

## **A multi-country case study of ICZM practice and implementation**

The above consideration consider single countries, however, there is one further interesting multi-country model of coastal management: the European Union which is composed of 27 Member States. Although this case might not seem to be relevant to the single-country India context, the structure and approach is partly synonymous with a Federal system in which there is central government and then state or provincial governments (e.g. USA or Australia). The key aspect of the EU approach is subsidiarity; this means that the EU sets the strategic objectives in many aspects, but leaves it up to Member States to choose an appropriate way to implement and achieve these objectives. The institutional distinction between the strategic lead coming from the central agency (EU) and the implementing and operational-level agencies in the Member States can be potentially an effective model. It relies on having adequate experience and capacity at the Member State level to implement strategy and policy, though the EU does have funding streams to support development and transfer of best practise across EU (such as the Inter Regional Co-operation program: INTERREG) to support this.

Whilst the EU model seems to be relatively effective and coherent, one further positive aspect is that the documentation tends to be clear and concise; communication is widely agreed as a key component of ICZM. The following vignette (Table 3.3) shows information on the EU and how the strategic approach functions; this is taken from their web page and acts as a gateway to further information for interested parties.

Table 1. EU ICZM web gateway (extracts)

Many of Europe's coastal zones face problems of deterioration of their environmental, socio-economic and cultural resources. Since 1996, the European Commission has been working to identify and promote measures to remedy this deterioration and to improve the overall situation in our coastal zones.

From 1996 to 1999, the Commission operated a Demonstration Programme on Integrated Coastal Zone Management (ICZM) designed around a series of 35 demonstration projects and 6 thematic studies. This programme was aimed to:

- Provide technical information about sustainable coastal zone management, and
- Stimulate a broad debate among the various actors involved in the planning, management or use of European coastal zones.

The programme was intended to lead to a consensus regarding the measures necessary in order to stimulate ICZM in Europe.

In 2000, based on the experiences and outputs of the Demonstration Programme, the Commission adopted two documents:

- A Communication from the Commission to the Council and the European Parliament on "Integrated Coastal Zone Management: A Strategy for Europe" (COM/00/547 of 17 Sept. 2000)
- A proposal for a European Parliament and Council Recommendation concerning the implementation of Integrated Coastal Zone Management in Europe (COM/00/545 of 8 Sept. 2000). This Recommendation was adopted by Council and Parliament on 30 May 2002.
- The Communication explains how the Commission will be working to promote ICZM through the use of Community instruments and programmes. The Recommendation outlines steps which the Member States should take to develop national strategies for ICZM. The national strategies are due for Spring 2006 and should involve all the coastal stakeholders.

During 2006 and the beginning of 2007 the Commission reviewed the experience with the implementation of the EU ICZM Recommendation. The Commission Communication of 7 June 2007, COM(2007)308 final presents the conclusions of this evaluation exercise et sets out the main policy directions for further promotion on ICZM in Europe:

The Member States national reports, the EEA state-of-the coast assessment and the external evaluation report which were the main sources for this Commission Communication can be found further down on this website under the entries State-of-the-coast assessment and Evaluation of Integrated Coastal Zone Management (ICZM) in Europe.

To support the implementation of the ICZM Recommendation, the Commission facilitates an expert group, which held its first meeting on 3 October 2002.

At the 2nd meeting the expert group endorsed a guidance report for the national stocktakes, which the Recommendation calls for in its Chapter III as the first step for its implementation. The meeting also heard a detailed presentation of the Spanish methodological approach to the stocktaking:

In 2005 DG Environment conducted a survey to analyse the responses in the coastal Member States to the EU ICZM Recommendation.

The working group on indicators and data established 2 set of indicators, one aimed to measure progress in ICZM, the other one measuring sustainability on the coast. Progress in this work has been reported to the expert group at each meeting.

#### State-of-the-coast assessment

To inform the evaluation of ICZM in Europe, the EEA produced the report "The changing faces of Europe's coastal areas", 3 July 2006. The report can be downloaded from the EEA website.

The work towards this report started at the ICZM expert group meeting of 24 November 2004 when the EEA presented a [background paper](#) describing the intended methodology and process for the assessment.

#### Presidency support

The Spanish Presidency of the EU organised a first High Level Forum on ICZM from April 19 to 21, 2002, in Villajoyosa, Spain. The Forum gave a clear message of support to the ICZM Recommendation and implementation of ICZM in Europe.

The Greek Presidency of the EU organised an International High Level Conference on Coastal areas and cities from May 29 to 30, 2003, in Hersonissos, Crete.

Evaluation of Integrated Coastal Zone Management (ICZM) in Europe

The EU ICZM Recommendation, Chapter VI.3, requests the European Commission to present an evaluation report to the Council and the European Parliament. To prepare for the evaluation the Commission ordered an external assessment. Following a call for tender, the contract was awarded to Rupprecht Consult GmbH (Germany) and its partner the International Ocean Institute (Malta). The final report from the consultants was received on 1/12/2006.

The EU ICZM Recommendation invited coastal member states to develop national strategies for ICZM. The reports received by the Commission were the main source of information used in the evaluation and are available [on-line](#). The results of the evaluation and policy directions for the further promotion of ICZM in Europe were presented by the Commission in its Communication of 7 June 2007 ([COM\(2007\)308 final](#)).

\* the page can be accessed at <http://ec.europa.eu/environment/iczm/home.htm> where links to most of the documents mentioned can be found.

The challenge of subsidiarity is that implementation can be different and progress at different rates in different areas. A review was made of progress at multiple scales in the devolved administration and regions of the UK as part of the COREPOINT (Coast Research and Policy Integration). The work on the “*Role of the Regions*”<sup>1</sup> used various policy documents to identify local, regional and national outcomes of ICZM and then assessed progress in these policy elements through expert-stakeholder discussion in the devolved administrations of Northern Ireland and Wales and in the regions of north-west and north east England. The following table shows these results (Table 3.4); the key conclusion from this table is that subsidiarity may be a useful mechanism for ICZM delivery, but care has to be taken to make sure that cumulative progress is monitored and evaluated and supporting action taken if certain administrations / regions fall behind on some aspects.

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<http://corepoint.ucc.ie/FinalDeliverables/Publications/CollaborativeWorking/The%20role%20of%20the%20regions%20in%20ICZM.pdf>

A review of progress in ICZM within Europe in 2006 found the status of policy implementation in the 24 countries of the EU at that time is as follows:

- No country has implemented an ICZM National Strategy as prompted by the EU ICZM EU Recommendation.
- In seven countries, namely Finland, Germany, Malta, Portugal, Spain, Romania, and United Kingdom, the implementation of an ICZM National Strategy is pending.
- In six further countries, namely Belgium, Cyprus, France, Greece, Netherlands, and Slovenia, documents considered as equivalent to an ICZM National Strategy have been developed, or coastal zone management strategies have become (or planned to become) an integral part of its spatial planning processes.
- In eleven countries, namely Bulgaria, Croatia, Denmark, Estonia, Ireland, Italy, Latvia, Lithuania, Poland, Sweden, and Turkey, no ICZM equivalent policies are in advanced stages of preparation, only fragmented tools are in place to address coastal issues.

Table 2: Summary of progress in devolved administrations of Northern Ireland, Wales and the north-west and the north-east regions of the UK against various local, regional and national policy elements (coding as follows: 1 = fulfilled to 4 = not covered, ND = no data).

	Policy item	NI	Wales	NE	NW
EU-local	Collect information	3	2	4	ND
	Develop consensus or make arbitration	4	3	4	ND
	Ensure optimal routine application of integration	4	ND	4	ND
	Bottom-up initiatives involving citizens and users of the coast	4	2	3	ND
EU – regional	Strategic outlook.	2	1	4	3
	Coordination between local government	4	3	3	3
	Local initiatives – in a regional context	ND	3	4	ND
	Counterbalance short-term economic interests	4	4	4	4
	Coordinated application of EU	2	3	4	4

	Policy item	NI	Wales	NE	NW
	legalization and law				
	Collaboration with actors in neighbouring countries	2	2	4	3
	Legal duty of regional government departments defined	ND	1	3	ND
	Support and involvement of relevant regional administrative bodies	3	2	4	2/3
	Good communication between regional bodies	ND	2	3	2
	Scope for long-term funding of regional bodies for ICZM	4	3	4	3
EU – national	Provide a legal and statutory framework	4	4	4	ND
	Co-operation and involvement of sectoral branches of administration	4	4	4	ND
	National vision to promote coherent activities	3	3	4	ND

The analysis of implementation trends showed that the ICZM Recommendation has been beneficial for the coastal management in Europe:

- The eight "Principles of good ICZM" as promoted in the EU ICZM Recommendation have created a new awareness and a higher level of preparedness at the regional level regarding long-term coastal challenges.
- The EU ICZM Recommendation has initiated a rethinking of traditional planning approaches by promoting a reconciliation of economic, social and environmental interests.
- Although the actual involvement of stakeholders is still unsatisfactory overall, successful local ICZM-based processes have created a strong pressure to increase participative elements in decision making.
- ICZM has shown that it could become the instrument to link "terrestrial" to marine legislation, especially on a "regional sea level".
- Proper implementation of ICZM improves the livelihood and employment of coastal areas, as cost-benefit-analyses for the EU countries have shown. Hence, an EU-wide implementation of ICZM would have a significant economic and social impact.

At the same time, this evaluation concludes there is wide scope to improve the implementation of ICZM along the European coasts; these include improved regional cooperation within the regional seas, stronger exchange of expertise and information, better stakeholder participation, monitoring of implementation through common methodologies and a long-term funding perspective for regional ICZM initiatives. There are several important factors which individually, in conjunction or in conflict with each other either support or hamper progress of ICZM in Europe.

***The main success factors for progress in ICZM are:***

- Small size and high importance of coast in relation to total size of country
- A proper allocation of competences, functions and tasks between central and lower state levels
- Leadership or at least a dedicated caretaker role (“political will”) by the national level driving and/or coordinating ICZM
- Connecting on-going administrative and governance changes within Member States with necessities of ICZM
- Utilizing and strengthening existing territorial planning and management institutions (e.g. from spatial planning) for ICZM
- National, regional and local levels working in connection with regional seas initiatives
- ICZM projects, programmes and initiatives showing benefits to and increasing communication among stakeholders
- Reliable funding for ICZM initiatives with a medium- to long term time frame
- Qualified personnel and management on all levels conversant with ICZM
- Strong civil society organizations promoting environmental affairs.

***The main fail factors for progress in ICZM are:***

- Unclear distribution of functions between national and lower levels of government with national government not feeling “incharge” of ICZM
- ICZM introduction coming at the wrong time (when the respective country is undergoing major reforms that organize the larger structure)
- Countries (purportedly) claiming that ICZM is sufficiently being taken care of by spatial planning institutions
- Insufficient time, unqualified manpower and insufficient funds provided to introduce the complex idea of ICZM through awareness, education and demonstration projects.

The analysis of the added-value of ICZM *vis á vis* existing and evolving EU policies and legislation has shown that ICZM relates positively to many EU policies and legal frameworks:

- ICZM is capable to help translate often very abstract policies to local and regional situations (e.g. Governance White Paper)
- ICZM can help to harmonise short-term aims with long-term policy objectives.
- ICZM can help to improve the coordination among policies, sectors and across scales.
- ICZM promotes participatory methods, thus greatly improving transparency in decision-making and co-management of coastal areas.
- A very important specific area of ICZM will be its intermediary function between the terrestrial/coastal management as stipulated in the Water Framework Directive and the planned Marine Strategy Directive as part of the Maritime Policy.

The documented information on the countries institutional architecture discussed above does not provide details on skills required by the various implementing agencies. Such information can only be gathered through questionnaire or interviews, which is outside the scope this present work. However, insight can be gathered on the skills required for coastal management, through a review of documentation of previous capacity building programmes along with published questionnaires and training needs analysis; though it should be noted that a published and comprehensive treatment of skills for coastal management is not available. The following table (Table 3.5) shows some previous ICZM initiatives, and describes the approach and some of the skills required for coastal management in a piecemeal way; such information is unfortunately not consistent or comprehensive.

Table 3. Various approaches from ICZM initiatives and skills identified.

<p><b>Sardinia, 1993: meeting organized by UNDP and UNDOALOS</b></p> <p><b>Objectives</b></p> <p>An Action Plan for Human Resources Development and Capacity Building for the Planning and Management of Coastal and Marine, 1993-1997, which included activities in 4 areas:</p> <ul style="list-style-type: none"> <li>• Capacity building</li> <li>• Institution building</li> <li>• Training programmes</li> <li>• Implementation mechanisms</li> </ul> <p><u>Recommendations:</u> conduct a training needs assessment and establish an international platform for sharing course material.</p>
<p><b>Coastal Zone Canada'94</b></p> <p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>• Identify knowledge and skills requirements</li> <li>• Discuss the components of a core curriculum for training sessions and university degree programmes</li> <li>• Discuss standards and criteria that must be met to make ICZM a consistent and internationally recognized discipline</li> <li>• Estimate time-scales and costs associated with establishing required</li> </ul>

programmes

*Recommendations:* encourage multi-disciplinary graduate training programmes with conflict resolution principles that reflect local cultural characteristics, government structures and management needs.

### **Rhode Island, 1995**

#### **Objectives**

Academics and experienced coastal management professionals were asked to:

- Define the needs of the profession
- Review existing education and training programmes
- Suggest ways in which universities meet the growing demand for coastal management professional

*Recommendations:* a strategy should be devised that emphasizes long term capacity building efforts. Degree programmes in coastal management should be multidisciplinary, including: theory of ICM tools, tools such as geographic information systems (GIS), methods and skills in planning and management, socio-economic and group processes.

### **International Conference on Education and Training for ICZM: The Mediterranean Prospect, Genoa, 1998<sup>2</sup>**

This Conference was conceived as a useful contribution to celebrate the 1998 United Nations International Year of the Oceans. The subject was considered so important as to mobilise the cooperation of three UN organisations, namely, the MAP Co-ordinating Unit of UNEP; the Intergovernmental Oceanographic Commission of UNESCO, and the International Centre for Science and High Technology of UNIDO, and that of the International Centre for Coastal and Ocean Policy Study, an NGO Observer to the Barcelona Convention and accredited to the UN Commission on Sustainable Development.

#### **Objectives**

- Serve as a consultative ground
- Monitor, present and discuss capacity building experiences in the Mediterranean
- Discuss harmonization and interaction issues among programmes
- Discuss design of new types of programmes to tailor them to the complexity of the Mediterranean context
- Focus on holistic and integration-referred approaches to education and training
- Design patterns to optimise the capacity (in particular, of human resources) to build education and training programmes
- Discuss optimization of cooperation between inter-governmental organizations (i.e. UN System and EU)

<sup>2</sup> [http://www.iccops.it/projects/conferenza\\_98/session4/report\\_4.htm](http://www.iccops.it/projects/conferenza_98/session4/report_4.htm)

- Extrapolate the Mediterranean experience to other regional seas.

Recommendations: GIS is an important decision-support tool and would be likely to be more widely incorporated, although human expertise will always be needed.

**Professional Development Needs of ICZM Practitioners. Survey by Ballinger RC, Ball I, Dodds W and Fletcher S, 2005.**

**Objectives:**

- to identify the professional development needs of integrated coastal zone management practitioners in the UK, via distribution of a questionnaire.

Findings: based on responses from 66 coastal practitioners representing statutory organisations, industry, coastal fora, NGOs and academics it was concluded that:

- 42 had been in their post for <3 years
- 59 had a first degree and 48 had a Masters degree
- >25 were affiliated with a professional organisation (eg CIWEM, ICE)
- 23 had received training in environmental technical/ planning techniques in the previous 12 months. Policy/ law and project management were also popular.
- 35 of respondents stated that they required more training in policy/ law and 27 would like to learn more about environmental technical/ planning techniques. 20 required further training in project management.
- 35 of respondents stated that time was a barrier, while 28 stated costs were prohibitive. 15 stated that availability of appropriate local training courses was also an issue.

On an EU scale training needs have been identified which divides capacity into knowledge, skills and attributes (see Table 3.6). As can be seen from this table the category with the longest list of required skills is “general management skills”. In addition, it can be seen that this list of required skills fits very well into the iterative and collaborative process of implementing ICZM. This work, under the Science and Policy Integration for Coastal Systems Analysis project<sup>3</sup> concluded that *“Reviews have shown that coastal professionals have a variety of training needs; ranging from general management skills to specific information and knowledge. Recent or existing courses cover many of these areas. However, a gap still exists in understanding how the coastal system functions as a single unit*

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<sup>3</sup> [www.spicosa.eu](http://www.spicosa.eu)

*and how ICZM decisions can be made, taking into account the wide range of environmental, ecological and social factors that determine its performance.”*

Table 4: Training Needs of Coastal Professionals in the EU

Knowledge		Skills		Attributes
Specific Knowledge	Information	General Management Skills	Coastal Management Skills	Understanding
International, national and local legislation	Training courses	Economic/ Social assessment	ICZM principles	Understanding roles of others
International, national, local policy	Funding for training courses	Decision support	Spatial planning	Understanding how the system works
	Data sources	Networking	Environmental assessment	Cultural issues
		Conflict resolution	GIS	
		Collaborative working		
		Project management		
		Communication Interpretation		

The linkage between institutional arrangements and skills and capacity for coastal management (in analytical terms between institutional analysis and capacity building) is very wide and is probably one of the main causes for the ineffective implementation of ICZM. A diversity of skills is required to support the processes that take place within the institutional architecture, or looking at it in another way, even with an “ideal” institutional structure skills are required within this to deliver ICZM. This becomes further complex with the requirement identified above and noted in the Swaminthan report, that involvement of community and other stakeholders is required for effective coastal management and thus it may be necessary to support this involvement through skill enhancement initiatives.

What is clear though is that a certain level of human capital is required for implementation of ICZM and that capacity building can help build human capital.

The challenge though is to target the correct group of people with the correct skill development initiative at the correct time in the ICZM initiative so as to ensure rapid uptake and use of the skills in the ICZM domain. This means that the skill development needs to be identified alongside the institutional roles and remits, and then skill development targeted to the correct people. This means that most training initiatives will have to be tailor-made to each unique situation. This is reinforced by Hills et al (2006)<sup>4</sup> from a study on capacity building initiatives in Asia who note that “... *the exchange, transfer, and translation to local conditions of appropriate good practice in ICM capacity development can be an important element in enhancing the impact of ICM programs on the coastal environments and societies*”. The necessity then for developing adequate human capital to implement ICZM is to (i) identify skills requirements within the institutional architecture, (ii) assess present skill levels and gaps, (iii) implement tailor-made skill development initiatives.

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<sup>4</sup> Hills, J.M., Alcock D., Higham, T., Kirkman, H., Le Tissier M., Pagdilao, C., Samonte, P.C., Smith T.F. (2006) Capacity Building for Integrated Coastal Zone Management in Asia-Pacific: the case for case studies. *Coastal Management*, 34: 323-337.

Table 5: Case : Comparison of Developed Countries

	United States	Canada	Australia
<i>Background variables and socioeconomic context</i>			
<i>Total Population</i>	263 million	28 million	21.9 million
<i>Percentage of population on the coast</i>	About 60%	25%	75%
<i>Per capita GNP</i>	\$25,880	\$19.51	\$18,000
<i>Maritime jurisdictions</i>	12-NM territorial sea (1988) 200-NM EEZ (1983)	12-NM <sup>a</sup> territorial sea, 24-NM contiguous zone, 20-NM EFZ, <sup>b</sup> 200-NM EEZ	12-NM territorial sea, 200 NM EEZ
<i>Major coastal and ocean issues</i>	Nonpoint-source marine pollution decline in fishery stocks, offshore oil development, closed shellfish beds, coastal erosion, coastal hazards (storms)	Loss of wetlands decline in fishery stocks, resource conflicts, pollution, offshore oil development	Habitat destruction, resource depletion, use conflicts, government fragmentation, offshore oil development, marine protected areas, coastal fisheries
<i>Primary level of government concerned with ICM</i>	National, State and in some cases, local	National, but provincial and local levels also play a role	Provincial (state); also nationals and local
<i>Nature and timing of ICM efforts</i>	1970s, various marine and coastal sectoral laws; 1972, Federal Coastal Zone Management Act (reauthorized at about five-years intervals, most recently in 1996)	1985, Fraser River Estuary Management Program; 1987, Great Lakes Water Quality Program; 1991, Atlantic Coastal Action Plan; 1996, Canada Oceans Act (includes ICM)	State: 1994-1995, Western Australia State Coastal Review; 1995, Queensland Coastal Management Bill (Ongoing), Victoria Coastal and Bay Management Act; 1995, 1996, New South Wales Revised Coastal Policy; 1996, Tasmanian Draft State Coastal Policy Federal: 1980, 1991, 1993, Commonwealth inquiries; 1991-2001 Ocean Rescue 2000; 1995, State of Marine Environment Report; 1995, the Commonwealth Coastal Policy; 1996-1997, proposed National Oceans Policy.
<i>Overall approach to ICM</i>	Top-down, bottom-up	Top-down (Canada Oceans Act), bottom-up (local consensus building)	Bottom-up, with top-down assistance
<i>Type of approach to ICM</i>	Regulatory, planning	Consensus building	Regulatory on ocean uses studies, consensus building intergovernmental incentives

	United States	Canada	Australia
<i>Extent of implementation of ICM</i>	Good implementation	Partial implementation	Implementation just beginning
<i>Importance of external assistance</i>	Not important	Not important	Not relevant
<i>Importance of UNCED influence</i>	Not important	Very important	Some what
<i>Effectiveness of ICM</i>	Moderately effective	Community – based programmes reportedly highly effective, but outputs of programmes are not clear	Too early to tell
<i>Movement toward policy integration</i>	Good at state level; mixed at national level	Some in locally based programmes	Some: Commonwealth inter departmental coastal committee, intergovernmental costal reference group (federal and state governments ), national coastal advisory committee (including community and industry), state and federal MoUs

Table 6: Case : Comparison of Developed Countries

	United Kingdom	New Zealand	Belize
<i>Background variables and socioeconomic context</i>			
<i>Total Population</i>	58 million	73 million	311,480
<i>Percentage of population on the coast</i>	No data	80%	38%
<i>Per capita GNP</i>	\$37,632	\$25,358	\$3,493
<i>Maritime jurisdictions</i>	12-NM territorial sea, 200 NM EFZ	100-NM territorial sea (285 NM in South China Sea ); 200-NM EEZ	12 NM territorial Sea, 200 NM EEZ
<i>Major coastal and ocean issues</i>	Pollution, damage to productive ecosystems, resource depletion, erosion of coastal areas, lack of integrated policy navigation in English Channel, fishery conservation, pollution control, strategic sea use, boundaries offshore oil development, lack of planning regime for marine areas	Fishery depletion through overfishing use of dynamite and habitat destruction; coral depletion through mining; loss of mangrove forests and wetland through expansion of human settlements	Sea level rise, increased sea surface temperatures, changes in weather patterns and increased storm activity. severe coastal resource degradation in the coastal fisheries, water, coral reefs, seagrasses and wetland systems; construction, landfill or dredging at or near shorelines; Pollution, untreated effluent and sewage disposal to rivers

	United Kingdom	New Zealand	Belize
			and sea
<i>Primary level of government concerned with ICM</i>	Mixed (national and country)	National, local	National
<i>Nature and timing of ICM efforts</i>	1980s-1990s various marine sectoral laws; 1990s NGO reports urging establishment of ICM policy and local coastal for a ; 1992 House of Commons inquiry	1975, Fisheries Act: 1976, Coastal Zone Management Committee of National Environmental Protection Council: Protection Council; mid 1980s, ASEAN/US Coastal Resources Management Project, Lingayen Gulf pilot study; 1990-1994, fisheries sector programmes (includes coastal management aspects)	Coastal Zone Management Act (No. 5 of 1998)
<i>Overall approach to ICM</i>	Bottom-up	First top-down , then bottom – up	
<i>Type of approach to ICM</i>	Consensus building	Regulatory- planning, participatory	Baseline Surveys, Research Studies, Change-Detection Monitoring,
<i>Extent of implementation of ICM</i>	Little implementation	Partial implementation	
<i>Importance of external assistance</i>	Not important	Very important	
<i>Importance of UNCED influence</i>	Moderately important	Of little importance	
<i>Effectiveness of ICM</i>	Too early to tell	Reported highly effective	Reported effective
<i>Movement toward policy integration</i>	Some movement in the national and local coastal form	Some movement	Coastal Zone Strategic Plan

Table 7: Case : Comparison of Developed Countries

	France	Netherlands	Spain
<i>Background variables and socioeconomic context</i>			
<i>Total Population</i>	58 million	18 million	40 million
<i>Percentage of population on the coast</i>	No data	60%	35%
<i>Per capita GNP</i>	\$23,240	\$22,010	\$13,440
<i>Major ethnic groups and religions</i>	Predominantly Celtic and Latin, Teutonic, North African, Indo-Chinese, Basque minorities; 90% Roman Catholic	Predominantly Dutch (90%), which Turks, Moroccans, others (4%); 34% Roman Catholic 25% Protestant, remainder unaffiliated	Predominantly Mediterranean and Nordic; 99% Roman Catholic
<i>Political System Characteristics</i>			
<i>Type of government</i>	Republic	Constitutional monarchy	Parliamentary monarchy
<i>Colonial heritage</i>	Not relevant	Not relevant	Not relevant
<i>Concentration of power among national-level institutions</i>	Very concentrated	Some pluralism	Pluralism
<i>Autonomy of sub national levels of government</i>	Little autonomy	Municipalities and provinces have some autonomy	some autonomy
<i>Maritime jurisdictions</i>	12-NM <sup>a</sup> territorial sea, 200-NM EEZ	12-NM territorial sea, 200 NM EEZ	12-NM territorial sea 200-NM EEZ
<i>Major coastal and ocean issues</i>	Pollution, tourism, Land –based sources of pollution, control of urban and industrial development, degradation of productive coastal ecosystems, oil transportation, fishery depletion, marine scientific research, conflicts over fisheries (France vs.Spain)	Coastal defence, water pollution (heavy metals, organic compounds, nutrient loading), wetland loss, competition for coastal space, sea-level change, vessel-source pollution, adverse environmental effects of sand mining, offshore oil and gas development sea –use zoning	Coastal erosion, tourism development general urbanization, sedimentation, degraded water quality, loss of productive ecosystems, intergovernmental duplication, marine duplication, competition for fishery resources

	France	Netherlands	Spain
<i>Primary level of government concerned with ICM</i>	Mainly national	National, but regional and local water boards are also important	National, but regional and local governments also play a role
<i>Nature and timing of ICM efforts</i>	1970s, Commission on CZM: "State of the Art"; 1975, conservatoire du Littoral; 1983, Schema de Mise en Valeur de la Mer; 1986, Loi Littoral (Seashore Act); 1995, new Secretariat a la Mer (linked to Prime Minister's office)	1984, North Sea Harmonization Policy; 1991, Dynamic Preservation Strategy; 1995, Coastal Defense Act	1988, Shores Act; 1992, Regional Guidelines for Coastal Zone
<i>Overall approach to ICM</i>	Top-down	Top-down, bottom-up	Top-down, bottom-up
<i>Type of approach to ICM</i>	Regulatory- Land use planning	Regulatory, studies	Regulatory
<i>Extent of implementation of ICM</i>	Little implementation; partial implementation of Schema de Mise en Valeur de la Mer on the Mediterranean coast	Reportedly good implementation	Little implementation
<i>Importance of external assistance</i>	Not important	Not relevant	Of little importance
<i>Importance of UNCED influence</i>	Of little importance	Very importance externally	Of little importance
<i>Effectiveness of ICM</i>	Uncertain	Reportedly effective	No data
<i>Movement toward policy integration</i>	Possible with new Secretariat a la Mer-concerned with fishery conflicts marine transport	Significant – provincial consultative bodies (coordinating mechanisms)	Little

Table 8: Case : Comparison of Developing Countries

	Philippines	Malaysia	Indonesia	Sri Lanka	Thailand
<i>Background variables and socioeconomic context</i>					
<i>Total Population</i>	96 million	19 million	203 million	18 million	60 million
<i>Percentage of</i>	60%	70%	60%	34%	70%

	Philippines	Malaysia	Indonesia	Sri Lanka	Thailand
<i>population on the coast</i>					
<i>Per capita GNP</i>	\$1,304	\$3,480	\$880	\$640	\$2,410
<i>Maritime jurisdictions</i>	200-NM EEZ	12-NM territorial sea, 200-NM EEZ	Archipelagic base lines 12-NM territorial sea 200-NM EEZ	12-NM territorial sea, 200-NM territorial sea, (1976)	12-NM territorial sea, 200-NM EEZ
<i>Major coastal and ocean issues</i>	Fishery depletion through overfishing use of dynamite and habitat destruction; coral depletion through mining; loss of mangrove forests and wetland through expansion of human settlements	Erosion, Mangrove loss, coral reef destruction, pollution from tourism and industry	Overfishing and destructive fishing habitat destruction, marine pollution conversion of mangrove forests and wetland areas, coral mining	Coastal erosion; coral and sand mining; degradation of coastal habitats; tourism; pollution loss and degradation of archaeological. Cultural and scenic sites; fisheries depletion	Coral reef destruction mangrove deforestation, decline in fishery stocks, pollution
<i>Primary level of government concerned with ICM</i>	National, local	National, provincial	National, Provincial	National,	National
<i>Nature and timing of ICM efforts</i>	1975, Fisheries Act: 1976, Coastal Zone Management Committee of National Environmental Protection Council: mid 1980s, ASEAN/US Coastal Resources Management Project, Lingayen Gulf pilot study; 1990-1994, fisheries sector programmes (includes coastal management aspects)	1984, national coastal erosion study; 1992, national and coastal resources management policy; 1992, south Johor Coastal Plan	1990, Conservation of Living Natural Resources and Their Ecosystem Act (marine parks); 1992, pilot study integrated management plan for Segara Anakan-Cilacap; 1993-1997, 1998- 2002, marine resources evaluation and planning project	1978, Coast Conservation Division 1981, Cost Conservation Act; 1983, coastal permit system; 1988 coastal Zone Management plan; 1990, Marine pollution prevention Authority; 1995 Special area management plan; 1996, second Coastal Zone Management Plan	1991, National coral reef management strategy; 1992, ICM management plan Ban Don Bay and Phangnga Bay
<i>Overall approach to ICM</i>	First top-down , then bottom – up	Top-down, bottom – up	Top-down , bottom - up	Bottom –up , Top – down	Top-down; bottom up pilot studies
<i>Type of approach to ICM</i>	Regulatory- planning, participatory	Regulator – for erosion and mangrove forests	Planning	Regulatory, special area management strategy, permit system	Regulatory (for coral reef protection), participatory
<i>Extent of</i>	Partial implementation	Partial	Partial implementation	Full implementation	Partial

	<b>Philippines</b>	<b>Malaysia</b>	<b>Indonesia</b>	<b>Sri Lanka</b>	<b>Thailand</b>
<i>implementation of ICM</i>		implementation (erosion mangrove forests)			implementation ( Coral reefs)
<i>Importance of external assistance</i>	Very importance	Moderrately important (ASEAN/US)	Very importance	Very important	Very important
<i>Importance of UNCED influence</i>	Of little importance	Very important	Moderately important	important	Moderately important
<i>Effectiveness of ICM</i>	Reported highly effective	Appears good for erosion issues – unknown otherwise	Unknown	Moderately effective	Reportedly moderately effective
<i>Movement toward policy integration</i>	Some	Some , in pilot study	Some	Early move toward integration- creation of Coast Conservation Department (CCD) Conservation Department in Ministry of Fisheries (does planning and coastal engineering, issues permits for coastal activities) coast Advisory Council (advises CCD, Issues Variances )	Some, in pilot study

Table 9: Case : Comparison of Developing Countries

	India	Fiji	China	Brazil	United Republic of Tanzania
<i>Background variables and socioeconomic context</i>					
<i>Total Population</i>	1.14 billion	770,000	1.2 million	160 million	28.7 million
<i>Percentage of population on the coast</i>	25%	100%	40%	38%	No data
<i>Per capita GNP</i>	\$320	\$2,250	\$530	\$2,970	\$140
<i>Maritime jurisdictions</i>	12-NM territorial sea (1967) 200 NM EEZ (1976)	Archipelagic base lines: 12-NM territorial sea, 200 NM EEZ	12-NM territorial sea, 200 NM EEZ continental shelf in Yellow Sea and East China Sea	12-NMa territorial sea, 200-NM EEZ	12-NM territorial sea , 200-NM EEZ
<i>Major coastal and ocean issues</i>	Environmental degradation due to coastal urbanization and accelerated industrial development; pollution; coastal hazards and disasters; uncontrol lable exploitation of mangrove forests and coral reefs	Pollution from coastal development. Mangrove deforestation and coral reef loss, fishery loss vulnerability to climate change	Economic development of coastal resources, pollution use and agency conflicts, reclamation and mangrove loss, coral and sand mining fishery depletion	Destruction of mangroves, coastal erosion, tourism, urbanization, shipyard development, nonpoint source pollution, multiple use competition, offshore oil production, offshore fisheries	Local community uses: reef blasting use of dynamite in fishing, depletion of near shore fish stocks, mangrove deforestation seaweed farming. Tourism development, land – based activities such as coastal agriculture and ranching, river impoundments, coastal deforestation
<i>Primary level of government concerned with ICM</i>	National	National, local	Provincial	National	Federal(Policy, legislation), state (community) – based management)
<i>Nature and timing of ICM efforts</i>	1974, Water Prevention and Control of Pollution	1993, National Environmental	1980-1986, 19888 1993, Comprehensive	1974, Ocean planning; 1980s,	1993 workshop on ICM in East Africa

	India	Fiji	China	Brazil	United Republic of Tanzania
	Act (Central and state water boards)_ 1981, Department of Ocean Development ; 1982 Ocean policy; 1991, Coastal Zoning Law Nation programme on marine sensing information service; 1996, beginning of ICM activitied at state level	strategy: 1995, ICM pilot efforts	surveys of coastal environment and resources: late 1980s provincial CZM regulations and provincial oceanic administrations created in eleven provinces; 1994, pilot ICM project in Xiamen	environmental laws; 1983, Coastal Programme (PROGERCO)	Tanga ICM pilot project
<i>Overall approach to ICM</i>	Top-down	Top- down, bottom - up	Bottom - up	Bottom –up especially in terms of local coastal ecosystem management initiatives	Top – down , Bottom – up
<i>Type of approach to ICM</i>	Regulatory	Regulatory, educational	Regulatory, planning, educational	Regulatory, institutional	Regulatory-, consensus building education
<i>Extent of implementation of ICM</i>	Partial implementation	Little implementation	Partial implementation	Little implementation	Partial implementation
<i>Importance of external assistance</i>	Of little importance	Very important	Of little importance	Of little importance	Very importance
<i>Importance of UNCED influence</i>	Of little importance	Very important	Somewhat important	Of little importance	Moderately important
<i>Effectiveness of ICM</i>	No data	Too early to tell	Unknown	Little data	No data
<i>Movement toward policy integration</i>	Little	Some, with implementation of National Environmental strategy	A little , in pilot study	Some , at national level	Some