

International Best Practices

Coastal areas throughout the world are under stress. There are five main anthropogenic factors causing marine environmental degradation and depletion of coastal resources: population growth, pollution, habitat degradation, multiple resource use conflicts, and over-exploitation of resources. A variety of national, state and local initiatives have been developed to remedy these environmental concerns and manage the coastal zone in a sustainable way. Most conventional coastal management programs attempt to address coastal hazards such as erosion and flooding, land-based pollution, and vessel-source pollution. These programs seek to reconcile resource issues, primarily affecting the fisheries sector, through sectoral planning and sectoral management, *i.e.*, in a non-integrated way. The on-going challenge is to reconcile multiple resource-use issues and conflicts through integrated coastal zone management.

ICZM is built on the essential elements of coordination and integration. Both horizontal and vertical integration are required, and this integration can take place in different planes:

In this Chapter, we discuss....

- **International Best Practices in Coastal Zone Management**
 - a. *Review of adverse impacts to the coastal zone*
 - b. *International ICZM Models for Coastal Zone Management*
 - c. *Identification of International Institutions with mandates similar to the NISCZM*
- **India: Identification of thematic areas**
 - a. The skills required for coastal management
 - b. Listing of major disciplines for coastal management
- **India: Identification of institutions with capacity in identified thematic areas**
 - a. Ministries/Government Organizations
 - b. National Institutions (including research organizations and centres)
 - c. Academic Institutions
 - d. Private organizations and Non-government Organizations (NGOs)

- Across institutions with a remit for the management of regional economic sectors, such as agriculture and fisheries;
- Among authorities and resources of federal, state, regional, and local institutions;
- Within the management tasks themselves; and
- Across the disciplines of management, including science, engineering, economics and law.

However, what is striking in reviewing the literature is the preponderance of conceptual articles and relatively few on the practical aspects of achieving the much needed, but elusive, integrated system of managing the coastal zone. Whilst there are many countries, who have attempted to implement an ICZM process in order to overcome the existing fragmented approach to managing coastal resources, uses and users, a unique “recipe” for ICZM has not emerged. It is probably true to say that there is no model – conceptual or practical – that has successfully integrated political, functional, and ecosystem aspects to achieve the level of integration and harmonization of decision-making required to accomplish ICZM.

Coastal management efforts can be divided into two types:

- single issue initiatives
- comprehensive models

Single issue initiatives focus on a single or a limited number of coastal problems (e.g. Barbados and the United Kingdom initiated programmes to address erosion control and shore protection) although they often expand their scope over time to address a wider array of issues and sectors.

Comprehensive coastal management models adopt a cross-sectoral approach. These models strive to incorporate a variety of issues in order to achieve sustainable development in the coastal zone (e.g. New Zealand, most U.S. state governments and the federal initiatives in Australia). The scope of these

management initiatives is often constrained by the mandate and responsibilities of the lead agency.

Usually no one government agency has the full jurisdictional responsibility or capability to address the complex issues affecting the coastal zone system. The institutional mechanisms, including the judicial, legislative, and administrative components, are generally not well developed, and existing agencies are typically relied upon to design and implement management strategies. Designing an effective institutional arrangement for ICZM is an important and challenging component of achieving integration. It is possible to identify three general types of approaches used to date:

1. Expanding the duties of an existing agency;
2. Concentrating the authority in a new agency; and,
3. Creating an inter-ministerial council or inter-agency coordinating committee under a lead agency

There are two general types of legislation that are utilised; CZM-specific legislation, and more general legislation which includes provisions for CZM. A growing trend in ICZM programs is the inclusion of the precautionary principle or approach as the basis upon which policy is formulated. The three basic tenets of the precautionary approach include:

1. Authorities must take preventative action if there exists a risk of severe and irreversible damage to humans or the environment;
2. Action must be initiated even in the absence of certainty that such damage will occur, and prior to full scientific proof of a cause and effect relationship;
3. In the event of disagreement over the need to take action, the burden of proof is on those who contend the activity will have no impact.