

National Approaches to Coastal Management

National approaches to coastal management are dependent on a number of factors. Generally speaking the role of national Government increases as management moves further offshore predominantly because it is national Government who is responsible for implementing and enforcing international legal requirements beyond the territorial seas. This is because, for strategic reasons, the control of the sea is vested in central Government while land-based activities are overseen by regional or local authorities. These authorities ultimately respond and comply with a central Government department which, it could be argued, means that national Government has ultimate responsibility for all activities. In the majority of coastal States therefore, it is the national Government which provides the steer for integrated coastal management. They provide leadership, guidance and often funding to local governments who are more likely to be concerned with day-to-day management of local areas of coast. While coastal management of any description is not dependent solely on legislation, it is an inherent consideration in the development and success of any management programme. This is not only because of legal obligations but also because the powers and duties of many public and private bodies, as well as individuals, are defined by law. Obviously, in order to comply with and fulfil regional and international obligations paramount responsibility rests with the national Government. A national government may decide to have a dedicated ICM agency or authority or may instead decide to improve coordination between its existing institutional structures. There are at least three different legal approaches which national Governments can take when approaching integrated coastal management:

- Non-statutory mechanisms for coordination of existing laws, policies and institutions
- Statutory framework for coordination of existing laws, policies and institutions
- New legislation, policies and/or institutional structures

The approach taken by any national Government will depend on the level of capacity the Government already has in place. Most Governments already have a Department of the Environment, or similar, which is responsible for environmental protection and regulation in that country. The problem arising here is that such traditional departments are again based on the sectoral approach. In Ireland, for example, the Department of the Environment has jurisdiction over only the terrestrial element of the coastal zone, while the Department of Communications, Marine & Natural Resources has jurisdiction seaward of the High Water Mark. In contrast, the British Department for Environment, Food and Rural Affairs not only has jurisdiction over the terrestrial element of the coastal zone but also over the wider marine environment through various national and international legal mechanisms, for example, the OSPAR convention.

If a nation already has strong legislation and policies covering the environment and the coastal zone in particular it may decide to attempt to coordinate existing laws, policies and institutions (1 above). This could involve creating a high-level forum where all relevant sectors are represented and decisions are taken jointly. To an extent this has been the approach taken by Britain through its Planning Policy Statements and Guidance Notes which are developed by key Government departments to provide guidance to local authorities and other interested parties on policies and the operation of the planning system. Planning Policy Guidance 20, for example, deals specifically with coastal planning and is cross-referenced to other guidance notes which may also be of relevance. The advantage of this

non-statutory approach is obviously the fact that no new laws have to be enacted. It is also flexible in that it can be reviewed quickly given that it does not have to go through the legal drafting process. This approach however does not address any problems which may exist in the current system. In addition the fact that cooperation is voluntary also has the potential to cause problems. Internationally, Australia has followed this approach and is discussed in greater detail below.

Other countries have formalised their national approach to integrated coastal management through a statutory approach. Perhaps the best known example of this type of approach is in the United States and its federal Coastal Management Programme which is based on the Coastal Zone Management Act of 1972. This is described in greater detail below.

Essentially statutory coastal management initiatives have specific coastal management legislation which may or may not include a formal legal definition of the coastal zone. In the United States programme the adoption of such a definition is left to the discretion of the individual state. A statutory framework also provides the general principles on which any coastal management plan should be based and ensures that the appropriate finance is available. Generally when a statutory national approach is taken a lead agency is also established. The purpose of such an agency is to provide an overall authority for the coastal management programme which has the authority to approve plans, provide finance and general guidance.

In the context of the United States, while a statutory approach has been pursued no lead agency exists. The programme is a federal-State partnership and is administered at the federal level by the Coastal Programs Division (CPD) within NOAA's Office of Ocean and Coastal Resource Management (OCRM). The

Federal Consistency provision is a major incentive for States to join the national coastal management programme and is a powerful tool that States use to manage coastal uses and resources and to facilitate cooperation and coordination with Federal agencies. There are many advantages to the statutory approach in that it gives legal status to ICM and associated coastal management plans. However one criticism of this approach is the possibility that it adds another level of law and bureaucracy to an already complex management framework. In addition it may be difficult for small and/or developing countries to administer such an over-arching approach given the range of resources required.

The third approach is similar to that of the second but would have an executive function as well as an advisory role. This would help achieve integrated decision-making at all levels. New Zealand has taken this approach and has radically changed its administrative structure to take these changes into account. In essence, the New Zealand resource Management Act abolished a number of institutions which had regulatory responsibilities in the coastal zone. All powers exercised by the abolished authorities were then transferred to the Department of Conservation in association with the local authorities. A national coastal policy now exists along with a system of coastal plans. While this approach may provide a solution to most of the traditional problems experienced in the coastal zone, it requires major legal and administrative changes therefore the cost is increased. The fact that the coastal zone is not seen as a priority issue on the political agenda of coastal States also makes this option somewhat unrealistic.

A number of recurrent themes run through the various national approaches already in existence. One is the lack of adequate funding. While the U.S. approach addresses this it is not feasible for all countries or European Member States. Bureaucracy and inflexibility of the administrative system is also a determining factor in national approaches to integrated coastal management.

Institutional capacity and cooperation is also essential in successful management but is one of the most difficult to achieve. Again, the US approach tries to overcome this through legislative provisions.

Institutional Arrangements

The sharp land-sea divide traditionally visible in the management of coastal area has obvious knock-on effects for the administration and institutional bodies regulating and managing the coastal zone. Usually this divide is centred on the position of an “imaginary” line, such as the low water mark in the U.K. and high water mark in Ireland. This sharp division is especially evident with respect to Government departments. Local, or non-governmental organisations, are more likely to view the coastal zone as an entity encompassing all physical and biological elements above and below such a boundary line. There is also a strong sectoral basis to the structure of administration. This may be, in part, a result of the traditional land-sea divide. In the European Union, many Member States have narrow legal concepts of the coast, which originated in the context of land ownership, and are now sometimes used for administrative purposes. Rigorous geographic boundaries like those mentioned above are not suitable for integrated coastal zone management. Where boundaries are inflexible management becomes more difficult. In Ireland, for example, the high water mark is virtually sacrosanct being the dividing line between local authority jurisdiction and national government jurisdiction as well as the line upon which many management functions are divided (e.g. mapping agency, land registration). The degree of horizontal and vertical integration between various levels of Government as well as different Government departments and agencies is also an essential consideration in integrated coastal management. Integrated coastal management must involve and develop mechanisms which allow for coordination of all departments and institutions involved in coastal and marine issues.

Government departments are not structured in a way conducive to successful integrated coastal management. They tend to be divided into various divisions and sub-divisions. While various publications explicitly state the responsibilities of each division, these do not always transpire in practice. The degree of interaction between various Government Departments, and other institutions involved in CZM, varies considerably. This can lead to poor results in terms of sustainably managing the coastal zone, as each institution seeks to advance its interests without adequate reference to the other regulatory and development institutions, or to any overall policy. In most coastal management programmes one central Government department takes the lead however this does not mean that only one department is involved. In the U.S.A, for example, the Office of Ocean and Coastal Resources Management (OCRM) of NOAA has primary responsibility for implementing the federal Coastal Zone Management Act but a number of other Departments and Government agencies are also involved. These are shown in Table 3.2. In the majority of coastal States, however, there are few formal requirements for cross-departmental co-operation. This is true both within Government departments (vertical) and also between Government departments (horizontal).

To be successful coastal management should be identifiable within a Government's institutional system. If it is then it is more likely that coastal management is both high on the political agenda and also has the relevant structures in place for its successful delivery. With this in mind, however, it is also important to note that there is no "best" institutional arrangement for managing coastal resources and, arguably, the appropriateness of any institutional arrangement can only be judged by the effectiveness and efficiency with which coastal use conflicts are resolved.

Table 1: U.S. Federal agencies with responsibilities for coastal zone management Source: Adapted from Beatley et al., 2002

Agency	Lead Department	Primary coastal management activities	Authorizing legislation
OCRM	Department of Commerce	Implements federal coastal management programme and aids States in preparing their coastal management plans	Coastal Zone Management Act 1972
Army Corps of Engineers	Executive Office, Chief of Engineers	Funds and advices on coastal protection works, beach nourishment and dredging	Flood Control Acts, 1917-1968; Clean Water Act
Environmental Protection Agency	Executive Agency, head appointed by President	Has various responsibilities in relation to pollution control in association with NOAA	Coastal Zone Management Act; Clean Water Act
Federal Emergency Management Agency (FEMA)	Department of Homeland Security	Implements National Flood Insurance Programme and provides assistance in response to disasters	National Flood Insurance Act; Flood Disaster Protection Act and Disaster Mitigation Act 2000
National Parks Service	Department of the Interior	Manages National Seashores and Barrier Islands	Site-specific legislation and Coastal Barrier Resources Act 1982.
Fish and Wildlife Service	Department of the Interior	Manages and enforces fish and wildlife legislation and recovery plans. Also manages national wildlife refuges	Endangered Species Act 1973
National Marine Fisheries Service	Department of the Interior	Manages and protects marine wildlife and fisheries	Marine Mammal Protection Act 1972-84

The challenge of Integrated Coastal Zone Management, therefore, is to devise institutional or procedural mechanisms that can coordinate not only the activities exercised in the coastal zone but also the many Government departments, organisations and agencies involved in regulating them. Any changes to the institutional framework operating in any particular country must take the various social, cultural and political factors into account and benefit from them.

The adoption of the Resource Management Act in New Zealand, for example, attempted to incorporate and harmonise Maori interests into the legal and

institutional framework. The need to include social, cultural and political factors into account is where one of the European Recommendation principles comes into play: local specificity. The best administrative system for coastal management in Ireland, for example, may not work to the same extent in another European country or elsewhere in the world. Not only will levels of Government involved vary, but the degree of integration both horizontally and vertically also varies. As previously stated, responsibilities for coastal management are also divided horizontally (within Government departments) and vertically (between Government departments). Procedures used by these various institutions also vary greatly, even though many are working from a common legislative base.

Institutional arrangements for coastal management must have a number of characteristics in order to be successful. These include: having an executive function, influence on all other responsible decision-making authorities, be credible to all stakeholders and capable of making informed decisions including those of a technical and/or scientific nature.

Among the most common institutional arrangements for coastal management are

1. the creation of a new authority
2. the naming of a lead agency or
3. the creation of an inter-governmental/agency panel.

Agenda 21 suggests that coastal States consider establishing, or strengthening, appropriate coordinating mechanisms, such as a high-level inter-departmental body, for integrated coastal and marine management. Of the three options listed all have various advantages and disadvantages. The creation a new authority may seem like a panacea but it will have strong implications for budgets and staffing as well as other resources. The naming of a lead agency has been successful in some countries but the usual problem with this approach is that it is

a lead only in name and not in practice. The creation of an inter-governmental panel is a good approach but, as stated previously, a certain degree of political will has to be in place in order for such a development to occur.

For comparative purposes integrated coastal zone management in six other countries is examined below. Three of the states are federal (U.S.A; Canada and Australia) and four are unitary (New Zealand, Philippines, UK and Belize) which has significant implications for their governance structure as well as the way in which coastal management programmes have been implemented. The United States of America has the longest-running coastal management programmes in existence. Canada and Australia are countries which have both had to address transnational and transboundary issues. New Zealand has taken a somewhat radical approach by reforming its legislative and administrative system.



Prior to 1970 many U.S. States had legislation relating to coastal management dating back several decades, but others did not. The complexity of coastal management issues, plus the need for consistency among states, argued strongly for decisive federal action. Consequently, in 1972 the U.S. Congress passed the Coastal Zone Management Act (CZMA). This established a national policy to “preserve, protect, develop, and where possible, to restore or enhance, the resources of the Nation's coastal zone for this and succeeding generations” and to “encourage and assist the states to exercise effectively their responsibilities in the coastal zone through the development and implementation of management programmes to achieve wise use of the land and water resources of the coastal zone...” (Section 303, [1] & [2], CZMA 1972). The legislation contains a broad definition of the coastal zone, which is based on the mutual influence of land and water. This generally includes coastal waters out to three miles offshore, but the landward boundary is more flexible, and applies to areas where control is needed to protect the sea from the effects of land-based activities or to deal with the consequences of sea level rise.

An important part of this Act is the requirement for federal consistency, that is, federal actions that are reasonably likely to affect any land or water use or natural resource of the coastal zone must be consistent with the enforceable policies of a coastal state's or territory's federally approved coastal management programme.

Federal actions include:

- direct federal actions - activities and development projects performed by a federal agency, or a contractor for the benefit of a federal agency;
- indirect federal actions - activities not performed by a federal agency but requiring federal permits or licences or other forms of federal approval, and federal financial assistance to states, territories and local governments.

The objective is to ensure that federal agencies and applicants for federal approvals and funding adequately consider and comply with state coastal management programmes. This is a very useful provision which has worked effectively in ensuring good intergovernmental coordination of integrated coastal management. In 1990, Congress created a new programme under the Coastal Zone Management Act, called the Coastal Zone Enhancement Programme. This programme provides incentives for states and territories to make changes in any of eight areas of national significance. While state participation in the National Coastal Management Plan is voluntary, 34 coastal states and six island territories currently participate.

Participation is good, firstly, because of the provision of funds by federal government for the development and implementation of approved coastal zone management plans. Funding has traditionally been highlighted as one of the factors which have hindered European and national progress on integrated coastal management. Secondly is the fact that once a state CZM programme is approved, federal government activities and those which it licenses or permits must be consistent with the plan.

One of the major criticisms of the U.S. approach to CZM is that there is no single coastal zone agency or national strategy to guide federal actions or programmes. Another possible problem is that the CZMA does not try to impose a single uniform CZM model. States are able to tailor plans to meet their own needs whilst meeting broad federal objectives. This results in a high degree of variation in state plans despite being federally reviewed every 2-3 years. If European Member States were to approach integrated coastal management in this way they would meet a number of the principles of ICZM included in the Recommendation, namely reflecting local specificity, taking both a broad and a

long-term perspective as well as participatory planning and involvement of all relevant administrative bodies.

A more recent development was the enacting of the Oceans Act 2000 which relates to ocean management. This came about in response to increased concerns regarding the pressures and opportunities regarding marine resource use. The Act provides a legislative basis for the president to appoint a U.S. Commission on Ocean Policy made up of 16 independent experts in a range of maritime disciplines (Section 2327, Oceans Act). The Commission's report is elaborate and makes more than 200 recommendations regarding ocean stewardship, changes to the current coastal zone management programme, the establishment of monitoring programmes and public education on the values of ocean management and ocean stewardship. With respect to the current coastal management programme the Commission recommended that Congress "reauthorize the Coastal Zone Management Act (CZMA) to strengthen the planning and coordination capabilities of coastal states and enable them to incorporate a coastal watershed focus and more effectively manage growth. Amendments should include requirements for resource assessments, the development of measurable goals and performance measures, improved programme evaluations, incentives for good performance and disincentives for inaction, and expanded boundaries that include coastal watersheds". All 200 recommendations were subsequently endorsed by the non-governmental Pew Oceans Commission (an independent organisation) that has recommended the adoption of a National Ocean Policy Act as a cornerstone for the development of a United States policy in relation to the marine area. These recommendations foresee the establishment of spatial planning in marine areas as well as a comprehensive network of Marine Protected Areas.



Canada has the longest natural coastline in the world extending 243,792 kilometres. The responsibility for planning and managing the Canadian coastal and marine environment is shared among the federal, provincial, territorial and municipal governments. Initial discussions began in the early 1970s with a major study commissioned by Environment Canada in 1974 to examine the legal and institutional framework for CZM. The early attention given to CZM did not translate into decisive action due to a number of problems. These include an unsatisfactory definition of the coastal zone, the application of political versus ecological boundaries, administrative fragmentation, dominance of short-term management over long-range planning, and a lack of clearly stated goals. A Shore Zone Program was established in 1980. The objectives of this programme were to develop and implement policies to ensure co-ordination of federal activities, and to participate with provinces in the planning of shore zone areas where significant federal responsibilities were involved. This programme was short lived and ended by 1984. Subsequent efforts at coastal zone management were largely local and on an individual basis.

There is no co-ordinating body, mechanism or policy to oversee activities in the coastal zone. Several provinces are currently defining their own policies and priorities for their respective coastal zones. On both the Pacific and Atlantic coasts, CZM programmes have been developed on an area by area basis. The Fraser River Estuary Programme, for example, was launched in 1985 and involves an alliance of federal, provincial and municipal governments and representatives of user and interest groups. One of the main pieces of existing legislation is the Canadian Environmental Protection Act which has allowed the federal government to sufficiently protect and manage particular aspects of the marine environment. However, it was not designed to provide for the protection

and enhancement of coastal areas in an integrated, cohesive manner. Essentially it is the aggregate of legislation developed for very specific purposes and at different points in time. Similarly the Oceans Act was designed to provide a framework for oceans management. One of the major themes of this Act is the environmental management of the oceans and the need to integrate environmental, economic and social activities.

In 2002, the Minister published Canada's Ocean Strategy, which provides a strategic approach to oceans management for the 21st century and sets out the government policy statement for the management of estuarine, coastal and marine ecosystems. In 2005, Canada commenced the first phase of an Oceans Action Plan aimed at developing integrated management plans for large ocean areas on all three coasts with a view of preserving the health of marine ecosystems. The Ocean Strategy is largely complementary to the Oceans Act and includes a comprehensive range of actions to implement the policy, including the appointment of two Ministerial Ocean Ambassadors; the establishment of a Minister's Advisory Council, an Ocean Management Research Network, and an Oceans Task Group; as well as the establishment of Marine Protected Areas and a number of large ecosystems initiatives. A policy framework has also been adopted for integrated coastal management that introduces the concept of Coastal Management Areas which will "enable communities to play a stronger role in issues affecting their future by matching local capabilities and development priorities to the opportunities and carrying capacities of the local ecosystem. Local economic issues such as in-shore fisheries, conventional tourism and ecotourism, aquaculture sites, ports and other transportation facilities may all be matters considered". Progress toward implementation has been hampered by interagency tensions and interdepartmental conflicts as well as the absence of appropriate budgets for programme implementation.

Australia

The coastal zone of Australia is 36,000 km long, not including external territories. More than 86% of the population lives in the coastal zone and even more visit it regularly. Coastal management in Australia is complex, involving three tiers of government (Commonwealth, State and local) and numerous agencies, which share responsibilities for the zone. The Government's role in coastal management is limited by the federal constitution, which gives primary responsibility to the State and Territory Governments. However, the Commonwealth exercises considerable power and influence in coastal issues predominantly through various pieces of legislation (for example, the Environment Protection and Biodiversity Conservation Act; the National Parks and Wildlife Act; and the Whale Protection Act) which have increased its role in policy-making. The Commonwealth is also responsible for defence and navigation, and international conventions and agreements. Finally, the Commonwealth has the power to grant financial assistance to the States.

All Australian States do have some form of coastal zone legislation, policy or guidance. Historically much of this was sectoral and developed in response to coast protection issues. In Victoria, for example, CZM has developed from the establishment of the Port Philip Authority in 1966. This Authority was created in response to environmental problems affecting the urban coast around Melbourne. The Victoria Coastal Management Act of 1995 completely overhauled coastal management arrangements as it covered both public and private land for the first time. Generally local governments are responsible for land use in the coastal margin and development approval and assessment processes. Several Australian coastal inquiries have noted how state-based sectoral administration has led to uncoordinated and fragmented agency responsibilities. A critical coastal inquiry undertaken by the Resource

Assessment Commission (RAC) in 1993 recognised the necessity for integrated management at various levels of government that would cut across individual agency responsibilities for managing the various attributes of the coast. Fragmentation of instruments and the adoption of different sectoral approaches led to over 900 regulatory systems being identified by the RAC (1993) in Australia, involving more than 1500 regulatory agents (900 local authorities and 600 State and federal agencies).

The Australian Department of the Environment published an Oceans Policy in 1998. Integration is a central theme running through the policy and it also confronts problems and limitations that have been identified in previous practices and includes over 400 initiatives for Commonwealth government agencies. One of the drawbacks in the Australian Oceans Policy has been the failure of the Commonwealth Government to fully involve the State and Territory Governments which have legislative power for the sea area within 3 nautical miles of the baselines under the Offshore Constitutional Settlement (OCS) of 1983. The OCS provides the framework for intergovernmental cooperation. This framework is based on collaborative arrangements that include a harmonisation of administrative arrangements where state agencies undertake day-to-day responsibilities (in the oil and gas sector) to agreements over which jurisdiction shall be responsible for management (in fisheries). Coastal management issues were not by the Offshore Constitutional Settlement's "arranged agreements" as CZM was seen to be a state responsibility.

Many developments have taken place since this and currently all States have their own coastal policies implemented or updated since the release of the Resource Assessment Commission CZM report and all have a state-level coastal advisory board of some description. Recent policy developments and election commitments have increased the potential for coastal and oceans policy to be

combined into an integrated management regime. The proposed National Coastal Policy can be seen as a further leverage for Commonwealth-State negotiations, and may lead to increased State 'buy-in' with respect to Australia's Oceans Policy. Integrated Management Councils (IMCs) are one possible means of addressing the need for integrated oceans management. These IMCs would be based on 'bioregions' within the large marine ecosystems established under Oceans Policy, and would be linked to the policy by the principle of subsidiarity, also a key principle in the European Union and hence in coastal management progress.



Historically, coastal management policies and decisions in the UK have been made with reference to individual sectoral interests such as transport, environment, economic growth or waste management. The framework currently in place reflects the sectoral nature of managing coastal issues in the UK and, like many other European nations, the framework is not representative of true ICZM principles as set out by the European Commission. Key government departments which have an interest in coastal management include:

- Department for Environment, Food and Rural Affairs (in sustainable development, environment protection, wildlife conservation, coastal defence, fisheries and water quality);
- Department of Trade and Industry (offshore oil and gas and offshore renewable energy);
- Department for Transport (ports, harbours and shipping);
- Office of the Deputy Prime Minister (land-use planning and aggregate extraction);
- Ministry of Defence.

A number of executive agencies and non-departmental public bodies have varying levels of jurisdiction over the regulation and management of the coast including:

- English Nature;
- Countryside Agency
- Countryside Council for Wales;
- Environment Agency (covering England and Wales);
- Sea Fisheries Committees (England and Wales);
- Environment and Heritage Service (Northern Ireland);
- Scottish Natural Heritage;
- Scottish Environment Protection Agency.

Many policies are also the responsibility of the devolved administrations of Northern Ireland, Scotland and Wales whose remits extend to 12 miles offshore (beyond which powers are reserved to the UK Government). This makes the management of the coastal zone in the UK complex.

County councils are the principal authorities managing activities within the coastal zone especially outside harbour authority areas. In general local authority jurisdiction coincides with the authority's seaward administrative boundary which is usually the low water mark. However, administrative boundaries and jurisdictions can, but do not always, extend to waters internal of the baseline. The low water mark usually defines the seaward boundary of the maritime local authorities control and therefore planning control, but in some instances, local authority jurisdiction extends below low water. In tidal estuaries it extends to the point where the river and sea meets and also covers certain harbours and bays.

The Town and Country Planning laws with guidance provided from the Government in the form of Planning Policy Guidance (PPGs) and Government circulars are the main source of legislation. This elevated hierarchy of legislation in the planning framework is supported by regional guidance from the Office of the Deputy Prime Minister (ODPM) who provides the framework for the preparation of structure plans. Structure and local plans develop regional planning in more detail and provide the opportunity to set out general policies and proposals for the UK's coastal areas. County councils are responsible for structure plans and local plans relating to certain country subjects such as minerals planning and waste disposal. Structure plans should distinguish between the developed, undeveloped and isolated coast, set out general policies for the protection of the coastal environment, including in particular Special Areas of Conservation and Special Protection Areas and identify areas at risk from coastal erosion and flooding.

Under the 1990 Act, local planning authorities are required, in formulating the general policies in a structure plan or Part 1 of a unitary development plan, to have regard to any regional and strategic planning guidance and to current national policies. The latter include Planning Policy Guidance notes (PPGs). PPGs are prepared by the Government, after public consultation, to provide guidance to local authorities and others on policies and the operation of the planning system. Under the devolved Welsh National Assembly, PPGs were replaced by Technical Advice Notes (TANs), however these remain similar in context to the English PPGs. In Scotland, policy on nationally important land use and other planning matters, supported where appropriate by a locational framework, is contained within Scottish Planning Policy (SPP) documents. Of particular relevance to the marine environment is PPG20, which covers planning policy for the coastal areas of England and Wales. PPG20 was published in 1992 as part of the Government's response to the Environment Committee's report on

Coastal zone protection and planning. It sets the general context for policy and identifies planning policies for the coast. Secretaries of State and their Inspectors should have regard to planning policy guidance in dealing with appeals and called-in planning applications, and expect local planning authorities to have regard to it in the exercise of their planning functions.

Town planning legislation does not normally apply below the low water mark. Development control at sea relies on a variety of consents and licences which are predominantly sectoral rather than integrated controls - the main exceptions being Food and Environment Protection Act 1985, Part II (FEPA) and the Coastal Protection Act (CPA) that have very broad application. Development within the boundaries of local authorities will normally be subject to control under the planning system. In addition, almost all development carried out at sea, on the seabed or within other tidal waters requires to be licensed under FEPA and, except where covered by local harbour powers, Private Acts or an Order under the Transport & Works Act, is liable to need a consent under the Coast Protection Act from the Department for Transport which has responsibility for works that may obstruct or endanger navigation. Other developments include harbour developments, minerals dredging, disposal at sea, fish farming, oil and gas exploitation, pipelines and cables. Consents in England and Wales are administered by the MCEU, with similar arrangements applying in Scotland. Details on the legislation and consents required for mariculture, offshore renewable energy, oil and gas exploration and aggregate extraction can all be found under their respective chapters in this report.

In common with developments at the European level, the UK government has recently passed the Marine and Coastal Access Bill which has been developed to provide enhanced protection of the marine environment and biodiversity, improved management of freshwater and migratory fisheries in England and

Wales and improved access to the English coast. At the heart of the Bill is the integration of the socio-economic needs of all marine users with the need to protect the marine environment and preserve biodiversity.



New Zealand's coastal management programme takes a multi-faceted approach. The minister for the Environment published a New Zealand Coastal Policy Statement (NZCPS) in 1994 subsequent to new legislation in the form of the Resource Management Act 1991 (RMA). It replaced more than 20 major statutes dealing with land use planning, water, soil, geothermal resources, air and noise pollution, and coasts. It concentrates on the effects of activities rather than prescribing the types of activity that should be restricted or prohibited. Regional or territorial authorities are given the administrative role for the Act. The overall aim of the coastal policy statement is to aid local authorities with day-to-day management of the coastal environment. The Coastal Policy Statement also introduced the requirement for Regional Coastal Plans (RCPs). These are plans prepared by regional councils for the coastal marine area of their region. They extend from the High Water Mark on the foreshore to the 12 mile limit of the territorial sea. Their purpose is to assist regional councils in achieving the sustainable management of their coastal environment. The plans outline the policies and rules that govern which activities the councils will allow, control or prohibit in the coastal environment. To ensure consistency and integration of coastal management in New Zealand the RCPs must be consistent with the New Zealand Coastal Policy Statement.

Restricted Coastal Activities (RCAs) are taken to mean activities that may have a significant or irreversible adverse effect on the coastal marine environment. Examples of such activities include reclamation, impoundment, dredging,

dumping and exclusive occupation. RCPs and lists of RCAs are required under the coastal policy statement and the Resource Management Act 1991. A number of proposed plans are at, or have completed, the hearing stage. Currently no plans have been forwarded to the Minister for approval. Transitional regional coastal plans are used until the coastal plans are approved and operative. These give details of the specific restricted coastal activities for the region. By law the New Zealand Coastal Policy Statement was required to be independently reviewed in 2003. The results of this review have been published and the general conclusion is that the Policy Statement has “effectively generated debate about New Zealand’s national priorities for coastal management. Along with the RMA provisions, the NZCPS has also encouraged local government to change the way in which coastal issues are considered in local planning frameworks”. The independent review also found that the NZCPS is effectively implemented through Regional Policy Statements and Regional Coastal Plans but is only partially effective in influencing district plans and only generally referred to in resource consent applications.



Belize's coastal zone, which includes over 1000 cayes and 3 atolls, is characterized by a rich diversity of coastal ecosystems. Coral reefs, seagrass beds, mangroves, littoral forests, estuaries, and lagoons are found throughout the 386 km of coastline, the 19km territorial waters and the 322 km exclusive economic zone. Each of these ecosystems is host to a wide variety of marine species, of which the manatee, Morelet's crocodile, American salt water crocodile, three species of marine turtles and the longest barrier reef in the Western Hemisphere are the most well-known.

Rapid coastal development to support housing, tourism, fisheries, coastal agriculture and aquaculture has had a significant impact on Belize's marine resources. Further economic development will undoubtedly promote Belize's dependency on coastal resources. In order to maintain these resources for future generations, Belize must promote sustainable coastal activities as well as integrated coastal zone management.

The coastal zone of Belize as described in the Coastal Zone Management Act includes the area bounded by the shoreline up to the mean high water-mark on its landward side and by the outer limit of the territorial sea on its seaward side, including all coastal waters. The government agency that is the authority on the environment is the Coastal Zone Management Authority & Institute, which is established under the Ministry of Agriculture, Fisheries and Co-operatives. The mission of the Coastal Zone Management Authority & Institute (CZMAI) is to support the allocation, sustainable use and planned development of Belize's coastal resources through increased knowledge and the building of alliances for the benefit of all Belizeans and the global community.

The beginning of Coastal Zone Management (CZM) in Belize dates back to a workshop held in San Pedro in 1989. At this time, it was recognized that an integrated, holistic approach to management of our coastal resources was necessary to ensure their use and protection in the long-term. The participants at this meeting recommended that a CZM Unit be established under the Fisheries Department. This unit would initiate the integrated CZM programme required, taking a multi-sectoral approach that links the effects of land-based activities on the marine environment.

By 1990, the small CZM Unit was functioning and the CZM Technical Committee was established. Although this programme made good progress, it clearly

needed expanding and strengthening, but funding was required. In early 1993, the GEF/UNDP CZM Project was launched, providing significant financing that has made integrated CZM in Belize a permanent and well-established national programme. Significant funding was also received from the European Union for the implementation process.

While progress was slow at first, in 1993 the GEF/UNDP CZM Project, "Sustainable Development and Management of Biologically Diverse Coastal Resources" provided the necessary financial assistance the Authority needed. The Project also served to: (a) update and improve information on coastal resources to better inform decision makers, and (b) develop strong commitment in all sectors to environmentally sound development of coastal resources (GEF/UNDP- Sustainable Development and Management of Biologically Diverse Coastal Resources, 1993). The CZM Authority is now an autonomous public statutory body which is mandated to implement and monitor Belize's coastal zone management and development policies. The major functions of the Authority are:

- Advise the Minister on all matters related to the coastal zone, and on the formation of policies;
- Assist in development of programmes and projects;
- Foster regional and international collaboration;
- Commission research and monitoring;
- In consultation with stakeholders, assist in preparation of development guidelines and review the CZM Plan prepared in accordance with the Act;
- Maintain the national coral reef and coastal water quality monitoring programmes.

The Authority is currently engaged in 5 Programmatic areas:

- Coastal Water Quality and Monitoring
- Manatee Research
- Coastal Planning
- Data Collection and Analysis
- Reef Monitoring

Belize enacted a Coastal Zone Management Act in 1998. This Act formally established two management bodies, The CZM Authority and Institute and an Advisory Council. These institutions have been tasked to prepare a coastal zone management plan, coordinate the efforts of government agencies and provide a forum for community input. The Coastal Zone Management Plan, as prescribed in the Coastal Zone Management Act 1998, defines the policies, strategies and guidelines for the management and conservation of Belize's coastal resources. This plan is being developed in two phases, the initial stage being the development of the National Integrated Coastal Zone Management Strategy for Belize. The second phase is the development of regional guidelines for the nine coastal planning regions and the updated Caye Development Policy. As required by the Act, the CZM Plan will be implemented by governmental and non-governmental agencies responsible for aspects of the Plan. The CZM Authority will oversee the monitoring of the implementation for the plan.

 **The Philippines**

The Philippines, being an archipelagic country, is rich in coastal resources. It is comprised of more than 7,000 islands with a total coastline of over 18,000 km. Seventy per cent (70%) of its 1,500 municipalities are located in coastal areas. Coastal fishing activities account for 40-60% of total fish catch with the fisheries sector accounting for about 4% of GNP and employing more than a million Filipinos. Fish and other marine products supply 70% of total animal protein intake and 30% of total protein intake. Tourism is a growing industry in the coastal areas, and together with fisheries and other economic activities in coastal areas, contributes to a host of environmental, socioeconomic and institutional problems.

There are five levels of government in the Philippines, namely, national, regional, provincial, municipal, and village-level. Shifts in leadership at any level have a potential impact on the implementation of ICM projects. However, changes in the municipal government leadership pose the greatest risk because of the devolution of coastal management authority to the municipalities in 1991. Devolution in this case meant the shifting of some, but not all, managerial control over marine spaces from the national government to the local government units (LGUs). This involves a transfer of both rights and responsibilities, so that an LGU may obtain new opportunities to control exploitation, but must also assume significant management obligations (Abregana et al. 1996). Specific tasks and powers have been assigned to three local levels of government, the provincial, city/municipal, and the barangay (=village) levels, most of which have no capacity to formulate and implement coastal resources management programs.

Political as well as socioeconomic structure and cultural values and characteristics that are generally the same throughout the country but different to

some extent by region, are also among the factors that have led to a common pattern of exploitation of resources. This pattern involves a series of stages that include discovery of a resource, exploitation, over-exploitation, decrease in yield, depletion, and then recognition of the need for management.

The following are the major issues that gave rise to the need for ICM in the Philippines:

- Serious resource depletion problems, particularly fishery resources
- Decrease in catch per unit of fishing effort particularly by subsistence fishers
- Loss of or damage to productive coastal ecosystems (e.g., mangroves, seagrass beds, and coral reefs)
- Cases of local extinction of economically important marine species
- Conflict among uses/users of coastal resources
- Poverty and other social problems of coastal communities
- Sectoral/fragmented approach to coastal resources management
- Lack of capacity among local government to manage coastal resources.

Slowly, through a series of projects and programs beginning in the early 1980s, the Philippines have developed the capacity for community-based coastal resources management. There is now a substantial body of experience in this form of coastal resources management among various institutions including national and local government units, NGOs, and academic and research institutions. Nevertheless, despite what have been accomplished by Coastal Resources Management initiatives so far, there is unabated destruction and depletion of coastal resources. The struggle to conserve coastal resources in the country continues in cooperation with international and regional organizations, and the support of donor countries.

Various government agencies are involved in coastal management. These agencies implement various mandates that sometimes overlap. For example,

both DA and Department of Environmental and Natural Resources (DENR) are involved in the establishment of marine protected areas; the former historically assuming such a function through the issuance of Fisheries Administrative Orders, and the latter through the more recent National Integrated Protected Areas System (NIPAS) programme. There are the following mandates of agencies involved in coastal management in the Philippines:

- Policy formulation (LGU, Fisheries and Aquatic Resources Management Council (FARMC), Non-government Agency (NGA), DENR)
- Resource assessments: coastal (Department of Agriculture-Bureau of Fisheries and Aquatic Resources(DA-BFAR), DENR, Philippine Council for Aquatic and Marine Research and Development of the Department of Science and Technology(PCAMRD)); marine (DA-BFAR, DENR, PCAMRD)
- Statistics gathering and compilation: fisheries (Department of Agriculture-Bureau of Agricultural Statistics(DA-BAS)); mangroves (DENR); fishponds (DA-BFAR)
- Establishment of protected areas (LGU, DA-BFAR, DENR, Congress)
- Mangrove reforestation (LGU, DENR)
- Fishery licensing: municipal waters (LGU); offshore waters (DA-BFAR)
- Fishery law enforcement (Local Government Unit-Philippine National Police(LGU-PNP), Philippine Coast Guard (PCG), DA-BFAR, deputies)
- Pollution law enforcement (LGU, PCG, DENR)
- Land use management (LGU, DENR)
- Tourism management (LGU, DOT)
- Reclamation (DENR, Philippine Estate Authority (PEA))
- Pollution monitoring, including marine waters (LGU, DENR-EMB, PCG)
- Establishment of municipal/fishing ports (Philippine Fisheries Development Authority (PFDA), Philippine Port Authority (PPA), LGU)
- Research (Department of Agriculture-Bureau of Agricultural Research (DA-BAR), Department of Science and Technology-Philippine Council for Aquatic and Marine Research and Development (DOTC-PCAMRD).

There is now a substantial body of knowledge and experience in coastal management in the country on which can be based the formulation of a national policy in coastal management for the Philippines. Based on experiences

elsewhere, national policies on ICM were developed to provide broad goals and standards to guide the widespread adoption of CRM in the country while leaving room for flexibility in the choice of site-specific activities and techniques. The national policy should provide for budgetary allocations to support CRM initiatives by local government units and the functioning of various forms of advisory bodies (e.g., national multi-sectoral, multi-disciplinary advisory body with a secretariat or support staff based in an existing government agency). This policy should also provide for the establishment of mechanisms to avoid duplication of efforts among agencies involved in CRM, to develop strategies on how to improve the transferability of lessons learned and techniques already developed, and to build on existing CRM programs. It will also be desirable to provide for the development of mechanisms that address global and regional environmental trends and concerns such as climate change, food security, biodiversity, and marine pollution.

The Department of Environment and Natural Resources has started this process. However, it is important to emphasize the need to involve all sectors and stakeholders concerned in the development of this national law. The ongoing USAID-funded CRMP has come up with an analysis of the legal and jurisdictional aspects of coastal resources management in the Philippines which has been useful in guiding the development of a draft Executive Order providing for a national policy in CRM. A careful evaluation of past and ongoing CRM programs and projects would be very useful to policy makers in determining which goals need to be incorporated and prioritized in the policy and which strategies could be realistically implemented in the country.