

5 TOWARDS INTEGRATED ZONE COASTAL MANAGEMENT

A desire to improve the planning and management of coastal activities around the UK has been voiced by many organisations, and on many occasions, from the non-governmental Coastal Preservation Committee set up in 1936, to the 2002 'Marine Stewardship Report' of Defra, the Scottish Executive and the Welsh Assembly Government.

The response has been a range of initiatives and actions to improve the planning and management of activities at the coast. Policy has been developed through coastal planning guidance, attempts have been made to resolve conflicts of interest through local estuary plans, practical works, such as coastal realignment projects have sought to deliver more holistic management on the ground, and wider ownership and appreciation of coastal issues has been sought through much greater involvement of local stakeholders in coastal projects.

Much of this work has been driven by an environmental agenda and, in particular, the case for conservation of coastal biodiversity and recognition of the need to safeguard areas of scenic beauty. However other drivers such as economic imperatives and the desire to involve stakeholders in making decisions that affect them are equally important and they have become more apparent in coastal initiatives of recent years. Today, the mix of environment, economic and social factors that deliver sustainable development are informing the current debate on how to shape a future of ICZM in England, Wales, Scotland and Northern Ireland, and the UK as a whole.

In 2002, the European Parliament and the European Council of Ministers recommended that Member States follow eight principles in formulating national strategies for ICZM and any subsequent measures based on these strategies. These principles are:

- ◆ a broad overall perspective.
- ◆ a long-term perspective.
- ◆ adaptive management.
- ◆ local specificity.
- ◆ working with natural processes and respecting the carrying capacity of ecosystems.
- ◆ involving all the parties concerned.
- ◆ support and involvement of relevant administrative bodies at national, regional and local level.
- ◆ using a combination of instruments.

These principles are the foundation on which UK and national ICZM initiatives are likely to be built and against which success will be measured. Consequently, they have been used to structure the following discussion of progress towards ICZM in the UK.

The findings are based on research carried out in 2003, using questionnaires, interviews, workshops, Stocktake Panels and case study reports. These methods were used to gather the views of coastal practitioners on the situation in England, Wales, Scotland and Northern Ireland, as well as the UK as a whole. Reference has also been made to the considerable body of information gathered by the EU ICZM Demonstration projects, surveys, research work, reports, and practical coastal initiatives that have taken place around UK during the last decade. The main issues are illustrated using examples that show what is happening on the ground.

5.1 Taking a broad holistic perspective

An effective ICZM policy needs to look at the problems faced by coastal zones in the widest possible context. This principle is an acknowledgement that successful planning and management should be strategic, looking at the bigger picture and the long-term interdependence between maintaining the integrity of natural and cultural systems and the provision of economic and social options. In terms of geography, it points to the need to consider both marine and terrestrial parts of the coastal zone as well as the river basins draining into to the coast.

The Severn Estuary Partnership (SEP)

SEP is an independent estuary-wide project set up in 1995 and involving all organisations and individuals who have declared their interest in caring for the Estuary and who want to encourage a more co-ordinated approach between organisations and agencies and their management activities

Their aim is to bring together all those involved in the development, management and use of the Estuary within a framework that encourages the integration of their interests and responsibilities to achieve common objectives

The broad holistic perspective of the Partnership is illustrated through its aims, which include *“the development of a prosperous, vibrant and sustainable economy whilst protecting and promoting the natural, cultural and historic heritage of the area”*

The Partnership has also taken a broad, holistic perspective in deciding on the geographic area over which its activities are focused. This covers the entire estuary, including both terrestrial and marine areas, as well as spanning the boundary between Wales and the South West of England, and including parts of thirteen local authority areas.

The need to consider coastal management issues in the widest possible context is also relevant to individual sectoral interests and is particularly well illustrated by examining the approach to coast protection in the UK. In the 1970's most schemes were viewed from a very local perspective with consideration of potential effects mostly limited to the immediate area. The situation is totally different today with schemes being assessed within the much broader context of Shoreline Management Plans (SMPs). In 1993, the Ministry of Agriculture, Fisheries and Food and the Welsh Office published their 'Strategy for Flood and Coastal Defence in England and Wales'. This document set out the need for management to be based on coastal process cells or sub-cells rather than the administrative boundaries of coastal operating authorities. The resulting regions cover many kilometres of coast and provide the necessary broad context in which individual schemes need to be considered. A major challenge in trying to take a broad, holistic approach to coastal management, is finding an effective way to link the work of the many organisations and individuals who need to be involved, while taking account of their individual roles and responsibilities. At the same time it is essential to make the end product relevant and useful to the different sectoral interests.

The Humber Estuary

The Humber Estuary Standing Conferences, Humber Estuary Management Strategy and Humber Estuary Action Programme are examples of initiatives and products which sought to bring together a large number of organisations that had a role or responsibilities to manage development and use of the Humber estuary and the surrounding land in the mid 1990's. The work was a contribution to the local delivery of Agenda 21 and involved more than eighty organisations. The environmental emphasis and the fact that the Strategy concentrated on water quality issues, although an issue of common interest to many of those operating in the area, were subsequently seen as shortcomings and unable to deliver a broad holistic approach.

In a similar vein, the first Shoreline Management Plan for the Holderness coast was rejected by the District Council who took the view that it did not have sufficient regard to social and economic concerns. East Riding of Yorkshire District Council tackled this by producing a holistic ICZM plan which addressed shoreline management as well as other social and political issues such as transport and tourism. A Coastal Forum was established as a wider steering group mechanism to help develop and implement the actions. The wider Forum meets biannually and attendance is regularly over 300. This has improved relations with the general public by engaging communities in vulnerable areas.

A broad holistic approach to coastal management is also promoted at a national level in a number of ways. The coast-specific policy documents that guide local authorities on decisions regarding development and management of activities at the coast are particularly important. The first of these was issued for England and Wales in 1972 and they have since been updated and now cover all parts of the UK except Northern Ireland, where coastal policy guidance is still being developed (see Section 3.3). The guidance is important in that it identifies coastal planning as a strategic issue. Other elements in the guidance that reinforce the principle of a broad, holistic advocated by the European Council of Ministers include calling on planning authorities to recognise the inter-relationship between onshore and offshore activities, for Structure Plans to identify key coast-related policy issues and coastal land, and for planning authorities to work with others to achieve a co-ordinated approach to dealing with issues arising on the coast. Certain elements of the land use planning system are being revised at the present time and it is unclear whether this strategic coastal guidance for planning authorities will be retained.

Another way in which the need for a broad holistic approach to coastal management has been recognised at national level has been through the establishment of national coastal forums. Their role in bringing together wide range of coastal interests to inform the development of ICZM is illustrated by the work of the Scottish Coastal Forum (see Table 4.1).

Green Sea Partnership

The **Green Sea (Môr Glas) Partnership** is an example of a partnership that has taken a broad planning perspective, through the involvement of the tourist industry as one of its major players. The initiative is an all-Wales informal, working partnership of organisations committed to enhancing the quality of the Welsh coastal, and particularly the beach, environment – a key asset to the Welsh tourist industry and coastal economy. Chaired by the Wales Tourist Board, it involves over forty bodies from the public, private and voluntary sectors including all the Welsh maritime local authorities, Dwr Cymru Welsh Water, the coastal national parks, CBI, Wales Tourist Board, Countryside Council for Wales, Environment Agency and NGOs (Surfers against Sewage, Friends of the Earth, Marine Conservation Society, Keep Wales Tidy).

National Coastal Forums also illustrate some of the difficulties of taking a broad approach at this level such as getting good representation from all sectoral interests, especially in the private sector, and social and economic interests. Clarity of purpose and a meaningful role for the participating organisations is also essential. A failing in these areas was perhaps the most significant factor in the demise of the English Coastal Forum.

The broad holistic approach at a UK level is difficult to achieve but a desire to do so and a direction has been set out in the governments Marine Stewardship report. At the present time the only structural opportunity within government to foster such an approach is a coastal Inter-Departmental Group of representatives from different Government Departments whose remit includes coastal matters. Representatives from the Crown Estate and Regional Government Offices also attend the meetings to exchange of information. The Group has a very limited remit at present however it could be developed to provide a focus within government for better integration of coastal policy and the identification of gaps and opportunities to promote ICZM.

An effective ICZM strategy must try to bring together the many different interests that affect coastal regions and address the many different but interconnected problems that affect these areas. There are some good examples where work is being advanced at national and local levels, but there are also some recurring issues that need to be tackled within any future national ICZM strategies. Gaps are most apparent in economic and social area and the private sector where the benefits and opportunities from ICZM have still to be made clear. At the same time the need to involve many interests brings its own problems as unwieldy processes may be needed to keep communication going.

Current interest in the idea of marine spatial planning may help improve links between terrestrial and marine decision-making regimes as there will need to be clarity about the links and boundaries between any formal marine planning system with the arrangements on land.

5.2 A long term perspective

Coastal management solutions that resolve current problems may be very different to strategies required in the future or to tackle issues in the long-term. This principle sets out the need to consider the needs of both present and future generations concurrently and equally, and in an institutional

framework that looks beyond the present political cycle. There is considerable variety in the planning horizon for sectors operating in the coastal environment.

Long Term Perspective

Shoreline Management Plans are one of the larger and more influential coastal management strategies that take a long-term perspective. Climate change scenarios have been considered in coastal management plans with coastal defence strategies which are looking towards the management of fluctuating coastal processes over 100 years. Recommendations, monitoring, research and management review procedures are created to ensure that the SMP is carried into the future as a working document.

The need for a long-term perspective is not limited to coastal management decisions but also the administrative structures that will take forward ICZM. This is an area where there has been significant difficulty up to now. Most if not all ICZM initiatives to date have been short-term projects rather than being an integral part of an established decision-making and delivery process. As such they have relied on a variety of short-term funding sources with a view to becoming self-sufficient in around 3-5 years time.

The Estuaries Initiatives supported by English Nature and the Firths Project supported by Scottish Natural Heritage, in the 1990's, illustrate the difficulties. These projects were very effective at initiating coastal management projects and bringing together organisations into partnerships to take forward ICZM at a local level where none had existed before. Keeping these initiatives going when project funding was no longer available has proved difficult. In the case of the Forth Estuary Forum and the Moray Firth Partnership, the groups have been set up as limited companies and operate as businesses in order to secure a long-term future. In other cases, financial contributions and contributions "in-kind" from public sector stakeholders and private sector companies support the management groups by enabling the employment of a project officer. In other cases the difficulty of securing follow-on funds has resulted project officer posts becoming part time (eg. Tay Estuary Forum) or being unsustainable (eg. Exe estuary).

Another area where progress has been slow has been in setting out a long-term coastal vision for a region, looking perhaps 25 or 50 years ahead.

Setting Long Term Visions

The Scottish Office and Aberdeenshire Council commissioned a **Coastal Planning Zones study** in 1998 to provide a practical framework for Local Authorities to classify their coast into developed, undeveloped or isolated coast, as advised by National Planning Policy Guidance. The indicators used to draw up a preliminary map of the three zones along 190km of Aberdeenshire coast included the population size of settlements, infrastructure, industrial facilities, offshore activity and character with a defined "coastal zone". While not an additional statutory designation, the classification is seen as a basis for the promotion and control of development and gives some indication of vision for these different areas. For example;

- ◆ The developed coast should be the focus for developments requiring a coastal location or which contribute to the economic regeneration of settlements whose livelihood is dependent on coastal or marine activities and features or which meet the social needs of these communities.
- ◆ The undeveloped coast should not be expected to accommodate development that could be located on the developed coast or inland.
- ◆ There should be a strong presumption against new development on sections of remote coast.

(from NPPG 13 & PAN 53)

Regional Planning Guidance documents are an opportunity to set out a long-term vision for sections of coast and are particularly important where most of the region is coastal. This is the case in North-West England and in 2000, the Department for Environment, Transport and the Regions funded a research study on ICZM to inform the review of Regional Planning Guidance in the North West, inform subsequent reviews of development plans and relevant coastal strategies and encourage a

more consistent, integrated and holistic planning and management for the north-west coast. This set out a vision for the integrated coastal planning of north-west England.

Vision for the Integrated Coastal Planning of North West England

In 2020 the coast of the north west of England is:

- ◆ A dynamic coast where human activities and development are in harmony with natural processes, coastal resources are managed in a sustainable manner and diverse environmental assets are protected and enhanced.
- ◆ A coast with diverse, competitive and sustainable local economies with strong and complementary identities which build upon established strengths and are responsive to new technologies and market opportunities.
- ◆ A coast with liveable, vibrant and supportive communities which celebrate their maritime heritage and are socially inclusive; communities which are informed, confident and responsive in their management of environmental, social and economic change.
- ◆ A coast with thriving ports and airports recognised as key gateways to the region and beyond, seeking new local and global market opportunities, with affordable and high quality links to national highway and rail networks and with a range of sustainable tourism and recreation access routes.

(from DETR, 2000)

The planning horizon needs to be appropriate to the sector and this will undoubtedly differ depending on the issue under discussion.

5.3 Adaptive management during a gradual process

ICZM is an evolving process, which is not only able to deal with today's problems but also flexible enough to adapt to as yet unforeseen issues that may arise in the future. The EU advocates that good coastal zone planning and management should be based on the 'precautionary principle' – trying to anticipate potential problems and erring on the side of caution if there is uncertainty about whether an action will have a detrimental effect on the coastal environment.

Most of the ICZM initiatives in the UK have been established in the last decade. While this is a relatively short period of time lessons have been learnt and management systems have been adapted as a result. An important pre-requisite is good information provision, shared responsibilities and monitoring so the programme can be adjusted as problems and knowledge evolve.

Shetlands Island Council

The Northern Isles of Scotland have had an advantage over other areas of Scotland and the wider UK in their remit to manage a range of activities in their coastal waters. The 1974 Zetland County Council Act allows Shetland Islands Council (SIC) to regulate development activities through a system of work permits. The Act was used initially to manage the activities of the offshore oil and gas industry, however, it has been applied to a range of coastal and marine works, including recently, to tidal power generation projects.

Historically, the work permit system has not been subject to strategic planning, rather, cases have been assessed on a site by site basis. However, SIC is currently working to integrate the work permit system between departments and into the land use planning system, through the development of a strategic marine plan. It is proposed that this marine plan will, also include the work of the recently initiated Shetland Shellfish Management Organisation, which has powers under the recently established Shetland Shellfish Regulating Order, to put in place byelaws and fishery licensing systems for Shetland waters.

Changes to the management regime in light of lessons learnt can also be seen in individual sectors of coastal activity. One example is in the aquaculture industry in Scotland where the licensing process has moved from considering applications on an individual basis in the 1980's, to the more recent broad approach of setting them in the context of area management agreements. Northern Ireland is developing an ERA package for assessing individual licence applications and assessing the impact of aquaculture on sea lochs.

Area Management Agreements (AMA's)

The Scottish Executive established a tripartite working group, in 1999, to establish Area Management Agreements (AMA's) for sea loch areas. Here, fish farming interests would work together and with local wild fisheries management bodies, to tackle sea lice in farmed fish and bring fish farming, wild fisheries and regulatory interests together. A number of AMAs have since been established in NW Scotland in the Western Isles and Highland Region.

Changes in management systems are most often reactive. They come about when problems with existing arrangements come to light. This was the case with oil spill contingency planning along the Welsh coast which has evolved in light of experience gained in dealing with a number of shipping accidents and associated oil spills.

Oil spill contingency planning in Wales

In the late 1980s, in recognition of the potential risk to the Pembrokeshire and south west Wales coast of oil pollution, the establishment of a Dyfed Oil Pollution Advisory Group (Dyfed OPAG: including representatives from local and central government and the shipping and petroleum industries) gave rise to one of the most extensive consultations on county contingency planning at the time.

Following the *Braer* disaster in Shetland in 1993, and the threat of potential hazards from offshore operations, particularly along the north and mid Wales coast, several other Welsh counties then reviewed their contingency plans, however, it was the *Sea Empress* incident in 1996 that became the greatest catalyst for change in this area of planning. It is widely acknowledged that a more joined-up approach has come about since the incident with Local Authority's appearing to want to take a more proactive role and to develop their own non-statutory contingency plans. Post *Sea Empress*, the Dyfed OPAG has been reorganised, expanded and renamed as the West Wales Oil Pollution Advisory Group (WWOPAG) and now covers the coast of three Unitary Authorities (Ceredigion, Pembrokeshire, Carmarthenshire). In the light of the knowledge and experience gained as a result of the *Sea Empress*, the Dyfed contingency plan, has been completely rewritten, although the rewritten planning document is still in draft form, currently being amended to gain acceptance by all three UAs.

Recommendations and changes of national significance have also followed from the *Sea Empress* oil spill including those following Lord Donaldson's Review into Salvage Intervention and Command and Control (1999: CM 4432) which has resulted in National contingency Exercises. The report of the independent *Sea Empress* Environmental Evaluation Committee (SEEEC), set up by government to evaluate the results of more than 100 related scientific studies, has also provided a wealth of information and knowledge to inform the future development of oil pollution contingency planning.

Clearly planning and management systems at the coast need to be flexible enough to meet these new challenges as they arise.

Insurance for development in flood risk areas

ABI guidance "Development Planning and Flood Risk" sets out the insurance industry perspective on development in flood risk areas. This has been sent to over 400 local planning authorities in response to advice contained in paragraph 32 of Development Planning and Flood Risk (PPG25) that planning authorities should consult with their insurers about the availability of insurance for new developments. This focuses on the need for a risk based adaptive approach for development in coastal and fluvial flood risk areas.

The Insurance Industry in the UK fully endorse the sequential and risk based approach to development planning and permissive decisions. The uncertainties around the impact of climate change nevertheless require a precautionary approach given the risk to life, the aggregations and longevity of assets, and the economic, social and environmental costs that result from coastal and riverine floods. Insurance costs form only part of the total economic costs arising from inappropriate development or insufficiently protected development on the floodplain. Nevertheless since 1990, weather related (flood and storm damage) insurance claims have cost an average of £825 million per annum in the UK, and have risen to levels in excess of £1 billion in four out of the last 15 years

The sustainability and affordability of insurance cover for flood risk will only be ensured by the avoidance of development in high-risk areas, adequate alleviation and mitigation measures where development goes ahead in medium risk areas, and the proper provision and maintenance of drainage systems in areas outside the floodplain. Whilst insurance may still be available in areas of higher risk, the vulnerability of properties to damage and the level of risk may price this beyond the reach of many property owners or occupiers. The impact of new developments on flood risk elsewhere on the floodplain will be a material factor for insurance decisions on existing properties.

5.4 Reflect local specificity

Effective ICZM requires action at many levels. Local solutions that suit local conditions are an essential part of this, and indeed the driving force behind many ICZM initiatives has been a desire to tackle issues of local concern. This not only makes ICZM relevant to local people but also encourages the development of practical solutions.

Sefton Beach Management Plan

The need for a Beach Management Plan for the Sefton coast in north-west England was highlighted in 1990 in a regional coastal issues report. The plan was developed and implemented in April 1993 and will be an important component of the area Coast Management Plan when it is next reviewed. Before April 1993, vehicular access was allowed over the whole of the foreshore between Ainsdale and Southport, a section of coast 9km long and up to 3km out to the waters edge. The size of this area made it impossible to control its use by visitors and, more importantly, to enforce the Seashore Byelaws and collect incidental litter. In recent years more people have had access to a car and this, along with the development of high performance off road recreational vehicles, such as quad and trike motorcycles, had led to the considerable unauthorised and damaging use of the foreshore and dune areas.

The draft beach management plan recommended a corporate and co-ordinated approach to beach management. The Council acted on this by transferring the responsibility for managing the foreshore and related staffing from the Tourism and Attractions Department and amalgamating the Shore Patrol and Lifeguards with the Coast and Countryside Ranger Service as part of the Leisure Services Department. The Coast and Countryside Service has now evolved to include all aspects of beach management including a demand led beach cleansing operation with in-house staff and equipment.

In many cases local forums have been set up to identify issues of concern and prepare coastal management plans and it is through such groups that local factors are reflected in ICZM plans. There are at least a dozen groups which take a broad overview (rather than sector specific) of coastal

management and they deal with issues as wide-ranging as fisheries, aggregate dredging, tourism, coastal development and coast protection.

At a national level, ICZM initiatives need to provide support and guidance in order to ensure a consistent approach, yet allow freedom and flexibility for actions to reflect and respond to local circumstances. Planning policy guidance at regional and national levels provides a framework within which coastal planning and management can reflect local circumstances but the extent to which there has been a local response has been variable.

In England, for example, Regional Development Agencies have been set up to provide coordinated regional economic development and regeneration within England's nine geographic regions. They work within regional planning guidance and local authority development plans which set out the long-term spatial planning context for the region including for coastal areas. The RDAs are therefore ideally placed to advocate locally appropriate solutions for ICZM in their Regional Economic Strategies. A review of these strategies as of November 2002 revealed that coastal issues are mentioned very briefly, if at all. This suggests that the value of ICZM in harnessing the economic potential of the region and the opportunities for enhancing economic and social benefits to a coastal region from ICZM have not been recognised by the RDAs.

One of the most challenging aspects of ICZM plans reflecting local specificity is to ensure there is sufficient support and guidance at a national level at the same time as having enough freedom and flexibility to enable decisions to reflect and respond to local circumstances. This is not an issue which is unique or specific to planning and management of activities in coastal areas but, given the relatively early stage of ICZM in the UK, it is one where a consistent approach has still to be clarified and agreed.

5.5 Work with natural processes

This principle recognises that natural processes and the dynamics of coastal systems are in continual and sometimes sudden flux. It advocates working with, rather than against these natural processes as well as recognising the limits (or carrying capacity) which is imposed as a result. The emphasis given to working with natural processes in the development and review of Shoreline Management Plans shows that this approach has become accepted practice in the UK, at least in the area of coast protection and flood defence.

Research and Development Programmes in England and Wales

The Environment Agency and Defra operate a joint thematic programme of research and development on flood risk management for England and Wales. This promotes communication and co-operation between the two organisations while organising the research within a number of topic areas. The programme as a whole is delivering R&D focussed on the needs of users within the flood risk management industry. The joint programme also allows effective promotion and development of cross cutting issues. One of six themes covered by the programme is fluvial, coastal and estuarine processes. This is considered important as developing and delivering technically successful, efficient and environmentally sustainable flood and coastal defences requires an understanding of the natural processes involved.

The theme specifically aims to promote understanding of cause- and effect linkages between processes that are defined from different sciences and sources and is advancing the understanding and quantifiable description of river, estuary and coastal systems. Through this essential information and building blocks are being provided to make practical progress in design, construction and management of flood and coastal defences. The programme includes estuary morphology, tidal and non-tidal sediments and habitats, and coastal dynamics.

Dynamic processes are essential for the conservation of coastal habitats, but can result in change to other habitats of equal conservation importance. There are also consequences for site boundaries where the designated features are mobile, and implications for flood management where features have conflicting ecological requirements. This raises difficult questions particularly in relation to implementing the EC Birds Directive and Habitats Directive on dynamic coastlines. Possible approaches to resolving these difficulties have been the subject of study through a EC LIFE Nature Programme involving English Nature, Defra, the Environment Agency, and the Natural Environment Research Council.

Living with the Sea LIFE Nature Project

A partnership of organisations responsible for planning and managing the coastline of England came together through this project to develop new ways of tackling the impact of sea level rise and flood and coastal defences on areas identified as important for wildlife. The project aims were to promote understanding of how sea level rise will affect the coast of England over the next 30 to 100 years, create sustainable and integrated coastal management policies and share the challenges and solutions. Seven pilot Coastal Habitat Management Plans (CHaMPS) were developed for coastal areas in eastern and south-eastern England as part of the project. Various approaches to coastal defence and options for creating new habitat were explored through these management plans as a contribution to the local Shoreline Management Plans.

Overall recommendations of the project included the need to manage sites as part of a coherent network to ensure that they can respond to environmental change; to focus on systems, not features, to develop a more innovative approach to habitat compensation arising from flood defence schemes; to integrate data and spatial information to improve the adequacy of use for monitoring and management and, in the long-term, move towards a presumption to restore functional coastlines, linked to a major programme of habitat restoration in more sustainable locations.

As well as looking at the bigger picture, site-specific solutions need to reflect a policy of working with natural processes. Some examples are the 'managed realignment' projects, which have been carried out by breaching or removing seawalls to reduce and offset the scale of loss of intertidal area in some parts of the country. The first demonstration project of this type was carried out in the Blackwater Estuary in 1991, for example at Tollesbury where 22 ha of arable land on the coastal flood plain was inundated allowing intertidal mudflat and saltmarsh to develop on the site. The most recent scheme is at Abbots Hall Farm, also on the Blackwater, where the Essex Wildlife Trust is working in partnership with others to encourage the reversion of more than 80 ha of arable land back to saltmarsh, mudflat, coastal grassland and transition habitat. The tidal wetlands that result will recreate natural coastal defences and which will be a more sustainable solution to the current 3km of sea wall which defends a relatively narrow strip of arable land.

A different type of approach can be seen in Wales where coastal development projects such as the Camarthen Bay Millennium Park have benefited from an awareness of natural processes.

Camarthen Bay Millennium Park

The Llanelli Millennium coastal park, a £27 million Millennium Commission-supported project for 22 km of low-lying coastline along the south Wales coast, is a good example of working with natural processes and how local aspirations and intentions have evolved in light of changed economic circumstances.

The project took advantage of a large area of land in local authority ownership, originally acquired for land reclamation and industrial redevelopment. Once an industrial wasteland, the Park now provides limited residential development, recreational (including boating, cycling, fishing and golfing) and wildlife conservation resources, including the National Wetlands Centre of Wales.

Another aspect of working with natural processes which is being trialled is the reuse of dredge spoil to provide soft coastal projection and retain material within particular coastal systems. Navigational dredging of ports and estuaries in southeast England yields large quantities of material, some of which may be suitable to enhance eroding, sediment-deficient, intertidal margins for the benefit of flood defence and conservation. A trial recharge of an eroding foreshore in the lower Orwell estuary has shown that it is possible to pump unconsolidated cohesive dredgings within a coarse gravel retaining bund, and much is being learnt about behaviour of the combined mud and gravel formation. Some of the benefits observed have been an increase in intertidal flat elevation to help flood defence, significant reduction in wave energy at the seawall toe, a rapid establishment of a diverse and abundant invertebrate fauna and increased use of the area by waders as they are able to feed later into the tidal cycle.

Carrying Capacity Model in Northern Ireland

The shellfish aquaculture industry in Northern Ireland has expanded significantly over the past decade and in 2001 and in 2001 the Queen's University and the Department for Agriculture and Rural Development) published a Shellfish Aquaculture Plan for Northern Ireland. This was the outcome of a five month project with the aim of producing a management plan to promote a sustainable aquaculture industry based on scientifically researched facts. The Plan contains a number of strategic recommendations including one recommending the concept of developing a *carrying capacity model* as a means to predict the ability of coastal environments to support sustainable bivalve mollusc culture and at the same time avoid or minimise ecological impacts.

5.6 Participatory planning

The opportunity for stakeholders to participate in the development, implementation, and review of ICZM is essential to the success of any ICZM programme. The views of stakeholders need to be drawn into the process as such involvement helps to identify real issues, harness local knowledge and build commitment and shared responsibility for the outcomes.

Participatory planning is at the heart of most ICZM initiatives in the UK and is perhaps a reflection of the origin of such initiatives. In the absence of any statutory basis for ICZM, the only way that coastal management ideas were likely to be put into practice, was with the full support of all interested parties. This led to a collaborative approach to ICZM, with a desire to keep stakeholders involved and informed of the process and to benefit from their input. Participation of stakeholders remains the foundation of ICZM initiatives in this country and has been formalised in some cases, such as the development of Shoreline Management Plans.

Defra Shoreline Management Procedural Guidance Note

In 2003, Defra published an interim Shoreline Management Plan Procedural Guidance document which had been developed using industry-wide expertise to establish the most appropriate, best practice methodologies to deliver the SMPs. Stakeholders are considered to be all those with an interest in the preparation of a shoreline management plan or affected by the policies produced (including agencies, authorities, organisations and private persons).

The following guiding principles for a Stakeholder Engagement Strategy are set out in the document;

- ◆ Inclusivity.
- ◆ The initiation of the SMP process should indicate whether a participatory or a consultative approach is adopted and outline the extent of wider community involvement.
- ◆ Transparency. Timely, accurate, comprehensive and accessible recording of representations, decisions and their justification is required to track decisions. The strategy should indicate who has responsibility for this.
- ◆ Appropriateness, The range of stakeholders, their level of involvement and likely knowledge, the potential for differences of view and the opportunity for awareness raising will influence the approach adopted
- ◆ Clarity. The roles of different "players", including where final decision-making lies, must be made clear in the strategy.
- ◆ Comprehensiveness. The strategy should cover all stages, including plan dissemination and arrangements for reporting on stakeholder engagement.

There are many different models for participatory planning in ICZM. The establishment of coastal forums has been particularly widespread with examples from all around the UK. An important issue in relation to participatory planning is how to encourage participation and, at the same time as ensure that coastal forums do not reach a size or structure that makes them ineffective. This has been tackled in a variety of ways.

Loughs Agency Advisory Forum

The Loughs Agency in Northern Ireland operates an Advisory Forum with representatives from tourism, forestry, farming, salmon fishermen and conservation group interests. This forum has representatives from most sectors with interests in both Loughs (Foyle and Carlingford). The forum has been in operation for more than a year and meets every three months. The forum members have their own agenda at such meetings and also have focus groups that look at particular issues. Recently focus groups have looked at the proposed wind farm development at Tunes Plateau, salmon management, shellfish farming and also marine leisure and tourism.

Coastal forums have been successful in providing an opportunity for all interested parties to get involved in ICZM initiatives. This involvement can range from overseeing or participating in projects to helping develop management solutions to issues of concern. Two examples of the sort of work undertaken are given below.

Pembrokeshire Marine Code

In response to a marked increase in wildlife boat operators along the Pembrokeshire coast over the last few years along stretches of coast of high nature conservation value, a pilot Pembrokeshire Marine Code has recently been drawn up to promote a sustainable approach to commercial boating activities. This voluntary behavioural code has been developed with commercial operators and conservation organisations and has been facilitated by its lead partner, the Pembrokeshire Coastal Forum. The Code is currently being piloted by commercial boat operators in advance of discussions with the general public next year. The code includes three species codes (for seabirds, seals and cetaceans), site specific zoning codes and maps for all the offshore islands and stretches of the mainland coast.

Despite the success of coastal forums in creating opportunities for involvement in ICZM various studies have identified a number of sector interests that are difficult to bring into the forums and initiatives. Most often these appear to be economic development and tourism sectors, with stated reasons including that the benefits are not obvious and that other areas of work, where they have statutory responsibilities, must have a higher priority. The fisheries sector has been brought into fisheries initiatives for example by the producers organisations and local fishery groups however these are mostly bottom-up initiatives and there are still calls for greater inclusivity of such groups in regional and sub-regional initiatives.

At the other end of the spectrum, "consultation fatigue" may also be a problem because of the large number of initiatives to get involved in, a limited pool of people with the relevant expertise, and many committees or sub-committees. The situation in Strangford Lough is one example of such complexity.

Strangford Lough Management Scheme

The Strangford Lough Management Scheme was formally launched on 8th October 2001. The management scheme is intended to safeguard the conservation status of those features for which Strangford Lough has been selected as a candidate Special Area of Conservation (SAC) and classified a Special Protection Area (SPA). The scheme sets the framework through which activities will be managed, either voluntarily or through regulation, so as to achieve the conservation objectives of the European Marine site. Conservation objectives have been identified by the Department of the Environment (DOENI) and are at the core of the management scheme.

Statutory authorities have a legal responsibility to ensure that these objectives are met. This primarily applies to the Environment and Heritage Service (EHS) and Planning Service of the DOE, Fisheries Division of the Department of Agriculture and Rural Development (DARD), Ards Borough Council and Down District Council. The National Trust has an important practical and role in view of its conservation and wildlife monitoring work and its extensive ownership within the Lough.

The Strangford Lough Management Advisory Committee (representing local user and specialist interests), is closely involved in the management scheme in an advisory capacity and has initiated many related projects.

5.7 Support and involvement of all relevant administrative bodies

The support and involvement of relevant administrative bodies is another essential element of successful ICZM because administrative policies, programmes and plans set the context for management at the coast. These bodies may have responsibilities at local, regional or national level and may deal with European or wider international matters that help to deliver ICZM and can therefore provide a nested set of planning and management actions at different scales.

This principle also stresses the need for support and links between sectors of administration and co-ordination of policies as well as ensuring that legal instruments which influence the coastal zone are mutually compatible and coherent.

Severn Estuary Chairs Group and Memorandum of Understanding

The Severn Estuary is unique. In response to perceived concern over duplication of estuary-wide management efforts and the need to improve communication between such groups, an Estuary Chairs Group was established for the Severn Estuary. This Group is attempting to co-ordinate efforts between the following key estuary-wide groups:

- ◆ Severn Estuary Partnership (SEP).
- ◆ Association of Severn Estuary Relevant Authorities (ASERA) – with a statutory function to produce a scheme of management for the Severn Estuary SPA.
- ◆ North Devon and Somerset Coastal Group– responsible for producing a SMP.
- ◆ Severn Estuary Coastal Group - responsible for producing a SMP.
- ◆ Bristol Channel Counter Pollution Association; and
- ◆ Standing Conference of Severnside Local Authorities (SCOSLA) – an estuary-wide Local Authorities group considering planning and development issues.

These groups have recently signed a 'Memorandum of Understanding,' providing the Chairs with a mechanism for further integration and a new approach to ICZM on the Severn.

In other cases, existing statutory powers have provided the foundation for the support and involvement of administrative bodies in delivering ICZM. This is the case with the Loughs Agency which is concerned with fisheries management of Lough Foyle and Carlingford Lough which straddle the borders of Northern Ireland and the Republic of Ireland.

Loughs Agency Fisheries Management

The Loughs Agency in Northern Ireland was initially the Foyle Fisheries Commission, which was established in 1952 to manage salmonid fisheries within Lough Foyle. This Commission had judicial and executive powers on both sides of the border. The Loughs Agency is now an agency of the Foyle Carlingford and Irish Lights Commission, which was established following the Good Friday Agreement. It has a Board with 12 members who in exercising the functions of the body are required to act in accordance with, any directions given by the North South Ministerial Council, to whom it also reports. The Commission's sponsoring Departments are the Department of Agriculture and Rural Development in Northern Ireland and the Department of the Communications, Marine and Natural Resources in the Republic of Ireland.

The involvement of administrative bodies in ICZM is most often driven by the need to resolve a particular problem and may therefore be sector specific. The challenge is to set these matters into a broader context of ICZM using the issue as a focus for practical action. One example of where this is occurring is on the Exe estuary.

Devon Crab Tiling Forum

The Devon Crab Tiling Forum was convened by Devon Sea Fisheries Committee and Estuary Officers in response to concerns over increasing crab tiling activity. In the context of increasing interest in and regulation of the Exe Estuary's resources, typical concerns about crab tiling have arisen (removal of crabs, disturbance of foreshore muds, presence/movement of collectors, proximity to other users) especially since the designation of the area as a Special Area of Conservation.

The Devon Crab Tiling Forum was established to find a way of operating a sustainable crab fishery without the need for rigid regulation of crab tiling. Involving all users of the Exe Estuary, in Devon at all levels, the Forum has promoted the adoption of a Code of Practice. A general code of conduct has also been prepared and provides a starting point for a broader Exe Estuary Code of Conduct for users.

A more proactive approach can be seen in the work of the Scottish Coastal Archaeological and Paleo-environmental Trust.

Scottish Archaeological and Palaeo-environmental Trust

The Scottish Coastal Archaeological and Paleo-environmental (SCAPE) Trust aims to encourage and co-ordinate research into coastal archaeology and to enhance the enjoyment of all in the heritage of the coastline. It provides a forum for discussion of coastal archaeological as well as advising and educating on the issues affecting coastal archaeology. SCAPE acts as an advocate for coastal archaeology in development of guidance for coastal planning.

The work of SCAPE is recognised and supported of the Scottish Executive and Historic Scotland, while recent work to map and assess archaeological heritage in Scotland's coastal zone was grant aided by the Carnegie Trust. SCAPE is one of the two organisations that runs the successful shorewatch project, which uses Scottish coastal communities to monitor erosion of coastal archaeological sites.

5.8 Use of a combination of instruments

This principle recognises the need for a mix of instruments to deliver ICZM. They include legal and economic instruments, voluntary agreements, information provision, technological solutions, research and education. In such circumstances it is also clear that there should be coherence between legal instruments and administrative objectives and between planning and management..

Shetland Islands Council

In Shetland the strategic marine plan currently being developed by Shetland Islands Council, will aim to integrate the planning and management systems associated with land use planning, the system for granting permits for a range of industrial and engineering activities in Shetland's coastal waters, and management of Shetland's inshore shellfisheries. Achievement of this aim will involve the integration and co-ordinated use of land use planning legislation and associated guidance; the Zetland Count Council Act of 1974; and the 2002 Shetland Shellfish Management Order.

An example of an organisation using a varied combination of instruments to implement ICZM at a regional level is the Norfolk Coast Partnership (NCP) who have developed a Visitor Management Zoning Scheme for the AONB.

Norfolk Coast Partnership

The Norfolk Coast Partnership (NCP) was set up in 1991 to facilitate integrated management of the Norfolk Coast AONB and address the problems associated with increasing visitor pressures experienced within the AONB. All organisations and partners have signed up to the scheme which is working effectively zoning areas of the North Norfolk coast are managed with a combination of instrument based on their sensitivity to visitor pressures.

One of the difficulties faced by coastal managers is the bringing together the plethora of initiatives, and instruments, with different objectives and agendas into a coherent ICZM plan. The scale of the task is particularly well illustrated in the Humber which has 38 Relevant Authorities. The Humber Estuary Management Strategy, has been identified as proving a useful frameworks for the Humber region despite its recognised focus on water quality.

The complexity of the current consenting regime in the marine environment has been recognised by Government and has been subject to review. The findings of this review are due to be published in 2004. At the same time, there are the beginnings of a debate on the idea of marine spatial planning for UK waters (see Section 5.9). If this were to be developed the linkage between bodies and systems at the coast will be critical.

5.9 Obstacles to ICZM in the UK

5.9.1 Implementation of ICZM principles

The Stocktake reveals a mixed and inconsistent picture on implementation of the principles of ICZM, as set out by the European Commission. There are examples of good practice but, at the same time, it is clear that some of the principles are being implemented more widely than others. The most common conclusion from the workshops held during the Stocktake was that there is no consistency in the effective implementation of ICZM principles across the UK. Key reasons given for this included amongst others, lack of long term funding and problems with implementing current legislation.

The principle that appeared to be implemented best was that of "local specificity", and many examples were cited of successful local actions or partnerships on the coast established to address a specific issue. Considerable effort has been put into facilitating and encouraging the involvement of all parties in coastal planning and management in the last decade. This approach is now widespread and an integral part of decision making at all levels from local initiatives, such as coastal projects, through to Government consultations on policy direction.

Long-term planning for ICZM is probably the weakest area. Although standard practice in spatial planning of some sectoral marine activities such as licensing areas for oil and gas extraction and offshore renewable energy it has been absent until recently for the UK as a whole. The current programme of work is set to change this as the Stocktake is completed and national strategies are prepared. In Scotland, for example, where work is well advanced on ideas for a national strategy, the Scottish Coastal Forum are looking beyond the short-to-medium term to develop an influential vision for the wise use of Scotland's coasts and inshore waters based on a 25-year forward view.

5.9.2 Role of ICZM in relation to marine spatial planning

One key gap in successful ICZM implementation in the UK is that there is no effective mechanism for planning across the land-sea margin. In recent years the desire for better integration and more effective management of the conflicting pressures and demands placed on the marine environment has led international bodies and national governments to consider the potential of "marine spatial planning". At the 5th North Sea Conference, held in 2002, Ministers agreed that strengthening of the spatial planning process of North Sea States related to the marine environment was required and invited OSPAR to take forward a number of initiatives on this subject. The European Commission is also promoting the idea of marine spatial planning in its developing strategy for the marine environment.

The UK is now contributing to this work at a regional and national level as part of a programme of work on integrated stewardship. This includes exploring how co-ordination between Departments might be improved in the issuing of individual consents for activities that impact on the seabed, and reviewing legislation affecting development in the coastal area with a view to simplifying the regulatory system and protecting the marine environment. The findings of this review are likely to refer to marine spatial planning and are due to be published in the near future.

The Stocktake findings suggest that better spatial planning linking land and sea will benefit long term management of marine resources. In Scotland, this issue is being reviewed by RSPB/RTPI as a specific issue ^{5.1}. A similar exercise is being undertaken for the Irish Sea Pilot region ^{5.2}.

Marine spatial planning is seen as a way of improving decision-making and delivering a more ecosystem-based approach to management of marine activities. In essence, it is a plan-led framework that enables integrated, forward-looking, consistent, decision-making on the use of the sea. There are clearly parallels with ICZM. Because of this, and the potential geographical overlap of the two processes, the relationship and respective roles of these two systems (and the forthcoming River Basin Management Plans under the EC Water Framework Directive) including whether and how ICZM might exist, needs to be clarified. This was raised as a significant issue during the Stocktake consultations and workshops. Much remains to be done before such clarification is possible, not least because discussions on the whole approach and detailed objectives and elements of any system of marine spatial planning have still to be agreed.

The role of ICZM in relation to marine spatial planning may also differ across the UK depending on the still to be determined future responsibilities of the devolved administrations with regard to development control and management of activities in territorial waters if marine spatial planning were to become UK policy. There has already been some discussion of this issue in Scotland and Wales. 'People, Places, Futures - The Wales Spatial Plan' was published as a consultation document by the Welsh Assembly Government in 2003. While this is limited to the land area of Wales, there is interest in some quarters for it to be extended to include the territorial waters off the coast of Wales. In Scotland, a seminar to discuss the potential of extending local authority jurisdiction offshore and the issue of marine spatial planning was held in 2002. There was support for the extension of planning control to the marine environment and a need for marine spatial planning as an important tool for resource management at the same time as a recognition that much of the detail remains to be developed. In Northern Ireland, the Regional Development Strategy for Northern Ireland 2025, which incorporates the Northern Ireland Spatial Development Strategy, could also cover this issue.

Discussions are therefore underway on how any future system of marine spatial planning might mesh in with the existing land use planning systems in the different countries. The recently concluded pilot study on a marine nature conservation framework for the Irish Sea has also pointed to the potential value of marine spatial planning ^{5.2}. There may therefore be an opportunity for the pilot to be extended to explore the role of ICZM as the linking mechanism for terrestrial and marine planning in an area of sea that borders five different land use planning regimes.

5.9.3 Communication needs for ICZM

A current overlapping issue that is stifling successful ICZM is effective communication at all levels. With such a range of consultation efforts currently taking place on environmental and sustainable

development related issues, standardising messages on ICZM or more sectoral issues is to a degree generating confusion on what ICZM actually is about. Good communication is fundamental to the successful integration of coastal policies, programmes and management actions, and for the successful involvement in ICZM of different sectoral interests, government and other stakeholders, from local to UK level.

Many aspects of the communication needs for ICZM were raised during the stocktake workshops. These ranged from the very basic need to clearly articulate what ICZM is about and the benefits it can bring, to suggesting possible administrative changes to improve communication. The way ICZM fits in with other government policies (eg. ecosystem based approach, sustainable development), initiatives (eg. marine stewardship), requirements (eg. EU Water Framework Directive), and developing ideas (eg. marine spatial planning and marine data management), should be part of this communication task.

Across the different workshops, there was broad agreement that ICZM needs to be “championed” by central government. In general, attendees supported the establishment of a co-ordinating body for ICZM responsible for overseeing ICZM.

Common to all workshop events was the observation that communication between stakeholders at the local level is currently sound with many good examples of interaction at this level. The communication link between local level and regional levels appears to be improving, but is variable across the UK. Interaction between these levels and government departments could be assisted by clarification of the roles of individuals and organisations. How ICZM supports other government policies (eg. ecosystem approach), initiatives (eg: marine stewardship), requirements (eg. Water Framework Directive), and developing ideas (eg: marine spatial planning) should be part of this task.

The case for ICZM has still to be made clearly to the private and commercial sectors. Engaging business continues to remain a challenge, most probably because the benefits are not clear and because it is difficult to demonstrate immediate economic return. It was generally agreed that, in order to improve integration, ICZM needs to be incentive based. A set of tangible benefits (social/environmental and economic) need to be clearly communicated and doing this effectively will require considerable commitment of time and effort.

5.9.4 Role of Partnerships/Local Action

There has been considerable interest in setting up coastal forums and partnerships to promote, develop and deliver ICZM on the ground. Their precise role varies depending on the level at which they operate. For example, at a local level, much of the partnership work is directed at resolving conflicts and preparing local management plans. At a national level discussions are of a more strategic nature and concerned with policy direction.

Some of the earliest work was conservation led, but support for partnerships now comes from a much broad group of stakeholders such as local authorities (who have both helped to fund and “hosted” partnership project officers), coastal and marine industries (ports, oil companies, sea fisheries committees), and local residents. A number of partnerships also benefited from taking part in the European ICZM Demonstration programme and, in the case of the Severn Estuary Partnership, continue to get some funding from the European Union (in this case through the INTERREG programme).

The Stocktake findings clearly suggest that local level ICZM worked best where there were clear conflicts to be resolved. It also suggests that not every inch of the UK coast needs ICZM to be set up. Where coastal issues needed to be addressed, the workshops and questionnaire returns showed considerable support for partnerships as a way of involving stakeholders in ICZM, facilitating exchange of information, breaking down sectoral barriers and moving ICZM forward at a local level. Long-term funding and resourcing to support their work and support staff, was probably the greatest issue of concern, as the majority are ‘project’ rather than ‘core’ funded. While there are clearly a variety of source of potential funding, some guidance on what is available would be useful for these groups. These partnerships, however, need (in the future) to better demonstrate more transparent and democratic methods for selection of organisations and individuals that truly reflect the needs of the coastal area.

Exchanging information on funding opportunities and other issues of interests to all coastal partnerships is an effective way of supporting their work and is being provided by networking groups such as CoastNet and the national coastal forums in Scotland and Wales, through newsletters, websites, commissioned research and workshops. National partnerships could also be used to help prepare and consult on the national ICZM strategies that need to be developed in the coming year.

5.9.5 Drivers influencing ICZM in the UK

A number of drivers can influence the likely future direction of ICZM in the UK. Some of these are recent or proposed legislative changes, but there are also existing programmes and policies such as the commitments made in the UK Marine Stewardship report.

The findings of the Stocktake project suggest that ICZM could help to deliver some of the requirements of the WFD at the coast. For example, the data held by ICZM/EM Plans/Partnerships could be used, as could the consultation and consensus approach and the networks of communication that have been developed over a number of years. Not all of the issues that need to be addressed by ICZM are relevant to the Directive or River Basin Management Plans (RBMP) but RBMP principles and the Programme of Measures could be brought into ICZM plans.

Existing models could also be used to provide a basis for greater integration such as AONB Plans, Marine SAC Single Schemes of Management, Shoreline Management Plans and Local Strategic Partnerships.

Initiatives at a UK level that need to be taken into consideration include:

- ◆ The outcome of the Government's review of development in coastal and marine waters which is due to be published shortly.
- ◆ The outcome of the Government's Review of Marine Nature Conservation and the findings from the accompanying Irish Sea Pilot Study.
- ◆ The development of the ecosystem approach to management and planning of activities at the coast as set out in the Marine Stewardship Report.
- ◆ Progress on European and international agreements such as the EU marine strategy, the OSPAR Convention, and the Convention of Biological Diversity.
- ◆ Implementation of the EU Water Framework Directive which offers opportunities to employ the communication networks established by coastal forums when consulting on draft river basin management plans.
- ◆ Programme of offshore renewable development and the implementation of the Directive of Strategic Environmental Assessment.

There are also initiatives at a national level that are set to influence future action on ICZM.

In England these include:

- ◆ The development of regional spatial strategies and the expected revision of planning policy guidance for the coast.
- ◆ The study by the Inter-Agency Committee on Marine Science and Technology into integrating marine and coastal data.

In Scotland these include:

- ◆ The strategy produced by the Scottish Coastal Forum expected in 2004.
- ◆ Scottish Sustainable Marine Environment Phase 2 Project starting in 2004.
- ◆ The development of a Strategic Framework for the Marine Environment by the Scottish Executive.

In Wales these include:

- ◆ The development of second generation shoreline management plans around the Welsh coast.
- ◆ The work of the Wales Coastal and Marine Partnership.

- ◆ The development and implementation of a Spatial Plan for Wales.

In Northern Ireland these include:

- ◆ Implementation of the Regional Spatial Strategy for Northern Ireland.
- ◆ Establishment of a working and effective Coastal Forum for Northern Ireland.

5.10 The Next Steps

The current coastal management framework is spread across many organisations and tends to operate on a sectoral basis. This provides clarity to specific user groups but comes at a risk of not achieving the bigger picture and integrating the requirements of all activities at the coast.

The Stocktake findings suggest that even without an integrated national framework, local ICZM initiatives have developed around the UK to address specific issues. This local commitment has been driven by the need to find a practical way of resolving conflicts in the coastal zone. However, this progress has been un-coordinated and many initiatives have been constrained by the lack of long term resources.

This need for a more secure funding arrangement to support ICZM is a key message of the Stocktake. A second message is that more coastal stakeholders at all levels – national, regional and local - need to engage in ICZM activity.

This report completes the first stage in the UK's implementation of the EU Recommendation on ICZM. It provides a stocktake of the current framework for coastal management: the institutions, legislation and stakeholders concerned. It is hoped that it will steer the way forward in the next stage of implementation, the development of national strategies for ICZM.

References

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5.2) Tyldesley, D and Associates, (2004) *Coastal and Marine Spatial Planning Framework for the Irish Sea Pilot Project.*