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WORLD MARITIME UNIVERSITY
Malmö, Sweden

**INTEGRATING MARITIME INDUSTRY AND
COASTAL & OCEAN MANAGEMENT**

An assessment of the situation in Portugal

By
GONÇALO CARNEIRO
Portugal

A dissertation submitted to the World Maritime University in partial fulfilment of the
requirement for the award of the degree of

MASTER OF SCIENCE

In

MARITIME AFFAIRS

(INTEGRATED COASTAL & OCEAN MANAGEMENT)

2006

DECLARATION

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

Malmö, August 26th 2006

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ABSTRACT

Title of Dissertation: **Integrating maritime industry and coastal & ocean management – Assessment of the situation in Portugal**

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This dissertation is an assessment of the integration of the regulation and management of the maritime sector with the policies relating to coastal and ocean management in Portugal. It considers the national and international contexts within which both areas have evolved and discusses the reasons and conditions for integration.

An overview is provided of the international institutional frameworks relating both to ocean and coastal management and to the regulation of the maritime industry. Particular emphasis is given to the roles of the IMO and the EU.

The governance structure of the shipping and port sectors in Portugal is reviewed, paying close attention to those elements that are of relevance for integration with coastal and ocean policies. The development of these two latter policy areas in the country is also described.

A brief look is taken at the status of the Portuguese coastal and ocean spaces, especial reference being made to the impacts associated with shipping and ports. The specific assessment of the Portuguese situation in respect of integrated management is preceded by a discussion of both fundamental concepts and empirical aspects of policy integration.

The integration of the maritime sector into the upcoming coastal and ocean policies is justified in view of the coherence of the integration effort and of the impacts associated with that sector. Various factors acting for and against integration are assessed, taking into account the Portuguese institutional framework and the foreseen developments in coastal and ocean management policies. Potential measures to promote integration are proposed in the concluding chapter.

KEYWORDS: Coastal & ocean management; Integration; Policy; Ports; Portugal; Shipping.

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LIST OF ABBREVIATIONS

- AMN** – Autoridade Marítima Nacional (National Maritime Authority)
- Art.** – Article
- CAP** – Common Agricultural Policy (of the European Union)
- CBD** – Convention on Biological Diversity
- CEC** – Commission of the European Communities
- CEO** – Comissão Estratégica dos Oceanos (Oceans Strategic Commission)
- CFP** – Common Fisheries Policy (of the European Union)
- Ch.** - Chapter
- CPMR** – Conference of Peripheral Maritime Regions
- CTAND** - Comissão Técnica para Acolhimento de Navios em Dificuldades
(Technical Commission for the Granting of Refuge to Ships in Distress)
- DG** – Directorate General

DGAM – Direcção Geral da Autoridade Marítima (Directorate General for Maritime Authority)

EEZ – Exclusive Economic Zone

EIA – Environmental Impact Assessment

EMAM – Estrutura de Missão para os Assuntos do Mar (Task Force for Sea Affairs)

EU – European Union

GIS – Geographical Information System

IA – Instituto do Ambiente (Environment Institute)

ICM – Integrated Coastal Management

ICN – Instituto da Conservação da Natureza (Institute for Nature Conservation)

ICOM – Integrated Coastal and Ocean Management

ICZM – Integrated Coastal Zone Management

IMO – International Maritime Organization

IPTM – Instituto Portuário e dos Transportes Marítimos (Institute for Ports and Maritime Transport)

LOSC – Law Of the Sea Convention

MAOTDR - Ministério do Ambiente, Ordenamento do Território e Desenvolvimento Regional (Ministry of the Environment, Territorial Planning and Regional Development)

MDN – Ministério da Defesa Nacional (Ministry of National Defence)

MEPC – Marine Environment Protection Committee

MOPTC – Ministério das Obras Públicas, Transportes e Comunicações (Ministry for Public Works, Transport and Communications)

MSC – Maritime Safety Committee

No. - Number

p. – Page

POOC – Plano de Ordenamento da Orla Costeira (Coastal Zone Management Plan)

pp. - Pages

PSSA – Particularly Sensitive Sea Area

SAM – Sistema da Autoridade Marítima (System of Maritime Authority)

SOCA-ACC - Sub-committee on Oceans and Coastal Areas of the
Administrative Committee on Coordination

SWOT – Strengths, Weaknesses, Opportunities & Threats

TSS – Traffic Separation Scheme

UN – United Nations

UNCED – United Nations Conference on Environment and Development

UNCLOS – United Nations Conference on the Law Of the Sea

UNEP – United Nations Environment Programme

VTs – Vessel Traffic System

WFD – Water Framework Directive

WMU – World Maritime University

1. INTRODUCTION

Integration is presently an unavoidable concept in the management of resources subject to multiple utilisations. The last ten to twenty years have witnessed the proliferation of integrated strategies aimed at improving the planning and management of complex systems, from mountains and forests, to river basins and coastal zones. Although varied in many of its aspects – not the least because of cultural, economic, social and environmental differences between the areas addressed by such strategies – a number of common features are identifiable in those processes: “consultation, conflict management, transparent and more informed cross sectoral decision making based on scientific information and local values” (McConnell, 2002, p.619), the wider aim consisting in achieving a balance between human development and well-being on one side and adequate levels of exploitation and protection of the natural resource base on the other. Arguably, the paradigm of integration stems from the need to counter evident shortcomings of sector-specific policies and actions, which more often than not tend to favour a few users at the expenses of the wider society.

In this context, integration of the different uses is not only the goal and the outcome of any initiative, but also a characteristic of the process through which the initiative is established (Chircop, 2000, p.348). This implies that every entity interested or affected by such initiative should also take part in the steps leading to its development.

Integrated Coastal & Ocean Management (ICOM) consists of a set of inter-related activities and approaches meant to deal with various types of pressures on coastal zones and on the oceans. Generically it attempts to reconcile diverse – and often opposing – uses with each other and with the natural coastal and marine ecosystems. One such use is maritime transportation and its supporting infrastructure, typically in the form of ports and associated navigation services, a cluster of activities that is often termed maritime industry or maritime sector¹.

¹ Other expressions are used to refer to the broader shipping and port industries as a whole, among which “shipping industry” and “maritime transport(ation)”. I shall refrain from using these latter terms when referring both to the sea and land-based elements of the maritime sector, as

The relevance of the maritime sector for coastal States is multifold. Besides constituting the backbone of both national and international trade of many countries, it is often a very important economic sector at both local and national levels, with large potential for generating revenues and employment. On the other hand, there are a number of areas where the interests of the maritime industry clash with those of other elements of society, notably those making use of the same ocean and coastal resources. In order to set the problem that the present research work addresses, it is worth describing these interferences in some detail. For the sake of the present discussion, I have grouped the different interferences into three main types.

The first type of interference relates to the occupation of specific land and marine areas. In both cases space is required for the installation and operation of diverse infrastructures complementing and supporting seaborne transport. On land these comprise harbours and ports, building and repair yards, navigational aids and a plethora of land-based transport infrastructure aimed at delivering goods to other locations. At sea exclusive space reclamation takes the form of dedicated shipping routes (both off-shore and in the proximity of harbours) and various forms of floating structures supporting cargo handling (Chircop, 2005; Council of Europe, 2000). Such utilisation of space results in various forms of interference. First, for safety and security reasons, shipping and port infrastructures tend to exclude, “to elbow away other ocean users” (Chircop, 2005, p.67), that is, the co-existence of maritime infrastructures with those for other marine and coastal activities is typically not possible. At sea, such exclusiveness is often mandated – as in dedicated shipping routes – or required for safety reasons, whereby fishing, recreational or other less dominant boating activities might be seriously impaired (Lindén, 2006, p.64; Chircop, 2005, p.67)². Second, space reclamation and the operation of the abovementioned support infrastructures leads to different types of impacts. The most common are the destruction and alteration of

they tend to apply mainly to the shipping element of the whole sector and leave out ports or other land-based infrastructure.

² See also Peng *et al.* (2006) for a description of the economic consequences of relocating mariculture activities because of shipping lanes, following the implementation of a zoning plan as part of the Xiamen Integrated Coastal Management (ICM) Demonstration Project. For a detailed description of the Xiamen ICM initiative see GEF/UNDP/IMO Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), 2006.

natural habitats and changes to hydrological patterns and sediment deposition, resulting both from construction and from dredging of navigational channels. Although resulting from interventions on coastal land, these impacts extend to adjacent marine areas (Council of Europe, 2000, p.82). Off-shore installations might further lead to constructions on the sea floor. All these types of impacts lead to changes in the affected coastal and marine ecosystems, interfering with other activities depending on them.

The second group of interferences relate to the impacts caused by the different forms of pollution resulting from the operation of ships and associated structures. These include routine discharges of oil - including oily / bilge waters - and litter (Council of Europe, 2000, p.82), the transfer to the aquatic environment of toxic components from ships' paints (Lindén, 2006, p.64; Chircop, 2005, p.68), air pollution from ships' exhausts (Council of Europe, 2000, p.82; Chircop, 2005, p.67) and the transfer of invasive alien species (Lindén, 2006, p.64; Chircop, 2005, p.68; McConnell, 2002, pp.620-621). These diverse forms of pollution impact differently on the various other ocean uses. Pollution of coastal waters and lands might pose health risks and renders the affected area less appealing for tourism. Air pollution from ships and ports has similar effects. Fisheries and in particular aquaculture might be strongly affected by water pollution, as well as by the introduction of invasive species. Serious economic consequences from such introductions have been recognized in different parts of the world (Lindén, 2006, p.65)³. It should be noted that routine pollution from maritime activities often results in chronic impacts on marine and coastal ecosystems, which, partly because of the accumulation of pollutants, results in long-term negative effects on the ecosystems' resources.

One also needs to consider the impacts caused by shipping accidents, as the third group of interferences. These are especially serious when hazardous materials are involved. In this category, oil and its derivatives have received most of the attention from the public, the regulators and the industry, as a consequence of the vast quantities of such products carried by sea and of the visual impact of spills. However, despite the attention devoted to marine spills of oil, its environmental consequences

³ The IMO-sponsored Global Ballast Water Management Programme has produced a wealth of information on the issue of alien aquatic species, with particular focus on shipping as the vector for their transfer. More information at <http://globallast.imo.org>.

and resulting impacts on other ocean and coastal users are limited. The International Tanker Owners Pollution Federation summarizes the case in the following manner (International Tanker Owners Pollution Federation Ltd [ITOPF], 1985, p.1):

“Oil spills can have a serious economic impact on coastal activities and on those who exploit the resources of the sea. In most cases such damage is temporary and is caused primarily by the physical properties of oil creating nuisance and hazardous conditions.”

Although the actual impacts will vary with the characteristics of the spilled material, the type of coast and the patterns of human utilisation of the affected coastal resources, one might argue that spills of hazardous materials pose acute but temporary threats to biological systems, thus interfering with human health – and hence human settlements on the coast - and economic activities such as fisheries - especially stationary forms, such as traps and aquaculture, but also through damage to fishing gear -, tourism and other activities whose infrastructures become damaged by the polluting substance.

Despite the various levels of interference between the maritime sector and other users of marine and coastal resources, the regulation and management of the former has been accused of more often than not being conducted outside existing ICOM frameworks (Lindén, 2006; Chircop, 2005; McConnel, 2002). And while there are aspects in the shipping and port sectors that indeed need to be dealt with in a sectoral, specialized manner – chiefly those related to purely technical issues – there is a growing recognition that the maritime industry needs to be an integral part of any comprehensive coastal and ocean management effort⁴.

In Portugal the situation has not been any different from that of many other coastal countries. Most activities taking place on the coast or on the country's marine areas have been treated in relative isolation, and the maritime sector constitutes no

⁴ Evidence for such recognition are the efforts of various countries in establishing integrated ocean policies. For a compilation of the main elements of some of these policies, visit the website of The Ocean Policy Summit 2005 - International Conference on Integrated Ocean Policy: National and Regional Experiences, Prospects, and Emerging Practices, held in Lisbon from the 10th to the 14th of October 2005, where summaries of existing policies were submitted as preparatory documents. (<http://www.globaloceans.org/tops2005/outcomes.html>, last accessed May 29th 2006)

exception (Taveira-Pinto, 2004; Veloso-Gomes, 2003). As will be discussed below, part of the reason for this might stem from the fact that the International Maritime Organization (IMO) has not yet moved towards integration with other ocean uses⁵. At the level of the European Union (EU) maritime transport policies have so far also been developed without regards to any ICOM principles, not even to those advocated by the EU itself⁶. Hence, without the motivation and support of these two supra-national organisation responsible for shaping Portugal's maritime sector – arguably the two most relevant ones – the country has so far had one less reason to bring the management of its maritime sector under any ICOM initiative.

There are, however, some developments on the horizon. Alongside a few other nations, Portugal is currently setting up new integrated coastal and ocean policies, and has been trying to occupy a prominent role in international fora dealing with ICOM and ocean governance⁷. How these efforts are shaping the relationship between ICOM and the country's maritime sector is what this dissertation has tried to uncover.

The present document is structured in the following manner: chapter two is a description of the framework governing and influencing the maritime industry and ICOM at the level of international institutions, particular attention being paid to those institutions having an influence over Portugal's maritime and coastal management policies. Chapter three consists of a description and analysis of the country's maritime sector and coastal and ocean management initiatives. The fourth chapter is dedicated to an appreciation of overall issues relating to policy integration and to the assessment of the status of and possibilities for integration of the maritime sector within Portugal's ICOM initiatives. The fifth and sixth chapters contain, respectively, the conclusions of

⁵ Moira McConnell (2003) presents an interesting account of this relative isolation of the IMO in relation to other United Nations' (UN) bodies whose mandates involve coastal and ocean uses.

⁶ See Commission of the European Communities (2005c) for the EU's current discussion of its future maritime strategy; and Recommendation 2002/413/CE for the EU's recommendation regarding integrated coastal management of Member States

⁷ The programme of the XVII Government of Portugal (2005-2009) explicitly mentions the coordination of all activities related to the oceans and the reinforcement of the ICM framework in the country (Government of Portugal, 2005, p.118). The government has also been active in supporting large-scale events related to the oceans, such as The Oceans Policy Summit 2005 (Lisbon), the International Maritime Day 2005 (Lisbon) and the Third Global Conference on Oceans, Coasts and Islands 2006 (Paris).

the present study and recommendations for further research on this topic. A description of the methodology followed in this study is included in Annex I.

2. THE INTERNATIONAL SETTING

2.1 THE CALL FOR INTEGRATION IN INTERNATIONAL AGREEMENTS

The UN-sponsored Convention on the Human Environment, which took place in Stockholm between June 5th and 16th 1972 marks, at the level of international agreements between individual States, the emergence not only of the “environment” as a globally articulated concern (McConnell, 2003, p.75), but also of the concept of integration in the management of the relationship between humans and that same environment (Chircop, 2005, p.71; Cicin-Sain, 1998, p.72; see also McConnell, 2003, 2002⁸). Relative to this latter point, principle 13 of the declaration emanating from the conference calls upon States to “adopt an integrated and co-ordinated approach to their development planning so as to ensure that development is compatible with the need to protect and improve environment for the benefit of their population” (Declaration of the United Nations Conference on the Human Environment, 1972). In that same year, the United States’ Congress passed the Coastal Zone Management Act for the country, an instrument that is seen today as the first attempt at establishing an integrated framework for the management of a nation’s coastal and marine areas⁹.

In the wake of the Stockholm Conference the United Nations Environmental Programme (UNEP) was created, and within it the Regional Seas Programme. This initiative consisted of a set of regional intergovernmental agreements aimed at addressing “the accelerating degradation of the world’s oceans and coastal areas through the sustainable management and use of the marine and coastal environment,

⁸ Moira McConnell (2003) does not explicitly refer to the concept of integrated management when discussing the evolution of international environmental agreements. Instead, she describes what she terms the emergence of an “ecosystemic worldview” to environmental management and human development. While the two concepts have different meanings, both are intimately related to the notions of inter-dependency and mutual influence between various elements (human and non-human); and in fact, in Moira McConnell’s argumentation, integrated management approaches have appeared as obvious and necessary follow-ups of that ecosystemic worldview.

⁹ Coastal Zone Management Act of 1972, 16 U.S.C.1451-1464, as amended through P.L.104-150, The Coastal Zone Protection Act of 1996, online at http://www.ocrm.nos.noaa.gov/czm/czm_act.html (last accessed May 31st 2006).

by engaging neighbouring countries in comprehensive and specific actions to protect their shared marine environment.” (<http://www.unep.org/regionalseas/About/default.asp>, last accessed May 31st 2006)¹⁰.

1982 saw the adoption of the United Nations Convention on the Law of the Sea (LOSC, Law of the Sea Convention¹¹), an instrument often described as the constitution for the ocean, as it attempts to regulate the myriad of human activities making use of the oceans and the underlying seabed. Despite the fundamental importance of the LOSC in defining basic jurisdictions, rights and duties of States relative to the utilisation of the ocean and its resources, some authors have claimed that the convention failed to adequately address the actual framework for the integrated management of the ocean and of coastal zones (Chircop, 2005, p.71; Cicin-Sain, 1998, p.72). McConnell (2003, p.76), on the other hand, argues that the “comprehensive management regime” enshrined in Part XII of the LOSC, “if fully implemented, could potentially govern all human activity”, providing the legal basis for later marine protection programmes and encouraging cooperation among States. This holistic view expressed by the LOSC is, according to the same author, a result of the influence that poorer, developing and newly-decolonised countries exerted during the nine years of preparatory work to the UNCLOS 1982, which brought socio-economic concepts such as equity, trade and economic rights into the LOSC.

Integrated coastal and ocean management practice would, however, see little development throughout the 1980s, with the eventual exception of the United States, where the 1972 act served as the basis for some action in that area. At the international level, it was only with the 1992 United Nations Conference on Environment and Development (UNCED) that a more detailed framework for the

¹⁰ The UNEP Regional Seas Programme presently covers 18 regions of the world, namely Antarctic, Arctic, Baltic, Black Sea, Caspian, Eastern Africa, East Asian Seas, Mediterranean, North-East Atlantic, North-East Pacific, North-West Pacific, South Pacific, Red Sea and the Gulf of Aden, ROPME Sea Area, South Asian Seas, South-East Pacific, Western and Central Africa and the Wider Caribbean. More information online at <http://www.unep.org/regionalseas/default.asp> (last accessed May 31st 2006).

¹¹ The abbreviation for the UN Convention on the Law of the Sea is often UNCLOS. This is, however, the same abbreviation used to refer to the conference itself, as for example in UNCLOS III, the third session of the conference held in 1982. To avoid confusion I have opted to keep UNCLOS for the conference and LOSC (Law Of the Sea Convention) for the convention, an abbreviation also commonly used.

integrated management of coastal and ocean resources was developed¹², and this under the overarching newly formulated concept of sustainable development¹³. It is meaningful to note that UNCED was held as an attempt to address “[t]he lack of progress [...] over the intervening 20 years [since Stockholm 1972] and the worsening environmental situation in most countries, combined with an increasing gap between the wealth of the industrialized countries and the deepening poverty of most less developed economies [...]” (McConnell, 2003, p.77) Two other concerns, of relevance for the main outputs of the conference, were the growing awareness of the multiple and complex interlinks between many of the world’s problems, chief among which those between human development and well-being and environmental quality; and the realization that industrialisation could be at the basis of significant alterations to the Earth’s climate and life-support systems (Cicin-Sain, 1998, p.74). With these issues in mind, the conference produced a number of documents, the most prominent ones being the Rio Declaration on Environment and Development, comprising a set of principles relative to sustainable development¹⁴; the Framework Convention on Climate Change, setting “an overall framework for intergovernmental efforts to tackle the challenge posed by climate change” (<http://unfccc.int>, last accessed June 2nd 2006); the Convention on Biological Diversity, addressing matters related to the conservation of the planet’s biodiversity¹⁵; and Agenda 21, an action plan guiding countries in their efforts towards sustainable development¹⁶. The two latter instruments contain explicit calls for the adoption of integrated strategies for the management of the relationships between humans and the environment, and both have specifically addressed issues related to the marine and coastal environments, through Chapter XVII of Agenda 21 and the 1995 Jakarta Mandate on Marine and Coastal Biological Diversity, respectively. Although it has been stated that the implementation of the above

¹² UNCED was held in Rio de Janeiro, Brazil, between June 3rd and 14th 1992. The conference is often also called “The Earth Summit” or “The Rio Conference”.

¹³ “Sustainable development”, albeit being a centuries-old practical evidence in many parts of the world, has been, as a political-societal concept popularised by the so-called Brundtland Commission in its 1987 report, *Our Common Future*. (World Commission on Environment and Development. (1987). *Our Common Future*. Oxford: Oxford University Press.)

¹⁴ Available online at www.unep.org (last accessed June 2nd 2006).

¹⁵ Available online at www.biodiv.org (last accessed June 2nd 2006).

¹⁶ Available online at www.unep.org (last accessed June 2nd 2006).

instruments has been less than optimal (McConnell, 2003, p.78; 2002, p.618-619), there is recognition of the changes operated by the Rio Conference in mankind's approach to environmental management and human development. As Cicin-Sain and Knecht put it (Cicin-Sain, 1998, p.81):

“All the major actions that came out of the Earth Summit – the Rio Declaration, Agenda 21, the Convention on Climate Change, the Convention on Biological Diversity, and the statement of forest principles – reflect a fundamental shift in thinking, a shift in paradigm: the understanding that henceforth, nations, groups, and individuals must address questions of environment and development and relations between North and South in a fundamentally different way from the way they have in the past.”

This new way, in the view of the same authors, entails two concepts: interdependence and integration. And although, as has been discussed above, both of these concepts had actually been surfacing over the previous 20 to 30 years, it is a fact that throughout the 1990s the world witnessed a proliferation of integrated coastal management (ICM) initiatives.

Other agreements were reached internationally that addressed the integration of marine and coastal activities, among which the 1994 Declaration of Barbados and the Programme of Action for the Sustainable Development of Small Island Developing States¹⁷; the 1995 Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities¹⁸, which followed the 1985 Montreal Guidelines for the Protection of the Marine Environment Against Pollution from Land-based Sources; the creation in 1997 of the World Trade Organization, where sustainable development was adopted as an element of international trade (McConnell, 2003, p.80)¹⁹; and the realisation of the World Summit on Sustainable Development from 2 to 4 September 2002 in Johannesburg, where, amidst other documents, a political declaration from all participating States and a comprehensive plan of

¹⁷ Additional information available online at www.sidsnet.org (last accessed June 2nd 2006).

¹⁸ Additional information available online at www.gpa.unep.org (last accessed June 2nd 2006).

¹⁹ Additional information available online at www.wto.org (last accessed June 2nd 2006).

implementation were produced²⁰. The latter, besides reinforcing the call for States to adhere to previous international agreements related to the oceans – such as chapter XVII of Agenda 21 and the LOSC – explicitly refers to the need for “[...] coordination and cooperation, including at the global and regional levels, between relevant bodies, and actions at all levels to promote integrated, multidisciplinary and multisectoral coastal and oceans management at the national level, and encourage and assist coastal States in developing ocean policies and mechanisms on integrated coastal management.” (Plan of Implementation of the World Summit on Sustainable Development, 2002, article 29.c)

The above description, albeit not covering all international agreements relative to the human utilisation and management of the Earth’s ocean and coasts, has attempted to delineate the path followed by concepts related to integrated resource management and spatial planning. Table 6 in Annex II presents a more complete picture of the principal international instruments of the past forty years relating to ocean governance. While a number of regional agreements have been left out of that compilation, it is still evident that States have to deal with an overwhelming array of instruments. And in fact, although the UN has been calling for integration for at least three decades, including coordination between its own agencies and programmes, it is recognized today that it is the fragmentation and relative isolation of the numerous institutions within the UN’s own system that, to some extent, is standing in the way of effective integration of development or environmental management initiatives. Added to the own agendas of countless other organisations active in coastal and ocean management, the results are a gap in the effective implementation of many of the agreements signed so far and a large resistance to the adoption of adaptive, multi-party processes that should constitute the core of integrated management schemes (Hinds, 2003, pp.350-352; McConnell, 2003, pp.81-87).

²⁰ Formally designated “Johannesburg Declaration on Sustainable Development - From our origins to the future” and “Johannesburg Plan of Implementation”. Both are accessible online at http://www.un.org/esa/sustdev/documents/docs_key_conferences.htm (last accessed June 2nd 2006).

At the UN level, however, efforts have been made since the 1992 Rio Conference to coordinate the activities of the UN agencies dealing with coastal and ocean issues, in support of chapter XVII of Agenda 21. One such effort was the creation in 1993 of the Sub-committee on Oceans and Coastal Areas of the Administrative Committee on Coordination (SOCA-ACC), chaired by the Intergovernmental Oceanographic Commission. It lasted until 2001, after which date inter-agency support was handled by *ad-hoc* groups²¹. In 2003 the situation was somewhat reversed with the establishment of the Oceans and Coastal Areas Network (later termed UN-Oceans), whose objective, building upon that of SOCA-ACC is to “enhance cooperation and coordination among Secretariats of the International Organizations and Bodies concerned with ocean related activities” (<http://www.oceansatlas.org/www.un-oceans.org/About.htm>, last accessed June 2nd 2006). Gathering the efforts and combining the expertise of these bodies, UN-Oceans has the promotion of integrated oceans management at the international levels as one of its prime objectives. In the next section, we will discuss how one of the UN’s prime agencies related to the oceans – the IMO – is dealing with the issue of integration of its sectoral interests with other uses of marine and coastal resources.

2.2 THE WORK OF THE INTERNATIONAL MARITIME ORGANIZATION

The International Maritime Organization has been, since its establishment in 1948, the specialised UN agency responsible for the regulation of maritime transport at the international level²². From an original emphasis on economic aspects related to the promotion of freedom of navigation and to the elimination of discriminatory practices, the IMO has evolved to deal with virtually all matters related to the safety and efficiency

²¹ The Administrative Committee on Coordination itself had its name changed to UN System’s Chief Executive Board for Coordination, which, without actually involving a change in mandate, more clearly demonstrates the task of coordination at the whole UN level.

²² Following the 1945 establishment of the United Nations Organization and the formation of a number of other UN international bodies in the 1940s, the Convention on the Intergovernmental Maritime Consultative Organization was adopted in Geneva on March 6th 1948. The convention entered into force ten years later and the first assembly meeting was held at the headquarters in London in January 1959. In 1982 the name was changed to International Maritime Organization. (http://www.imo.org/Conventions/mainframe.asp?topic_id=771, last accessed June 4th 2006)

of maritime transport and to the prevention of pollution from ships (see Annex III for the full enumeration of the IMO's objectives, as stated in the IMO Convention).

The IMO itself is composed of representatives of the organization's Member States and includes different bodies: the Assembly, where all Member States are represented, meets every second year to approve the work programme, vote the budget and determine financial arrangements; the Council, composed of representatives from a total of 40 Member States, is the executive arm of the organization charged with supervising the work of the IMO, performing the Assembly's tasks in-between the latter's sessions; two high-level committees, the Maritime Safety Committee (MSC) and the Marine Environment Protection Committee (MEPC), consisting of all Member States, which consider technical matters related to safety and pollution prevention in shipping; nine sub-committees providing assistance to the MSC and the MEPC in specific technical issues²³; three other committees handling issues of legal (Legal Committee), technical execution and cooperation (Technical Cooperation Committee) and bureaucratic / administrative (Facilitation Committee) nature; and a Secretariat made up of the Secretary-General and personnel based at the London headquarters.

Against a background of the IMO's regulatory and standard-setting activities aimed principally at technical, operational or educational-training aspects of shipping, it is interesting to appreciate to which degree this organization has approached concepts of integrated coastal and ocean management. As was alluded to in the introduction, some opinions have been expressed about the need for such approach, given the central role played by shipping in the maritime economy of many nations and the extent of the impacts upon coastal and marine zones associated with maritime transport. However obvious these two latter facts might be, the issue of how the IMO could better contribute to the ICOM movement is somewhat more problematic. On one hand the very nature of the issues that the IMO has to deal with might not be very "ICOM-friendly" because of their high technical complexity and specificity. On the other, the consensus-based representative structure of the IMO, whereby outcomes tend to

²³ The IMO's sub-committees are: Bulk Liquids and Gases; Carriage of Dangerous Goods, Solid Cargoes and Containers; Fire Protection; Radio-communications and Search and Rescue; Safety of Navigation; Ship Design and Equipment; Stability and Load Lines and Fishing Vessels Safety; Standards of Training and Watchkeeping and Flag State Implementation.

represent compromises between Member States, might constitute the strongest barrier to permeation by innovative approaches. Despite these observations, there is enough room in the scope of the issues dealt by the IMO to come closer to broader integrated management issues; and the only means for this approach actually rests within the governance structure of the institution itself. It is worth elaborating on these two considerations.

In respect of the issues dealt with by the IMO, an all-encompassing view would hold that all of them are relevant for ICOM. The basis for such argumentation would be that maritime transportation is a key element in most coastal States, and hence all measures affecting this activity should be handled from within an ICOM perspective. While there is some reason in such claim, it implies a considerable dilution of sectoral specificity and could jeopardise technical efficiency in the development and implementation of often highly complex matters specific to the shipping industry²⁴. An alternative view is that a restricted number of issues should be given most attention from the point of view of ICOM. Aldo Chircop (2005, pp.74-77) mentions the cases of the designation of places of refuge for ships in distress – a topic also analysed by Lindén (2006) – and the nomination of Particularly Sensitive Sea Areas (PSSA) as two such issues. In both cases, the IMO's guidelines point towards the adoption of comprehensive, multi-factorial and multi-use views of coastal and marine areas, clearly paving the way for integrated assessment – if not management – of such areas (International Maritime Organization [IMO], 2006, February 6; 2004, March 5).

Another set of issues where the decisions at the IMO are of paramount importance for ICOM are those relating to the assignment of sea space for navigational purposes, in the form of navigational channels or traffic separation schemes. Such decisions have potential consequences for other users of the same space and for the marine and coastal environments, and as such should take into account interests other than just those of shipping.

Finally, the drafting of maritime regulations – especially those relating to environmental standards of ships – has been “developed on the basis of a reconciliation of ship equipment technical development and commercial viability as opposed to ecological carrying capacity.” (McConnell, 2002, p.622) Indeed, although

²⁴ In section 4.3.2 below this issue will be discussed in relation to the specific situation in Portugal.

the concern for the technical and economical viability of standards is necessary to ensure adherence thereto, it is questionable whether ecological factors should not be given more weight in the negotiation of international environmental norms for ships.

In spite of the obvious need to handle these four issues under the umbrella of an ICOM framework, there is little evidence that this has happened at the IMO. The underlying reason has to do with the way how issues are raised and decisions are made at the IMO. As described above, this agency basically consists of delegates from its Member States, either at the temporary committees and meetings or in the permanent secretariat. As such, the priorities of the IMO are for the most part the sum – better said, the intersection – of those of its constituting members. What individual States put into the IMO is, after negotiations, what they can expect to get out of it. In this context, the only means of pushing the ICOM agenda into the IMO is through the national representations.

One fundamental aspect in this process is the level of ICOM expertise in these representations. Chircop (2005, p.78) has called for “ICM capacity within the secretariat, notably in the Marine Environment Division” and for national delegations to “include ICM expertise to enable appreciation of how international standard-setting for marine transportation might interrelate with national ICM effort”. A similar call for professionals in the maritime industry to be trained in subjects relevant for ICOM has also been made by Moira McConnell (2002). Indeed, only if the individuals participating in the work of the IMO are able to convey the concerns and concepts of ICOM will decisions from this organisation reflect an integrated view of the use of the ocean and coasts. The responsibility for this change lies clearly with every individual Member State, and is one that should be made clear to those involved in ICOM at national level. After all, taking part in the decision-making process at the IMO should be seen by ICOM professionals as an opportunity to push the national ICOM concerns into the key international forum dealing with the regulation of maritime transport.

With the growing concern for and the proliferation of integrated management at national level, it is probable that ICOM will gain an increasing presence at the IMO. Still, for the time being, the IMO on the whole seems keen to maintain its strictly sectoral character. An illustration of this fact – and of the relevance of ICOM for the IMO - is the development of the ICOM specialisation at the World Maritime University

(WMU). This university was established by the IMO in 1983 with the principal aim of “training [...] senior specialist maritime personnel in various aspects of shipping and related fields concerning the improvement of maritime safety, the protection of the marine environment and the efficiency of international shipping, in furtherance of the purposes and objectives of the International Maritime Organization [...]” (World Maritime University [WMU], 2003, Art.2). After over a decade of teaching ICOM as an elective subject, the WMU launched the ICOM specialisation in 2006, covering a wide range of subjects, from oceanography and marine ecology to principles of integrated management²⁵. Despite the apparent relevance of ICOM for the work of the IMO and the considerable investment in the development of the new specialisation, ICOM will be discontinued at the IMO after 2008 and replaced by a new course with a greater share of shipping-related subjects. The main reason for such change is that the IMO effectively does not consider ICOM to be one of its core purposes and objectives.

2.3 ICOM AND MARITIME INDUSTRY IN THE EUROPEAN UNION

The European Union is an organisation of 25 European States, which, having evolved from a forum for economic cooperation among half a dozen countries²⁶, at present regulates virtually every aspect of its Member States’ policies and actions in those domains that either impact on other Member States (such as environmental quality) or relate to the whole of the EU’s relationship with the rest of the world (e.g.

²⁵ The WMU MSc courses consist of four semester, the first and second being respectively foundation and pre-specialisation studies; the third consisting of the specialisation course; and the fourth composed of a research assignment and a variable number of electives in a wide range of subjects. The third semester clearly represents the core of the MSc course. More information is available from the university’s website at www.wmu.se.

²⁶ The formal roots of the EU go back to the establishment in 1951 of the European Coal and Steel Community, whose members were Belgium, the Federal Republic of Germany, Luxembourg, France, Italy and the Netherlands. The organisation had as main purpose the integration of those two industries in western Europe. In 1957 through the Treaties of Rome this group of countries created both the European Atomic Energy Community and the European Economic Community, expanding the initial aim to integrate other sectors of economy, remove trade barriers and form a common market. The institutions in these three communities were merged in 1967, a single Commission, a single Council of Ministers and the European Parliament having been established. The Treaty of Maastricht of 1992 formally created the European Union. (http://europa.eu/abc/history/index_en.htm, last accessed June 2nd 2006)

customs regulations). The legislative work is concentrated in three main institutions: the European Parliament, an assembly of representatives directly elected by the citizens of all Member States, whose main task consists of passing laws; the Council of the EU, composed of ministers from Member States' governments, shares the rule- and policy-making obligations of the Parliament and handles issues of foreign, security, justice and freedom policy; and the Commission of the European Communities (CEC), independent of national governments, responsible for proposing new policies and laws and ensuring implementation of existing ones.

Through different mechanisms and to different degrees, EU Member States have to abide by EU regulations. The relevance for the present study is that because of its numerous areas of influence, the EU effectively determines much of its Member States' ocean and coastal governance frameworks. Indeed, several of the EU's policies are potentially relevant for ocean and coastal issues, namely those related to fisheries, agriculture, environment, regional development, energy and maritime transport²⁷. Institutionally, policy making in each of these domains rests with individual Directorates General (DG), respectively DG Fisheries & Maritime Affairs, DG Agriculture, DG Environment, DG Regional Policy, and DG Transport & Energy. As will be discussed below, all these entities have been exerting their influence on the marine and coastal governance schemes of Member States, mainly through the development of various pieces of legislation, but also through the launching of programmes specific to coastal or marine areas.

In the course of the EU's legislative efforts, considerable fragmentation of the EU's action in the field of ocean and coastal policies has emerged, as recently acknowledged by the CEC itself (Commission of the European Communities [CEC], 2006a, p.5):

“So far our policies on maritime transport, industry, coastal regions, offshore energy, fisheries, the marine environment and other relevant areas have been developed separately. Of course we have tried to ensure that their impact on each other was taken into account. But no one was looking at

²⁷ Industry and tourism are two other areas with significant potential impacts on coasts and oceans, but their respective policies are mainly dealt with at domestic level by each Member State, the EU intervening only in matters related to industrial competitiveness.

the broader links between them. No one was examining in a systematic manner how these policies could be combined to reinforce each other.”

This statement is included in the introduction to the CEC’s green paper on the Union’s future maritime policy, one of the two most notable efforts by the EU in the field of the integration of policies affecting oceans and coasts, the other being the action of the EU in the field of integrated coastal zone management. Before looking at these two initiatives in detail, it is worth having an overview of other EU regulatory instruments directed at coastal and marine areas of Member States.

Two EU-wide sectoral policies with significant impact on coastal and marine ecosystems are the Common Fisheries Policy (CFP) and the Common Agricultural Policy (CAP), the latter having an indirect influence by means of agriculture patterns and practices in the Union. The first is the principal fisheries management instrument of the EU, and has thus a direct influence on the populations of harvestable marine species. Aquaculture, with its array of impacts on coastal zones, is also dealt with by the CFP.

Four “horizontal” regulations have been mentioned in the literature as also being relevant for ICOM in the EU, as they apply to many developments in coastal zones (see Gibson, 2003, p.130; and Gibson, 1999, pp.50-52). These are the Environmental Impact Assessment Directive (85/337/EEC, amended by Directive 97/11/EC), the Strategic Impact Assessment Directive (2001/42/EC) and the two directives related to the Åhrus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters – to which the EU is party since May 2005 - Directive 2003/4/EC on public access to environmental information (repealing the earlier Council Directive 90/313/EEC) and Directive 2003/35/EC providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment.

Many of the sector-specific environmental regulations of the EU are of direct relevance for coastal and marine zones because of the wide variety of activities that take place there. Of particular relevance are measures relating to water quality, among which the Bathing Water Directive (76/160/EEC); the Urban Waste Water Treatment Directive (91/271/EEC); the Nitrates Directive (91/676/EEC); to some extent the

Integrated Pollution Prevention and Control Directive (96/61/EC), aimed at regulating industrial pollution of water, air and land; and the Water Framework Directive (2000/60/EC, [WFD]). This latter instrument establishes a rather comprehensive framework for the protection of inland surface waters, transitional (estuarine) waters, coastal waters and groundwater. According to Borja (2005, p.1769), three main features make the WFD an innovative mechanisms for water resources management in the EU: first, management is based on biological and ecological elements, instead of the previous physical-chemical parameters, having the concept of the ecosystem at the centre of the management decisions; second, the WFD applies to all water bodies; and lastly, it considers whole river basins, including adjacent coastal areas up to an average distance of one nautical mile from the baseline²⁸. This means that quality parameters stipulated by the WFD will apply directly to coastal waters of the EU's coastal Member States. Moreover, although the directive does not deal with ocean waters beyond the average one mile distance from the coast, it will still exert a potential beneficial impact on all marine ecosystems in the EU as many of the pollutants that the WFD will regulate on land eventually make their way into open waters (Borja, 2005, p.1770).

Still within the scope of environmental policy, nature conservation instruments are also of significance for ICOM, as many of the areas and living beings subject to protection are coastal or marine. In the EU legislative framework two instruments stand out, the Birds Directive (79/409/EEC) and the Habitats Directive (92/43/EEC), which underpin most of the EU's action in the field of biodiversity conservation and aim at the structuring the Natura 2000 network of European protected habitats. Although a further priority of these two directives is the integration of nature protection requirements into other EU policies - such as agriculture, regional development and transport - and despite the fact that marine biodiversity is already covered by two of the EU's

²⁸ The exact wording reads: "Coastal water" means surface water on the landward side of a line, every point of which is at a distance of one nautical mile on the seaward side from the nearest point of the baseline from which the breadth of territorial waters is measured, extending where appropriate up to the outer limit of transitional waters. "Transitional waters" are bodies of surface water in the vicinity of river mouths which are partly saline in character as a result of their proximity to coastal waters but which are substantially influenced by freshwater flows. (Directive 2000/60/EC, Art.2)

Biodiversity Action Plans – Natural Resources and Fisheries – the implementation of the Birds and Habitats directives to the marine environment has so far been hampered by a number of difficulties unforeseen at start. The two principal constraints have been the lack of scientific knowledge, upon which all designations of protected sites should be based; and the high costs of carrying out research and surveys in offshore marine areas (CEC, 2006c). According to Maes and Neumann, the two directives have “provoked many parliamentary questions and court cases” and their requirements have neither been properly implemented into Member States’ domestic legislations, nor been clearly understood by most parties concerned (Maes, 2004, p.76). It is also important to note that the dispositions in both directives apply equally to terrestrial and marine environments, in the latter case the legal obligation extending to all waters under the sovereignty of the coastal Member State (CEC, 2006c). At present, alongside a broader revision of the whole of the EU’s Biodiversity Strategy, particular attention is being devoted to marine biodiversity issues and to how the Birds and Habitats directives, together with the upcoming Marine Strategy, can better be used to foster real conservation of marine habitats and species.

2.3.1 The Marine Strategy of the EU

The work on the EU-wide Strategy for the Protection and Conservation of the Marine Environment – the EU’s Marine Strategy – commenced in 2002, following the adoption of the sixth Community Environment Action Programme. This latter initiative, which sets the environmental objectives, priority areas, actions and some targets for the EU in the period 2002-2012, specifically calls for a “strategic integrated approach”, whereby the EU’s institutions should establish new ways of working with the various stakeholders in promoting sustainable development on land and at sea (Decision 1600/2002/EC, p.2). One of the requirements of this programme is the preparation of seven thematic strategies addressing broad environmental concerns, the Marine Strategy being one of them. An interesting feature of this new thematic approach by the EU is the long-term perspective of the policy frameworks, environmental objectives for all seven areas being set to around 2020 (http://ec.europa.eu/environment/newprg/strategies_en.htm, last accessed June 9th 2006).

The European Commission launched the debate on the Marine Strategy in 2002 by means of communication COM(2002)539. This document identified operational and institutional objectives for the EU and defined an action plan for the Commission, Member and Candidate States and other stakeholders to elaborate the mentioned thematic strategy by 2004. It was based on an analysis of the environmental status of European seas, of European policies aimed at controlling the major environmental threats and of the gaps in terms of scientific knowledge and monitoring (CEC, 2002, p.4). A total of 14 objectives is proposed in the communication, distributed among 11 distinct themes²⁹. Some objectives relate directly to maritime transport, namely the limitation and posterior elimination of oil discharges to sea; the elimination of marine litter disposal at sea; and the reduction of the overall environmental impact of shipping through the adoption of the so-called “clean ship” concept. In what might be considered a call for the integration of efforts of different stakeholders involved in marine protection, the Commission set the objective of achieving “more effective co-ordination and cooperation between the different institutions and regional and global conventions, commissions and agreements [...]” (CEC, 2002, p.20).

To each of the thematic areas and based on the proposed objectives, the Commission then proposed a number of specific actions. These were presented in a rather concise manner and were to be seen mainly as proposals for further discussion during the consultation procedure. Again looking specifically at the actions involving the maritime industry, one finds actions relating to the control of the introduction of alien aquatic species by means of ships’ ballast water (action 4); the reduction of discharges of hazardous substances to the sea (action 6), in particular oil (action 12); the proposal for the implementation of the IMO’s Convention on Anti-Fouling Systems and further action related to these substances (action 8); an attempt to improve surveillance of illegal oil discharges at sea (action 11); the revision of the effectiveness of the EU’s maritime safety policy, in particular the measures aimed at preventing marine pollution and the promotion of initiatives aimed at minimising environmental harm by ships (action 14); the speeding up of the process towards the entry into force of Annex IV of

²⁹ The themes are: Loss of biodiversity & destruction of habitats; Hazardous substances; Eutrophication; Radionuclides; Chronic oil pollution; Litter; Maritime transport; Health & environment; Climate change; Enhancing coordination and cooperation; and Improving the knowledge base (CEC, 2002, pp.18-20)

MARPOL 73/78 (action 17); and the proposition for the European Community's membership of the IMO (action 22)³⁰. No particular mention is made to the possible links between the Marine Strategy and ICOM, not even to the EU's efforts in this domain, which, as will be discussed below, were already underway at the time this strategy was presented. However, two aspects in particular might point in that direction: first, the call for an ecosystems approach to the "conservation and sustainable use of biodiversity" in action 1 will, if implemented, require a comprehensive approach to the protection and use of coastal and marine habitats (*Ibidem*, p.21); second, the recurrent emphasis in several of the proposed actions on the harmonisation and coordination of efforts between different organisations, both within and outside the EU's institutional body. Actions 19 to 22 are specifically aimed at this latter effort.

In October 2005 the Commission issued a further communication on the Marine Strategy, COM(2005)504 and proposed a directive for the EU's action in the field of its marine environmental policy, the so-called Marine Strategy Directive, COM(2005)505. In the three years that mediated both communications, the Commission conducted a consultation consisting of dedicated conferences; working groups, including consultation with expert organisations and individuals; and an open internet consultation. The proposal for the new directive combines the results of the consultation process, an analysis of documents from other sources on the protection of the marine environment and the Commission's own ideas, in a binding instrument that is meant to be "ambitious in its scope but not overly prescriptive in its tools" (CEC, 2005a, p.5)³¹. This last statement is of particular importance: faced with significant

³⁰ The idea of the CEC's IMO membership was eventually developed further in a recommendation from the Commission to the Council where the relationship of the Commission with the IMO was explored in considerable detail (see SEC/2002/0381). However, as talks between the IMO and the Commission intensified throughout 2003, a number of shipping organisations – notably the International Chamber of Shipping – started to openly criticise and oppose the Commission's move. Individual Member States also expressed their discomfort with the idea in the past two years, and slowly the issue seems to have faded away.

³¹ John Gibson (2003, p.130) provides an interesting summary of the three types of binding legislation available to EU institutions, regulations, directives and decisions. "Regulations, which are widely used in relation to agriculture and fisheries, are of general application and directly applicable to member states. Decisions are less common, and bind only those to whom they are addressed. However, in the environmental context, directives are more frequently employed; these are binding on member states as to the result to be achieved, but leave the choice of form

regional differences within the EU in terms of the characteristics of and threats to the marine environment and of the capacity of the different countries in addressing the conservation needs, the Commission explicitly opted for a mechanism that allowed discretion in the choice of methods to achieve the common goal of good marine environmental status by 2021. In addition to this dual EU/regional approach, the Marine Strategy is built around three other key elements: a knowledge-based approach, aiming at informed policy-making; an ecosystems-based approach, managing human activities in an integrated manner so as to promote conservation and sustainable and equitable use of the ocean; and a cooperative approach, striving for engagement with a broad stakeholder base, including regional seas conventions (*Ibidem*, p.5).

The directive applies to the whole of the waters under the sovereignty or jurisdiction of EU Members States and to the seabed and subsoil underneath those water masses. Each country, falling within one or more pre-set marine regions and sub-regions proposed by the Commission, shall then elaborate its own marine strategy based on the following key items (CEC, 2005b, pp.15-16):

A) Preparation:

- (i) an initial assessment [...] of the current environmental status of the waters concerned and the environmental impact of human activities thereon [...];
- (ii) a determination [...], of good environmental status for the waters concerned [...];
- (iii) establishment [...], of a series of environmental targets [...]; and
- (iv) establishment and implementation [...] except where otherwise specified in the relevant Community legislation, of a monitoring programme for ongoing assessment and regular updating of targets [...].

B) Programmes of measures:

- (i) development, by 2016 at the latest, of a programme of measures designed to achieve good environment status [...]; and

and methods to the national authorities. Thus, directives can specify the objectives of environmental policy, while allowing member states some discretion to fulfil them in ways that suit their own geographical situation and their legal or administrative systems.”

- (ii) entry into operation of the programme provided for in point (i), by 2018 at the latest [...].

The Marine Strategy Directive is presently pending promulgation by the Council and the Parliament, having already been reviewed by the Committee of the Regions and the European Economic & Social Committee³². Once adopted, it will constitute the environmental component of the maritime policy that is presently also under preparation.

2.3.2 The future maritime policy

The European Commission launched the consultation process on the Union's future maritime policy on March 2nd 2005 by means of a joint communication by President José Manuel Barroso and Commissioner for Fisheries & Maritime Affairs Joe Borg. This document pointed out the relevance for the EU of the adoption of an integrated, holistic approach to the management of Europe's maritime affairs, noting the importance of the EU's maritime industries; the numerous links among these; and the growing international recognition of the importance of integrated approaches to the management of the ocean (CEC, 2005c). That communication also announced the establishment of a task-force dedicated to steering the consultation process and preparing a so-called Green Paper on the future maritime policy³³.

The Green Paper was published on June 7th 2006, aimed at "asking citizens how they want to deal with oceans and seas and launching one of the largest consultation exercise in the EU's history." (CEC, 2006b)³⁴ The document is in fact a quite comprehensive list of themes and issues dealing with the relationship between

³² The description and documentation of the revision process is accessible online at http://ec.europa.eu/prelex/detail_dossier_real.cfm?CL=en&DosId=193457 (last accessed June 12th 2006).

³³ "Green Papers [...] are intended to stimulate thinking and launch consultation at European level on a particular subject. The consultations resulting from a Green Paper can then lead to the publication of a White Paper that will propose a set of concrete measures for Community action." (http://eur-lex.europa.eu/en/droit_communaute/droit_communaute.htm#1.5, last accessed June 12th 2006)

³⁴ The Green Paper was, to a considerable extent, inspired by the 2004 report of Portugal's Strategic Oceans Commission, referred to in section 3.2.2.

European citizens and institutions and the seas surrounding them. Amidst the recognition of the poor condition of many of Europe's marine and coastal areas and of the multiple threats posed to them, the guiding thread of the Green Paper is the need to reformulate the European maritime policy with the aim of taking advantage of the immense benefits that marine and coastal resources have for the citizens of the EU. Therefore, under the umbrella of a future unifying maritime policy, the main industries are considered in terms of their threats and opportunities, specific questions being posed on how these two aspects should be addressed. Maritime transport in particular, a sector where the EU is a world leader, is repeatedly mentioned throughout the document, not only for its importance to the EU's economy and the political priority it has received in the last decade, but also because of the interferences with other ocean uses and the eventual need to reconcile its development with the requirements of other sectors. Seaports deserve special mention in the chapter dedicated to the links between the maritime policy and integrated coastal management in the Union (*Ibidem*, ch.3.4).

It is interesting to note that the Commission itself recognizes the challenges of harmonising the promotion of maritime transport – in particular short sea shipping and the so-called Motorways of the Sea – and the expansion of port areas and services on one side, with the constraints imposed by the EU's environmental legislation and the increasing competition for space in and around Europe's ports on the other. The need for coherence between the new maritime policy and the Union's efforts in ICM is thus necessary if both are to be successful. Such recognition is all the more important given the fact that for the past three decades the EU has developed an impressive array of shipping- and port-related legislation³⁵. The vast majority of it related to safety, pollution prevention and competitiveness of Europe's shipping and port sectors. Traditionally it has followed the work of the IMO and the directions emanating from its regulations, but in recent years – specially after the Erika and Prestige disasters – the CEC has pushed for rules that go beyond those agreed internationally at the IMO. It is thus of great relevance that the EU - as an important regulator in the maritime field - considers

³⁵ A description of all EU legislation in its various areas of influence can be found on the SCADPlus service of the EU webportal. For legislation relating to transport policy visit <http://europa.eu/scadplus/leg/en/s13000.htm> (last accessed June 19th 2006).

addressing the development of its shipping industry in a broader context of integrated ocean governance, as seems to be the rationale behind the Green Paper.

The consultation that started with the issue of the Green Paper will extend for approximately one year up to the end of June 2007. By the end of 2007 the Commission shall summarise the results of this process and propose a way forward for the EU's new maritime policy by means of another Communication to the Council and Parliament.

2.3.3 A framework for ICZM

The work by European institutions on ICM can formally be traced back to October 1973, with the issue by the Council of Europe's Committee of Ministers³⁶ of Resolution (73)29 on the Protection of Coastal Areas, which, among other recommendations, called upon States to "institute appropriate machinery to co-ordinate the various actions concerning the coastline whether they are initiated by the State or by local authorities" (Resolution (73)29, article 3). Throughout the 1970s and the early 1980s - by means of the first and second environmental action programmes of the European Community - the Commission devoted particular attention to the planning and ecological management of Europe's coasts. This led to the formulation of principles for integrated planning of coastal areas and to the search for ways of applying such principles in Member States (CEC, 1986, p.2). At the same time, Member States that were parties to the Conference of Peripheral Maritime Regions (CPMR) started to work on a joint action for coastal areas, having presented at their plenary assembly in Crete in 1981 the European Coastal Charter, which in 1982 was supported by a European Parliament Resolution³⁷. In the years to follow, the Commission endorsed the work of the CPMR in implementing the Charter, calling in 1986 for a stricter application of its requirements (COM(86)571. See CEC, 1986). A few years later proposals were put forward for specific actions to protect coastal resources in the Mediterranean and Northern

³⁶ The Council of Europe is an inter-governmental organisation of 46 European States founded in 1949. Its main areas of work are, at present, democracy and human rights, social cohesion, the security of citizens and democratic values and cultural diversity. Although it also produces binding agreements between Member States, its action and influence is not as widespread as that of the EU.

³⁷ See Official Journal of the European Communities, OJ C 182 , 19 Jul 1982 p.124.

European seas (Respectively, COM(89)598, OJ C 80, 30 Mar 1990, p.09 and COM(90)498, OJ C 21, 29 Jan 91, p.13. See also Ballinger, 1994, pp.75-76). The early 1990s in fact mark a turning point in terms of commitment from EU institutions relative to ICM. From the 1991 Conference on European Coastal Conservation emerged an agreement by 13 coastal States for the development of an European Strategy and Action Plan (Ducrotoy, 1999, p.9), which a few months later received the support of the Council (Resolution 92/C 59/01). A call was then made for the Commission to develop a Community strategy for ICM and for the inclusion of such strategy in the 5th environmental action programme. The first call was renewed in another Council resolution in 1994 (Resolution 94/C 135/02), resulting in the year after in the announcement of the Commission's Demonstration Programme on Integrated Coastal Zone Management (ICZM)(COM(95)511). This programme was a joint effort of Directorates General Environment, Fisheries and Regional Policy intended to gather information about the factors and mechanisms encouraging or inhibiting sustainable management of coastal zones; and to stimulate information exchange among those involved in the management of European coastal zones. The results of the 35 individual projects and the six thematic analyses carried out under the demonstration programme were published by the Commission³⁸ and formed the basis for a further communication and a proposal for a Recommendation on the implementation of ICZM in Europe (Respectively COM(2000)547 and COM(2000)545). The Communication set out a renewed strategy for ICM in Europe, and proposed that the role of the EU be restricted to the promotion and dissemination of ICM knowledge, practices and activities and the harmonization of sectoral legislation and policies with ICM (CEC, 2000, p.11). The Recommendation was adopted by the Council and the Parliament in 2002 (Recommendation 2002/413/CE), and to date constitutes the only legal act of the EU relative to ICM.

The choice for a non-binding instrument results from the Commission's desire to leave room for national and regional approaches, an important feature in ICM strategies. John Gibson, the thematic expert on legislation to the demonstration programme argues (Gibson, 2003, p.135) that such national discretion could also have

³⁸ Available online at <http://ec.europa.eu/environment/iczm/demopgm.htm> (last accessed June 15th 2006). For a discussion of some of these results, see Belfiore, 2000; Belfiore, 1999 and Taveira-Pinto, 2004.

been achieved with a binding framework directive, and that by opting for a non-binding recommendation, “the Commission and the Council preferred political compromise to the more controversial certainty of a directive”. Noting that law instead of guidance could provide a better means of ensuring compliance, he nonetheless recognizes that “the choice of [legal] instrument matters less than the fulfilment of the objective” and that “the achievement of ICZM in the EU will ultimately depend upon political will”.

According to the Recommendation, Member States should have developed and implemented national ICM strategies by February 2006. As will be discussed below, Portugal has not done so, the bases for such national strategy being presently under development. The situation in the whole of the EU relative to the implementation of the Recommendation is the subject of an evaluation presently being carried out. Based on its outcome, the Commission might review the Recommendation (<http://www.rupprecht-consult.eu/iczm/>, last accessed June 15th 2006).

3. OCEAN & COASTAL MANAGEMENT AND MARITIME INDUSTRY IN PORTUGAL

3.1 THE INSTITUTIONAL STRUCTURE OF THE MARITIME AND PORT SECTORS

This section consists of a description of the governance framework of the maritime industry in Portugal. The focus will be on organisational aspects, in an attempt to examine how the present framework enables or constraints the dialogue of the maritime sector with other ocean and coastal uses and with the coastal and ocean management initiatives in the country.

From the multitude of institutions that in Portugal have competencies relating to the use and management of coastal and ocean resources³⁹, three stand out as particularly relevant because of their close relationship with the maritime industry. These are the maritime administration, which lies under the Ministry of Public Works, Transport and Communications; port administrations, also under the same ministry; and the System of Maritime Authority, controlled by the Portuguese navy, which in turn is supervised by the Ministry of National Defence⁴⁰.

3.1.1 The maritime administration

The Institute for Ports and Maritime Transport (IPTM, Instituto Portuário e dos Transportes Marítimos) is the entity charged with the administration of the shipping and port sectors in Portugal. It was established in its present form in 2002 through Decree-Law 257/2002, resulting from the fusion of the previous Maritime & Port Institute with the Port Institutes of the North, Centre and South and of the Institute for the Navigability of the Douro⁴¹. Traditionally, the maritime administration has been placed under the ministry responsible for transports, and this is still the case today. Under the

³⁹ See Annex IV for a summarised overview of these institutions.

⁴⁰ For an overview of the development of the maritime administration in Portugal and an analysis of its situation in 1993, refer to Leça da Veiga, 1993, pp.6-29.

⁴¹ In Portuguese, respectively Instituto Marítimo-Portuário, Institutos Portuários do Norte, Centro e Sul and Instituto da Navegabilidade do Douro.

current XVII Government of the Portuguese Republic, the IPTM is under the tutelage of the Secretary of State for Transports of the Ministry for Public Works, Transport and Communication (MOPTC, Ministério das Obras Públicas, Transportes e Comunicações).

The IPTM has three principal attributions⁴², namely 1) the provision of advice to the government in the preparation of policies and legislation affecting the maritime industry, in the implementation of international legislation and in the development of sectoral activities; 2) as the maritime administration, the regulation, licensing and monitoring of maritime activities, including recreational ones; and the certification and surveillance of vessels and seafarers through flag and port-State control actions; and 3) as port administration, the overall coordination of the Portuguese port system; the management of a number of ports that are under its jurisdiction⁴³; and the promotion of the navigability of river Douro. The IPTM also acts as the representative of the Portuguese State in international organisations, such as the IMO. The headquarters of the IPTM is located in Lisbon, with ten other delegations serving the ports under its jurisdiction or acting as inspection bases.

It is worth noting that the IPTM has a consultative council within its structure composed of representatives from various public and private entities having a stake in either ocean and coastal affairs or in transportation. These include, among others, representatives from the Directorate General for Fisheries, the Institute of Water, the Institute for Nature Conservation and from the Association of Municipalities. This council is expected to emit opinions about the past and future activities of the IPTM and propose actions aimed at improving the work of the latter. One element that the consultative council is supposed to assess is the IPTM's annual and multi-annual plans. It is interesting to note that, despite the apparently varied composition of this council, the latest plan, for the years 2003 to 2005 contained references only to activities that were strictly related to shipping and port activities, with brief mention to recreational shipping and consideration of internal labour issues. No references to

⁴² The following discussion is based on the provisions of Decree-Law 257/2002 and on information from the IPTM's website, at www.imarpor.pt (last accessed June 21st 2006).

⁴³ These are a number of smaller commercial ports the administrations of which have not been awarded administrative autonomy in the late 1990s, and the fishing ports all along the Portuguese coast, totalling approximately 25 ports and harbours.

other activities or uses of ocean and coastal resources exist in that document (Instituto Portuário e dos Transportes Marítimos [IPTM], 2003).

The Secretary of State for Transports of the MOPTC oversees a further consultative body, the National Council for Ports and Maritime Transportation (CNPTM, Conselho Nacional dos Portos e dos Transportes Marítimos). Its composition is narrower in that it mainly gathers representatives from various branches of the shipping and port sectors. Nonetheless, this council is supposed to assist the minister in matters related to national and international policies in the maritime and port sectors and to major works and projects in these sectors. Albeit its apparent relevance for the work of the ministry, under the present government it is expected that the CNPTM will be dissolved and that consultation by the Minister with the various entities under its tutelage will be done in a more informal manner.

3.1.2 Port administrations

The administration of sea ports on the Portuguese coast is shared by the IPTM, through its regional delegations, and five autonomous administrations in charge of the five largest ports: Douro & Leixões, Aveiro, Lisbon, Setúbal & Sesimbra and Sines. The present institutional framework results from a thorough restructuring of the whole port sector in the late 1990s, which was codified through Decrees-Laws 331/98 – 339/98⁴⁴. This restructuring aimed at improving the efficiency of the principal commercial ports through 1) the decentralisation of port administration and the granting of greater autonomy to the local port entities, and 2) the institution of the “landlord port” concept, whereby the Portuguese State would progressively be removed from the direct commercial operation of the ports and instead would simply manage concessions to private port operators and administer the public domain in the port area. Further, it was intended to separate the roles of the IPTM as simultaneous regulator and operator in the port sector, a situation that, nevertheless, is still maintained in the ports directly administered by this institute. In the five main ports with autonomous administrations such move has to a large extent been achieved, and although the administrations of such ports are State enterprises – formally public joint-stock companies, where all

⁴⁴ Published in Diário da República, I Série A, Nº254, 15 Nov 1998, pp.5697-5768. Lisbon: Imprensa Nacional Casa da Moeda.

stocks are held by the Portuguese State - their relationship with the IPTM is similar to that of private entities.

In terms of jurisdiction, port administrations, whichever their statute, are solely responsible for and autonomous in the management of the public maritime domain⁴⁵ in the port area and enjoy, to a large extent, full autonomy in the licensing and implementation of projects and constructions within the port area⁴⁶. In this respect, duties to consult with external entities relate chiefly to projects and constructions in the port area that are not directly relevant for the activities of the port – for example a tourism development – where the port has to consult and obtain permission from the neighbouring municipality; and, indirectly, to obligations relating to environmental impact assessment (EIA) of certain port developments and to monitoring of specific environmental parameters conducted by the local delegations of the Ministry of Environment.

The current jurisdictional rights of port administrations over stretches of the Portuguese coast has been laid down in Decrees-Law 379/89 and 201/92, the exact areas under the administration of the five autonomous ports having later been reviewed in Decrees-Law 335-339/98, where the statutes of such entities are also described. Interestingly, it was in the early 90s, through Decrees-Law 451/91 and 201/92 that the jurisdiction over the public maritime domain outside port areas was transferred from the Directorate General for Ports of the Ministry of Public Works, Transport and Communications to the Directorate General for Natural Resources, in the Ministry of Environment and Natural Resources, thus bringing recognition to the environmental relevance of coastal zones. As will be discussed later, the coastal areas under port jurisdiction were excluded from the Coastal Zone Management Plans launched in 1993, and this despite the fact that, with the exception of Sines, all major ports in

⁴⁵ The public maritime domain, as originally regulated through Decree-Law 468/71 and most recently through Law 54/2005, refers to the physical domain and the resources found in a) coastal and territorial waters, and respective sea bed; b) internal waters in rivers, lakes and lagoons subject to tidal action, and respective beds; c) the sea bed under the whole exclusive economic zone; and d) the margins of coastal waters and of internal waters subject to tidal action. Albeit prone to differing interpretations, coastal margins and those of navigable water courses have been set at 50m landwards from the spring high-tide.

⁴⁶ For a detailed description of port administrations' competencies, refer to article 3, number 2 of any of the Decrees-Law 335-339/98.

continental Portugal are situated in the mouth of rivers, in the cases of Aveiro, Lisboa, Setúbal and Faro in ecologically sensitive and valuable wetlands.

Changes to the current statutes might result from the implementation of the Water Law published in 2005 and which transposes into national legislation the EU Water Framework Directive (see Law 58/2005). According to that law, the Portuguese territory shall be divided into ten hydrographical regions – eight in continental Portugal and further two in each of the archipelagos of Madeira and the Azores -, administered by regional bodies – termed Administrations of Hydrographical Region - under the central supervision of the Minister of Environment, through the Water Institute (INAG, Instituto da Água). Of relevance for the port sector, besides any new or altered requirements directly relating to the quality of river or coastal marine waters, is the fact that the management of river basins as a whole is to be done in an integrated manner, thus potentially involving all activities and organisations that interfere with the quality of the waters the law regulates. Still, it is anticipated that the administrative rights of port administrations in the areas presently under their jurisdiction will not suffer any significant blow; indeed, article 13 of the Water Law provides for a transfer of competencies from the Administrations of Hydrographical Regions to the local port administration in those areas, in what relates to the “licensing and surveillance of the use of water resources” (Law 58/2005, Art.13, no.1)⁴⁷. The exact responsibilities of all parts and how the transfer of competencies is to happen is still to be defined in a further regulation, but as it stands today it appears that port administrations – including of ports under the tutelage of the IPTM – will be charged with additional tasks, but not be void of any of their rights over coastal and estuarine domains. Nevertheless, it will be interesting to see to which extent the new provisions under the Water Law will require ports to interact more closely with other entities in society outside the immediate port community. In section 4.3.5 reference is once again made to how port administrations consult and cooperate with external entities in the shaping of their development plans.

⁴⁷ All translations of Portuguese text contained in this document are my own.

3.1.3 The System of Maritime Authority

The System of Maritime Authority (SAM, Sistema de Autoridade Marítima) was established in 2002 through Decree-Law 43/2002 as the institutional framework composed of all Portuguese entities and services that have powers of maritime authority. Among these are a number of police forces, the maritime administration, port administrations and representatives from the fisheries, environment and health ministries. Its main administrative structure, termed the National Maritime Authority (AMN, Autoridade Marítima Nacional), is placed under the Ministry of National Defence (MDN, Ministério da Defesa Nacional) together with two consultative bodies, the National Coordination Council, responsible for the coordination of the various organs of the SAM; and the Commission for the public maritime domain, which is charged with informing the AMN in matters relating to the utilisation, maintenance and defence of that domain. Some aspects of the National Coordination Council will be discussed in section 4.3.2, namely the fact that it never actually met.

The central executive service is the Directorate General of the AMN (DGAM), charged with the direction, coordination and control of all activities carried out under the AMN. Its action is carried out regionally through regional Maritime Departments and locally through the Port Captaincies. The DGAM further includes the Institute for Life Saving⁴⁸, responsible for life saving at sea and beach safety; the Lighthouse Directorate, charged with the supervision of all navigational aids on the Portuguese coast and waters; and the School of the AMN, which provides education and training in areas of relevance for the AMN. Finally, the Maritime Police has also been integrated into the AMN through the mentioned decree, being the main operational organ for the enforcement of legislation in marine areas under Portuguese sovereignty and jurisdiction.

In addition to the principal task of overseeing the enforcement of the law in marine areas, the DGAM, through the services under its control is also active in civil protection, as part of the broader national service; in search and rescue operations at sea; in the monitoring of fisheries and diving activities; in the granting of authorisations for scientific cruises; and in the fight against pollution at sea. In relation to this latter

⁴⁸ The Portuguese name is Instituto de Socorro a Náufragos, literally Institute for Help to Castaways.

item, the DGAM is responsible, at national level, for the coordination of all means and equipment for fighting pollution at sea, in accordance with the national contingency plan⁴⁹. What follows from the navy's extended competencies as the State's authority at sea is that more than 80% of its resources – both human and technical – are now assigned to the above mentioned civil services, the remaining less than 20% devoted to military operations.

The MDN, through the navy and the AMN in its role of law enforcement on the marine and coastal domains plays an important part in the prosecution of whichever objectives and plans are laid down for such domains. In addition, and for reasons that are mainly historical and stem from the period when Portugal had overseas colonies, the navy has long also been involved in the delineation of Portugal's oceans policy. While some voice from the non-military sectors oppose the alleged omnipresence of Defence in Portugal's sea affairs and oceans policy, it must be recognised that the navy has gathered a wealth of knowledge about the country's marine spaces and is a constant presence there. The navy's Hydrographical Institute has been involved in various research efforts in marine and oceanographic research, and it is also the navy that currently leads the task force for the extension of Portugal's continental shelf⁵⁰. In collaboration with a number of other research and educational institutions, this task force is also putting together a catalogue of marine environmental data for public access. It might also be worth mentioning an initiative led by members of the navy Reserve, the so-called "Hypercluster of the Sea", that aimed at bringing together in a series of public events actors from different sectors relating to the sea and coasts, in view of increasing public awareness for the issues affecting the oceans and for the potential benefits that Portugal could take from its coastal and marine resources.

⁴⁹ Plano de Emergência para o Combate à Poluição das Águas Marinha, Portos, Estuários e Trechos Navegáveis dos Rios, por Hidrocarbonetos e Outras Substâncias Perigosas, in abbreviated form Plano Mar Limpo. Resolução do Conselho de Ministros (Resolution of the Council of Ministers) N° 25/93, Diário da República I Série B, N° 88, 15 Apr 1993. Lisbon: Imprensa Nacional Casa da Moeda

⁵⁰ More information about this latter effort can be found at www.emepc.gov.pt (last accessed July 19th 2006).

On an institutional level, the Secretary of State for Sea Affairs still rests with the MDN⁵¹. Along this line, in April 2005 the newly elected government of Portugal awarded to the MDN the responsibility for the development of an integrated policy for all matters relating to the ocean, in collaboration with other ministries (Decree-Law 79/2005, art.14-2). Later that year, the Task Force for Sea Affairs (EMAM, Estrutura de Missão para os Assuntos do Mar) was created in what might be considered the first significant step in that process. Placed under the MDN, this unit's mission is to propose a set of measures enabling the coordination and articulation of all entities responsible for ocean affairs and the implementation of a national strategy for the sustainable development of the sea. Ultimately, the Government envisions the creation of a dedicated structure for the inter-departmental coordination of all sea affairs, which should facilitate and promote a convergent action of all public and private entities in order to achieve the rational and sustainable use of the sea (Resolution 128/2005). Some preliminary outcomes of the work of the EMAM will be discussed in section 3.2.2.

3.2 THE DEVELOPMENT OF INTEGRATED COASTAL AND OCEAN MANAGEMENT

In Portugal there are at present no unified policies for integrated planning or management of the country's ocean and coastal domains. Efforts to develop integrated approaches to coastal management date back to the late 1980s, whereas advances on the country's oceans policy are much more recent, their genesis probably being the World Exposition held in Lisbon in 1998.

A striking feature in the discussions around integrated policies for Portugal's oceans and coasts is that, for their most part, they have been conducted in isolation of

⁵¹ In fact, to the dislike of many, for a short period under the previous government all maritime affairs, including shipping and ports, were transferred to the Ministry of National Defence, then renamed Ministry of Defence and Sea Affairs. An interesting option by the minister at that time was to have the Secretary of State for Sea Affairs directly under the Presidency of the Council of Ministers, somehow to indicate that Sea Affairs were not purely a matter of the navy and actually superseded any ministerial office. Such move was possible because the Minister of Defence was then also Minister of State and could place that Secretary of State under his alternative ministerial position.

one another. As will be discussed below, even the most recent proposals in both areas show few if any signs of mutual integration. While this might seem difficult to understand when both areas are encouraging integration, there are a number of internal reasons for the separation. The practice at international level sometimes also follows such segregation. This section consists of separate descriptions of the evolution of coastal management and oceans policies in Portugal, followed by a brief critical appraisal of the current relationship between both policy areas.

3.2.1 The evolution of coastal planning and management

Before addressing the evolution of the coastal management regime in Portugal, it is useful to briefly refer to the three levels of territorial management in the country⁵², as laid down in Decree-Law 380/99, and amended by Decree-Law 310/2003 (see also Taveira-Pinto, 2004, p.148)⁵³. At the national level, the overarching instrument is the national programme for territorial planning, the most recent version of which is presently open for public consultation⁵⁴. The two other types of instruments at the top level are the sectoral plans having a territorial incidence and the especial land use plans, comprising plans for protected areas, plans for catchment areas of public waters and coastal zone management plans⁵⁵. The latter, as especial plans and in accordance to Decree-Law 151/95 (Art.3), are administrative regulations binding upon all public and private entities and to which lower level plans - such as municipal plans - must abide. According to such hierarchy, should there be any unconformities between e.g. coastal

⁵² In this document I make use of expressions “land use planning / management” and “territorial planning / management” to refer to the Portuguese concept of “*ordenamento do território*”. The choice for English translations which are not synonymous among themselves results from the intention to convey the broader meaning of the Portuguese expression, where *ordenamento*, meaning “ordinance”, or “to put in order”, in this context contains elements of planning and management of the uses of land and of the occupation of the Portuguese territory.

⁵³ In the regions of the Azores and Madeira, the respective instruments are the Regional Legislative Decrees 14/2000/A and 8-A/2001/M.

⁵⁴ See Resolution 41/2006, also for a description of the development of territorial and land use planning in Portugal.

⁵⁵ In Portuguese, respectively, *Planos de Ordenamento de Áreas Protegidas*; *Planos de Ordenamento de Albufeiras de Águas Públicas*; *Planos de Ordenamento da Orla Costeira*.

management plans and municipal plans, it is the latter that must be changed so as to come in line with the first.

At the regional level, planning is assured by means of regional territorial management plans, which should be harmonized with the especial land use plans.

Finally, the third tier consists of municipal and inter-municipal territorial management plans, the first sub-divided into municipal master plans, urbanisation plans and detailed plans⁵⁶.

The basis for the current legal framework underlying the management of Portugal's coastal zones is often considered to be Decree-Law 468/71 – most recently amended through Law 54/2005 - which established the regime governing the country's public maritime domain as a strip of coastal land and water subject to State ownership and management, extending 50m landwards from the spring high water mark and seawards to the limit of territorial waters. Innovative at the time of the first instrument - 1971 - was the designation of an "adjacent zone" on land, where occupation was to be restricted as a means of protecting against threats posed by the sea (Decree-Law 468/71, preamble, no.2). Such measure, together with the concept of the public maritime domain itself, has been considered of critical importance in limiting human settlement on the coast (Conselho Nacional do Ambiente e do Desenvolvimento Sustentável [CNADS], 2001, p.6).

In view of the importance of the maritime sector for the country in the 1970s, the management of the coastal zone and the implementation of the provisions of Decree-Law 468/71 was overseen by the Directorate General for Ports. As mentioned in section 3.1.2 above, it was only in the early 1990s, through Decrees-Law 451/91 and 201/92 that the Ministry of Environment was awarded the tutelage of the public maritime domain lying outside port areas.

From the late 1980s dates the transposition into national legislation of the European Coastal Charter (see section 2.3.3), formalised in Decree-Law 302/90, which set the legal regime for the urbanisation of the coastal zone. The intention was to establish a series of guiding principles for land occupation, access to the coast, and the

⁵⁶ In Portuguese, respectively, *Planos Directores Municipais*; *Planos de Urbanização*; *Planos de Pormenor*.

location of infrastructures and public spaces. Such principles should then be applied in the various types of planning instruments, including port expansion plans. In practice, however, this is not what has happened, and principles such as the minimum distance of constructions from the coastline, the building of coastal accesses perpendicular to the coastline and the establishment of natural or rural areas between urban spaces, although eventually mentioned in those instruments, have frequently not been adhered to (Resolution 22/2003, Annex, no.3; see also Veloso-Gomes *et.al*, 2006, Annex 1).

The abovementioned transfer of the responsibilities over most of the coastal zone from the Ministry of Transport to the Ministry of Environment in 1992, albeit illustrating the environmental relevance of the coast, was not accompanied by adequate financial and human resources to implement any more integrated approach to its management. Hence the persistence of a mainly sectoral approach to coastal management (CNADS, 2001, p.6).

1993 saw the launching of the Coastal Zone Management Plans (POOC, Plano de Ordenamento da Orla Costeira) through Decree-Law 309/93, later regulated and amended by Decree-Law 218/94 and Order⁵⁷ 767/96. The POOCs were originally conceived as sectoral plans with five main objectives in mind (Decree-Law 309/93, Art.2):

- the planning of different uses of and activities in the coastal zone;
- the classification of beaches and the regulation of their use;
- the promotion and improvement of the quality and value of beaches with particular environmental or touristic importance;
- the development of activities specific to the coastal zone; and
- the protection and conservation of nature.

The portion of the coast subject to the POOCs extended 500m landwards of the spring high water mark and included a maritime protection zone seawards down to the 30m isobath. The coastal zone itself was divided into nine stretches in mainland Portugal, as illustrated in Figure 1. In the autonomous regions of the Azores and Madeira the regional governments were charged with the sub-division of their respective coastlines, a process that is at present still underway. Port areas have been

⁵⁷ The Portuguese term is “Portaria”.

excluded from the POOCs, and, as mentioned previously, are planned and managed almost exclusively by autonomous port administrations or the IPTM, depending on the administrative regime of each port. Also excluded from the POOCs are areas under military administration.

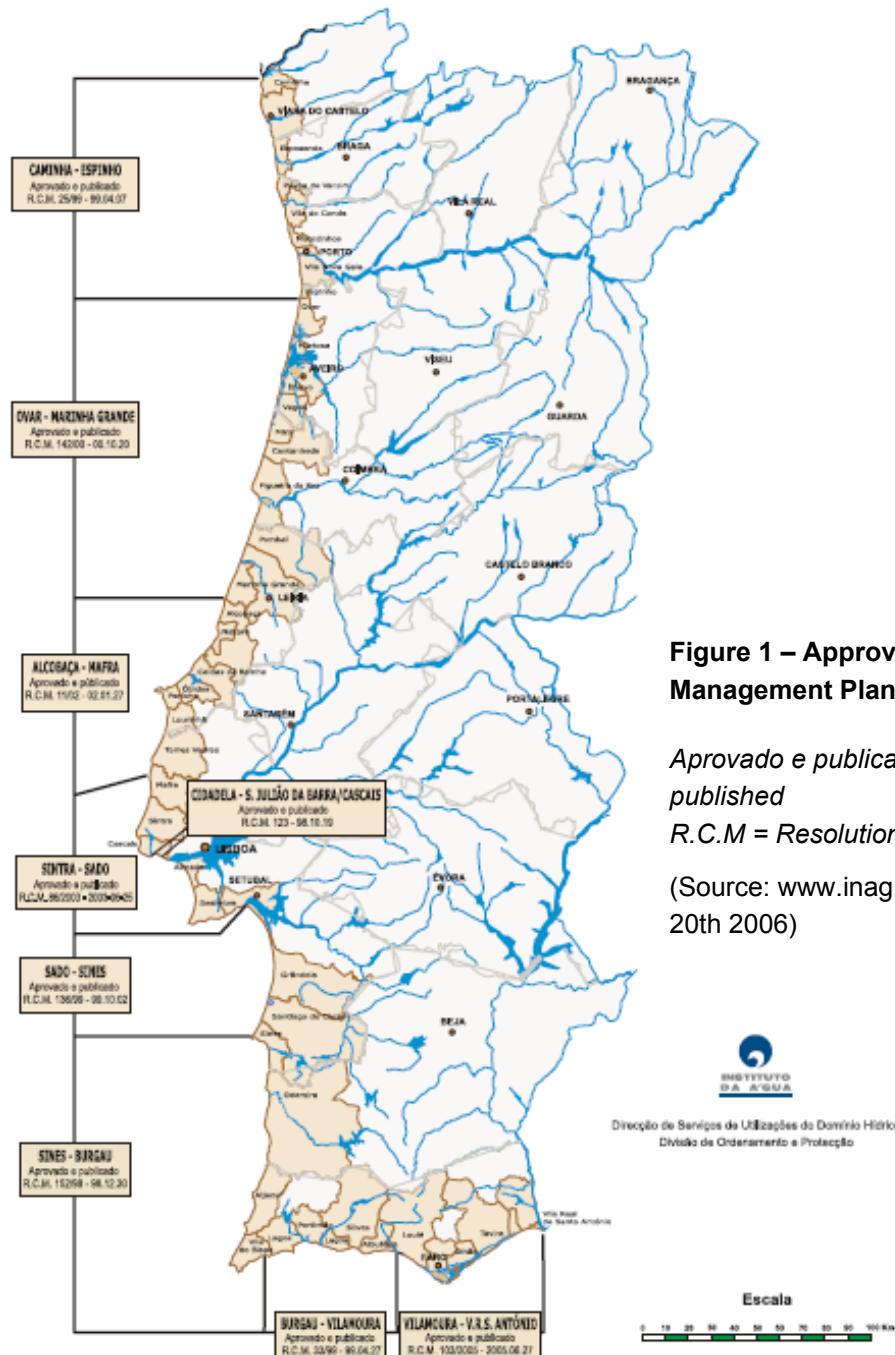


Figure 1 – Approved Coastal Zone Management Plans for mainland Portugal

Aprovado e publicado = Approved and published

R.C.M = Resolution of the Council of Ministers

(Source: www.inag.pt, last accessed on May 20th 2006)

The development of the plans was supervised by the Water Institute and, in protected areas by the Institute for Nature Conservation (ICN, Instituto da Conservação da Natureza). Their implementation and the production of detailed plans for specific interventions⁵⁸ is presently divided between the regional delegations of the Ministry of Environment⁵⁹, local municipalities and the ICN in protected areas.

The POOCs being arguably the most relevant instruments for the planning and management of Portugal's coastal zones, it is worth taking a closer look at the experience in their implementation so far. Veloso-Gomes and Taveira-Pinto provide a detailed account of the main difficulties in the development of the plans, and these are briefly revisited here (Veloso-Gomes, 2003, pp.27-28). In general they derive from differences in the composition and technical expertise of the teams who drew up the various POOCs; the use of different methodologies; the specificities of the different stretches of the coast; and the attitudes of the technical commissions accompanying the development of the plans. Together, these factors have contributed to different quality levels in the different POOCs, something that goes against the overarching purpose of harmonizing the management practices along the whole of the country's coastline. In particular:

- planning teams had little time to carry out a very extensive job and one of great responsibility. Although the plans should have all been ready by the end of 1998, this was the case only for POOCs Sines-Burgau and Cidadela-S.Julião da Barra. The last plan to be completed, in the eastern part of tourism-dependent Algarve, was finalised and approved only in 2005;
- there lacked a monitoring programme and updated topo-hydrographical studies of the intervention areas;
- basic scientific information upon which to establish an environmental baseline status did not exist for some of the intervention areas;
- some of the information about the coasts, fragmented among different institutions, was not made available to the planning teams in due time; and

⁵⁸ So-called UOPG - Unidade Operativa de Planeamento e Gestão, Operational Unit for Planning and Management.

⁵⁹ So-called CCDR – Comissão de Coordenação e Desenvolvimento Regional, Commission for Regional Coordination and Development.

- the presence of various local entities in the so-called Accompanying Technical Commissions – including municipalities, fishermen associations, tourism and industry groups, natural parks and other local stakeholders (CNADS, 2001, p.8) – forced the adoption of compromises that have weakened the plans.

According to the same authors, positive outcomes of the POOC development process was the elaboration of detailed GIS-referenced information sets on Portugal's coastal zones and the awareness raised among parts of the society for issues related to the importance of coastal zone management.

In terms of the implementation of the plans, the issues of the fragmentation of responsibilities on the coastal zone and of the difficult harmonisation of the different levels of planning and management has been recognised as a limiting factor to the success of the POOCs. The National Council for the Environment and Sustainable Development, considering the management of the coast as a whole has described the issue in the following manner (CNADS, 2001, pp.8-9):

“The wide fragmentation of responsibilities among the institutions involved in the management of the coastal zone creates jurisdictional conflicts and blocks or complicates the resolution of concrete issues related to sustainable development, at the levels of both public and private entities. On the other hand, these diverse institutions have differing perspectives, priorities and interests that are difficult to harmonise. The inexistence of a coordination mechanisms prevents, in practice, an integrated and sustainable management of the coastal zone and tends to promote a type of development that is based on the case-by-case resolution of conflicts, namely through the pressing of institutions and dilatory processes.”

In what regards the implementation of the POOCs, outside protected areas the regional delegations of the Ministry of Environment (presently termed Ministry of the Environment, Territorial Planning and Regional Development, MAOTDR - Ministério do Ambiente, Ordenamento do Território e Desenvolvimento Regional) – the CCDRs – are responsible for the application of the plans in the 50m of the public maritime domain and the local municipalities handle the remaining 450m of the POOC within their areas of jurisdiction. Exceptions are those zones outside the public maritime domain that are

considered of high risk (e.g. due to coastal erosion), where the CCDRs must approve any intervention. In protected areas, such as natural parks or reserves, it is the ICN who is in charge of seeing to the implementation of the plans.

From the interviews with individuals currently involved in the implementation of the POOCs conducted for this research (see in Annex I) a few issues relating to the implementation of these plans have emerged. One such issue is that the relationship between the municipal powers and the CCDRs raises opposing feelings. On the one hand, the cooperation between the local municipalities and those regional delegations was more than once described as good, with the municipalities abiding by the POOCs and actually requesting the assistance of the CCDR for developments within “their own” 450m of POOC area even when this was not required by law. The intention would be to harmonise every municipal intervention with the POOC in the best possible manner. Also for the preparation of the next generation of municipal master plans, which have to follow the regional POOC, the CCDR has worked closely with the municipalities in trying to decipher the complexities of the plan. On the other hand, there are opposing views that claim that the 500m landward limit of the POOC area leaves too much of the coastal area subject to “unrestricted” intervention by municipalities. In fact, it is reasonable to think that many options that municipalities make outside the POOC area will influence their 450m POOC strip and adjacent ones. These same views will claim that municipal entities presently have excessive power over coastal zones and that to some extent they do whatever they wish to. Greater institutional power at higher levels and adequate monitoring and enforcement could then help reverse this situation and enable a more homogeneous and coherent application of the POOCs.

In protected areas, the relationships with municipal powers might develop additional tensions, but which mainly derive from the conservation statutes and the limitations that these impose to development, rather than from the provisions in the POOCs.

What appears to be a common reason of concern is the lack of funding for plan implementation, worsened in some cases by failure from central government to transfer previously assigned funds. This has mirrored itself in a variety of situations, from the failure to develop specific and detailed intervention projects – the UOPGs referred to

previously – to anecdotal situations such as lack of funds for minor repairs of wooden beach accesses.

Regrettably, the previous government did not conduct one single monitoring campaign of the implementation of the POOCs, and as such there has been no consistent means of assessing their performance. At present, a first national survey of the POOCs is being finalised. It is to be seen what measures the MAOTDR will take in order to reinforce the implementation of these coastal zone management plans. As a recent report by the University of Aveiro has put it, the POOCs offer the conditions for the implementation of actions and projects aimed at the protection, re-qualification and sustainable development of littoral resources (Borrego, 2005, p.90).

Following the launch of the EU ICZM Demonstration Programme in 1996, four separate projects were developed in Portugal: a CONCERCOST (Co-operation,

integrated management and sustainable development in the coastal zones of the European Union) project in the valley of the Lima river, headed by Valima, an association of local municipalities; the Programme of integrated management for the Ria de Aveiro, headed by the University of Aveiro, in fact consisting of two projects, MARIA and ESGIRA-MARIA; the TERRA CZM Algarve – Ria Formosa project, headed by the Faro municipality; and the Integrated management of the Algarve-Huelva coast, coordinated by the Hispano-Portuguese Association of Municipalities ANAS (see Figure 2).

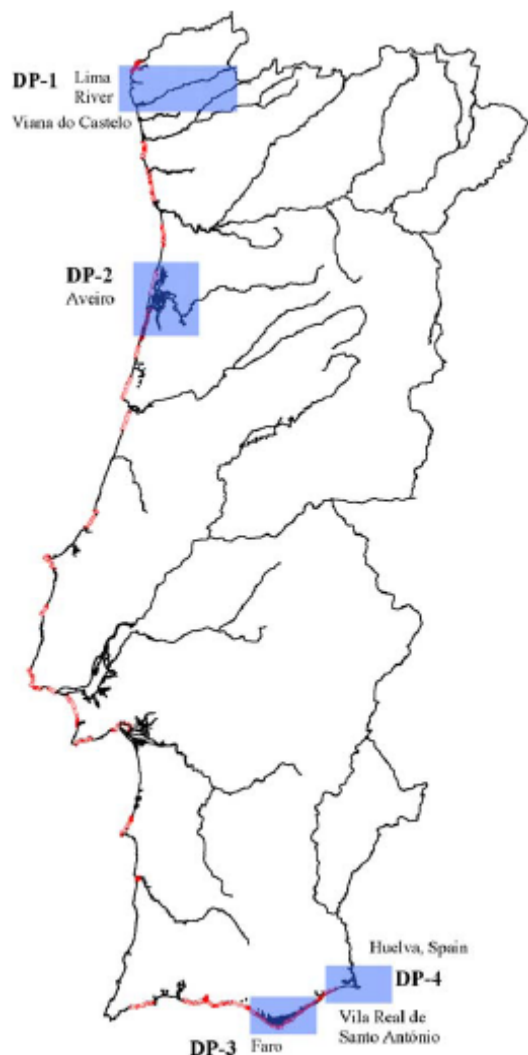


Figure 2 - EU ICZM Demonstration Programme sites in Portugal, 1997-99

(Source: Taveira-Pinto, 2004, p.155)

From the detailed account of the four projects provided by Francisco Taveira-Pinto, the following aspects deserve mention (Taveira-Pinto, 2004, pp.153-156). The Valima-CONCERCOST project fulfilled its main objective of promoting sustainable development and competitiveness of the Lima valley region through the issuing of a strategic plan aimed at informing the central government about investment priorities in the region, hereby contributing to an improved management of EU funds channelled thereto. The Ria de Aveiro projects, directed at one of the country's most sensitive coastal wetlands, aimed principally at the dissemination of information on the importance of the lagoon system and at creating an enabling environment for the various stakeholders to work together in the management of the area. Within these two projects, success was achieved in bringing together entities from various levels, from national to local. Another critical wetland, the Ramsar site Ria Formosa near Faro was the subject of the TERRA CZM project, which attempted to propose tourism development strategies in line with the carrying capacities of the ecosystems affected by such developments. It resulted in various local demonstration actions and the production of an ICZM strategy. Finally, the cross-border project by ANAS aimed at implementing small demonstration activities linking spatial planning processes on the coast with visible actions for the citizens. Limitations in available resources and ICZM implementation status forced the project to focus on compiling data on coastal and marine systems and plans, and to initiate a participation process about coastal issues.

Near the end of the 1990s, the government formally launched the so-called Littoral Programme (Programa Litoral) through the Resolution of the Council of Ministers 86/98, where explicit mention is made to the development of an integrated and coordinated management of the coastal zone. The recognition of the diversity of institutions acting on the coastal zone and of the existence of conflicting interests led to the proposal for the establishment of an organ whose functions would be to articulate those institutions and interests (Resolution 86/98, Art.1.4). Four principal areas of action were foreseen, namely 1) observation and monitoring of coastal phenomena and delimitation of the public maritime domain and of risk areas; 2) interventions for the re-qualification of the coastal zone, according to the POOCs; 3) structuring of the coastal zone management regime; and 4) fight against pollution sources and improvement of

environmental standards. Despite the good intentions of the programme⁶⁰, besides the issuing of a number of charts of coastal risks and the implementation of a few of the proposed interventions, *de facto* outcomes were very limited.

A similar fate seems to have had the Finisterra programme proposed in 2003, created through the Resolution of the Council of Ministers 22/2003, with changes imposed by Decree-Law 97/2003 and the Joint Dispatch 1006/2003. As its full name implies – Programme of Interventions on the Continental Coastal Fringe⁶¹ - Finisterra intended to promote and conduct a series of specific actions to address the degradation of the coasts in mainland Portugal, from the re-qualification of beaches to the revision of coastal urbanisation patterns, besides revisiting the proposals set out in the various POOCs. Once again, the fragmentation of competencies in the management of the coastal zone was to be addressed. Interestingly, interventions in estuaries and in port areas using integrated management models, and the articulation of dredging plans with strategies for the deposition of sand in eroded coastal strips were part of the programmes objectives. Implementation of the various actions was to be achieved by different types of partnerships between entities at various levels, with the IPTM playing a central role as one of the three coordinating and funding entities. However, a combination of lack of definition in the co-ordination of the programme and, especially, insufficiency of financial, technical and human resources – which, combined, arguably point towards an overall lack of political will behind the programme – has led to the overall failure of Finisterra. In the end, it acted mainly as another awareness raising campaign on coastal issues and proposed some specific interventions in priority areas (Teigão dos Santos, 2006, pp.64-65). At present, although programme Finisterra is formally still in existence, there is great uncertainty about its actual actions and its future.

The latest effort in the quest for ICM in Portugal was the presentation in January 2006 of the report “Bases for the National Integrated Coastal Zone Management Strategy”. Nominated by Dispatch 19212/2005 of the MAOTDR, an eight strong

⁶⁰ The programme actually came to be known as two interlinked programmes, *Litoral 1998* and *Litoral 1999*.

⁶¹ In Portuguese, *Programa de Intervenção na Orla Costeira Continental*.

workgroup⁶² was assigned the task of developing the foundations of a strategy supporting a policy for the planning and management of the Portuguese coastal zone, in the mainland and the archipelagos, in its terrestrial and marine components (Veloso-Gomes, 2006, p.5). The proposed strategy is centred around eight principal objectives, namely

- promoting international co-operation and EU integration;
- reinforcing and promoting institutional articulation;
- conserving resources and the natural heritage;
- qualification of the coastal zone and sustainable development of specific activities and uses;
- minimising risks and environmental, social and economic impacts;
- implementing integrated operational policies, based on medium- to long-term visions;
- promoting knowledge and public participation; and
- integrated evaluation of policies and instruments for coastal management.

A number of strategic measures is further proposed under each objective, which were prioritised and classified as legal, institutional and administrative measures; operational and financial measures; and measures for the re-orientation of human resources. The combined analysis of objectives and measures, and a SWOT⁶³ evaluation of a number of activities and themes relative to Portugal's coastal and marine areas led the work group to propose four so-called "Structuring Measures". These should underpin the new integrated management model proposed for the country's coastal zones. The first of such measures is the drafting of a Coastal Zones Base-Law, reviewing the current legal regime affecting coastal zones, currently made up of something like 150 different legal instruments. By incorporating elements of sectoral territorial planning instruments, the proposed new legal regime would address issues such as the evolution of the coastline; the revision of the POOCs; plans for

⁶² Curiously, the group nominated by the minister was composed mainly of individuals with an academic background, with a strong emphasis on natural sciences – biology, geology and geography – and coastal engineering. Representatives from coastal and marine economic sectors, albeit consulted in the process, were not directly involved in the drafting of the strategy.

⁶³ SWOT – Strengths, Weaknesses, Opportunities and Threats is a qualitative methodology for strategic planning for conducting comprehensive analyses of both internal and external factors of a given subject.

estuaries and lagoons; plans for areas under port or military administration; the management of dredging; and compensation, participation and monitoring mechanisms.

The second measure relates to institutional arrangements aimed at enabling the new coastal management framework. To some extent this should involve the creation of networks and fora on coastal matters, and principally the establishment of a national coordinating unit.

The third measure addresses the issue of priority interventions on the coast, not only at the level of the identification of situations of risk, but also in terms of the arrangements that should be put in place to give effect to those interventions.

Finally, the workgroup elected as the fourth measure the establishment of a scheme for monitoring the coastal zone. It should focus on not only on environmental parameters, but also on the implementation of the planning instruments, policies, projects and actions aimed at the coastal zone. Such scheme, which should make use of existing monitoring programmes, is a key element for controlling and reviewing the adequacy of policies in relation to the actual status and needs of the coast.

The report prepared by the workgroup and the process it intends to launch – the elaboration of a long-awaited ICM strategy for Portugal – are not free from controversy. More sceptical views hold that the document was primarily intended to fulfil the government's obligation under EU's Recommendation 2002/413/CE. According to chapter VI of this instrument, States should show progress in the implementation of a national ICZM strategy no later than 45 months after the recommendation was issued – June 6th 2002. Others claim that, although this might be true – after all, Portugal was one of the few countries that did not respond to the questionnaire sent by DG Environment in 2004/05 on ICZM implementation (see http://ec.europa.eu/environment/iczm/pdf/iczm_implementation_overview.pdf, last accessed July 24th 2006) – it is hoped that this time the government will develop the process further into an actual ICM policy. Whichever the case, after the publication of the document and the ensuing public consultation period that ended in early March 2006 no further notice has been issued about which future steps are to be taken, and even people closely related to the initiative do not know what is to follow suit.

An additional point of tension in this process is the nomination of the potential national coordinating unit for ICM. This is an important issue for both the ICM and

ocean policy strategies; and while no proposal has so far been officially made, the name of the INAG, part of the Ministry of Environment was in fact put forward, countering a preliminary agreement that such unit should preferably be supra-ministerial. Be it as it may, the follow-up to the proposal presented earlier this year is eagerly awaited by many, after so many previous attempts in the last two decades at addressing the problems of the country's coastal zones.

3.2.2 Steps towards a national policy for the oceans

The development of a national ocean policy in Portugal is a much more recent endeavour than that of the country's integrated coastal management strategy. Indeed, the first noticeable steps were taken in the run up to the World Exposition held in Lisbon in 1998, the theme of which was "The oceans, a heritage for the future". Following a Portuguese proposal, that same year was proclaimed the International Year of the Oceans by the General Assembly of the United Nations. These two events, but especially the former one, greatly contributed to raising the awareness in the country for matters relating to the oceans. Further, they engaged the political powers in a debate around those matters and in coming up with proposals for a revitalisation of Portugal's relationship with the sea. In fact, 1998 marked the issue by the government of the guidelines for the definition of the country's ocean policy. Through Resolution 83/98⁶⁴ the council of ministers decided on an ambitious set of measures aimed at such definition, thereby also assuming the compromise of taking concrete steps in that domain (Resolution 83/98, Preamble). The proposals centred around four main ideas:

- the redefinition of the country's oceans governance model, including the exercise of jurisdiction over Portugal's oceans spaces;
- the promotion of human activities relating to the ocean, with special emphasis on making use of the economic opportunities offered by the oceans' resources;

⁶⁴ The issue of the national gazette *Diário da República* where such resolution was published, alongside a number of other resolutions pertaining to marine and coastal issues – among which the foundations of the coastal management programme *Litoral 1998*, referred to above – was a special issue printed in blue colour and associated with the celebrations of the International Year of the Oceans and Expo98.

- the promotion of educational and research actions in areas relating to the oceans; and
- the strengthening of Portugal's 'maritime identity', both internally by means of raising awareness for ocean issue, and internationally through active participation in international organisations and events.

Of these four areas, one might say that the first two have practically had no expression since those days. The institutional changes that would have enabled the first one are still being discussed, as are the concrete measures and strategies that the country should adopt to effectively strengthen the country's marine economy. Still, considerable progress was made in research and education, where, despite the chronic budgetary constraints, a successful programme for the promotion of marine science and technology has since been running⁶⁵. In parallel, although the internal mobilisation of citizens in matters relating to the oceans is still sparse and lacks structure and definition, at the international level Portugal has been increasingly active in organising, participating in and contributing to debates on ocean policy matters.

The lack of progress on the internal front, especially on matters related to institutional structures and development strategies, led the government in 2003 to establish a workgroup tasked with "putting forward a national strategy for the ocean with a view to strengthen Portugal's association with the sea, based on the sustainable development of the ocean and its resources, and to enhance the management and exploitation of maritime waters within national jurisdiction, with a view of achieving the objectives of a sustainable development." (Pitta e Cunha, 2005, p.35) This so-called Oceans Strategic Commission (CEO, Comissão Estratégica dos Oceanos), as laid down in Resolution of the Council of Ministers 81/2003, should (Art.3):

- develop guidelines for an ocean strategy and for maritime activities and indicate adequate policies for such strategy;
- propose and recommend measures and actions backing the proposed policies, among which the harmonisation of national with international legislation;

⁶⁵ Launched through Resolutions of the Council of Ministers 88/98 and 89/98, and formally known as *Programa Dinamizador das Ciências e Tecnologias do Mar*.

- propose adjustments in order to modernise Portugal's institutional framework in matters relating to the ocean;
- propose initiatives promoting the country's maritime profile and displaying the strategic option of Portugal's association to the oceans.

In terms of its composition, the former coordinator of the CEO, Tiago Pitta e Cunha summarised it in the following manner (Pitta e Cunha, 2005, p.35):

“This high level policy group was made up of ministerial representatives and members of civil society, covering diversified fields of expertise including oceanography, hydrography, marine biology, marine geology, robotics, naval engineering, fisheries, aquaculture, ports, maritime transportation and ship building, marine defence and vigilance, Law of the Sea and international affairs, marketing and communications, sociology, economics, and management. The Oceans Strategic Commission was the first initiative of this kind in Portugal, encompassing an integrated, intersectorial and interdisciplinary approach to the sea.”

The result of the CEO's work was a 400 page report entitled “The Ocean: a national aim for the XXI Century”⁶⁶, made public near the end of 2004. A total of 250 recommendations were put forward, under the five main strategic goals of:

- further developing the links between Portugal and the ocean, through its use as a branding and communication tool; through educating people to take care of and responsibility for the ocean; and through the preservation of traditional uses of the ocean and of underwater cultural heritage;
- advancing knowledge of the ocean in its different components, through observation and monitoring, also as a means of fostering its protection;
- promoting sustainable development of key maritime activities, among which fisheries and aquaculture, ports and maritime transport, shipbuilding and repairing, marine technologies - including biotechnology, mining of mineral resources, energy and tourism;

⁶⁶ In Portuguese, *Os Oceanos, Um Desígnio Nacional para o Século XXI*, available online at http://www.portugal.gov.pt/Portal/PT/Governos/Governos_Constitucionais/GC16/Ministerios/PC/M/MEDNAM/Comunicacao/Publicacoes/20041213_MEDNAM_Pub_CEOceanos.htm (last accessed July 25th 2006).

- iv. developing national expertise and international leadership in fields such as ocean sciences and technologies; international oceans affairs; and security and defence of the national Exclusive Economic Zone (EEZ) and other maritime areas; and
- v. implementing adjustments to the national institutional framework for ocean governance.

From the myriad of proposals put forward by the commission, it is worth paying closer attention to those relating to ports and shipping and to the new governance model, respectively under strategic goals iii and v.

The majority of the measures proposed for the Portuguese maritime and port sectors are aimed at improving their competitiveness and facilitating their sustainable development. One key idea is the creation of a system for the integrated strategic planning of port activities and developments, so that the sector as a whole develops harmoniously and is not subject to destructive competition between the various national ports. Integration of the development plans for the maritime and port sectors with those of other transport modes should also be stimulated. Interestingly, attention is drawn to the need of harmonising port development with the planning of maritime transport; unfortunately, for the last two to three decades the successive governments have been unable to come forward with a robust and coherent policy strategy for the shipping industry in the country. Besides calls for further simplification and integration of the various activities and entities that play a role in the maritime and port sectors, the CEO explicitly recommends the elaboration and implementation of port expansion plans and that both sectors actively contribute to the integrated management of estuarine zones, where, as mentioned above, some of the country's largest ports are located (see Comissão Estratégica dos Oceanos [CEO], 2004b, pp.122-125).

In what regards the proposal for a renewed institutional framework to give effect to the new ocean governance regime in the country, the CEO justifies its need with the fragmentation of responsibilities for the different matters related to the ocean. Such fragmentation results from a traditional sectoral approach to public administration, where vertical segregation between the different public powers is the norm. As has been recognised in many instances, such system is all too often not adequate for dealing with many of the oceans' components and issues that require multi-sectoral responses. The proposal of the CEO explicitly avoids the establishment of a new

decision-making entity that could further contribute to the fragmentation of political powers. Instead, what is proposed is a specialized version of the existing council of ministers, where those ministers whose competencies relate to ocean affairs would jointly orchestrate the work of their respective areas in view of pursuing the objectives stated in a national oceans strategy. The sectoral competencies would be kept at the level of the implementation of the policies emanating from such council. In support of this political entity, the CEO proposes the creation of a so-called National Entity for the Ocean⁶⁷ whose task would consist of providing technical and scientific backup and advice. Finally, within this technical body, a consultative council should ensure adequate consultation with and participation of the civil society and all relevant stakeholders (see CEO, 2004a, pp.45-51).

As alluded to in section 3.1.3, the present Portuguese government has nominated in mid 2005 the Task Force for Sea Affairs (EMAM), charged with two main tasks: 1) advancing a set of concrete measures enabling the coordination and articulation of all entities with responsibilities for sea affairs and 2) the implementation of a national strategy for the sustainable development of the ocean. In practice, the EMAM should have harmonised the numerous recommendations contained in the report of the CEO and come up with condensed proposals in the form of a strategy. Unfortunately, resource constraints have limited the actual scope of this action.

In terms of the institutional model, a preliminary suggestion by the task force reaffirms the CEO's concept of a supra-ministerial entity supervising all ocean affairs. However, at this stage no specific recommendation has been made, and alternatives to the specialised council of ministers such as the office of the prime-minister – where the CEO itself was located – are also considered viable. Whichever the case, this entity should have the powers to require the various ministries and State institutions that relate to ocean affairs to sit together, identify and characterise problems and ultimately coordinate their efforts to address those problems. This entity should not be too large – more so in view of the budgetary constraints that Portugal currently faces and that are anticipated for the near future –, should involve individuals with expertise in key areas of sea affairs, and have direct access to high levels of political power, so as to be able

⁶⁷ In Portuguese, *Entidade Nacional para o Oceano*.

to steer ministerial decisions. With the delivery of the EMAM's report to the government in August 2006 and the eventual public discussion of its content, further details of the governance structure of Portugal's future ocean policy will hopefully be unveiled.

3.2.3 A tale of two cultures?

It is visible from the above descriptions that the strategies for ocean and coastal management in Portugal have followed separate paths. Integration between both processes does not even seem to be a prime concern today. These facts, recognized by those involved in either of the fields, rests upon a number of reasons that will be briefly described here.

The first aspect is probably temporal. Concerns with the need for reviewing the coastal planning and management regimes in Portugal date back to the late 1980s, whereas the first impetus for the national ocean policy was given only about ten years later.

The temporal gap illustrates what I would consider a key difference in the way the two concepts are being developed in the country. Using single words, coastal management appeared as a 'reaction'; in contrast, the ocean policy as a 'pro-action'. Reaction in the sense that the need to revise the coastal management framework arose – as in countless other locations in the world – from the recognition of the steady degradation of Portugal's coastal zones and of the inadequacy of the existing administrative model to respond to such degradation. On the contrary, much of the rationale behind the national ocean policy is a proactive desire to improve the uses of the ocean and to increase the benefits the country might reap from these uses. There are obvious nuances to these classifications, in that there are numerous elements of pro-activity and accounting for future trends and events in the coastal management strategy. Inversely, the ocean policy is also addressing the need to correct existing problems – such as marine fisheries and pollution and the lack of law enforcement in Portugal's marine areas. Nonetheless, the main distinction arguably still holds true.

This conceptual divide reflects in the institutions – and to some extent in the individuals – heading the two processes. Coastal management has mainly been in the hands of the Ministry of Environment, while the ocean policy has been headed either by supra-ministerial entities – such as in the case of the Expo98 and the CEO – or the

Ministry of Defence, mainly through the navy. A reason for such attributions lies also in the traditional areas of jurisdiction and competencies of those entities, with environment handling mainly land-based issues and the navy being the State's presence at sea. In terms of the individuals involved, coastal management has been developed mainly by people coming from biological and earth sciences and from coastal engineering, whereas the ocean policy has seen a greater diversity of areas of expertise, with a higher number of economists and jurists.

A comment on the separation of the two areas by one of the interviewees noted the different scales of analysis that one needs to adopt when dealing with either ocean or coastal matters. The latter – at least in its terrestrial component - is much more finely divided than the former. Also because the entities and the planning models differ considerably between both domains, there is an actual need to consider both processes in separate when proposing measures or implementing policies. Still, the importance of eventually arriving at the integration of both areas is recognized, given the obvious influence that coastal and ocean policies have on each other and on the marine and coastal domains. In addition to this, I would argue that proposing separate governance frameworks for two closely linked areas – both of which strongly advocate integration – will gather little support from any Portuguese government faced with the unavoidable need of cutting down public spending and limiting the number and size of State institutions. As such, although today nobody in the country really seems to be dealing with the means of joining the two development processes, the integration of coastal and ocean management in Portugal will have to happen. As Stella Vallejo noted (Vallejo, 1993, p.175):

“[...] the coastal policy should be integrated with the national ocean policy. In this respect, the coastal policy should be considered as a sub-set of a broader ocean policy that defines the role of the oceans and coastal areas as an integrated whole, that defines long-term perspectives, values and aspirations of the country *vis-à-vis* the coastal areas taking into consideration all aspects of the development process that impinge upon them.”

4. ASSESSING INTEGRATION

This chapter considers the need for and the means of promoting the integration of the regulation and management of Portugal's maritime and port sectors into the integrated coastal and ocean governance structures that are under development. It starts with a brief overview of the principal threats and pressures faced by the country's coastal and ocean areas, with special focus on those relating to those two sectors. This description is followed by a summary review of some key concepts of policy integration, in order to set the stage for possible measures to be adopted in Portugal. Finally, the integration of ports and shipping into ICOM efforts is discussed, in view of the developments described in the previous chapter and the need to address the impacts of ports and shipping within an ICOM framework. A few specific issues will be discussed in detail to illustrate the potential for and the benefits of integration.

4.1 THE STATUS OF PORTUGAL'S COASTAL AND OCEAN SPACES

Mainland Portugal has a coastline that is approximately 1,450km long, with a wide variety of configurations – such as sandy beaches and dunes, high cliffs and low-lying rocky shores - and habitats, among which highly productive estuaries and coastal lagoons (see Figure 3 for mainland Portugal). The country's EEZ is 18 times larger than its landmass and, with a total area of just over 1,7 million km², is the largest in the EU.⁶⁸ Coastal and maritime activities have traditionally been important to the country's economy and to the historical, social and cultural identity of the Portuguese. It is thus no surprise that, like many other coastal areas elsewhere in the globe, Portugal is witness to a significant concentration of population on its coastal strip. This pattern of migration to the coast has its root in the mid 19th century and has been aggravated in recent decades by the decay of significant segments of the country's agriculture and forestry sectors further inland, which led people to seek alternative occupations along the coast. Although the figures vary, estimates point at circa 75% of the Portuguese

⁶⁸ France and the UK actually have larger EEZ, adding up all their overseas territories, at approximately 11 million and 4 million km², respectively. Nonetheless, in European waters Portugal has by far the largest EEZ, accounting to something like 50% of EU Member States' EEZ in European waters.

population living in the 25% of the territory that constitutes its coastal zones. This concentration of population and human activities along the coast necessarily leads to a

series of impacts and threats upon the coastal and marine environments, the most relevant of which are presented in Table 1.⁶⁹

Figure 3 – Coastal configurations and habitats in mainland Portugal

(Source: CNADS, 2001, p.9)



⁶⁹ See Dias, 2005 and Dias *et al.* 2002, for a description of the evolution of coastal demography in Portugal, and its consequences for the alterations of the country's coastline.

Type of pressure	Impacts	Affected areas
Coastal urbanisation	<p>Alteration of natural habitats and degradation of land- and seascapes;</p> <p>Over-exploitation of local resources;</p> <p>Loss of biodiversity;</p> <p>Pollution (air, water, soils);</p> <p>Alteration of soils, with impacts on water infiltration and drainage;</p> <p>Unregulated settlements in risk areas;</p>	All urban areas, especially near the largest settlements and those without proper planning or waste treatment facilities.
Tourism	<p><i>Same impacts as for coastal urbanisation;</i></p> <p>Seasonal water shortage;</p> <p>Interference with traditional culture and socio-economic fabric in tourism areas;</p> <p>De-characterization of coastal areas.</p>	All tourism-prone areas, but most notable in certain areas of Algarve.
Fisheries & Aquaculture	<p>Over-exploitation of marine resources;</p> <p>Loss of biodiversity and disruption of marine food webs;</p> <p>Destruction of marine and coastal habitats (e.g. trawling);</p> <p>Release of pollutants, chemicals and antibiotics from fish farms;</p> <p>Reductions in fisheries has led to serious socio-economic problems in former fishermen communities.</p>	<p>Fisheries take place all over the EEZ, with greater incidence on near-shore waters;</p> <p>Aquaculture is so far concentrated on estuaries and coastal lagoons, using mainly former salt pans.</p>
Agriculture	<p>Eutrophication of coastal waters due to use of fertilizers;</p> <p>Release of pollutants, some of high toxicity;</p> <p>Soil erosion;</p> <p>Irrigation dams lead to changes in transport of water, nutrients and sediment in rivers, and block fish migrations.</p>	Potentially all along the coast, but greater incidence in the central and southern coasts of mainland Portugal.

Type of pressure	Impacts	Affected areas
Industry & Energy	<p>Pollution (air, water, soil);</p> <p>Alteration of natural habitats and degradation of land- and seascapes;</p> <p>Potential health risks to surrounding populations;</p> <p>Conflicts for the utilisation of space and resources with local populations;</p> <p>Hydroelectric dams lead to changes in transport of water, nutrients and sediment in rivers, and block fish migrations.</p>	<p>Main industrial areas, north of Cape Mondego and around, Lisbon, Setúbal and Sines.</p> <p>All major river basins have dams; large stretches of the coast affected by erosion.</p>
Transports	<p>Alteration of natural habitats and degradation of land- and seascapes for transport infrastructures;</p> <p>Pollution (air, water, soil), including accidents;</p> <p>Conflicts with other activities and local populations for the utilisation of space ;</p> <p>Changes to coastal hydrodynamics, potentially leading to erosion;</p> <p>Changes to sediment transport and deposition from dredging.</p>	<p>Areas around main ports;</p> <p>High risk of accidents all along the coast of mainland Portugal;</p>
Coastal and riverine constructions	<p>Changes to coastal hydrodynamics, leading to changes in transport of water, nutrients and sediments, potentially causing erosion;</p> <p>Barriers to fish migrations in rivers;</p> <p>Changes to sediment transport and deposition from dredging.</p>	<p>All along the coastline of mainland Portugal, with erosion being particularly serious in the central west and south coasts.</p>
Climate change	<p>Mean sea level rise worsens erosion problems;</p> <p>Changes to weather patterns, with more extreme events – storms, draughts – might destroy coastal habitats and lead to changes in hydrological patterns.</p>	<p>All along the coast; problems will be more serious in degraded areas, such as those subject to erosion.</p>

Table 1 – Main pressures and impacts on Portugal’s coastal and marine areas

(Sources: CNADS, 2001; Veloso-Gomes, 2003; Resolution 22/2003; Bettencourt, 2005)

Of these impacts, it is worth referring to those that originate from or otherwise relate to shipping and port activities in Portugal. These fall mainly into two categories: alteration of coastal habitats and hydrodynamics; and pollution to water and air. In what concerns the first type, two types of interventions have often been referred to as important negative factors contributing to changes in the patterns of water and sediment transport and deposition along the coast: 1) interventions in the mouth of rivers – in the form both of constructions and of dredging of navigation channels - and 2) coastal defence works intended to protect port facilities or enable safe navigation into port areas. Both have contributed to the severe cases of erosion and coastal retreat in many parts of the country, especially in the central west coast of mainland Portugal (see Dias, 2005; Veloso-Gomes, 2003 and CNADS, 2001). The issues surrounding dredging activities for navigational purposes will be discussed in greater detail in section 4.3.4. Added to this, the construction of whichever infrastructure on the coastal frontage necessarily entails the destruction of natural habitats and some level of disruption to marine and coastal ecosystems. Port structures constitute obviously no exception to this; in fact, as was mentioned previously, with the exception of Sines, all major ports on the coast of mainland Portugal are located either in estuaries – Viana do Castelo, Leixões, Figueira da Foz, Lisbon and Setúbal⁷⁰ - or coastal wetlands – Aveiro and Faro – all of which of very high ecological, cultural and economic importance. Furthermore, as is the case in many old port cities, there are increasing conflicts between ports and the local municipalities; if, on the one hand, ports and shipping are an important source of economic revenue for the regions and the country as a whole, on the other they tend to occupy high-valued land that is often claimed for purposes other than a polluting unaesthetic seaport. Recalling the jurisdictional rights enjoyed by port administrations referred to in section 3.1.2, in cities such as Lisbon and Setúbal

⁷⁰ From this sub-set, Viana do Castelo is home to the country's largest ship-building yard, right at the mouth of the Lima river, whereas Setúbal harbours the country's largest ship-repairing yard, situated in the middle of the Sado estuary, very close to a Ramsar nature reserve.

the local port administrations are the landlords of the whole of the cities' waterfronts, a situation that is unacceptable to many⁷¹.

In what regards pollution originating from shipping or port operations, it can be separated into two types, as alluded to in the introduction in chapter 1: operational discharges and those resulting from accidents. In respect of both, it is important to note that estimates point towards over 100 merchant vessels sailing every day along mainland Portugal's EEZ⁷², the country lying at the crossroads of heavy traffic sealanes linking the Mediterranean with North America and northern Europe and the latter with the African continent. There are numerous claims of constant operational discharges of pollutants from ships sailing in Portuguese waters (for example Teigão dos Santos, 2006, p.49; CNADS, 2001, p.19; also Veloso-Gomes, 2003, p.30), including illegal dumping of garbage and washing of cargo holds offshore. Unfortunately, Portugal has not had the capacity to effectively monitor its marine areas, and although the suspicions are many, there are no records of any ship ever having been prosecuted for polluting the country's marine waters. While some of the measures to fight this type of pollution fall outside the legislative and enforcement powers of the Portuguese State, other do not; monitoring is one of them – and it is hoped that the upcoming Vessel Traffic System (VTS) will assist in better controlling shipping activities along the coast -, as is the provision of adequate reception facilities for polluting and hazardous substances, something that the SWOT analysis conducted by Veloso-Gomes and others found out to be missing (Veloso-Gomes, 2006, p.42).

Pollution in harbour areas might also be an issue. Relative to water pollution it is generally accepted that pollution sources other than ports themselves are more important in the degradation of coastal waters. Those typically include urban and industrial effluents of various kinds and toxicity levels. Moreover, within port areas

⁷¹ For a taste of the ongoing debate surrounding the expansion plan for the port of Lisbon – which, among other things, admits the construction of a landfill on the river Tagus right in front of downtown Lisbon – read the articles in the journal *Cargo*, n.º169, June 2006.

⁷² There is some controversy about the actual figure. Referring to a publication by the Ministry of Environment of 1999, CNADS (2001, p.19) cites a figures of 200 ships per day, 40 of which are tankers. Velho-Gouveia (2003, p.8), combining data from the Hydrographical Institute from 1987 – about 60 ships per day, 5 of which tankers in Traffic Separation Schemes (TSS) in Portugal - and from the IMO for 2002 – 118 vessels per day across the Finisterra TSS – argues that the figure of 200 is too high. A figure of roughly 100 vessels seems thus reasonable.

water quality is monitored by the Water Institute, and as such must obey whatever criteria this entity sets. However, the issue of invasive aquatic species transferred through ships' ballast waters has not been subject to any investigation so far. The problem of air pollution – mainly from ships' exhausts – and of noise from port operations, although mentioned in times of dispute between local populations and the ports, has not yet been addressed in any significant manner in Portugal.

Finally, in what concerns shipping accidents, despite the heavy traffic along mainland Portugal's coast and the seasonal roughness of the weather conditions, Portugal has been fortunate enough to not having had any major shipping accident in the past decades. In terms of contingency plans, Portugal has long approved the *Plano Mar Limpo* ("Clean Sea Plan", see footnote 49), which, although allegedly having sufficient means at its disposal, has more often than not been considered not operational, given that few, if any, drills have actually taken place, which hinders the necessary co-ordination between the involved entities. As will be discussed in section 4.3.3, the issue of the designation of places of refuge on the Portuguese coast in another such pending issue of great relevance for minimising accidental pollution from shipping.

4.2 CONSIDERATIONS ON THE INTEGRATION OF POLICIES

As was described in chapter 2, the debate on integrated coastal or ocean management policies has been ongoing for over three decades. Nevertheless, considerable uncertainty persists about what 'integration' actually means, and equally important, how it can be achieved. For the most part, such uncertainty results from the fact that no single, unifying answers exist for any of those two questions, a fact corroborated by actual experiments with policy integration in numerous situations in different countries. In this section an overview is provided of some key concepts related to policy integration, as these have been discussed by practitioners in the fields of coastal management, public administration and political science.

4.2.1 Defining terms: policy, integration and beyond

Despite the fact that the prime focus of this section is the notion of integration and of related concepts, it is worth considering first what is meant by 'policy' and why policies are central to coastal and ocean management.

From the Merriam Webster Online Dictionary one retrieves the following two meanings for the word policy: a) a definite course or method of action selected from among alternatives and in light of given conditions to guide and determine present and future decisions; b) a high level overall plan embracing the general goals and acceptable procedures especially of a governmental body⁷³. A further definition from the University of Princeton's WordNet is 'a line of argument rationalizing the course of action of a government'⁷⁴. These three definitions all point towards policy being a structured process – a plan, a course, a line – encompassing i) an overall concept or vision – an argumentation; ii) goals and objectives relating to the materialisation of such concept; and iii) the actions or procedures necessary for attaining the goals and objectives. The reference to 'alternatives' and 'given conditions' stresses the practical nature that policies tend to have, and the link to governmental action reinforces the common view that policies are the substance of the work of governments. This is, however, not always the case, and any entity – including individuals – might develop policies to deal with a given issue. This last aspect is relevant for the practice of coastal or ocean management and for the present discussion.

As a set of procedures aimed at dealing with activities and related issues taking place in and affecting coastal and ocean areas, coastal and ocean management necessarily consists of structured processes developed by a social group to handle such activities and issues, centred around a vision and a set of objectives and involving a variable number of actions. As such, irrespective of the scale or complexity of any such management initiative, a coastal and ocean management policy is always present. The same can be said of any other sector of human activity or area of public administration. In the present case of Portugal, as described in the preceding chapter, one is mainly dealing with national governmental policies. In many other cases,

⁷³ www.m-w.com/dictionary/policy, search word "policy", accessed on August 8th 2006.

⁷⁴ <http://wordnet.princeton.edu/perl/webwn>, search word "policy", accessed on August 8th 2006.

especially in small-scale ICM initiatives, one might refrain from using the term ‘policy’ when referring to the set of vision, objectives and underlying processes, and instead read these as project elements – e.g. project vision, goals and tasks. However, when such project intends to propose directions for certain public or private goods – as is the case in virtually all coastal and ocean management initiatives – one is immediately in the realm of policy. Hence, through formal or informal means, and subject or not to governmental – i.e. political – intervention, coastal and ocean management always involves the formulation of a policy. At the very least, of policy principles.

The concept of ‘integration’ itself is also charged with at least the same amount of imprecision as that of ‘policy’. Referring to a definition of ‘integrate’ as “to form, coordinate, or blend into a functioning or unified whole; to unite with something else; to incorporate into a larger unit”, Åsa Persson (2004, p.10) makes three interesting remarks about integration that are relevant when thinking about applying this concept to policies: first, that integration might occur through processes with varying degrees of order and purposiveness, from rule-based to random blending mechanisms; second, that integration might take into consideration hierarchical and priority levels of the parts to be integrated; and thirdly, that integration might indicate both the unification of various parts into a new entity and the incorporation of a smaller part into a larger unit.

A term composed of two elusive concepts, ‘policy integration’ is necessarily troublesome to define. Its scope has been tentatively explained by Meijers and Stead in the following manner (2004, p.1):

“Policy integration concerns the management of cross-cutting issues in policy-making that transcend the boundaries of established policy fields, which often do not correspond to the institutional responsibilities of individual departments.”

One of the earliest literary attempts to address the issue of policy integration – arguably one of the most comprehensive and influential ones in the literature on this matter – is Arild Underdal’s 1980 article “Integrated marine policy: What? Why? How?” (Underdal, 1980). To this author, integrated policy “means a policy where the constituent elements are brought together and made subjects to a single, unifying

conception” (p.159). Within this relatively broad definition, a policy must satisfy three fundamental principles before qualifying as integrated:

- i. comprehensiveness of the inputs to the policy, whereby, with due account of the best available knowledge in a given situation, “all significant consequences and implications of policy decisions are [ideally] recognized as premises in the making of those decisions” (p.160). Among others, four principal dimensions should be considered in the evaluation of a policy’s comprehensiveness: the time range of policy decisions and premises; the spatial extension of policy interventions; the variety and proportionality of actors whose perspectives inform the policy; and the number of interrelated issues that are included.
- ii. aggregation in the evaluation of a policy’s consequences, where such an evaluation should be based on an overall, aggregated perspective of the policy’s premises, objectives and consequences, as opposed to the individual perspectives of each actor involved in or affected by the policy; and
- iii. consistency in processes and outputs, referring to the accord between the policy’s elements. Two dimensions are considered: vertical, in terms of consistency between different policy levels, such as implementation conforming to higher-level policy goals or guidelines; and horizontal, referring to harmonisation of the work of the various executing bodies at a given policy level and dealing with a given issue.

In a summarised form, Underdal states that “a policy is integrated to the extent that it recognizes its consequences as decision premises, aggregates them into an overall evaluation, and penetrates all policy levels and all government agencies involved in its execution.” (p.162) Notwithstanding the elegant and robust logic of this concept, the author himself recognizes one major limitation in its application to real-life policy making, namely the expectation of an inverse relationship between comprehensiveness on one side, and aggregation and consistency on the other. That is, the more elements one subsumes under a given policy framework, the more difficult it will be to ensure their relative consistency and to adopt an aggregated perception of the whole process. As will be discussed in the following section, the relative costs and benefits associated with policy integration are a further compounding factor to the

achievement of a perfectly integrated policy that conforms to Underdal's notions. Finally, as Persson notes (2004, p.11), although Underdal does adequately address potential barriers to integration, he does so mainly in a theoretical, conceptual manner, paying little attention to political or practical issues that further complicate policy integration. As will be mentioned below, such issues often account for most of the actual barriers to the implementation of ideal policies.

With the concept of 'policy integration' somehow representing an ideal state, it is worth considering possible alternatives involving varying degrees of interplay between separate policies. Meijers and Stead (2004, pp.2-6; see also Stead, 2004, pp.3-4) aggregate a variety of terms used in the literature under three broader groups⁷⁵:

- policy cooperation, which, at its lowest level implies no more than dialogue and information sharing;
- policy coordination, policy coherence and policy consistency, which add transparency and attempt to avoid conflicts to policy cooperation; and
- policy integration and joined-up policy, which build upon the preceding group with the addition of joint working and synergies between policy areas and with the use of common policy goals.

A finer grading is the one elaborated by the PUMA group of the Organisation for Economic Cooperation and Development, as presented by B. Guy Peters (1998, p.7), included in Table 2. Although illustrating possible coordination options available to governments for dealing with intergovernmental negotiations, the scale is equally useful for inter-policy and inter-organisational relationships at domestic level.

⁷⁵ Such terms include, besides that of 'integrated policy': *coherent policy-making; cross-cutting policy-making; policy coordination; concerted decision-making; holistic government; joined-up policy; joined-up government*; and the related concepts of *inter-organisational coordination; inter-organisational collaboration; inter-governmental management*; and *network management*.

-
- Step 1:** *Independent decision making by ministries.* Each ministry retains autonomy within its own policy domain.
- Step 2:** *Communication to other ministries (information exchange).* Ministries keep each other up to date about what issues are arising and how they propose to act in their own areas. Reliable and accepted channels of regular communication must exist.
- Step 3:** *Consultation with other ministries.* A two-way process. As well as informing other ministries of what they are doing, individual ministries consult other ministries in the process of formulating their own policies, or position.
- Step 4:** *Avoiding divergences among ministries.* Ensuring that ministries do not take divergent negotiating positions and that government speaks with one voice.
- Step 5:** *Inter-ministerial search for agreement (seeking consensus).* Beyond negative co-ordination to hide differences, ministries work together, through, for example, joint committees and project teams, because they recognise their interdependence and their mutual interest in resolving policy differences.
- Step 6:** *Arbitration of inter-organisational differences.* Where inter-organisational difference of view cannot be resolved by the horizontal coordination processes defined in levels 2 to 5, central machinery for arbitration is needed.
- Step 7:** *Setting parameters for organisations.* A central organisation of inter-organisational decision-making body may play a more active role by setting parameters on the discretion of individual organisations. These parameters define what organisations must not do, rather than prescribing what they should do.
- Step 8:** *Establishing government priorities.* The centre of government may play a more positive role by laying down main lines of policy and establishing priorities.
- Step 9:** *Overall governmental strategy.* This case is added for the sake of completeness, but is unlikely to be attainable in practice.
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Table 2 – The internal management of external relations: policy coordination scale

(Source: Organisation for Economic Cooperation and Development (OECD), PUMA Group. (1996). *Globalisation: What Challenges and What Opportunities for Government?* Paper OCDE/GD(96)64. Paris: OECD. Cited in Peters, 1998, p.7.)

The definition of coordination advanced by Peters refers “to the need to ensure that the various organizations – public and private – charged with delivering public policy work together and do not produce either redundancy or gaps in services.” (p.5)

This is clearly a less ambitious concept than that of integration as proposed by Underdal, but nonetheless still a very difficult one to implement in actual public administration. Referring to the minimal level of coordination between public organisations, and drawing from consultations with public servants in Canada, the United Kingdom and Australia, Peters points towards the actual difficulties in achieving even the lowest levels of policy coordination (p.5):

“The minimal level might be that at which organizations simply are cognizant of each other’s activities and make an honest effort not to duplicate or interfere. This certainly would be a desirable pattern of behaviour, but seems unlikely to address most of the serious problems in the public sector. Still, the majority of the respondents pointed out that this would be an improvement over much existing behaviour in the public sector.”

About the tri-partite relationship between the concepts of cooperation, coordination and integration alluded to above, Meijers and Stead state the following (2004, pp.5-6):

- cooperation and coordination, albeit often seen as different levels of the same type of interaction, differ in the interplay between individual and collective goals, being that in the first it is individual goals that prevail in shaping policy decisions, whereas in the second there is some shaping of common objectives;
- coordination typically is more formal than cooperation, involving more resources and increased interdependence, thus resulting in greater loss of autonomy of the policies or organisations involved. In what regards outcomes, jointly coordinated decisions and actions tend to produce joint outcomes, while cooperation will still favour each organisation pursuing its own goals and achieving separate outcomes.
- Integration lies at an even more far-reaching level than the preceding two concepts, requiring from the involved stakeholders more interaction, accessibility and compatibility; leading to greater interdependence and loss of individual autonomy; requiring more formal institutional arrangements and

more resources; and exhibiting a broader scope in terms of time, space, actors and issues, as mentioned by Underdal.

4.2.2 The rationale for policy integration

With the multitude of calls for integrated policies, some of which mentioned in chapter 2, and the ample debate on what such policies are and how they can be implemented, one must first try to understand why such integration is at all desirable.

In the literature on coastal management, the recognition of a certain level of degradation of coastal zones or the identification of specific threats thereto are frequently used to justify the calls for integrated policies. The premise is that such degradation and threats result from disjoint actions producing unwanted externalities that are not possible to tackle adequately through the existing policy mechanisms. A renewed policy framework that enables due consideration of those externalities to be taken into account is then a central element of the effort to reverse the initial situation. Those externalities might be negative from the points of view of efficiency and of distributional justice (Underdal, 1980, p.163). This latter aspect manifests itself whenever the unwanted externalities affect certain social groups more than others, and is especially severe when the groups generating the externalities are not the same as those bearing their consequences or costs.

The lack of efficiency associated with conflicting policies results from the need to compensate for the externalities mentioned above, which necessarily diverts scarce resources from the core services that governments are expected to provide. Peters elaborates on this topic writing that the requirement for improving efficiency of policies is further strengthened by financial constraints faced by the majority of governments and by greater accountability of governmental action demanded by civil society (Peters, 1998, p.10). The issue of costs actually assumes a central role in the prospects for implementing coordinated or integrated policies. The processes through which integration or coordination are achieved necessarily entail costs, which increase with the growing complexity and comprehensiveness of the target policies or organisations. Considering that benefits are generated by the adoption of integrated or coordinated perspectives – mainly from improvements in efficiency -, Underdal notes that “[f]rom a cost-benefit perspective policy integration should be pursued up to the point where

marginal cost of integration effort equals marginal gain from policy improvement, and no further.” (p.165) To compound things further, inter-agency competition for limited funds might instil in organisations the tendency to individually focus on their core functions and to swerve from interacting with other entities. In addition, because coordination activities do not constitute the core mission of public organisations, they might be awarded lower priority than those core activities, and thus face even greater constraints in their development (Peters, 1998, p.10).

Peters discusses a number of other possible reasons underlying the interest for coordination and integration in decision-making and in governmental action, namely (pp.10-13):

- the nature of the issues that governments have to face might demand the adoption of integrated approaches, as in the case of issues cutting across different sectors – coastal and ocean management being a perfect example – or policies that are structured around groups or entities instead of traditional functional policy areas;
- the increasing international dimension of policy requires national governments to present a coherent and unified policy framework to other countries. Furthermore, membership of certain international organisations might make such requirements mandatory or specifically force States to adopt integrated policies, as is the case with Portugal and the EU;
- governmental and administrative restructuring and reforms might also contribute to higher levels of integration or coordination. On the one hand, scarcity of resources might lead to the adoption of more streamlined governance structures, involving for example the aggregation of previously independent entities. On the other, modern-day governments tend to organise their organs as if these were functioning in a competitive marketplace, instead of a single public entity. While this alone might lead these organs to cooperate in order to increase their efficiency, the inherent fragmentation of such systems makes coordination and integration all the more necessary and difficult;
- the pressure on governments to reverse their generic lack of popularity with civil societies world wide should drive the public sector to search for more

efficient and coherent policies where externalities and unnecessary spending are reduced to the minimum.

4.2.3 Options for achieving integration of policies

It is certainly not possible to propose a set of options for the implementation of integrated policies that is adequate to all situations. Illustrative of such limitation is the lack of universally accepted and applicable criteria for ICOM initiatives; instead, what the sharing of specific experiences that one finds in the literature attempts to achieve is to suggest general patterns and inspire reflections on how ICOM can be developed and tailored to a given situation.⁷⁶ Nevertheless, and for exactly this latter reason, it is worth considering some alternatives for the development of cooperation, coordination and integration among policies and organisations. Some of these ideas will be used in later sections when considering the integration of maritime and port policies with coastal management and ocean policies in Portugal.

In terms of the process through which integration is promoted, and referring once again to the writings of Arild Underdal, two generic approaches can be identified: a direct one, whereby integration is promoted by means of “goals and guidelines to be followed by all government agencies involved” (Underdal, 1980, p.166); and an indirect approach, involving various distinct mechanisms not specifically targeting integration but which potentially contribute to an overall integration goal. Table 3 depicts the further subdivisions of these two categories as proposed by this author.

⁷⁶ Referring to coastal management alone, Brown, Tompkins and Adger have expressed it in the following manner (2002, p.131): “There is no blueprint for inclusive and supported decision-making for coastal management. The examples and methods described in this book point to some general patterns in making coastal management legitimate, effective and equitable.”

DIRECT

Integration is promoted by means of specific goals and guidelines directed at all organisations involved with the policy in question.

INDIRECT

Integration results from the contributions of distinct mechanisms not specifically geared towards integration, but which facilitate the adoption of holistic perspectives to policy-making

INTELLECTUAL

Policy makers are subject to research, training and socialization initiatives in the hope to increase their knowledge of and sensitivity for the issues that require integrated approaches, and to prepare them for the integration process itself.

INSTITUTIONAL**Domain**

Moving of political issues to an institutional level with a broader scope, e.g. vertically from the local to the national level, or horizontally from a sector with a narrower political mandate to one with a wider mandate.

Procedures

Institution of different mechanisms involving multi-party consultations, such as public hearings or environmental impact assessments.

Resources

Reallocation of resources and redistribution of political power so as to grant increased capacity to a given organisation responsible for integration.

Coordinating agency

Involves the creation of a new entity responsible for supervising the whole integration process and for coordinating other organs.

Table 3 – Generic approaches to achieving policy integration

(Source: Underdal, 1980, pp.166-168)

As was the case with the definitions presented in section 4.2.1, in practical terms there hardly exists a clear cut between these different categories. Instead, their respective limitations often require practitioners to combine elements of the various approaches when implementing integrated policies. Some of those limitations and elements will be briefly described here.

In respect of the direct approach, its success depends upon the ability to devise goals and guidelines that are simultaneously comprehensive enough so as to encompass the whole of the relevant policy issues, and sufficiently precise so as to effectively guide the practice of all organisations involved. Achieving these two seemingly opposing goals is often time and resource consuming. Furthermore, because policy definition and implementation are typically in the hands of distinct levels of political organisations – e.g. the cabinet and specialised agencies, respectively – a variable part of the guidance might be lost along the administrative chain (Underdal, 1980, p.166). This might be due to a lack of willingness on the part of those responsible for following the top-level guidance, or to erosion of communication and loss of information when the policy instructions flow from the upper to the lower levels of government. Regarding the first aspect, Guy Peters notes that while it is important to ensure that all organs involved in policy integration are allowed to develop ownership of the proposed measures, top level coordination capacity and leadership is essential to generate the desired cooperation among those organs. In other words, “[...] good will and commitment on the part of the organizations involved is not so important as the authority relationships that exist within the formal hierarchy.” (Peters, 1998, p.17) Such top-down procedure has the advantage of enabling a reduction of transaction costs, as the same set of guidelines can be used for a diversity of organs and reduce conflict and competition among these (*Ibidem*, p.17). Conversely, centralised instructions might counter principles such as participation, decentralisation and subsidiarity, all of which are increasingly promoted by governments.

The relationship between the roles of central and peripheral political organs raises one fundamental question for the elaboration of any policy, one that is frequently encountered in coastal and ocean management initiatives and which was alluded to in Underdal’s concept of policy comprehensiveness: what is the spatial domain to which the policy is to apply? In chapter 3 we saw that the coastal management and the ocean policies in Portugal are being developed for the country as a whole, with some regional variations applicable to the archipelagos of Madeira and the Azores. On the other hand, we saw the development of local or regional ICZM initiatives as part of the EU’s demonstration programme. Similarly, in developing countries one frequently encounters small-scale local projects, as funds often do not suffice to develop nation-wide programmes. Federal States, where certain levels of autonomy of the individual

States typically need to be retained, tend to adopt national programmes that rely on state or provincial mechanisms for their implementation. Transport policies, among which those for ports and shipping, tend to be national in nature, in the case of the latter mainly because of the strong influence of the international regulatory regime.

At the frontier from direct to indirect approaches to policy integration, one needs to consider if the focus of the integrative effort should be on the policies themselves or on the administration of the services rendered by government organs. There are some elements of a top-down *versus* bottom-up dilemma in this issue, and to some extent it relates to the additional question of how government organs should be led to cooperate among themselves. The options in respect of this latter issue vary from explicit and detailed top-level guidance determining as many aspects of inter-organisational relationships as possible, to free market-like approaches where organisations are left to autonomously decide which form of cooperation is most beneficial for achieving the set goals (see Peters, 1998, pp.16-22). In respect of the first issue, it is recognised that successful coordination and integration demand efforts at both the policy and the administrative levels. Interestingly, Peters notes that “[...] there is often greater willingness to coordinate programs at the bottom of organizations than there is at the top” (p.48), mainly because organisations at the bottom usually have to deal directly with the issues that integration attempts to solve and have greater proximity to the populations affected by such issues.

The so-called intellectual indirect approach mentioned by Underdal has the merit of producing significant and robust results in the long run. Among other things, “[c]omprehensive training programmes in ocean management can be a way of making bureaucrats aware of policy consequences they would otherwise tend to neglect.” (Underdal, 1980, p.167). Similarly, and referring specifically to the shipping industry, Moira McConnell has noted that “[t]here is a need for educational reform in the maritime-marine sector in order to equip people with the ability to work effectively and take the lead in promoting integrated management of coastal and ocean activities.” (McConnell, 2002, p.631). Nevertheless, the ability of such approach to provide immediate solutions to acute problems is reduced. Moreover, it is often the case that barriers to integration are of political and not of intellectual or educational nature (Underdal, 1980, p.167).

Finally, a brief look should be taken at some of the alternatives in terms of indirect procedures enabling government organs to interact with each other and with other entities in society. A first category of such procedures include different internal audits and evaluations of governmental performance. Such internal checks enable the identification of redundancies, inefficiencies and unwanted externalities and might give impetus to the reformulation of policies, including the promotion of integrated approaches. If the outcomes of the auditing schemes are made public – or at least shared with specific social groups – then transparency of governmental action and accountability are promoted, two aspects that most ICOM schemes tend to encourage.

The second category includes a number of different impact assessment techniques, which attempt to assess a definite number of potential consequences of specific policies or interventions. Examples of such techniques include, among others, environmental impact assessments; strategic environmental assessments; sustainability appraisals; and causal chain analyses (Stead, 2004, pp.4-6)

The value of these impact assessment is greatest when combined with public participation mechanisms, which roughly constitute a third category of indirect procedures. In Portugal, for example, public consultation is mandatory in all environmental impact assessments. In general, the various forms of consultation with civil society open the possibility for the views of populations to permeate the policy-making process, a further essential element of ICOM initiatives.

4.2.4 Facilitating and constraining elements

From the overview of possible means for achieving policy integration of the previous section, it is useful to refer to some empirical lessons about which elements facilitate or constrain the adoption of integrated or otherwise coordinated policies. Meijers and Stead, referring to a 1982 review by Halpert, have summarised some of the facilitators and inhibitors of organisational coordination, as presented in Table 4.

The significant relative importance awarded to behavioural elements – the so-called ‘interpretative factors’ – point at the *de facto* powerful influence that such elements possess in the decision-making process. While one might instinctively consider that such behavioural elements are shaped exclusively by the personality of the individuals involved, Peters (1998, p.47) notes that factors related to the political

process – such as budgetary constraints, various types of pressures or lack of political relevance – might be equally determining in shaping the attitudes of those individuals. As will be described below, this issue was raised a few times in the course of the consultations with Portuguese individuals conducted for the present work. One observation in this respect is that mere manipulations of an institutional framework will not produce the full range of policy alterations that enable greater integration. Instead, factors such as budgeting, resource allocation or political influence, just to name a few, require some – if not an equal – level of attention in the process of changing policies and organisations (*Ibidem*, pp. 47-48).

Facilitators of organisational coordination	Inhibitors of organisational coordination
1. Interpretative factors (attitudes, values and perceptions of personnel)	
<ul style="list-style-type: none"> · Perceived needs · Positive attitudes · Consensus between administrators and staff · Maintenance of organisational and paradigm identity · Maintenance of prestige or power · Group-centred approach to problems · Similar resources, goals or needs · Common commitment · Common definitions, ideologies, interests or approaches · Good historical relations 	<ul style="list-style-type: none"> · Vested interests · Perceived threats or competition · Disparities in staff training · Perceived loss of organisational and programme identity or strategic positions · Perceived loss of prestige or authority · Inter-professional and intra-professional differences · Lack of a common language · Different priorities, ideologies, outlooks or goals · Differing organisational-leader-professional socialisation · Poor historical relations or image formation

Facilitators of organisational coordination	Inhibitors of organisational coordination
<i>2. Contextual factors (internal environmental conditions)</i>	
<ul style="list-style-type: none"> · Actual needs or benefits · Standardisation · Decentralisation · Professionalism · Occupational diversity · Informal contracts or exchange of information and resources · Geographical proximity · Boundary permeability · Complementary organisational and personnel roles · Similarity of structures, supply capabilities, needs or services 	<ul style="list-style-type: none"> · Costs outweigh benefits · Bureaucratisation · Centralisation · 'Professionalisation' · Specialisation · Infrequent or inadequate communication (internal or external) · Fragmentation of levels of government · Little or no boundary permeability · Inadequately trained personnel · Structural differences

Table 4 – Facilitators and inhibitors of organisational coordination

(Source: Meijers, 2004, p.7, adapted from Halpert, B.P. (1982). Antecedents. In: Rogers, D.L. & Whetten, D.A. *Interorganizational coordination: theory, research, and implementation*. Ames: Iowa State University Press.)

An additional important factor appears to be the sharing of information and knowledge between the various levels of policy-making organs and between these and society at large – in particular to those groups or individuals with significant knowledge about the policy area in question (see Brown, 2002, p.36). One respondent in Portugal argued that within a regional governmental delegation charged with development and environmental policies, one of the barriers to integrating the work of different units within the delegation was the inability to convey simple information between those units.

Two other important aspects appear to be the timing of the integration efforts and the methods to implement inter-organisational coordination. In what regards the first, while there are potential efficiency gains in advancing the coordination or integration efforts as early as possible in the decision-making process, care should be taken not to propose such efforts before they are clearly defined. Otherwise, the inherent difficulties of advancing integration will be further compounded by the lack of definition of what the process is actually all about. In respect of the means of proposing inter-agency

coordination, it is often recognized that a formal process should guide the whole integration effort (see for example Meijers, 2004 and Peters, 1998). Nevertheless, the exact form in which the involved organisations reshape their functions to give effect to the new integrated approach will certainly need to be tailored to the political culture of each country. Looser, market-like adjustments of agencies' functions, albeit seemingly less efficient than centrally guided processes, might enable greater buy-in of the integration process and take greater advantage of the often greater knowledge of local conditions that decentralised government organs possess. As was alluded to above, attention should also be paid to the need of ensuring that principles such as participation or subsidiarity are not overridden.

Finally, the single most important factor – one that was frequently mentioned at the interviews conducted for the present work – is arguably the level of political commitment that accompanies any policy-making effort, be it integrated or not. Guy Peters summarizes this absolute need in the following manner (Peters, 1998, p.52):

“There are any number of ideas and mechanisms for producing enhanced horizontality in the administrative system, but none of these has been a real solution for the problem. As is so often the case, coordination (or any other virtue) may be achievable without special mechanisms if there is the will to coordinate, but no mechanism is sufficient if there is an absence of will.”

Intimately related to this premise is the notion that the coherence of individual policies and the level of integration of policies and government organisations is greatest when these conform to an overarching governance model that guides the whole political action. Ultimately, a government that is able to work towards an agreed development vision, using a coherent and coordinated institutional model will succeed in producing integrated policies.

4.3 THE CASE FOR INTEGRATION IN PORTUGAL

Having reviewed in chapter 3 the status and development of Portugal's shipping and port sectors and of the country's ocean and coastal management policies; having described earlier in this chapter the main pressures on its coastal and ocean spaces;

and having briefly presented the main concepts relating to policy integration in the preceding sections, an appreciation of the conditions for the integration of the shipping and port sectors into the emerging coastal and ocean management framework will be conducted in this section. The reflections contained herein are based on the descriptions of the preceding chapters and draw – in some cases, extensively – from the opinions of the interviewees consulted for the present work.

Two main questions will be addressed:

- why should such integration take place?
- how could such integration be achieved?

In attempting to answer the latter question, a number of subsidiary issues shall be debated, namely which aspects of the shipping and port policies should be integrated; which governance model could be proposed; and which pertinent aspects need to be taken into account. In order to illustrate some of these questions, a number of specific shipping- and port-related themes will be analysed individually in terms of their relevance for integrated coastal and ocean management policies.

4.3.1 Justifying integration

The reasons for promoting the integration of Portugal's maritime policy – or at least parts thereof - into the national policies for the ocean and for coastal zones could arguably have been derived from the preceding section in this chapter. Nonetheless, in view of the generic difficulties in fostering integration among public organisations and policies, and considering the relative isolation in which the shipping and port sectors tend to operate – which further enhances the lack of enthusiasm with which integration might be perceived by these two sectors – it is useful to explicitly state what those reasons might be.

Two justifications can be put forward: the first one is mainly conceptual and relates to the very nature and purpose of any ICOM initiative. Inherent to the notion of ICOM is the purpose of jointly managing all activities and forces that act upon marine and coastal zones. As such, the inclusion of all these influencing elements into the management process is a basic requirement for the very identity and coherence of the integrated framework. Consequently, a coastal or ocean management scheme where one or more of such elements is absent – in the present case, the country's maritime

sector – could hardly be called integrated. Such inclusion is all the more important the larger the impacts associated with a given element. If the Portuguese government is committed to the formulation and implementation of integrated coastal and ocean management frameworks, then it must necessarily consider the inclusion of the maritime sector into those schemes.

The second justification is more of a factual one, relating to the actual interference of shipping and port activities with coastal and marine ecosystems and with other human uses of those areas. Indeed, as was described in section 4.1, the shipping and port sectors are responsible for a number of severe impacts upon and threats to Portugal's coastal and ocean spaces. Furthermore, the present administrative structures – both those dealing with the management of those spaces and those responsible for the regulation and management of the shipping and port sectors – have proved inadequate to handle the mentioned impacts and threats in a manner that is beneficial for society as a whole. As in most coastal and ocean management programmes around the world, it is the recognition of this inadequacy that provides the fundamental justification for the adoption of integrated management schemes.

When advocating the integration of maritime policy into the ICOM framework, one must take into account the concomitant need of integrating the first with other sectoral policies. Underdal eloquently relates this issue with the requirement for internal coherence of the sectors or issue-areas around which integration is centred (Underdal, 1980, p.164):

“[...] the case for policy integration rests on the assumption that the elements to be integrated are somehow interdependent or linked. Policy integration can be seen as an effort to ensure that links among issue-aspects or issue-areas are not neglected in the making of policy decisions. From this perspective, issue-areas requiring policy integration would have to be determined on the basis of what empirically constitute distinct ‘interaction systems’ - internally interconnected, externally relatively independent. Some of our everyday notions about ‘wholes’ - such as ‘sea’, ‘land’, ‘air’ – may not be useful delimitations from this perspective. In some respects the links between a sea-based and a land-based activity can be

stronger than the links within either of these categories. Thus, even though strong arguments can be found for coordinating policies dealing with ocean use, ‘marine policy’ is not necessarily a more useful policy area concept than are other concepts, such as ‘transportation policy’ (covering sea, land and air) or ‘energy policy’ (including offshore as well as land-based energy sources).”

The point to make here is not to question the appropriateness of using ocean or coastal zones as unifying ‘interaction systems’ for integrated policies. Although it is sometimes questioned whether or not coastal management should be subsumed to ocean policies or, on the other hand, be expanded to include river basin management⁷⁷, the specificities of both coastal and ocean systems grant them enough internal linkages to qualify them as meaningful unifying policy areas. However, when considering the broader practical implications of integration, one must bear in mind that shipping and ports must conform to the country’s policies for transports; to some extent, energy and defence; and largely to the State’s financial dispositions. This greatly compounds the work of the government in achieving efficient integration of the maritime sector into these various political areas and limits the concessions that the maritime policy might grant to each of the integrative efforts.

4.3.2 Putting integration into practice

In considering the means through which the integration of the maritime sector into the ICOM framework in Portugal could occur, the first issue to be considered is which areas of the country’s current shipping and port policies should be managed outside the exclusive responsibility of the sectoral organisations heading those two sectors⁷⁸. This is an inherently cumbersome question to answer. First, because it depends on the governance model that is adopted for ICOM, and, within such model, on the actual

⁷⁷ In relation to this last issue, it is noteworthy that the frontier between “salt water-based” coastal management and “fresh water-based” river basin management appears to be a rather impermeable one, so far with little if any meaningful cross-fertilisation between both areas.

⁷⁸ In Portugal these are principally the ministry supervising transport (MOPTC), the maritime administration (IPTM) and the five autonomous port administrations, and, to some extent the system of maritime authority (SAM) and the ministry of defence (MDN).

balance of political power and influence between the various sectors and on their relative resources. None of these aspects have yet been defined in Portugal. Secondly, because at a time when the Portuguese government is itself working on the ICOM framework, proposing solutions for parts of this framework might be seen as an excessive intromission into governmental action. More so with such a proposal coming from outside the government or the sectoral administrations themselves. Be it as it may, the present research would not be complete without paying some regard to that issue, especially because it was a recurrent one in the consultations conducted for this work.

There is ample recognition today that coastal and ocean management strategies, irrespective of their level of integration, should not replace sectoral management, but rather provide “[...] additional dimensions to government processes in order to examine and act upon the interactions and interdependencies among human activities and the ecosystem processes [...]” (Brown, 2002, p.36). Indeed, if one considers the spectre of activities, functions and responsibilities of maritime and port administrations, it becomes obvious that the majority of those are technically quite complex – thus requiring very specific knowledge and training, often only available within the particular sectors – and have little if any direct influence on the impacts caused by the two sectors. On a general basis, examining two models of maritime legislation developed by the IMO – one providing overall regulations for the shipping activity (McCalla, 2000a) and the other for shipping-related marine pollution (McCalla, 2000b) – one can argue that only in aspects such as the registration of ships; the criminal prosecution of offences; and the granting of the various types of certifications are the individual national governments capable of exercising full discretion in their decisions. All other subject matters – such as, among others, training and education of seafarers; navigation rules; technical norms related to safety at sea and carriage of cargo; wreck and salvage; technical standards and procedures to control ship-source marine pollution; and measures to prevent and respond to accidental marine pollution – are determined to varying degrees by international agreements. Such fact greatly limits the ability of national governments to interfere with the international provisions, more so because unilateral action by individual States in relation to international maritime transport is greatly discouraged. Nevertheless, as was discussed in section 2.2 above,

even in relation to matters covered by international maritime treaties individual States can try to implement their individual visions.

On the domestic level, the core of Portugal's shipping and port policies have been laid down in Decrees-Law 257/2002 and 335-339/98, respectively, where the statutes of the national maritime administration (IPTM) and the five autonomous port administrations are defined. Of the numerous attributions, one category in particular is an obvious candidate for management within the national ICOM framework, namely the one relating to the jurisdictional rights of those organisations over the coastal areas occupied by ports or other maritime structures. As was mentioned in section 3.1, all harbour areas are exclusively managed by either the IPTM or the autonomous port administrations, and are not covered by the national coastal management plans, the POOCs. Besides the occupation of stretches of the coast, those rights include the planning and execution of whichever interventions are necessary for shipping or port activities (see Decree-Law 257/2002, Annex, art.4; and for example Decree-Law 336/98, art.3 & 4). Some of these interventions interfere significantly with coastal processes and should thus be subject to scrutiny by the upcoming coastal management institution. Generically, all activities by the IPTM or port administrations that interfere or otherwise alter the biophysical characteristics of rivers, the coastal zone or the ocean should be managed in an integrated way, clearly within the upcoming ICOM framework. Similarly, developments in ports or other maritime structures need to be more closely interlinked with surrounding urban areas. As will be discussed in section 4.3.5 below, port development is still allowed to proceed in relative isolation from a number of other elements of society.

The above argumentation does not mean to imply that only certain parts of Portugal's maritime policy are to be managed in an integrated way. Instead, the intention is simply to indicate which are the priority areas where integration with other uses and concerns is more urgent. In fact, if a governance model is adopted where a supra-ministerial body oversees the work of all sectors involved in ocean affairs, most of the sectoral responsibilities will be kept to some degree, and virtually the whole of the shipping and port policies will be targeted by the integration effort. For example, the Australian government has decided for a wide range of measures for the shipping sector in that country's Oceans Policy, including technical requirements for reducing

pollution from ships (e.g. standards for anti-fouling paints and procedures for ballast-water control); plans to combat accidental pollution; managing ship-generated wastes; improving maritime search and rescue capacity; ameliorating navigational services; encouraging maritime education; and increasing the overall competitiveness of the sector (Commonwealth of Australia, 1998, pp.17-18).

In relation to this last element, the commercial aspect of shipping and port policies is, together with the specific technical aspects of the two sectors, one where the individual sectors are most eager to retain sectoral independence and where interference by an “external” ICOM structure would be less welcome. On the other hand, the strategic importance of the maritime sector for the country’s economy should – and, to some extent, already does - require commercial decisions to conform to a broader national development strategy. And indeed, of the numerous recommendations of the Oceans Strategic Commission that result from an integrated perspective of Portugal’s relationship with the ocean, some address very specific issues of competitiveness and efficiency of the shipping and port sectors (CEO, 2004b, pp.121-125).

As was briefly mentioned in the initial paragraph of this section, the extent of integration will depend on the governance structure that is proposed for the integrated management of Portugal’s ocean and coastal zones. If, according to the view of some coastal management practitioners, the responsibility for ICZM rests with an agency of the ministry of environment – the INAG – in the short- to medium-term, then it is probable that greater emphasis will be laid on biophysical impacts of maritime activities. The extent of such emphasis will vary with the amount of available resources. If, alternatively, the coordination of the integrated coastal or ocean policies is awarded to a supra-ministerial entity, a broader set of maritime issues might be subject to joint management within the integrated framework.

At this stage, as mentioned previously, this is an unsolved issue. From the consultations with entities in the maritime sector, there is relative openness on their part in relation to the choice of institutional model for ICOM in Portugal⁷⁹. The general

⁷⁹ Interestingly, in its multi-annual action plan for 2003-2005, the IPTM stated as an opportunity the existence of “fair perspectives for the clarification of the institutional relationship

feeling is that some integration is meaningful, but the ultimate acceptance thereof will depend on which concrete measures will be proposed. Moreover, in the opinion of one of the respondents, the reactions of the various sectors and social groups affected by any ICOM effort will depend on the circumstances under which the process is conducted – e.g. budgetary or resource constraints, other political issues requiring attention, specific requirements of new procedures – and on the willingness and capacity of the individuals behind those sectors and groups in cooperating with the integration process.

The present practice in terms of coordination or cooperation within the maritime sector and of this sector with other social groups or entities displays some of these tensions. On the one hand, the administration of the IPTM has adopted a policy of building case-by-case partnerships with external entities – such as the INAG – to address specific issues related to its activities. Albeit limited in its scope or degree of consultation with potential stakeholders, such partnerships are nonetheless valuable and contribute to searching for more balanced solutions in terms of impacts from maritime activities. On the other hand, the IPTM and the ministry responsible for shipping and ports – the MOPTC – have been accused of not contributing in a meaningful way to the recent work of the EMAM. In other instances, port administrations have also shown little or no cooperation with entities dealing with the drafting of the POOCs or wishing to study mechanisms to counter coastal erosion.

A further illustration of the practical difficulties of integration is the failure of the National Coordinating Council of the SAM. According to Decree-Law 43/2002, this council was supposed to be composed of a number of ministers – defence, internal administration, social equipment, justice, agriculture and fisheries and environment -, various police forces and law enforcement entities, the heads of the maritime, fisheries and health administrations and the INAG, and a number of other representatives from the national and regional governments. Its tasks, although limited, were clearly related to the articulation of the responsibilities and actions of these various sectors and organisations within the competencies of the SAM (see section 3.1.3). Because of the

with entities whose competencies and activities relate to those of the IPTM: Directorate General for Maritime Authority; Directorate General for Customs and Special Taxes on Consumption; Water Institute; Institute for Nature Conservation; Docapesca; Local municipalities.” (IPTM, 2003, p. 14)

broad representation of ocean-related sectors and organisations and its integrative, coordinating role, the National Coordinating Council of the SAM would have shared some of the features of a national management unit for ICOM. However, due to the unwillingness of various organisations in accepting that council's presidency by the minister of defence, it never actually met.

One final aspect relates to the balance between centralized and decentralized processes in both the maritime sector and the ocean and coastal management frameworks. The Portuguese State has traditionally been a very centralized one, with the national government having full responsibility over almost every matter. The level of regional or municipal autonomy is relatively low. This is especially true in the shipping sector, which is fully administered by the central government. In the port sector there is a reasonable level of autonomy in the case of the five autonomous port administrations, which, however, are fully owned by the State. Although port policy is still defined by the central government – at the level of the MOPTC – the last reform of the port sector in the late 1990s awarded the new administrations a fair amount of discretion. As for the upcoming coastal and ocean management policies, as was discussed in the previous chapter, the proposals point towards national policies coordinated by a single entity, which will necessarily have to sit with the central government so as to have easy access to high level political power. In the view of one of the respondents, the potential demand for renewed centralisation of all decisions pertaining to the maritime or port sectors because of a new ICOM structure is a threat to the efficiency of many of the services provided locally. To some extent such centralising move would counter principles of autonomy, decentralisation and subsidiarity established in the past and would pose the risk of introducing new bureaucracy into the regulation and management of shipping and port activities.

4.3.3 The identification of places of refuge on the Portuguese coast

The broader *problématique* of the designation of places of refuge for ships in distress has been widely debated on several occasions, a comprehensive volume on

the international situation having been published recently⁸⁰. In Portugal, José Velho Gouveia has conducted quite detailed analyses of the domestic situation (Velho Gouveia, 2004; 2003). This section will not attempt to reconsider the issue on the whole, but instead focus on how the national authorities have been giving effect to the legal requirement of identifying and preparing plans for places of refuge along the Portuguese coast.

From a legal perspective, the identification of places of refuge for ships in distress and the provision of assistance to such ships are to varying extents addressed by numerous international instruments. Besides international customary law, there are references to these matters in conventions such as the LOSC, SOLAS, MARPOL 73/78, OPRC, Intervention and Salvage. Related issues of compensation for damage from oil pollution are the subject of the CLC, FUND and HNS Conventions. Nevertheless, none of these instruments explicitly demand neither the granting of refuge nor the identification of such places. The guidelines issued by the IMO on this latter issue constitute nothing more than guidance that coastal States may voluntarily accept (IMO, 2004, March 5). In the EU, the first mandatory requirements came with the so-called Erika II legislative package, in the form of Directive 2002/59/EC, where, in article 20, Member-States are called upon to develop plans for the granting of refuge to ships in distress. Following the IMO's guidelines, the EU stresses the need to consult with interested parties and to take into account operational and environmental restrictions that may apply to each individual situation (Directive 2002/59/E, art.20).

At the national level, the transposition of this directive was done through Decree-Law 180/2004, which, through article 19, gives effect to article 20 of the directive, further stating that the IPTM, in partnership with the DGAM, the navy – through the Naval Command –, the Institute for Nature Conservation, port authorities and the Nuclear Technology Institute is responsible for the drafting and updating of the abovementioned plans. These are to be approved by the Council of Ministers. (Decree-Law 180/2004, art.19). Near the end of 2004, the general provisions of article 19 of Decree-Law 180/2004 were further elaborated by means of Resolution of the Council of Ministers 179/2004. In particular, the procedures to be followed in case of a request

⁸⁰ Chircop, A. & Lindén, O. (Editors). (2006). *Places of Refuge for Ships. Emerging Environmental Concerns of a Maritime Custom*. Leiden / Boston MA: Martinus-Nijhoff Publishers.

for refuge by a distressed ship were detailed, resulting in i) the nomination of the minister responsible for the IPTM as the entity authorising the granting of refuge to ships; ii) the establishment of the Technical Commission for the Granting of Refuge to Ships in Distress (CTAND, Comissão Técnica para Acolhimento de Navios em Dificuldades) that should assist the minister in the decision to grant refuge; and iii) the definition of the procedures to be followed in cases where refuge is requested, in terms of analysing the situation and elaborating corresponding action plans. Such plans should take into account a number of administrative and legal issues, consider the status of the vessel and crew and be based on an “objective analysis of the advantages of and impediments to the access of ships in distress to the places of refuge” (Resolution 179/2004, no.7). This latter analysis should take into consideration background information on a number of parameters of the potential refuge areas, namely in terms of human safety, demography, environment, socio-economical factors, geophysical constraints, means of intervention, and the foreseeable consequences of the utilisation of a specific place of refuge. Because of the very broad scope and complexity of this background information, its compilation and analysis would require preliminary work by the government. To some extent this was also addressed by Resolution 179/2004 with the creation of a further work group headed by the IPTM and composed of the elements of the CTAND and representatives from virtually all other ministries.

At present, although the mentioned legislative instruments date back two years and follow mandatory EU directives, little has been achieved. Consultations led by the IPTM and involving interested parties have been very limited – according to one respondent, only two in total so far, and with little effect – and there is no information about plans for granting of refuge or even meaningful reports about the baseline information that should inform ministerial decisions. The only known attempt in that direction so far has resulted from the initiative of one element of the DGAM, individually (Velho-Gouveia, 2003) and in association with the Technical University of Lisbon (Velho-Gouveia, 2004). Fortunately, it appears that the IPTM might be finally progressing on this issue, having recently requested from those two sources some of the information that they had worked, which included a multi-factor characterisation of mainland Portugal’s coastal areas and a preliminary assessment of possible places of refuge (see Velho-Gouveia, 2003).

Finally, the extent of the consultations with stakeholders for the purpose of a *priori* identification of potential places of refuge is a pertinent issue. In the spirit of integrated and participative coastal and ocean management, some level of public participation should be stimulated. However, the provisional composition of the CTAND does not include any civil society or non-governmental organisations, and even the work group charged with compiling background information is not formally required to consult with social groups other than the nominated governmental bodies. Whether or not such broad public participation should be encouraged is a difficult question to answer. Recent maritime incidents show the trend of not granting of refuge because of fears of extensive damage to coastal zones. Local entities and populations will obviously be at the forefront in contesting refuge in their area. However, as was amply demonstrated by the Prestige case, the option of not granting refuge might have much more serious consequences, that easily extend from the local to the national or international spheres. Thus the capacity of forcing the national interest over the local or regional one is of paramount importance. The view shared by those in Portugal involved in the granting of refuge to ships in distress is that consultation should be carefully conducted so as to not lead to unreasonable contestation, and that an *a priori* publication of the nominated places of refuge could lead not only to such contestation but also to a depreciation of the value of the coastal areas surrounding the nominated places of refuge.



4.3.4 Dredging in ports and coastal erosion

Around 29% of mainland Portugal's coasts are presently affected by erosion. In certain locations, the average annual rate of recession has reached nine meters (Instituto do Ambiente, 2004, p.69-70). Large stretches of the Atlantic coast in northern and central mainland Portugal are in critical situation, with numerous situations of destruction of coastal habitats and human constructions. The main factor underlying erosion is the reduction in the amount of sediments flowing from the inland and along the coast. For the most part, this is due to the construction of numerous dams in the major rivers flowing from the interior of the Iberian Peninsula to Portugal's western and southern coasts. Figure 4 illustrates the reduction in the catchment areas of the main river basins in Portugal. Estimates point at an approximate reduction of 80% in the



volume of sediments transported by rivers due only to hydroelectric and hydro-agricultural dams (Dias, 2005, p.16; see also Veloso-Gomes, 2002, p.415).

Figure 4 – Catchment areas of river basins draining into Portugal's coasts

 area affected by dams
 area not affected by dams

(Source: Dias, 2005, p.17)

The already critical situation of reduction of sediment volumes

has been made worse by a number of other factors, chief among which the extraction of sand and other sediments from coastal areas and the construction of coastal defence structures. The first type of interventions removes from the coast further amounts of sediments necessary to sustain coastal integrity, whereas the second introduces barriers to the littoral drift of sediments.

Within the first category one finds port dredging, an essential intervention in ports the entrance of which is subject to siltation and where the resulting water depth is insufficient for the safe passage of vessels. In Portugal, some of the major ports such as Leixões, Aveiro, Figueira da Foz and Setúbal require periodical dredging operations. The magnitude of the dredging operations varies with a number of factors:

- the objective of the dredging itself: operations for the establishment of new navigational channels or for the significant deepening of existing ones generally involve larger extractions than maintenance operations intended to keep a certain depth of an existing channel;
- the natural characteristics of the location, in terms of hydrological patterns and of the type and amount of sediments and their dynamics ; and
- large-scale unexpected events such as storms or floods that cause abrupt changes.

An idea of some of these volumes is presented by Dias (2005, p.18), who mentions a value of 3 million m³ of dredged material in the lower river Douro in the period 1982-1986, a value that is only somewhat lower than the estimate amount of sediments involved in coastal drift, between 1 and 2 million m³/year. Another useful comparison can be made with the estimate value of 1,8 million m³/year for the volume of sediments carried by the Douro under natural conditions, prior to the construction of the numerous dams along its course. At present that value has been reduced to around 0,25 million m³/year (Oliveira *et al.*, 1982, cited in Dias, 2005, p.16).

The issue surrounding dredging in ports is not whether or not it should continue nor about the dredged volumes. After all, there is ample recognition of the vital importance of ports for Portugal's economy and without adequate dredging some of these ports would not be able to function. The issue is about the control over such operations and the destination of the dredged materials. In the present regime, port administrations – either the IPTM or the five autonomous entities – are solely responsible for drafting dredging plans, which are internal documents. Depending on the dimension of the dredging operations, an environmental impact assessment (EIA) might be required, which needs to be submitted to the Environment Institute (IA, Instituto do Ambiente) and involves public consultation. Larger interventions such as the dredging of new channels typically require an EIA. However, there are cases of dredging operations involving several millions m³ of extracted sediments where an EIA was not required. Whichever the case, it is up to the port administration to decide what to do with the dredged material. When the IA is involved, one might think of an additional check involving considerations of the impacts of dredging, but so far and in the majority of situations port administrations have operated in considerable freedom. Such freedom involves the selling of sand to the construction industry, in those cases where such sand is of sufficient quality. The income from such source is often quite substantial. The same freedom also involves not disclosing the volumes of dredged material to the public, not even to professionals involved in studying sediment dynamics and balances for the purpose of elaborating coastal defences.

A related problem is the utilisation of sand that accumulates up-drift of coastal breakwaters protecting port entrances. An example of the potential problems in such situations is described by CNADS (2001, p.24) in relation to the S. Jacinto breakwater

north of the entrance to the Aveiro port. Citing a value of 0,6 million m³/year of accumulated sand a few decades ago up-drift of that structure, two reasons are mentioned for the inability of using this surplus in the nourishment of severely eroded areas down-drift: the fragmentation of responsibilities over a very short stretch of coast around the port entrance – the ICN to the north, the port administration in the harbour area, and the INAG to the south; and the lack of willingness from the part of the port administration and some municipalities to cease the commercial exploitation of such sand in favour of investments in a by-pass system.

A prime deficiency of the present regime is that there are few if any standards governing the actions of port administrations in relation to minimising the impacts of dredging operations or port defence works. As with other issues, the practices vary considerably between different ports, as a result of the individuals in charge and of the available resources. While there are well-intended interventions by certain ports in contributing to beach nourishment, other multi-million m³ dredging operations take place where not a single grain of sand is planned for down-drift nourishment. In the meanwhile large investments continue to be done to maintain or expand coastal defences to protect natural habitats or human infrastructures, at the expense of taxpayers. Considering the specific case of erosion in the region of Aveiro, Veloso-Gomes and others called for a change in the *status-quo* that should pave the way for an integrated approach to port constructions and dredging (Veloso-Gomes, 2002, p.420):

“It is considered essential that the first priority for using the dredged material from Aveiro harbour is the nourishment of the down-drift beaches [...]. For this purpose it is necessary to collect data on planned dredging operations near Aveiro Harbour Administration [...] and to impose to the harbour authority the mitigation of impacts related with harbour activities.”

4.3.5 Port expansion and development plans

Inherent to the attributions and jurisdictional rights of the IPTM and of the five autonomous port administrations is the preparation and implementation of port expansion and development plans. Such plans began to surface in the last few of years and constitute public documents through which port administrations disclose their

intentions for the future of the port. To a considerable extent those plans focus on commercial aspects of port activities. An interesting issue from the point of view of ICOM is the extent to which those plans take into account concerns other than those of the individual port administrations.

The needed articulation with external entities is steered mainly by the port administration themselves and focuses primarily on the port community, i.e. the different private and public organisations that are directly involved in port activities. An extended round of consultations may be conducted with the municipalities or other social groups outside the port community. Exploring the linkages with, for example regional transport policies might be necessary to ensure the adequate extension of port development beyond the port itself, as part of the effort of increasing the efficiency of transport services as a whole.

The main drawback of the present system is that there are no formal requirements for consultation or articulation of the plan with external interests. Obviously, port administrations will try to ensure that as many relevant stakeholders as possible buy into the plan as a means of increasing its potential for success. However, the extent of consultations and how the views of external stakeholders are taken into account is left to the discretion of the port administration. And in fact, while some administrations have been praised for the quality of their plans, others have faced considerable opposition from outside.

An interesting comment by some of the interviewees is that at present there is no national strategy for commercial ports, which has led not only to fierce destructive competition between ports – involving, for example, accusations of dumping of port taxes – but also to incomprehensible redundancy of port services. On a broader scale the problem relates to the difficulty of implementing a holistic transport policy for Portugal. In this context, some claim that without such overarching policies one cannot expect a balanced and sustainable development of Portugal's ports. Should such policies exist, and if the government were committed to their implementation, the present institutional framework should prove adequate to steer the development of individual ports. Indeed, the State is the owner of all of the country's seaports and is involved in their management and development, either through the IPTM or by means of its participation in the general assembly of all five autonomous port administrations.

5. CONCLUSION

The main purpose of this study was to assess the integration of the regulation and management of the maritime industry with the ocean and coastal management policies in Portugal. In order to identify the forces acting in favour or against integration, I have tried to describe the national and international institutional frameworks in which both areas operate. Focusing to the largest extent possible on practical aspects of integration, the assessment was guided by two principal questions: 'what are the reasons for integration?', and 'how can integration be achieved?'.

At the international level there is a clear movement towards the adoption of integrated approaches to the management of coastal and ocean areas. This has manifested itself in numerous agreements and in the proliferation of national initiatives related to integrated ocean and coastal management. In Portugal, coastal and ocean management have evolved through a series of more or less successful attempts. Aimed at addressing the continuing degradation of coastal and marine resources and at proposing development alternatives for the country, new policies for both areas are presently under discussion.

Somewhat against the flow of policy integration, the maritime industry has kept intact much of its reputed sectoral character. At the IMO much of the sectoralism that is rightfully needed for developing international technical standards extends to issues such as PSSAs, places of refuge or environmental norms, where consideration of other ocean uses would be desirable. Apparently, countries that advocate and implement integrated ocean management seem unable to bring that same perspective to the IMO. Still, it is up to individual countries to use the IMO as a privileged forum for regulating maritime transport in accordance to ICOM principles.

Portugal has witnessed a distancing of its maritime sector from the broader management of its coastal and ocean spaces similar to that of many other countries. Despite the recognition of the severe impacts that shipping and ports have upon coastal and marine habitats and resources, shipping and ports continue to be managed mostly in a sectoral way. Such recognition, added to the inadequacy of the present institutional framework for dealing with the multitude of coastal and ocean uses, offer

sufficient justification for attempting integration of the maritime sector into the national ICOM efforts.

The absence of concrete ocean or coastal management policies with which the maritime sector should be integrated is certainly a prime reason for the prevailing sectoralism. An additional inhibitor of integration is the current legislative framework, which exempts the port sector from having to abide to regional coastal management plans, thereby allowing considerable room for discretion by port administrations. In what regards shipping, further sectoralism is justified by the difficulty of subsuming a sector that is regulated internationally to domestic coastal and ocean management schemes. Moreover, in both sectors the individuals behind the respective organisations might pose additional obstacles to the purpose of integration.

It should be kept in mind that the complexity of the existing governance structure, of the underlying organisations and of the policy issues poses numerous practical difficulties to the effective integration of the maritime sector with the ICOM policies. The current sectoral approaches have arguably evolved from the need of addressing such complexity with the highest possible level of expertise. As such, the justifications for keeping to sectoral management are numerous and in most instances reasonable. Indeed, the integrated approach to the management of Portugal's ocean and coastal zones should not attempt to replace the sector-by-sector administration of the various policy areas, but instead constitute an additional institutional dimension enabling the adequate communication and coordination among the different sectors dealing with marine and coastal affairs.

This study has attempted to demonstrate the need for integrated management of a selected number of areas of Portugal's maritime policy. Of highest priority are all interventions that alter the biophysical characteristics of coastal or marine ecosystems or that interfere with the urban areas surrounding maritime infrastructures. The strategic planning of the maritime sector as a whole should also be done in harmony with a broader ICOM policy, and certainly conform to an overarching development model for the whole country. The representation at the IMO and the work with its instruments at domestic level is a further area where maritime industry and ICOM could improve cooperation.

How integration could occur is difficult to predict. It has been argued in the past that a first step should consist of removing some of the legislative exceptions that the maritime sector presently enjoys, in particular those relating to jurisdiction over stretches of the coastal zone. Such measures, albeit justifiable, should be taken with care: it has happened in the past that the reduction of the jurisdiction area of one port resulted in an institutional void in areas that suddenly lost its former landlord. In addition, the changes to the present situation should not create additional barriers to the efficiency and competitiveness of Portugal's maritime sector. This should be a prime concern if the country is to take full advantage of its maritime industry, as both the national ocean strategy and the upcoming EU maritime policy seem to advocate.

It is anticipated that within the present legislature – up to 2009 – the policies for the management of Portugal's ocean and coastal areas will be defined. At the level of the EU there are developments in that direction that will certainly influence the internal political sphere. At domestic level, actual implementation of such policies is seen by many as an absolute need after years of failed promises that fed an increasing scepticism about the government's actual will. Indeed, for any integration effort to succeed, strong and continuous political will by the government will have to be displayed. Otherwise, the considerable difficulties of implementing a national ICOM policy, and in promoting an effective integration of the maritime sector into that policy will most certainly not be overcome.

6. RECOMMENDATIONS FOR ADDITIONAL RESEARCH

The research work presented in this document has faced two principal constraints. The first was the limited time available for conducting the work. In accordance to the schedule of the WMU's Masters programme, a period of just under four months is formally awarded for the realisation of the research thesis – from early May to late August, roughly corresponding to the initial two thirds of the fourth semester of the programme. While it is conceivable that students start working on their research topic prior to the official thesis period, in practice this turns out to be quite laborious, given the work load required by other programme subjects. The time constraints in the fourth semester are further exacerbated by the need to complete two elective subjects, on average each lasting two weeks of half-day lectures and involving written examinations, assignments or both.

The second limitation was the lack of resources to conduct extensive consultations in Portugal. Fortunately it was possible for me to combine one particular appointment in Portugal with the realisation of a number of interviews. Nevertheless, more resources – and time – would have been necessary to extend the number of interviews, in particular to allow consultation with individuals in Madeira and the Azores. To some extent, the inability to meet certain individuals in person was compensated by telephone conversations, but the extent of the topics discussed tends to be more limited when talking on the phone compared to in-person interviews.

In view of the above, the present research is limited in its coverage of the situations in the Azores and Madeira. It also lacks more extensive consultation with individuals working in the government and actually participating in high-level political decision-making processes relating to the maritime sector and the coastal and ocean management initiatives. The failure to consult with these entities was to some extent a flaw in the initial research design – the initial round of interviews having relied mainly on individuals with technical responsibilities and not political ones – but was also limited by the poor adaptability of the work plan due to time constraints. In respect of this latter issue, the fact that the second half of the research period coincided with the traditional vacation period in southern Europe created additional difficulties.

For an improved understanding of the political alternatives for integrating the maritime sector in the national ICOM effort, the present work would have also benefited from broader comparisons with the situation in other countries, notably those in the EU and with political systems similar to the one in Portugal.

Finally, the lack of a clear code of conduct for dealing with the information collected at interviews limited the explicit reference to the sources of that information.

In brief, the present research could be improved and extended by means of:

- more in-depth consultation with governmental entities in Portugal in order to better assess the practical options for integrating the maritime sector into the national ICOM efforts;
- consultation with entities in the autonomous regions of the Azores and Madeira;
- comparison with the practice in other countries, notably those in the EU and with similar political systems; and
- development of a code of conduct for conducting interviews to enable reference to information sources.

REFERENCES

- Ballinger, R.C., Smith, H.D. & Warren, L.M. (1994). The Management of the Coastal Zone of Europe. *Ocean & Coastal Management*, 22: 45-85.
- Belfiore, S. (2002). Integrated coastal zone management in the European Union: prospects for a common strategy. In Cicin-Sain, B., Pavlin, I. & Belfiore, S. *Sustainable Coastal Management: A Transatlantic and Euro-Mediterranean Perspective* (Editors) (pp.3-8). NATO Science Series IV: Earth and Environmental Sciences – vol.12. Dordrecht: Kluwer Academic Publishers.
- Belfiore, S. (2000). Recent developments in coastal management in the European Union. *Ocean & Coastal Management*, 43: 123-135.
- Bettencourt, A.M., Bricker, S.B., Ferreira, J.G., Franco, A., Marques, J.C., Melo, J.J., Nobre, A., Ramos, L., Reis, C.S., Salas, F., Silva, M.C., Simas, T. & Wolff, W.J. (2005). *Typology and Reference Conditions for Portuguese Transitional and Coastal Waters; Development of Guidelines for the Application of the European Union Water Framework Directive*. Lisbon: INAG - Instituto da Água & Coimbra: IMAR – Instituto do Mar.
- Borja, A. (2006). The new European Marine Strategy Directive: Difficulties, opportunities, and challenges. *Marine Pollution Bulletin*, 52: 239-242.
- Borja, A. (2005). The European water framework directive: A challenge for nearshore, coastal and continental shelf research. *Continental Shelf Research*, 25: 1768-1783.
- Borrego, C., Coutinho, M., Leão, F., Mata, P., Pinho, R., Martina, F., Coelho, C., Arroja, L., Queiroga, H., Costa, A. & Pinho, J. (2005). *Contribuição para a formulação de políticas públicas no horizonte 2013 relativas ao tema 'Ambiente e Prevenção de Riscos'*. Final Report. Aveiro: Department of Environment and Planning, University of Aveiro.
- Brown, K., Tompkins, E.L. & Adger, W.L.. (2002). *Making Waves – Integrating coastal conservation and development*. London / Sterling, VA: Earthscan Publications Ltd.

Chircop, A. (2005) The Regulation of Marine Transportation and Integrated Coastal Management: Two Management Approaches in Need of Integration. In Nordquist, M.H., Moore, J.N. & Fu, K. (Editors), *Recent Developments in the Law of the Sea and China* (pp. 65-84). Leiden / Boston, MA: Martinus-Nijhoff Publishers.

Chircop, A. (2000). Teaching integrated coastal management: lessons from the learning arena. *Ocean & Coastal Management*, 43: 343-359.

Cicin-Sain, B. & Knecht, R.B. (1998). *Integrated Coastal and Ocean Management – Concepts and Practices*. Washington, D.C / Covelo, CA: Island Press.

Comissão Estratégica dos Oceanos. (2004a). *Os Oceanos, Um Desígnio Nacional para o Século XXI – Parte I*. Relatório da Comissão Estratégica dos Oceanos. Lisbon: Author.

Comissão Estratégica dos Oceanos. (2004b). *Os Oceanos, Um Desígnio Nacional para o Século XXI – Parte II*. Relatório da Comissão Estratégica dos Oceanos. Lisbon: Author.

Commission of the European Communities. (2006a). *Towards a future Maritime Policy for the Union: A European vision for the oceans and seas – Green Paper*, SEC(2006)689. Brussels: Author.

Commission of the European Communities. (2006b). *Oceans and seas: Commission sets a new vision for Integrated Maritime Policy*. Retrieved 12 June 2006 from the World Wide Web: http://ec.europa.eu/maritimeaffairs/press/press_rel070606b_en.html.

Commission of the European Communities. (2006c). *Initiatives and ongoing developments in Europe -EU25- regarding conservation of marine protected areas*. Retrieved 08 June 2006 from the World Wide Web: http://ec.europa.eu/environment/nature/nature_conservation/natura_2000_network/marine_issues/index_en.htm.

Commission of the European Communities. (2005a). *Communication from the Commission to the Council and the European Parliament – Thematic Strategy on the Protection and Conservation of the Marine Environment*. COM(2005)504. Brussels: Author.

Commission of the European Communities. (2005b). *Proposal for a Directive of the European Parliament and the Council establishing a Framework for Community Action in the field of Marine Environmental Policy (Marine Strategy Directive)*. COM(2005)505 Final. Brussels: Author.

Commission of the European Communities. (2005c) *Towards a future Maritime Policy for the Union: A European vision for the oceans and seas*. Communication to the Commission from the President and Mr Borg. Brussels: Author.

Commission of the European Communities. (2002). *Communication from the Commission to the Council and the European Parliament - Towards a strategy to protect and conserve the marine environment*. COM(2002)539 Final. Brussels: Author.

Commission of the European Communities. (2000). *Communication from the Commission to the Council and the European Parliament on integrated coastal zone management: a strategy for Europe*. COM(2000)547 Final. Brussels: Author.

Commission of the European Communities. (1995). *Communication from the Commission to the Council and the European Parliament on the integrated management of coastal zones*. COM(95)511 Final. Brussels: Author.

Commission of the European Communities. (1986). *Communication from the Commission to the Council. Integrated planning of coastal areas: its role in Community environmental policy*. COM(86)571 Final. Brussels: Author.

Commonwealth of Australia. (1998). *Australia's Oceans Policy – Specific Sectoral Measures*. Canberra: Author.

Conselho Nacional do Ambiente e do Desenvolvimento Sustentável. (2001). *Reflexão sobre o desenvolvimento sustentável da zona costeira*. Lisbon: Author.

Council of Europe. (2000). *Model Law on Sustainable Management of Coastal Zones and European Code of Conduct for Coastal Zones*. Nature and environment Series No. 101. Strasbourg: Council of Europe Publishing.

Decision 1600/2002/EC. *Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme*. Official Journal L 242, 10 Oct 2002 pp.1-15. Brussels: European Communities.

Declaration of the United Nations Conference on the Human Environment, 1972, online at <http://fletcher.tufts.edu/multi/texts/STOCKHOLM-DECL.txt> (last accessed May 30th 2006).

Decree-Law 79/2005. *Decreto-Lei n.º 79/2005 de 15 de Abril*. Diário da República, I Série A, N.º74, 15 Apr 2005, pp.2979-2986. Lisbon: Imprensa Nacional Casa da Moeda.

Decree-Law 180/2004. *Decreto-Lei n.º 180/2004 de 27 de Julho*. Diário da República, I Série A, N.º175, 27 Jul 2004, pp.4732-4741. Lisbon: Imprensa Nacional Casa da Moeda.

Decree-Law 310/2003. *Decreto-Lei n.º 310/2003 de 10 de Dezembro*. Diário da República, I Série A, N.º284, 10 Dec 2003, pp.8339-8376. Lisbon: Imprensa Nacional Casa da Moeda.

Decree-Law 257/2002. *Decreto-Lei n.º 257/2002 de 22 de Novembro*. Diário da República, I Série A, N.º270, 22 Nov 2002, pp.7346-7357. Lisbon: Imprensa Nacional Casa da Moeda.

Decree-Law 43/2002. *Decreto-Lei n.º 43/2002 de 2 de Março*. Diário da República, I Série A, N.º52, 2 Mar 2002, pp.1750-1752. Lisbon: Imprensa Nacional Casa da Moeda.

Decree-Law 380/99, *Decreto-Lei n.º 380/99 de 22 de Setembro*. Diário da República, I Série A, N.º222, 22 Set 1999, pp.6590-6622. Lisbon: Imprensa Nacional Casa da Moeda.

Decree-Law 339/98, *Decreto-Lei n.º 339/98 de 3 de Novembro*. Diário da República, I Série A, N.º254, 03 Nov 1998, pp.5760-5768. Lisbon: Imprensa Nacional Casa da Moeda.

Decree-Law 338/98, *Decreto-Lei n.º 338/98 de 3 de Novembro*. Diário da República, I Série A, Nº254, 03 Nov 1998, pp.5753-5760. Lisbon: Imprensa Nacional Casa da Moeda.

Decree-Law 337/98, *Decreto-Lei n.º 337/98 de 3 de Novembro*. Diário da República, I Série A, Nº254, 03 Nov 1998, pp.5744-5753. Lisbon: Imprensa Nacional Casa da Moeda.

Decree-Law 336/98, *Decreto-Lei n.º 336/98 de 3 de Novembro*. Diário da República, I Série A, Nº254, 03 Nov 1998, pp.5737-5744. Lisbon: Imprensa Nacional Casa da Moeda.

Decree-Law 335/98, *Decreto-Lei n.º 335/98 de 3 de Novembro*. Diário da República, I Série A, Nº254, 03 Nov 1998, pp.5729-5737. Lisbon: Imprensa Nacional Casa da Moeda.

Decree-Law 151/95, *Decreto-Lei n.º 151/95 de 24 de Junho*. Diário da República, I Série A, Nº144, 24 Jun 1995, pp.4095-4098. Lisbon: Imprensa Nacional Casa da Moeda.

Decree-Law 309/93, *Decreto-Lei n.º 309/93 de 2 de Setembro*. Diário da República, I Série A, Nº206, 02 Set 1993, pp.4646-4631. Lisbon: Imprensa Nacional Casa da Moeda.

Decree-Law 468/71. *Decreto-Lei n.º 468/71 de 5 de Novembro*. Diário da República, I Série, Nº260, 05 Nov 1971, pp.1674-1680. Lisbon: Imprensa Nacional Casa da Moeda.

Dias, J.A. (2005). Evolução da Zona Costeira Portuguesa: Forçamentos Antrópicos e Naturais. *Revista Encontros Científicos -Turismo, Gestão, Fiscalidade*, 1:7-27.

Dias, J.A., Bernardo, P. & Bastos, R. (2002). The occupation of the Portuguese Littoral in the 19th and 20th Centuries. In Veloso-Gomes, F., Taveira-Pinto, F. & Neves, L.d. *Littoral 2002 - The Changing Coast*. Porto: Eurocoast / EUCC.

Directive 2002/59/EC. *Directive 2002/59/EC of the European Parliament and of the Council of 27 June 2002 establishing a Community vessel traffic monitoring and information system and repealing Council Directive 93/75/EEC*. Official Journal L 208, 05 Aug 2002, pp.10-27. Brussels: European Communities.

Directive 2000/60/EC. *Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy*. Official Journal L 327, 22 Dec 2000, pp.1-73. Brussels: European Communities.

Ducrotoy, J.-P. & Pullen, S. (1999). Integrated Coastal Zone Management: commitments and developments from an International, European, and United Kingdom perspective. *Ocean & Coastal Management*, 42: 1-18.

GEF/UNDP/IMO Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia (PEMSEA). (2006). *Xiamen: An ICM Journey*. Technical Report No.18. Quezón City: Author.

GEF/UNDP/IMO Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia (PEMSEA). (2005). *Framework for National Coastal and Marine Policy Development*. Technical Report No.14. Quezón City: Author.

Gibson, J. (2003). Integrated Coastal Zone Management Law in the European Union. *Coastal Management*, 31: 127-136.

Gibson, J. (1999). *Legal and Regulatory Bodies: Appropriateness to Integrated Coastal Zone Management*. Final Report. Brussels: European Commission – DG XI.D.2.

Government of Portugal. (2005). *Programa do XVII Governo Constitucional*. Lisbon: Presidência do Conselho de Ministros.

Hinds, L. (2003). Oceans governance and the implementation gap. *Marine Policy*, 27: 349-356.

Instituto do Ambiente. (2005). *Relatório do Estado do Ambiente 2004*. Lisbon: Author.

Instituto Portuário e dos Transportes Marítimos. (2003). *Plano de Actividades Plurianual 2003-2005*. Lisbon: Author.

International Maritime Organisation. (2006, February 6). *Revised guidelines for the identification and designation of Particularly Sensitive Sea Areas (A24/Res.982)*. London: Author.

International Maritime Organization. (2004, March 5). *Guidelines on places of refuge for ships in need of assistance* (A23/Res.949). London: Author.

International Tanker Owners Pollution Federation Ltd. (1985). *Effects of Marine Oil Spills*. Technical Information Paper Number 10. London: Author.

Joyner, C.C. (2000). The international ocean regime at the new millennium: a survey of the contemporary legal order. *Ocean & Coastal Management*, 43: 163-203.

Law 58/2005. *Lei n.º 58/2005 de 29 de Dezembro*. Diário da República, I Série A, N°249, 29 Dec 2005, pp.7280-7310. Lisbon: Imprensa Nacional Casa da Moeda.

Law 54/2005. *Lei n.º 54/2005 de 15 de Novembro*. Diário da República, I Série A, N°219, 15 Nov 2005, pp.6520-6525. Lisbon: Imprensa Nacional Casa da Moeda.

Leça da Veiga, J. (1993). *Maritime safety administration in Portugal taking into consideration the European situation*. Unpublished masters thesis, World Maritime University, Malmö, Sweden.

Lindén, O. (2006) The Integrated Coastal Management Framework. In Chircop, A. & Lindén, O. (Editors) *Places of Refuge for Ships. Emerging Environmental Concerns of a Maritime Custom* (pp.61-74). Leiden / Boston MA: Martinus-Nijhoff Publishers.

Maes, F. & Neumann, F. (2004). The Habitats Directive and port development in coastal zones: Experiences in safeguarding biodiversity. *Journal of Coastal Conservation*, 10: 73-80.

McCalla, W. (2000a). *A model shipping act – Prepared for the English Speaking Caribbean Countries*. London: International Maritime Organization.

McCalla, W. (2000b). *A model shipping (marine pollution) act – Prepared for the English Speaking Caribbean Countries*. London: International Maritime Organization.

McConnell, M. (2003). Inter-Agency Collaboration or Inter-Agency Competition – A Challenge for the UN System. In Kirchner, A. (Editor) *International Marine Environmental Law – Institutions, Implementation and Innovations* (pp.69-91). The Hague / New York / London: Kluwer Law International.

- McConnel, M. (2002). Capacity building for a sustainable shipping industry: a key ingredient in improving coastal and ocean management. *Ocean & Coastal Management*, 45: 617-632.
- Meijers, E. & Stead, D. (2004). *Policy integration: what does it mean and how can it be achieved? A multi-disciplinary review*. Paper presented at the 2004 Berlin Conference on the Human Dimensions of Global Environmental Change: Greening of Policies – Interlinkages and Policy Integration, Berlin, Germany.
- Peng, B., Hong, H., Xue, X. & Jin, D. (2006). On the measurement of socioeconomic benefits of integrated coastal management (ICM): Application to Xiamen, China. *Ocean & Coastal Management*, 49: 93-109.
- Peters, B.G. (1998). *Managing horizontal government: the politics of coordination*. Research Paper No.21. Ottawa: Canadian Centre for Management Development.
- Persson, Å. (2004). *Environmental Policy Integration: An Introduction*. PINTS-Policy Integration for Sustainability Background Paper. Stockholm: Stockholm Environment Institute.
- Pitta e Cunha, T. & Ruivo, M. (2005). Summary of Portugal's national ocean policy. In Balgos, M.C., Ricci, N., Walker, L., Didden, J., Wenczel, A. & Wowk, K. *Compilation of Summaries of National and Regional Ocean Policies* (pp.35-38). Newark: The Nippon Foundation Research Task Force on National Ocean Policies, University of Delaware.
- Plan of Implementation of the World Summit on Sustainable Development, 2002, United Nations Department of Economic and Social Affairs – Division for Sustainable Development, 2002. Retrieved June 2nd 2006 from the World Wide Web: http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIToc.htm.
- Recommendation 2002/413/CE. *Recommendation of the European Parliament and of the Council of 30 May 2002 concerning the implementation of Integrated Coastal Zone Management in Europe*. Official Journal L 148 , 06 Jun 2002, pp.24-27. Brussels: European Communities.

Resolution 41/2006. *Resolução do Conselho de Ministros n.º 41/2006*. Diário da República, I Série B, N°82, 27 Apr 2006, pp.2931-3040. Lisbon: Imprensa Nacional Casa da Moeda.

Resolution 128/2005. *Resolução do Conselho de Ministros n.º 128/2005*. Diário da República, I Série B, N°153, 10 Aug 2005, pp.4605-4606. Lisbon: Imprensa Nacional Casa da Moeda.

Resolution 179/2004. *Resolução do Conselho de Ministros n.º 179/2004*. Diário da República, I Série B, N°296, 20 Dez 2004, pp.7195-7196. Lisbon: Imprensa Nacional Casa da Moeda.

Resolution 81/2003. *Resolução do Conselho de Ministros n.º 81/2003*. Diário da República, I Série B, N°138, 17 Jun 2003, pp.3534-3535. Lisbon: Imprensa Nacional Casa da Moeda.

Resolution 22/2003. *Resolução do Conselho de Ministros n.º 22/2003*. Diário da República, I Série B, N°41, 18 Feb 2003, pp.1060-1077. Lisbon: Imprensa Nacional Casa da Moeda.

Resolution 94/C 135/02. *Council Resolution of 6 May 1994 on a Community strategy, for integrated coastal-zone management*. Official Journal C 135, 18 May 1994 p.02. Brussels: European Communities.

Resolution 92/C 59/01. *Council Resolution of 25 February 1992 on the future Community policy concerning the European coastal zone*. Official Journal C 59, 06 Mar 1992, p.01. Brussels: European Communities.

Resolution 86/98. *Resolução do Conselho de Ministros n.º 86/98*. Diário da República, I Série B, N°157, 10 Jul 1998, pp.3258-3260. Lisbon: Imprensa Nacional Casa da Moeda.

Resolution 83/98. *Resolução do Conselho de Ministros n.º 83/98*. Diário da República, I Série B, N°157, 10 Jul 1998, pp.3254-3255. Lisbon: Imprensa Nacional Casa da Moeda.

Resolution (73)29. *Resolution (73) 29 on the protection of coastal areas (Adopted by the Committee of Ministers on 26 October 1973, at the 225th meeting of the Ministers' Deputies)*. Strasbourg: Council of Europe.

Roberts, J. (2005). Protecting Sensitive Marine Environments: The Role and Application of Ships' Routing Measures. *The International Journal of Marine and Coastal Law*, 20(1): 135-159.

SEC/2002/0381. *Recommendation from the Commission to the Council in order to authorise the Commission to open and conduct negotiations with the International Maritime Organization (IMO) on the conditions and arrangements for accession by the European Community*. SEC/2002/0381 Final. Brussels: European Communities.

Stead, D. & Meijers, E. (2004). *Policy integration in practice: some experiences of integrating transport, land-use planning and environmental policies in local government*. Paper presented at the 2004 Berlin Conference on the Human Dimensions of Global Environmental Change: Greening of Policies – Interlinkages and Policy Integration, Berlin, Germany.

Taveira-Pinto, F. (2004). The practice of coastal zone management in Portugal. *Journal of Coastal Conservation*, 10: 147-158.

Teigão dos Santos, F., Soares, L., Silva, M., Venceslau, T. & Sousa-Reis, C. (2006). *Contributos para uma política nacional de oceanos*. Lisbon: GEOTA.

Underdal, A. (1980). Integrated marine policy: What? Why? How? *Marine Policy*, 4: 159-169.

Vallejo, S.M. (1993). The Integration of Coastal Zone Management into National Development Planning. *Ocean & Coastal Management*, 21: 163-182.

Velho-Gouveia, J.A. & Guedes-Soares, C. (2004). A Problemática da Identificação de Locais de Refugio na Costa Portuguesa. In Guedes-Soares, C. & Gonçalves de Brito, V. (Editors). *As Actividades Marítimas e a Engenharia*. Lisbon: Edições Salamandra.

Velho-Gouveia, J.A. (2003). *Identificação de Locais de Refúgio na Costa de Portugal Continental para Navios em Perigo: um Contributo*. Lisbon: Academia de Marinha.

Veloso-Gomes, F., Barroco, A., Pereira, A.R., Reis, C.A., Calado, H., Ferreira, J.G., Freitas, M.C. & Biscoito, M. (2006). *Bases para a Estratégia de Gestão Integrada da Zona Costeira Nacional – Projecto de Relatório do Grupo de Trabalho*. Lisbon: Ministério do Ambiente, Ordenamento do Território e Desenvolvimento Regional.

Veloso-Gomes, F. & Taveira-Pinto, F. (2003). Portuguese coastal zones and the new coastal management plans. *Journal of Coastal Conservation*, 9: 25-34.

Veloso-Gomes, F., Taveira-Pinto, F., Barbosa, J.P., Neves, L.d. & Coelho, C. (2002). High Risk Situation in the NW Portuguese Coast: Douro River – Cape Mondego. In Veloso-Gomes, F., Taveira-Pinto, F. & Neves, L.d. *Littoral 2002 - The Changing Coast*. Porto: Eurocoast / EUCC.

World Maritime University. (2003). *Charter of the World Maritime University*. Malmö: Author.

ANNEX I – METHODOLOGY

The methodology followed in the study underlying this report consisted of both bibliographic research and direct consultation with key individuals working in the maritime sector and in coastal and ocean management.

The bibliographic research included two main components. First, the compilation and reviewing of literature addressing the issue of the relationship between maritime industry and ICOM. Attention was also paid to gathering information on the experiences of ICOM practitioners with the joint management of maritime interests and those of other elements in society. The second component consisted of compiling relevant legislative and policy documents relating to the regulation of certain aspects of the maritime industry and to the management of coastal and ocean areas. The focus was laid on instruments from Portugal, the EU and the IMO, as well as international agreements referring to coastal and ocean governance. Key sources were, respectively, the online version of the Portuguese Diary of the Republic (Diário da República electrónico, <http://dre.pt/>); the website of the European Union (<http://europa.eu/>), in particular the PreLex and EurLex databases (<http://prelex.europa.eu> and <http://europa.eu.int/eur-lex/en/index.html>); the IMO database of documents (<http://www.imodocs.imo.org/>) and the extensive repository of IMO documentation at the WMU library; and various internet sources for international agreements.

The key individuals with whom direct consultation was held were selected based on their relevance for the regulation and management of the maritime industry in Portugal and for their level of involvement in the coastal and ocean management initiatives in the country. In addition, interviews were held with a former chairman of the IMO MEPC and with senior academic staff at the WMU. A complete list of all interviewed persons is included in Table 5. Initial contact with interviewees was established by e-mail, fax or telephone, depending on the available contact details. All interviews were semi-structured around a set of issues pertinent to the research work and related to the interviewee's expertise and professional position. Summaries of all interviews were prepared by the author based on written notes.

Name	Position	Place & date of meeting
Shuo Ma	Vice-President of the WMU	Malmö, June 16th 2006
Michael Julian	Executive Director of AUSMEPA, former IMO MEPC chairman (1997-2002)	Malmö, June 22nd 2006 (telephone)
Mário Ruivo	President of the Inter-sectoral Oceanographic Commission and of the Portuguese National Council for Sustainable Development	Lisbon, July 3rd 2006
Eduardo Martins	Chairman of the Board of the IPTM-Instituto Português e dos Transportes Marítimos (Portuguese Maritime Administration)	Lisbon, July 3rd and August 13th 2006 (e-mail correspondence)
Miguel Sequeira	Task Force for Sea Affairs	Lisbon, July 4th 2006
Carlos Sousa Reis	Professor, Faculty of Sciences, University of Lisbon and former Director of Programme Finisterra	Lisbon, July 4th and July 10th 2006
José Mota Lopes	Director of Programme Finisterra	Lisbon, July 4th 2006
João Braga da Cruz	Assessor to the Board of Directors, Administration of the Ports of the Douro & Leixões	Leça da Palmeira, July 11th 2006 Lund, July 27th 2006 (telephone)
António Carvalho Moreira	Director, Services for Coastal Zones, Nature Conservation and Infrastructure, Commission for Regional Coordination and Development - North	Porto, July 4th 2006
João Nunes	Association of Municipalities of Littoral Alentejo	Grândola, July 12th 2006
José Velho Gouveia	Directorate General for Maritime Authority	Lisbon, July 13th 2006
Lídia Sequeira	Chairman of the Board of the Administration of the Port of Sines	Lund, July 27th 2006 (e-mail correspondence)
Francisco Taveira Pinto	Professor, Hydraulics and Water Resources Institute, Faculty of Engineering, University of Porto; Director Eurocoast Portugal	Porto, August 3rd 2006
Fernando Veloso Gomes	Full professor, Hydraulics and Water Resources Institute, Faculty of Engineering, University of Porto; Coordinator of the Work Group for the Bases for the National Strategy for Integrated Coastal Zone Management	Porto, August 3rd 2006

Table 5 – Identification of interviewees and dates and places of interviews

ANNEX II – INTERNATIONAL INSTRUMENTS AND PROGRAMMES RELATED TO OCEANS AND COASTS

Deep Seabed Mining
<ul style="list-style-type: none"> · Agreement relating to the Implementation of Part XI of the LOSC, 1994
Law of the Sea
<ul style="list-style-type: none"> · UN Convention on the Law of the Sea, 1994 (<i>entry into force date</i>) · International Seabed Authority, 1996 · International Tribunal on the Law of the Sea, 1997 · Commission on the Limits of the Continental Shelf, 1997
Marine Biodiversity
<ul style="list-style-type: none"> · UN Convention on Biological Diversity, 1992 · Jakarta Mandate on the Conservation and Sustainable Use of Marine and Coastal Biological Diversity, 1995 · International Coral Reef Initiative, 1995 · Annex VI to the OSPAR Convention, 1996 · Cartagena Protocol on Biosafety, 2000
Marine Environment
<ul style="list-style-type: none"> · International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78) · International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (INTERVENTION), 1969 · Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (LDC), 1972 · International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), 1990 · Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on Board Ships, 1993 · Global Programme of Action for the Protection of the Marine Environment for Land-Based Activities, 1995 · Protocol to the LDC Convention, 1996 · Protocol on Preparedness, Response and Co-operation to pollution Incidents by Hazardous and Noxious Substances (HNS Protocol), 2000 · International Convention on the Control of Harmful Anti-fouling Systems on Ships (AFS), 2001 · Stockholm Convention on Persistent Organic Pollutants, 2001 · International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004
Marine Safety and Liability
<ul style="list-style-type: none"> · International Convention on Load Lines (LL), 1966 · International Convention on Civil Liability for Oil Pollution Damage (CLC), 1969 · Special Trade Passenger Ships Agreement (STP), 1971 · International Convention on the Establishment of an International Fund for Compensation

<ul style="list-style-type: none"> for Oil Pollution Damage (FUND), 1971 · Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material (NUCLEAR), 1971 · Convention on the International Regulations for Preventing Collisions at Sea (COLREG), 1972 · International Convention for Safe Containers (CSC), 1972 · International Convention for the Safety of Life at Sea (SOLAS), 1974 · Convention on the International Maritime Satellite Organization (INMARSAT), 1976 · The Torremolinos International Convention for the Safety of Fishing Vessels (SFV), 1977 · International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978 · International Convention on Maritime Search and Rescue (SAR), 1979 · International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F), 1995 · International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS), 1996 · International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001
River Basins
<ul style="list-style-type: none"> · ECE Convention on Transboundary Lakes and Rivers, 1992 · UN Convention on the Non-Navigational Uses of International Watercourses, 1997
Sustainable Development of Small Islands
<ul style="list-style-type: none"> · Barbados Programme of Action for the Sustainable Development of Small Island Developing States, 1994
Sustainable Use and Conservation of Marine Living Resources
<ul style="list-style-type: none"> · Convention on the Conservation of Antarctic Marine Living Resources, 1980 · Convention on the International Trade of Endangered Species, 1987 · Hague Declaration on the Protection of the North Sea, 1990 · UN General Assembly High-Seas Drift Net Resolution, 1991 · UN Agenda 21 (Chapter 17), 1992 · Agreement to Promote Compliance with International Conservation and Management Measures by Vessels Fishing in the High-Seas, 1993 · Code of Conduct for Responsible Fisheries and four related International Plans of Action, 1995 · Agreement for the Implementation of the Provisions of the LOSC Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, 2001 · The Johannesburg Declaration on Sustainable Development, and associated Plan of Implementation, 2002
Underwater Cultural Heritage
<ul style="list-style-type: none"> · Convention for the Protection of the Underwater Cultural Heritage, 2001

Table 6 – International agreements related to the ocean and coasts
(Sources: PEMSEA, 2005, pp.56-7; www.imo.org; Brown, 2002, p.27)

ANNEX III – OBJECTIVES OF THE INTERNATIONAL MARITIME ORGANIZATION

The following are the purposes of the IMO as stated in Article 1 of the Convention on the International Maritime Organization, 1948. The underlined text has been added through amendments to the original text of the Convention on the Intergovernmental Maritime Consultative Organisation, 1948 .

(Source: http://www.imo.org/Conventions/mainframe.asp?topic_id=771#1, last accessed June 5th 2005).

- (a) To provide machinery for co-operation among Governments in the field of governmental regulation and practices relating to technical matters of all kinds affecting shipping engaged in international trade, and to encourage the general adoption of the highest practicable standards in matters concerning maritime safety, efficiency of navigation and prevention and control of marine pollution from ships; and to deal with administrative and legal matters related to the purposes set out in this Article;
- (b) To encourage the removal of discriminatory action and unnecessary restrictions by Governments affecting shipping engaged in international trade so as to promote the availability of shipping services to the commerce of the world without discrimination; assistance and encouragement given by a Government for the development of its national shipping and for purposes of security does not in itself constitute discrimination, provided that such assistance and encouragement is not based on measures designed to restrict the freedom of shipping of all flags to take part in international trade;
- (c) To provide for the consideration by the Organization of matters concerning unfair restrictive practices by shipping concerns in accordance with Part II;
- (d) To provide for the consideration by the Organization of any matters concerning shipping that may be referred to it by any organ or specialized agency of the United Nations;
- (e) To provide for the exchange of information among Governments on matters under consideration by the Organization.

ANNEX IV – PORTUGUESE INSTITUTIONS WITH COMPETENCIES RELATING TO THE OCEAN AND COASTS

The following is a simplified representation of the organic structure of the institutions whose competencies relate to the ocean and coastal areas in Portugal, under the XVII Constitutional Government of the Portuguese Republic .

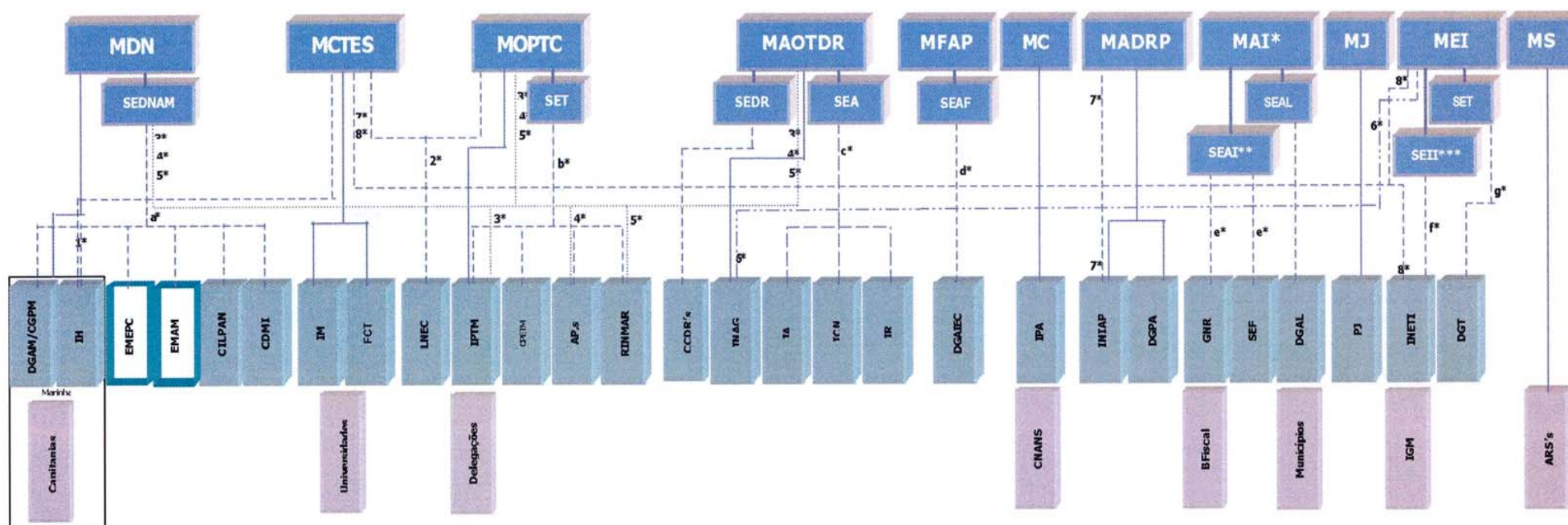


Figure 5 – Portuguese institutions with competencies relating to the ocean and coasts

(Source: Veloso-Gomes, 2006, p.61)

Legend to Figure 5, from top to bottom, from left to right

MDN – Ministry of National Defence; Ministério da Defesa Nacional

SEDNAM – Secretary of State for Defence and Ocean Affairs; Secretaria de Estado da Defesa e Assuntos do Mar

DGAM – Directorate General for Maritime Authority; Direcção Geral da Autoridade Marítima

CGPM – General Command of Maritime Police; Comando Geral da Polícia Marítima

Capitanias – Captaincy

EMEPC – Task Force for the Extension of the Continental Shelf; Estrutura de Missão para a Extensão da Plataforma Continental

EMAM – Task Force for Sea Affairs; Estrutura de Missão para os Assuntos do Mar

CILPAN – International Centre for Pollution Combat in the Área of the Northeast Atlantic; Centro Internacional de Luta contra a Poluição no Atlântico Nordeste

CDMI – Commission for International Maritime Law; Comissão para o Direito Marítimo Internacional

MCTES – Ministry of Science, Technology and Higher Education; Ministério da Ciência, Tecnologia e Ensino Superior

IM – Institute of Meteorology; Instituto de Meteorologia

FCT – Foundation for Science and Technology; Fundação para a Ciência e Tecnologia

Universidades – Universities

MOPTC – Ministry of Public Works, Transport and Communications; Ministério das Obras Públicas, Transportes e Comunicações

SET – Secretary of State for Transport; Secretaria de Estado dos Transportes

LNEC – National Laboratory for Civil Engineering; Laboratório Nacional de Engenharia Civil

IPTM – Institute for Ports and Maritime Transport; Instituto Portuário e dos Transportes Marítimos

Delegações – Delegations

CPETM – Commission for Emergency Planning in Maritime Transportation; Comissão de Planeamento de Emergência do Transporte Marítimo

APs – Port Administrations; Administrações Portuárias

RINMAR – Madeira International Registry of Ships; Registo Internacional de Navios da Madeira

MAOTDR – Ministry of Environment, Territorial Planning and Regional Development; Ministério do Ambiente, Ordenamento do Território e Desenvolvimento Regional

SEDR – Secretary of State for Regional Development; Secretaria de Estado do Desenvolvimento Regional

SEA – Secretary of State for the Environment; Secretaria de Estado do Ambiente

CDDRs – Commissions for Regional Coordination and Development; Comissões de Coordenação e Desenvolvimento Regional

INAG – Water Institute; Instituto da Água

IA – Environment Institute; Instituto do Ambiente

ICN – Institute for Nature Conservation; Instituto da Conservação da Natureza

IR – Institute for Residues; Instituto dos Resíduos

MFAP – Ministry of Finance and Public Administration; Ministério das Finanças e Administração Pública

SEAF – Secretary of State for Fiscal Administration; Secretaria de Estado da Administração Fiscal

DGAIEC – Directorate General for Customs and Special Taxes on Consumption; Direcção Geral de Alfândegas e dos Impostos Especiais sobre o Consumo

MC – Ministry of Culture; Ministério da Cultura

IPA – Portuguese Institute for Archaeology; Instituto Português de Arqueologia

CNANS – National Centre for Nautical and Underwater Archaeology; Centro Nacional de Arqueologia Náutica e Subaquática

MADRP – Ministry of Agriculture, Rural Development and Fisheries; Ministério da Agricultura, do Desenvolvimento Rural e das Pescas

INIAP – National Institute for Agrarian and Fisheries Research; Instituto Nacional de Investigação Agrária e das Pescas

DGPA – Directorate General for Fisheries and Aquaculture; Direcção Geral das Pescas e Aquicultura

MAI – Ministry of Internal Administration; Ministério da Administração Interna

SEAI – Secretary of State for Internal Administration; Secretaria de Estado da Administração Interna

SEAL – Secretary of State for Local Administration; Secretaria de Estado da Administração Local

GNR – National Republican Guard; Guarda Nacional Republicana

BFiscal – Fiscal Brigade

SEF – Service for Immigrants and Borders; Serviço de Estrangeiros e Fronteiras

DGAL – Directorate General for Local Municipalities; Direcção Geral das Autarquias Locais

Municípios - Municipalities

MJ – Ministry of Justice; Ministério da Justiça

PJ – Judicial Police; Polícia Judiciária

MEI – Ministry of Economy and Innovation; Ministério da Economia e da Inovação

SEII – Secretary of State for Industry and Innovation; Secretaria de Estado da Indústria e da Inovação

SET – Secretary of State for Transport; Secretaria de Estado dos Transportes

INETI – National Institute for Engineering, Technology and Innovation; Instituto Nacional de Engenharia, Tecnologia e Inovação

IGM – Institute for Geology and Mining; Instituto Geológico e Mineiro

DGT – Directorate General for Transport; Direcção Geral dos Transportes

MS – Ministry of Health; Ministério da Saúde

ARSs – Regional Health Administrations; Administrações Regionais de Saúde