessary), fence erection & caravan parking. 2. Restriction of planning for new activities.
England	No	5 m contour line recently being used in some localities in relation to coast protection and flood defence management	
Finland	No	Guidelines: 100 m (can be increased to 200 m locally) strip along coastline: all development controlled by planning requirement.	Ministy of Environment planning guidelines. Protected strip width agreed on case by case basis
Germany	Yes	Lower Saxony: 50m landward of dikes - all building prohibited. Schleswig-Holstein: 100 m inland from coast. Mecklenburg-Vorpommern: 200 m inland from coast.	No consistent set-back line at national scale: different set-back line width applied by each of Länder.
Norway	No	100 m landward of shoreline: no development	National policy guideline
Poland	Yes	A "technical belt" and a "protective belt". Technical belt definition and width varies depending on shore type: *Dune shores*: beach, dune ridge & up to 200 m landward of dune ridge; *Cliff shores*: cliff foot, cliff & up to 100 m landward of upper edge of cliff; *Lagoon shores*: lup to 200 m landward of the shore, or between the shore and a flood embankment. Protective belt: 2 km landward from shoreline; acts as buffer zone to technical belt.	Designed chiefly for erosion control and flood protection, but also used for nature conservation. Within the two belts construction and development must have approval from relevant Maritime Office.

Spain	Yes	1. "easement of protection": minimum 100 m (can be extended to 200; 2. "easement of passage": 6 m (can be extended to 20 m) strip from landward limit of shore - permanently clear for pedestrian and search & rescue access; 3. "easement of free public access to the sea": outside protected areas, requirement for access roads at max. 500 m apart and pedestrian access at max. 200 m apart; 4. "influence zone": min. 500 m from landward limit of shore - building density restricted and car parking space required.	Easements under National Shores Act impose restrictions on development and exercise of private property rights.
Sweden	Yes	100 m both inland and offshore from the shoreline. Can be extended up to 300 m inland and/or offshore.	Under new Environmental Code: zone reserved for outdoor recreation and nature protection; prohibition of all new development (exemptions can be made).
Turkey	Yes	Minimum 100 m shore strip width, from 'shore edge line', in two zones: In first 50 m of shore strip, no buidling (except exemptions where planning permission and coastal location essential): strip is for public access and recreation.; In landward 50 m (or greater), infrastructure and toursism facilities permitted subject to planing permission.	Effective application of shore strip planning policy depends on precise definition and delineation of 'shore edge line' - in practice this has not proved easy to apply.

Summary:

Key features of set-back line policies

In most cases set-back lines are simply part of a wide ranging "tool-kit" for the management of coastal zones and alone they cannot provide solutions to the many problems of integrating coastal zone management across the land-sea continuum. They are primarily used as a planning zonation tool.

1. Most shore-parallel linear set-back lines in the countries selected are terrestrially based and do not include the marine zone.

- The exception is Sweden where the marine zone is included in both general planning and implementation of set-back lines for development control.
- Drawing such land based lines excluding the marine areas goes against the increasingly widely recognised ecosystem approach to spatial planning and management.

2. Exclusive Economic Zones are only relevant to the marine areas and do not take terrestrially based coastal development into consideration.

- EEZs are of most use in a nature conservation context as UNCLOS aims to protect marine species and habitats by pollution control and good conservation and management measures. This has been reinforced by the recent legal case against the UK Government.
- There are problems in some countries (e.g. Germany) as to who or which national department or authority has responsibility for the EEZ.

3. Rigid distance lines, such as the shore-parallel linear set-back do not take account of the coastal topography.

- Such lines are of most use in flat sedimentary plains. In areas with variable topography ,*e.g.* coastal plains and steep cliffs, such a rigid line can be environmentally meaningless and may complicate sustainable management of the hydrology of coastal zones by cutting across naturally functioning systems.

4. Enforcement of set-back lines is to a large extent dependent upon the cultural attitudes and administrative context.

- Where there is a high level of local autonomy, especially when it is combined with a lack of horizontal concertation, too many dispensations or exemptions may be granted. The cumulative impact of such locally based decisions can seriously undermine national objectives of such protected zones.
- Most effective implementation and enforcement of set-back lines is achieved where they have been fully incorporated into the planning system.
- Acceptance and understanding of the need for such zones by both local authorities and the general public is crucial to their enforcement.

5. The approach of a simple set-back zone defined by a line on a map does not allow for buffer zones to mitigate impacts.

- In order to better control damaging environmental impacts, there is a frequent need for buffer zones between protected zones and areas zoned for development.
- Multiple levels of controlled zones such as the 3 km planning zone landwards of the coastal protected strip, as recommended by HELCOM, is a step towards addressing this issue.
- However, the "Protective Belt" of Poland essentially acts as a buffer zone, its intention is to protect the "Technical Belt" from anthropogenic impacts.

6. A clear, precise definition of the coastal zone is required to establish such set-back lines, especially for use of GIS and other mapping systems.

- Many of the selected countries have no precise definition of the coastal zone which can cause difficulties in establishing and mapping the base line.
- For the implementation of contour lines, the 0 level must be realistically defined. This is especially important when such lines are used as flood defence or coastal protection mechanisms due to changes in sea level.

7. Set-back lines can be a useful planning mechanism to control development along the coastline.

- They can be especially useful for preventing ribbon development encroaching into undeveloped coastal areas.
- As a zonation and planning tool, they can contribute to the sustainable management of natural ecosystems and cultural landscapes

6. References & Sources

Ackefors H. & Grip K. 1995 *The Swedish Model for Coastal Zone Management.* Swedish Environmental protection Agency, Stockholm, Sweden

Anker H., Nelleman V. & Sverdrup-Jensen S. 1998 *ICZM in Denmark - ways and means for further integration.* Discussion paper for Transnational Seminar on ESDP, October 1998. Goteborg, Sweden

Bogdanowicz R 1995 Targeting Environmental Problems in Coastal Areas. In *Directions in European Coastal Management*, eds. Healy & Doody. Samara Publishing, Cardigan, UK

Bridge L. & Gee K. 1998 *UK Coastal Management Directory.* CoastNET and National Coasts & Estuaries Advisory Group (NCEAG), Bournemouth, England.

Cambers, G. 1997 *Planning for Coastline Change - Guidelines for Construction Setbacks.* Environment and Development in Coastal Regions and Small Islands (CSI), Info No. 4.

CIA (Central Intelligence Agency) 1995 *The World Factbook.* Washington DC, Government Printing Office, USA

Cicin-Sain B. & Knecht R.W. 1998 *Integrated Coastal & Ocean Management: Concepts & Practices.* Island Press, Washington DC, USA

Ducrotoy JP. & Pullen S. 1999 ICZM: commitments and developments from an International, European and UK perspective. *Ocean & Coastal Management 42 (1 - 18)*

Environment Agency 1999 *The State of the Environment of England & Wales: Coasts* HM Stationery Office Norwich, UK

EU 1999 *Lessons from the EC's Demonstration Programme on ICZM* European Commission Luxembourg.

Gibson J. 1999 *Legal & Regulatory Bodies: Appropriateness to ICZM.* MacAlister Elliott & Partners, Lymington, UK

Goeldener L 1999 The German Wadden Sea Coast: reclamation and environmental protection. *Journal of Coastal Conservation 5 (23 - 30)*

Grange N. & Odendaal F. 1999 *Guidelines for Environmental Assessment of Coastal Tourism.* SEACAM, Mozambique

Huggett D. 1998 The role of federal government intervention in coastal zone planning and management. *Ocean & Coastal Management 39 (33 -50)*

Jorgensen T. H. & Kjorsvik H. 1996 *"Plan- og bygningsloven og annet lovverk" ("The Plan- and building Act and other laws")* Sandnessjoen, Norway

Kay R. & Alder J. 1999 *Coastal Planning & Management.* E & FN Spon,Routledge, London and New York

MOPU (Ministerio de Obras Publicas y Urbanismo) 1989 *The Shores Act* Ministerio de Obras Publicas y Urbanismo, Madrid, Spain

NORCOAST 1999 *Review of national and regional planning processes and instruments in the North Sea regions.* Norcoast Project Secretariat, County of North Jutland, Denmark

Nordberg L. 1999 *Coastal Legislation & Policies in the Baltic Sea Region* EUCC Coastlines 99 Conference, Miedzyzdroje, Poland (in prep)

OECD 1992 *Environmental Policies in Turkey* Organisation for Economic Co-operation and Development,Paris, France

Ozahn E. 1996 Coastal Zone Management in Turkey *Ocean & Coastal Management 30 (2-3) pp 153 -176*

Raivikko T. 1999 *Discussion Paper (no title) by the Finnish Association for Nature Conservation* EU ICZM Seminar September 1999, Helsinki, Finland

Visser L. 1999 The social-institutional dynamics of coastal zone management. *Journal of Coastal Conservation 5 (145 - 148)*

Appendix - Local Case Studies

The following five case studies have been compiled to provide additional contextual information relating to the implementation of national frameworks at the local level:

England	Blackwater Estuary
	Pegwell Bay
Spain	Urdaibai Biosphere Reserve
Denmark	Egense Skanse
Turkey	Konyaalti Antalya

Acknowledgement of the author or supplier of information is provided at the end of each case study and a map is provided to indicate the location.

England - Blackwater Estuary, Essex, S.E. England

The Issue:

In the absence of any national statutory policy or guidelines regarding rising sea levels in an area of high recreational and biodiversity conservation value, local authorities and national agencies have come together voluntarily to address the situation. The Ministry of Agriculture Fisheries and Food is producing comprehensive national Project Appraisal Guidance to help address the complex issues of managing coastal defence needs. The Government's advisers on conservation, English Nature, in partnership with the Environment Agency are also managing a project in the Thames Estuary with EU Life-Nature funding to develop CHAMPs (Coastal Habitat Management Plans) for sustainable management of Natura 2000 sites on dynamic coasts. These initiatives will provide a means of integrating habitat management into ICZM processes.

Context:

The Blackwater Estuary (5,200 ha of shallow tidal inlet with eroding saltmarsh and major areas of intertidal mudflats) forms part of the greater Thames Estuary in south-east England. The whole estuary is designated of international importance for its wetlands and waterbirds under the Ramsar Convention, as an SPA under the EU Birds Directive, an SAC under the EU Habitats Directive and is a Natura 2000 site. Although the resident population is relatively small with few towns and villages in the immediate area, the sheltered nature of the estuary and its ease of access from major conurbations in Essex and London make it one of the most heavily used areas for recreational watersports in Britain. The estuary lies in a zone in which relative sea level is rising rapidly, threatening to inundate areas of nature conservation importance (both intertidal areas and grazing marshes behind sea walls) and recreational value. This risk is compounded by increasing storminess and the consequent risk of storm surges.

Approach to ICZM in this area

Although there is no formalised structure for ICZM in the UK, in the early 1990s a number of statutory agencies began to try and bring together various sectors involved in the management of the coastal zone. In the Blackwater estuary this took the form of steps towards an Estuary Management Plan initiated as part of English Nature's (the statutory nature conservation agency) Estuary Initiative, facilitated through local government authorities in the area. This rather sectoral approach has been abandoned in favour of a broader involvement of interested parties. This has happened notably through the strengthening of the responsibilities of the Environment Agency, who are responsible for delivering sea defence and supervising coastal defences, and MAFF, through a more strategic approach towards the protection of low-lying agricultural land.

These circumstances have combined to create a situation in which it has been accepted that the former policies in the area of defending existing low-lying land at all costs is no longer viable. The implementation of revised national Project Appraisal Guidance is addressing the need for economic, technical and environmental sustainability in future flood policies and strategies. This case study is important because the approach being pioneered here is of major relevance to other low lying areas in Britain and elsewhere.

There are several consequences and impacts for major stakeholders;

1. The acceptance of *possible* loss of a number of areas of agricultural land behind existing sea walls (dijks)

2. For those areas of unimproved grassland (claimed in previous centuries) that are now of national and international importance for nature conservation, difficult decisions have to be taken in trading off the balance between re-instating an inter-tidal habitat and the loss of wet grasslands, both of which are threatened and diminishing in the UK. Lost habitats will have to be recreated in more sustainable locations to maintain the Natura 2000 network.

3. Despite increasing urbanisation and recreational pressure in this area (as in much of south-east England) there is a need to restrict and focus any further such developments, particularly in regard to recreational watersports and the major demand for additional marina facilities including their land based infrastructure.

As a consequence of economics and changing agricultural policy in the UK, the emphasis has shifted from raising existing sea walls to protect low lying agricultural land to a more innovative approach, including managed retreat and the restoration to tidal flats and salt marshes of formerly reclaimed areas, (as set out in the Coastal Habitat Management Plans*)*. This includes the removal of sea walls, or allowing them to be breached and the construction of secondary embankments further landward. This estuary is the primary test bed for this approach in the UK. An integrated estuary management plan has been developed, led by the local government authority in the area in association with the many statutory agencies in the UK for the coastal zone (Environment Agency, EN, MAFF etc).

How successful is this approach?

Lack of clear policy and statutory guidance bringing together cross-sectoral interests has meant a long lead time in engaging all the key players. The current focus for management of the area (and the whole of the UK) has been facilitated by the financial realities of coastal protection in low lying areas in a period of decreasing agricultural subsidies. This has been helped by an acceptance of sea level rise and global warming, and the need to allow the coast to respond and evolve in a more natural way. The accelerated loss of international conservation habitats, identified under the Habitats and Birds Directives has further focused attention on developing new coastal management methods. The initiation of realistic cost-benefit analyses for coastal protection and the introduction of environmentally sensitive areas (ESAs) have greatly facilitated the potential for returning the estuary towards a more naturally functioning system, this has however, posed an increasing dilemma for the nature conservation management in the estuary since it means the actual or potential loss of areas of high nature conservation and biodiversity importance (recognised under National and EU Statutes). The Blackwater estuary is providing a test bed for the evaluation and resolution of such issues. At the same time the approach involving managed retreat in a number of pilot areas raises difficulties for decision making by local government under major pressure for expansion of recreational facilities, housing and related infrastructure. The Environment Agency is also promoting tougher planning control within areas liable to flooding along the coast; identified on flood risk maps. It remains to be seen how successfully these potentially conflicting pressures will be resolved in a way acceptable to all sectors.

Would a statutory set-back line have helped?

No formal rigid protection line or exclusion line applies to the area. Broad zonation of land to the low water mark is applied through the Structure Plan process, this however, does not specifically relate to zones or set-back in relation to the shore line. In this pilot area the changing approach to coastal protection and the maintenance of existing sea-walls means that de facto there is an implied set-back line under consideration that relates to the 5 metre contour line approach.

Given the varied topography of the land surrounding the intertidal and shoreline of this low lying estuary, a rigid set-back line whether it be 100 or 500 metres would have no topographical or planning relevance. It would, for example, draw a wholly artificial boundary bisecting natural eco-systems and their hydrology. This would be likely to hinder the effective management of the natural environment by permitting developments eg in areas threatened with future tidal inundation.

With thanks to Paul Murby, Steven Worral and Alex Midlen for their contribution and comments.

England - Pegwell Bay, Kent, S. E. England

The Issue:

The lack of any coherent framework for addressing the inherently conflicting activities which impact on Pegwell Bay in East Kent threatens the importance of the site for nature conservation and its significance for both recreation and economic activity. This situation has prevailed for many years but is now exacerbated by sea level rise, increasing storminess and proposals for drawing up new set-back lines.

Context:

Pegwell Bay in East Kent is the estuary of the River Stour, a long narrow channel for much of its length, that broadens into the Bay and Sandwich Flats and empties into the English Channel.

Nature conservation status

Much of the lower estuary is intertidal flats which range from fine sands immediately south of Pegwell Bay to silky muds in the bay itself. The broad area of flats supports a rich invertebrate fauna. Also of note are the marine algal communities associated with the chalk cliffs, gullies and caves which border the bay to the north and which are regarded as internationally significant.

Saltmarsh has developed along both banks of the Stour (although much of that on the western bank has been lost to land-claim) whereas to the south of the estuary the shore is backed by a long stretch of bare shingle which to landward is overlain by an extensive area of sand dunes and sandy grassland. The dunes support an exceptionally large number of plants including many which are rare or scarce, and a diverse invertebrate fauna that contains many rare species.

Pegwell Bay is also of importance to waders and wildfowl and supports a variety of wintering species. The conservation status of the bay is correspondingly high because of its wealth of estuarine and coastal habitats, and the diversity of its geomorphology. The lower reaches of the estuary lie within the Sandwich Bay and Hacklinge Marshes *Site of Special Scientific Interest*, designated for their biological and geological interest.. Sandwich Bay is a *Local Nature Reserve* managed by the Kent Wildlife Trust (a voluntary body) and the Royal Society for the Protection of Birds (an NGO). Sandwich Bay is also a *Ramsar* site and *Special Protection Area (SPA)*. There are two *Geological Conservation Review Sites* within Pegwell Bay and the chalk coast to the north is a candidate *Special Area of Conservation (SAC)*.

Human activities

Leisure activities are numerous, with a marina to the north at Ramsgate and many moorings along the Stour; most sailing occurs from the estuary out to sea. Power-boating, wind-surfing and water-skiing occur over 200 ha of the intertidal flats and along most of the riverbanks. Beach recreation is centred on the bay.

A sizeable area of the sand dunes is given over to the Royal St. George's Golf Club, one of England's premier courses.

Exploitation of the natural resource includes grazing over part of the saltmarsh and bait-digging. A wildfowling club shoots over the grazing marsh.

Industrial activities are divided between the defunct and the dynamic. At Richborough on the north bank of the Stour is an old oil- and (latterly) orimulsion-fired power station awaiting demolition. Alongside is a waste disposal site, now virtually full. A wharf capable of receiving small oil tankers is adjacent. Towards Ramsgate is the derelict site of a hoverport built over thirty years ago to convey passengers by hovercraft to France. To the south of the Stour and in the lee of the shingle bank is a large (and expanding) pharmaceutical works, the single largest employer in East Kent.

Planning and Management:

In the past, informal methods of managing Pegwell Bay have largely been sufficient to prevent conflict over competing resource use. This is partly explained by the fact that, although relatively numerous, the pressures impinging on the bay are by themselves fairly modest and do not attain the intensity common in, say, the Thames or Medway estuaries in North Kent. For example, the remote location of the bay has so far restricted the number of pleasure boaters, jet skiers and wind surfers whose activities might conflict with the nature conservation interest. Again, the closure of Richborough power station has mitigated the need to expand the existing wharf.

It is also worth noting that different interests have found common cause with each other. For example, the Royal St. George's Golf Club prevents the public accessing the sand dunes from Sandwich and thus makes protection of fragile plant communities that much easier. Similarly, grazing over the saltmarsh and grazing marsh has helped maintain the resource which in turn assists in dissipating the force of the incoming tide and hence contributes to flood defence.

Voluntary agreements to manage the *Site of Special Scientific Interest* have been worked out between English Nature, the Government's nature conservation advisor, and landowners and users. A non-statutory *shoreline management plan* has been drawn up by regional and municipal authorities, the Environment Agency (in its flood prevention role), English Nature and the Ministry of Agriculture to protect the coast from incursions by the sea.

Regulating economic activity (insofar as its location is concerned) is the responsibility of the statutory planning system. Any development (including coastal defence) must conform with the County Structure Plan and Statutory Local Plans. To date, industrial development has largely been permitted within a narrow corridor alongside the main coast road between Dover and Ramsgate. The road swings inland to the south of the bay in bypassing the town of Sandwich but then hugs the estuary shore before ascending the chalk cliffs to the north.

It should be noted that East Kent is characterised by patterns of social and economic exclusion not often encountered in southern England. Unemployment is three times the average for the County of Kent and other indices of deprivation tell a similar tale. This part of East Kent has been designated an Objective Two area. These circumstances have contributed to a more relaxed attitude to development proposals in the past.

Current Management Issues:

It is doubtful that the comparatively informal pattern of management which has served sectoral interests in Pegwell Bay reasonably well in the past can continue to do so into the future. Matters are coming to a head because of the increasing impact of extraneous forces.

At the time of the Norman Conquest of England in the year 1066, Sandwich lay at the mouth of the Stour. But a series of powerful storms drove shingle eroded from the chalk which once stretched between England and France across the estuary so forcing the Stour to take a northerly course to reach the sea. By the early seventeenth century, the mouth of the Stour was impassable to ships of any size and Sandwich rapidly declined in significance. The town now lies five kilometres from the open sea.

The shingle bar has continued to grow northwards for the past three centuries but the rate of growth has risen dramatically over the past two decades or so with an increase in the number and intensity of local storms, and with a rise in sea level relative to land. More importantly, the bar is swinging north westerly and threatens to force the River Stour to cut back on itself and sever the narrow isthmus at the head of the estuary. This would effectively cut off the lower, extravagant, bend of the river, some twelve kilometres of waterway, and isolate Sandwich from the sea.

Not surprisingly, there is a lively argument as to what should be done. The town of Sandwich wants access to the sea maintained; indeed, it wants the channel of the Stour deepened so that larger pleasure craft can reach the town from the estuary. The Environment Agency, wearing its flood control hat, is exploring the

possibility of drawing up new set back lines higher up the Stour. English Nature, while keen to work to the principle that natural processes should be accommodated wherever possible, is ambivalent about set back because the SSSI would loose not only Sandwich Flats but also part of the sand dunes which lie atop the shingle bar.

The Highways Authority and Railtrack both oppose new set back lines because both the coastal road and the railway (which crosses the Stour at around sea level) would need to be rebuilt.

Meanwhile, to the north, the District Council has granted yet another deferment on planning permission for the old hoverport site. Desperate for development (and hence local jobs), Thanet District Council have pursued various proposals for the past twenty years. A scheme for a leisure park has been deferred a number of times but outline permission was granted some years ago. However, the likely impact of sea level rise is that the site could be inundated regularly in a few years' time unless defences are strengthened, a prospect encouraged by the District Council but opposed by English Nature and the Environment Agency.

Conclusions:

The situation at Pegwell Bay is not unique. It demonstrates that the voluntary, non-statutory approach to coastal zone management that has often served in the past to regulate potential conflict in the coastal zone might not be the best model for the future.

This does not mean that statutorily enforceable regulations should replace traditional ways of working together. Nor does it necessarily mean that Pegwell Bay needs an overarching management plan or estuary management strategy.

It does suggest, however, that a process akin to that commonly referred to as ICZM could profitably be brought to bear on the bay and its stakeholders. At present, there is no mechanism for the parties to come together and debate the issue in the round. And even if that were to happen, there is only one tool by which an outcome could be engineered - a fairly crude cost-benefit analysis of the options for either maintaining the status quo (with reinforced defences) or setting back along new lines which, because of the weighting given to the value of the coast road and the railway would probably reject set back even if that were the best option on grounds other than economic cost.

Author of case study - Clive Gilbert

Spain - Urdaibai Biosphere Reserve. Basque Country, N.E. Spain

The issue:

A management plan and set of regulations have been developed for the sustainable management of this important estuarine system in the Basque Country. However, overlapping competencies combined with political tensions and a lack of technical and economic capacity are hindering the implementation of the plan.

Context:

Designated as a UNESCO Biosphere Reserve in 1984, Urdaibai (the River Oka estuary) is located in the Basque Country of north-east Spain. The reserve is designated of international importance for its wetlands and waterbirds under the Ramsar Convention, identified as an Important Bird Area (IBA), and is a candidate Natura 2000 site. Twenty-two municipalities are partially or totally included in the designated protected area.

Management of Biosphere Reserves aim to integrate the different sectoral interests and minimise pressures that arise in spatial planning within areas of high biodiversity value. Integrated Coastal Management should therefore be an important tool for the management of these areas.

Legislative framework for ICZM :

A number of regulations of national, regional and local level are applicable to the Urdaibai area:

- The Spanish Shores Act (1988) which *inter alia* establishes a set-back line of 100 m for the whole Spanish Coastline
- Urdaibai Biosphere Reserve Protection and Planning Act (1989) which declares the coastline and estuary area as a Special Protection Zone. It also establishes a special management system for the whole area which provides measures designed to enhance sustainable development, including spatial planning and environmental management, delivered through:
    1. The General Use and Management Plan (PRUG, 1993)
    2. Social & Economic Activity Harmonisation & Development Plan
    3. Interpretation, Investigation & Environmental Education Plan

Specific Territorial Action Plans are also being developed within this framework for different habitats, specifying the actions needed. All of these regulations are especially applicable to non-urban development areas. Sectoral Territorial Plans for both the wetlands and the coast are also being developed, implementing the Territorial Planning Guidelines for the Basque Country.

The Urdaibai Protection & Planning Act and the PRUG take precedence over local municipal planning legislation. All actions on the coast up to the intertidal area (the marine area was not included in the Reserve boundaries) need agreement from the Urdaibai Biosphere Reserve Trust and the Environment Council of the Basque Government

How successful is this approach?

This approach should, in principle, assist ICZM processes, as this is one of the main objectives of the Urdaibai Reserve Protection & Planning Act. All regulations affecting natural areas and the municipalities involved aim to find integrated solutions to the sustainable development of the area overriding any particular sectoral interests of the municipalities. Although the regulations are extensive and an excellent tool for integrated management, the technical and financial means for implementation are lacking.

An example of these inconsistencies are apparent in Bermeo, the oldest and most important fishing port of the northern coast of Spain. All the above regulations affect the municipality of Bermeo as most of its territory falls within the Urdaibai Reserve. Furthermore, within the municipality there is an area declared as

"protected biotope" which is bound by special regulations. However, there are two major problems interfering with the implementation of both the management plan and any ICZM process:

1. The distribution of responsibility/competence in Bermeo, as well as in some other municipalities, is complicated:
   - the coastline- Central State
   - ports and territorial Planning - Basque Government
   - roads - Provincial Government of Biscay
   - nature management - Urdaibai Biosphere Reserve Trust
   - urban planning - Bermeo municipality

   Vertical and horizontal co-ordination between all of the responsible bodies has failed, mainly due to political pressures. Different political parties lead most of these bodies which leads to conflict and a tendancy to prioritise political interests and short term gains over the environmental interest of the region.

   In Bermeo the current most important issues are harbour development, urbanisation and improvement of road connections. Each of these sectoral interests are dealt with by different bodies each with different political affiliations, creating tensions which impede any attempts at sectoral integration or the delivery of any ICZM process or management system.

2. The special regulations for the Reserve which were intended to facilitate integrated management are not adequate for the current situation. The regulations were adopted without taking into account that most of the area is privately owned. The controls and restrictions on many activities are not welcomed by the private landowners, mostly due to the fact that there is no possibility of compensation for any loss of revenue incurred by abiding by such regulations. A further complication is that the local landowners were not consulted or involved in formulating the policies for management of the reserve.

   Many residents perceive the reserve designation as a hindrance to their economic development potential. Neighbouring municipalities which are not within the protected area are encouraging development which is forbidden within the reserve.

Conclusion:

The Reserve Trust is has embarked upon an environmental education campaign to raise public awareness of the importance of the area. However, an increase in technical capacity at the local level to implement an integrated management plan , combined with a solution to the political tensions which prevent its implementation must be secured. Furthermore, the provision of financial incentives to comply with the regulations should be researched.

With thanks to Carolina Pérez Valverde.

Sources:

Xabier Arana Eiguren. Director of the Urdaibai Reserve Trust
Raúl Castro Uranga. AZTI Technological Institute. Oceanography and Marine Env.Dept.
Ainhize Uriate. AZTI Technological Institute.
José Ramón Zabala. Association for the Protection of the Bay of Txingudi.

Denmark - Egense Skanse, Sejiflod Municipality, N E Denmark

The issue:

The increase in width of the protected coastal zone from 100 metres to 300 metres and the implementation of the 3 km planning zone has resulted in a change of priorities for local planning in Egense Skanse. Although there has been agreement with the state Department for the Protection of Nature on reduction of the set-back line for part of the area, there has been no agreement for reduction in an area designated for planned development of recreational facilities to enhance the economic possibilities for the municipality.

Context:

Egense Skanse is situated in North Jutland, on the east coast at the southern side of the Limfjord, where it meets the Kattegat. There is intensive in-shore fishing and the area is very popular for yachting. The municipality of Sejflod wished to improve and upgrade the recreational facilities in the area, both for aesthetic values and for the potential economic spin-off an increase in visitor numbers would bring.

The area is not considered particularly attractive for either residents or tourists. There is no beach and the coastal waters and Limfjord are very shallow at this point. There is a small harbour from where the ferry boat crosses the fjord to the small town of Hals on the northern side. A dike has been constructed for flood defence which separates the harbour area from the urban area. Landwards of the dike is an area of summer cottages.

The plan

In 1996 the municipality developed plans to construct a small beach near the harbour area. The plan also included provisions for upgrading the harbour, making it more attractive and including a marina with full facilities to attract yachting tourists. Furthermore a hotel was planned for the harbour side with berthing for yachts.

The outcome:

Whilst the county administration agreed with the prospective plan, the relevant national authorities refused to accept the plan due to the siting of the planned hotel seawards of the set-back line. The only construction allowed within the protected zone are facilities necessary for harbour operations and the hotel was not included within this category.

The national authority suggested an alternative approach of developing a small summer cottage village as an extension of the existing summer cottage area landwards of the protected zone.

For the last three years the municipality has attempted to interest private investors in this new plan, so far with little success. However, there is broad acceptance of the ruling by the national authority despite the reduced possibility for enhancing the area's tourism potential. Currently the municipality is preparing a new local plan which acknowledges the full extent of the protected zones.

Information for this case study was supplied by Anna-Lise Fruelund

Turkey – Konyaalti Coastal Area, Antalya City

The Issue:

Konyaalti-Antaly coastal area is an area of high recreational value with increasing numbers of visitors. Due to the lack of proper land use planning and any ICZM process, increasing recreational and development pressures combined with other conflicting sectoral activities have resulted in serious environmental degradation.

Context:

Konyaalti coastal area (around 20 km length) is one of the most important tourist areas of Antalya City with its attractive beach along the Mediterranean Sea and fascinating Taurus mountains. However, conflicting land use activities are common in the coastal area, for example: gravel and rock quarrying, a petrol storage and distribution installation very near to the shore, a busy highway running along the coast, a ferrochromium and cement storage area, a free trade zone, a sea port, high rise residential buildings, and a wastewater treatment plant in addition to a sea outfall to treat and dispose of the sewage of Antalya City.

Legislative Structure:

Since 1980, many laws and by-laws relating to the management of coastal areas have been issued. A significant number of the laws deal with protection and conservation issues, such as the Environmental Law and the By-law on Water Pollution Control for protecting coastal water quality; the By-law on Environmental Impact Assessment for protecting the coastal and sea resources in general; the National Parks Law and the Law for Protection of Cultural and National wealth.

The sectoral character of the present system of coastal and sea resource management is clear in all this legislation. Moreover, there is both a lack of horizontal coordination and integration between ministries at the national level and of vertical integration between national government and local municipalities to facilitate integrated management of coastal areas. There is also a lack of integration at the local level between all the conflicting sectors with different government departments being responsible for each issue. Additionally, resources for ICZM are insufficient.

Current situation:

Increased pressure from the NGOs in Antalya and the Local Environmental Board of the province, have led to considerable improvements in the area:

- recently part of the highway has been closed to traffic and the remaining part will be closed in the near future. An alternative highway distant from the shore is being constructed.
- a monitoring program for the quality of seawater has been initiated to determine any adverse impact of the treatment plant and sea outfall.
- there are serious efforts to stop the gravel and rock quarrying.

However, attempts to transfer the petrol storage and distribution installation have so far not met with any success due to the lack of funds for compensation. The local municipality is also still issuing permits for high rise residential buildings despite increased awareness of their disadvantages..

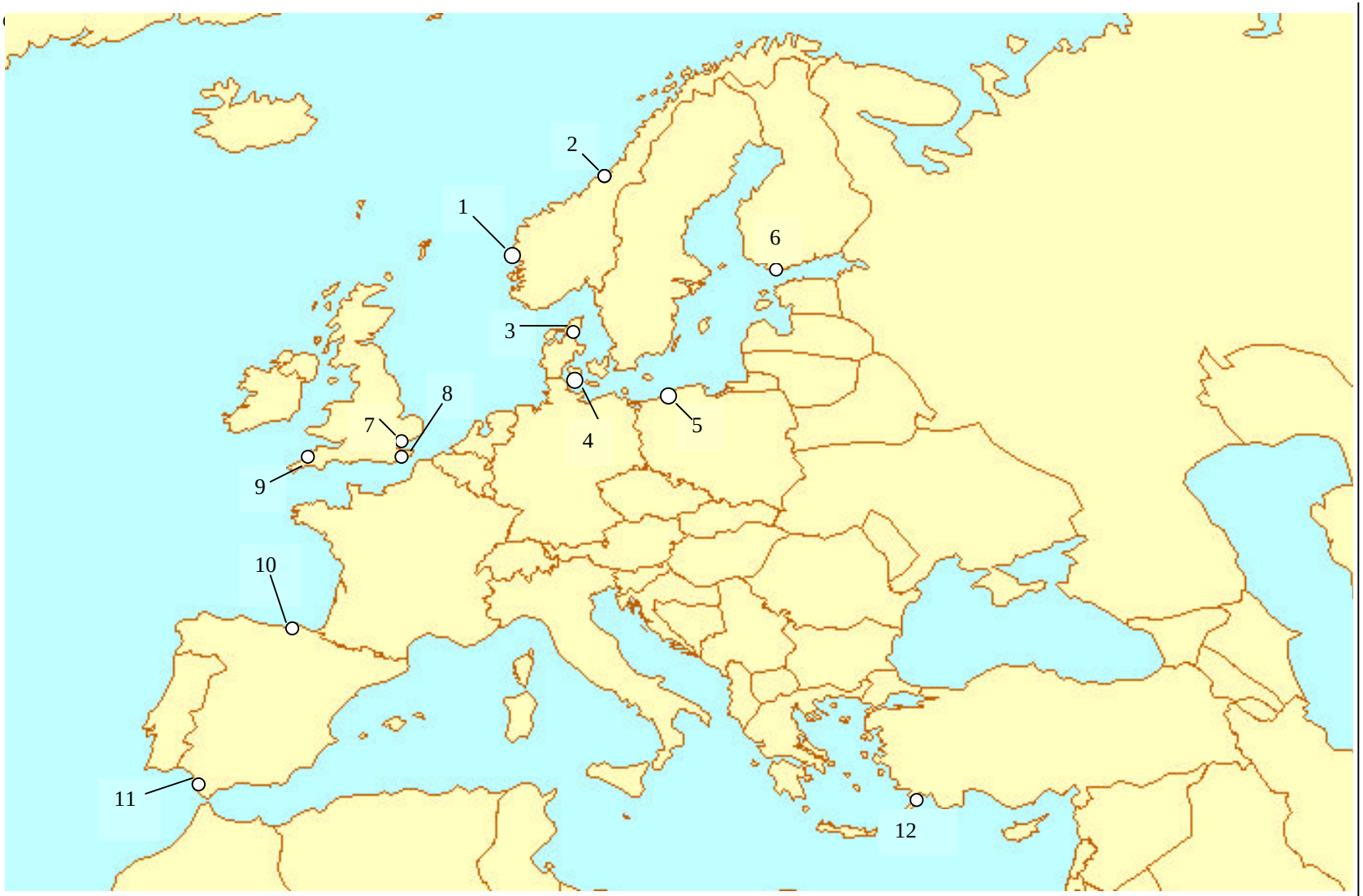
Permission has also been granted for the construction of an ugly multi-story hotel on the coast in the area. This permission is provided by the Ministry of Tourism who designated the area as a“tourism area” according to the Tourism Incentive Law of 1982, amended in 1993. This law, which promotes the priority of tourism over all other uses of coastal and sea resources, has led to considerable adverse impacts.

However, the latest earthquakes in Turkey have diminished construction activities, especially of tall buildings.

Various government departments are having to coordinate the supply of infrastructure under the highway *e.g* electricity lines, water and wastewater pipes, communication cables etc. However, all of these departments have conflicting plans and priorities which combined with their limited budgets make such attempts at coordination extremely difficult.

Unfortunately, many other conflicting activities are still present in this valuable area with no solution in sight.

Information supplied by Habib Muhammetoglu



Case studies

Norway
1. Hordaland
2. Helgeland

Denmark
3. Egense Skanse
4. Storstroms

Poland
5. Leba

Finland
6. Southern Finland

England
7. Blackwater
8. Pegwell Bay
9. Atlantic Living Coastlines

Spain
10. Urdaibai/Bermeo
11. La Janda

Turkey
12. Konyaalti

Figure 1. Location of local case studies used in the analysis of local integration and implementation of ICZM frameworks in nine European countries. Numbers refer to the list of case studies in the key to the map.

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Denmark:

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