
3.1 Definition of ICZM: Some Suggestions

This section contains a compilation of several definitions of the term *Integrated Coastal Zone Management*. The aim is to indicate the variety of intentions, interpretations and comprehensions of this term. It is not the aim to repeat all available definitions.

The comprehensive description given by the Coastal Zone Management Act of the USA on ICZM has been provided on p. 15 in Sect. 2.1.

Several years after the enactment of the CZM Act in the USA a workshop was held in 1985 attended by an international audience who discussed and finally agreed on the following definition (Sorensen, 1993, p. 49):

ICZM is a dynamic process in which a coordinated strategy is developed and implemented for the allocation of environmental, socio-cultural, and institutional resources to achieve the conservation and sustainable multiple use of the coastal zone.

Several years later the UN Earth Summit in Rio de Janeiro in 1992 formulated in chapter 17 of the Agenda 21 the term as follows (UN, 1992):

Coastal States commit themselves to integrated management and sustainable development of coastal areas and the marine environment under their national jurisdiction. To this end, it is necessary to, inter alia:

- (a) Provide for an integrated policy and decision-making process, including all involved sectors, to promote compatibility and a balance of uses;
- (b) Identify existing and projected uses of coastal areas and their interactions;
- (c) Concentrate on well-defined issues concerning coastal management;
- (d) Apply preventive and precautionary approaches in project planning and implementation, including prior assessment and systematic observation of the impacts of major projects;

- (e) Promote the development and application of methods, such as national resource and environmental accounting, that reflect changes in value resulting from uses of coastal and marine areas, including pollution, marine erosion, loss of resources and habitat destruction;
- (f) Provide access, as far as possible, for concerned individuals, groups and organizations to relevant information and opportunities and participation in planning and decision-making at appropriate levels.

Starting in 1990 the Organisation for Economic Co-operation and Development (OECD) initiated a 3-year study on the management of coastal zones in their member countries; the results were summarized in the report *Coastal Zone Management. Integrated policies* wherein the term of ICZM is defined as follows (OECD, 1993, p. 25):

Integrated coastal zone management is most simply understood as management of the coastal zone as a whole in relation to local, regional, national and international goals. It implies a particular focus on the interactions between the various activities and resource demands that occur within the coastal zone and between coastal zone activities and activities in other regions. In practical terms this might mean the integration of environmental protection goals into economic and technical decision-making processes, the management of the impacts agricultural run-offs is having on coastal zone water pollution control policies within different parts of the particular coastal zone, or (most probably in practice) all of these and more simultaneously.

Shortly after the UN Earth Summit in 1992, the World Coast Conference was held in The Netherlands in 1993. Here, the term of ICZM was defined as (IPCC, 1994, p. 25):

Integrated coastal zone management involves the comprehensive assessment, setting of objectives, planning and management of coastal systems and resources, taking into account traditional, cultural and historical perspectives and conflicting interests and uses; it is a continuous and evolutionary process for achieving sustainable development.

In 1996 the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) consisting of representatives of different international organizations such as UN, UNEP and FAO and others published a report on *The contributions of science to integrated coastal management* based on several case studies (GESAMP, 1996). Therein, the term Integrated Coastal Management is defined as:

Integrated Coastal Management (ICM) is a process that unites government and the community, science and management, sectoral and public interests in preparing and implementing and integrated plan for the protection and development of coastal ecosystems and resources. The overall goal of ICM is to improve the quality of life of human communities who depend on coastal resources while maintaining the biological diversity and productivity of coastal ecosystems.

Also in 1996 the World Bank published guidelines as a “conceptual presentation of how Integrated Coastal Zone Management may be applied to contribute to the evolving practice

of environmentally sustainable development” (Post and Lundin, 1996, p. v). The definition of the term ICZM is as follows:

ICZM is a process of governance and consists of the legal and institutional framework necessary to ensure that development and management plans for coastal zones are integrated with environmental (including social) goals and are made with the participation of those affected. The purpose of ICZM is to maximize the benefits provided by coastal zones and to minimize the conflicts and harmful effects of activities upon each other, on resources and on the environment.

The Model Law on Sustainable Management of Coastal Zone defines under Article 2 the term of Integrated Management of Coastal Zones as follows (CEC, 2000):

“Integrated Management” shall mean sustainable development and use of coastal zones which takes into consideration economic and social development linked to the presence of the sea while protecting landscapes and the coastal zone’s fragile biological and ecological balances for present and future generations.

Establishing a system of integrated management of coastal zones necessitates institutional and legislative instruments to ensure participation of the relevant parties and co-ordination of aims, policies and action from both the territorial and decision-making points of view. Integrated management of the coastal zone necessitates dealing with problems not as they arise but in a comprehensive manner, taking account of the interaction between all the elements which make up the environment.

Finally, the definition of ICZM by the European Union laid down in the ICZM Recommendation 2002/413/EC (EC, 2002):

Member States take into account the sustainable development strategy and the Decision of the European Parliament and of the Council laying down the sixth Community environment action programme, and take a strategic approach to the management of their coastal zones, based on:

- (a) protection of the coastal environment, based on an ecosystem approach preserving its integrity and functioning, and sustainable management of the natural resources of both the marine and terrestrial components of the coastal zone;
- (b) recognition of the threat to coastal zones posed by climate change and of the dangers entailed by the rise in sea level and the increasing frequency and violence of storms;
- (c) appropriate and ecologically responsible coastal protection measures, including protection of coastal settlements and their cultural heritage;
- (d) sustainable economic opportunities and employment options;
- (e) a functioning social and cultural system in local communities;
- (f) adequate accessible land for the public, both for recreational purposes and aesthetic reasons;
- (g) in the case of remote coastal communities, maintenance or promotion of their cohesion;
- (h) improved coordination of the actions taken by all the authorities concerned both at sea and on land, in managing the sea-land interaction.

The EU definition provided in the recommendations on ICZM will be the basis for the following chapters of this book.

3.2 Principles for ICZM: A Compilation

One can find many suggestions for the basic principles which should be recognized in designing an integrated management process (see e.g. Fig. 3.1). A bulk of literature is available to substantiate these principles. Here, we concentrate on two descriptions of principles with a time difference of 30 years.

In Sect. 2.1 the first steps in integrated management of the San Francisco Bay were described. In 1972 the Coastal Zone Management Act (CZMA) went into force. Within the CZMA minimum standards have been set for the development of coastal zone management programs of coastal states (Archer and Knecht, 1987, p. 105):

- (a) The protection of natural resources, including but not limited to, wetlands, floodplains, estuaries, beaches, dunes, barrier islands, coral reefs, and fish and wildlife and their habitats within the coastal zone;
- (b) The management of coastal development to minimize the loss of life and property in hazardous areas;
- (c) Priority consideration of coastal-dependent uses, and an orderly process for siting major facilities related to national defense, energy, fisheries development, recreation, ports and transportation, and the location of new development in or adjacent to areas already developed;
- (d) Public access to the coasts for recreation purpose;
- (e) Assistance in the redevelopment of urban waterfronts and ports, and preservation and restoration of historic, cultural and aesthetic coastal features;
- (f) Coordination and simplification of governmental decision-making for the management of coastal resources;
- (g) Consultation and coordination with federal agencies;
- (h) Participation by the public and local governments in coastal management decision-making; and
- (i) Comprehensive planning, conservation, and management for living marine resources, including planning for the siting of pollution control and aquaculture facilities in the coastal zone, and improved coordination between state and federal agencies.



Fig. 3.1 Necessity of integration at the Wadden Sea coast in Schleswig-Holstein, Germany, shipping, fishing and natural conservation © Frank Ahlhorn

In Sect. 2.3 the European developments in ICZM have been delineated. One important policy for ICZM in the EU was the Recommendations on ICZM from 2002 (2002/413/EC). The eight principles are constituted as crucial elements for the development of an ICZM process. The principles are as follows (EC, 2002, p. 25):

- (a) *A broad overall perspective (thematic and geographic)* which will take into account the interdependence and disparity of natural systems and human activities with an impact on coastal areas;
- (b) *a long-term perspective* which will take into account the precautionary principle and the needs of present and future generations;
- (c) *adaptive management during a gradual process* which will facilitate adjustment as problems and knowledge develop. This implies the need for a sound scientific basis concerning the evolution of the coastal zone;
- (d) *local specificity* and the great diversity of European coastal zones, which will make it possible to respond to their practical needs with specific solutions and flexible measures;
- (e) *working with natural processes and respecting the carrying capacity of ecosystems*, which will make human activities more environmentally friendly, socially responsible and economically sound in the long run;
- (f) *involving all the parties concerned* (economic and social partners, the organizations representing coastal zone residents, non-governmental organizations and the business sector) in the management process, for example by means of agreements and based on shared responsibility;
- (g) *support and involvement of relevant administrative bodies at national, regional and local level* between which appropriate links should be established or maintained with the aim of improved coordination of the various existing policies. Partnerships with and between regional and local authorities should apply when appropriate;
- (h) *use of a combination of instruments* designed to facilitate coherence between sectoral policy objectives and coherence between planning and management.

These principles should build the fundamental basis for all ICZM endeavors in the EU. The challenge regarding these principles is to fulfill them in real and practical life. Many projects were launched to duly complete and to enhance the vitality of these principles.

The enumeration of these principles should be kept in mind for the subsequent chapters, especially for Chap. 3 where the challenges of the integration of sectoral plans and policies are discussed using the example of the management of water-related issues. (see e.g. Fig. 3.2)

3.3 Reflection on the Principles for ICZM

Despite the difficulties of transferring previously mentioned definitions into a processable working environment, also problems and challenges occur in bringing the provided principles into operation. This section provides some reflection on the problems and challenges



Fig. 3.2 After the closure of the Oosterschelde, The Netherlands, in 1986 different demands have to be considered in management, that is protection against high water, nature conservation and leisure shipping. © Frank Ahlhorn

associated with the operationalization of the above-mentioned principles. The focus is laid on the coastal management programs in the USA and the developments of ICZM in the EU.

3.3.1 Reflection on the Coastal Zone Management Act Guidelines

Five years after the CZM Act had passed the Congress the first assessment of the CZM efforts in the USA was conducted. Caused by a missing assessment scheme NOAA (1979)¹ discussed whether “the Act was intended primarily to foster the development of a management process which itself represents the main achievement to be measured or whether the substantive outcomes resulting from these procedures are the measure of accomplishments” (NOAA, 1979, p. 9). On the one hand, in some coastal states of the USA legislation and regulation for the coastal zone already existed. On the other hand, there was a great variety in the coasts of the States regarding planning procedures, the natural environment or the pressures of concern. The attempt of developing an assessment scheme according to the national CZM program highlighted the problem of non-uniform state CZM programs. The CZMA set the frame for the development of State CZM programs; however, it was neither intended to generate a uniform process nor a template for these. In NOAA (1979) the assessment on procedural and substantive results of the state CZM programs was described.

¹At that time Robert W. Knecht was the Assistant Administrator for Coastal Zone Management at NOAA.

To assess the procedural results NOAA (1979) listed the establishment of legal authorities and other organizations which are linked to CZM within the evaluation period. The substantial results were assessed based on specific indicators (see NOAA, 1979, pp. 19-51). The assessment was enhanced by interviews of several people that show a stake in CZM. These interviews revealed that four aspects were important for the past successes and failures and for the further enhancement of the (national) CZM process:

Comprehensiveness On the one hand, seen as a strength because it pays a tribute to the multifaceted issues of coastal zones. On the other hand, apprehensions were mentioned that taking a lot of aspects into account may lead to “broad-brush” programs owing not enough intention to specific issues. Another important point mentioned was that the provided framework of the CZMA enables profound decision-making. But the individual state programs may not contribute adequately to the overall national intention of, for example, resource management in the entire US coastal zone.

Balancing Some interviewees felt that the CZMA has led to a more balanced decision-making process between, for example, environmental protection and economic development needs. Another strength mentioned was that short-term solution finding processes which may compromise long-term developments were attenuated. But some representatives understood the CZM intentions as fostering and conservation of sector-specific interests.

Costs-savings It was too early to assess the influence on costs neither on project implementation processes nor on administration permits. At this stage both ways cost developments – either increased costs or the complication of processes or raise the effectiveness of coastal decision-making processes – were likely to occur.

Public Awareness The awareness of the broad public increased by the involvement of coastal inhabitants in planning and decision-making processes.

Finally, for the 5-year assessment was concluded that “encouraging signs are appearing that coastal development is being managed more rationally than before, though much more remains to be done in this area” (NOAA, 1979, p. 60).

In a certain period of time the efforts of development and enhancement of CZM efforts drift apparent because of lack of support by the national CZM administration. The process considerably damped down in the 1980s so that a new impulse seemed to be necessary (e.g., see Archer and Knecht, 1987). In these years the role and the activities of the federal program were perceived as inadequate. Recommendations had been suggested to integrate an emerging broader scope for coastal management, that is, the integration of ocean and marine management caused by the extension of the administrative borders at sea (see UN Law of the Seas), and a revised role of the national CZM program administration (see Archer and Knecht, 1987, pp. 109ff).

A comprehensive program evaluation was conducted between 1995 and 1997 by [Hershman et al. \(1999\)](#). The *National Coastal Zone Management Effectiveness Study (CZME)* focused on the five core objectives of the CZMA:

- protection of natural resources such as wetlands and estuaries
- protection of beaches, dune, bluffs,² and rocky shore resources
- public access to the coastal zone
- revitalization of urban waterfronts
- seaport developments

First, they identified over 60 studies and reports dealing with the assessment of CZM program on different topics and levels. [Hershman et al. \(1999\)](#) conducted an effectiveness evaluation, so that in their view “effective coastal programs [...] show a clear link between the goal they deem important, the process they set up to achieve that goal and the outcomes resulting from those processes that advance the goal” ([Hershman et al., 1999](#), p. 118). To be able to assess the different core objectives according to the effectiveness they developed and applied three indicator categories: (i) issue importance indicators, (ii) process indicators and (iii) outcome indicators. Each set of indicators was adapted to the respective investigation of the core objectives. Because of the difference of these objectives and the quality and amount of available data approaches have to be tailor-made. In a second step the results and findings on each core objective were aggregated to gain results from the national perspective. The investigation was enhanced by interviews of senior program managers to get an in-depth insight into the development of CZM programs over time. Quintessential statements were, for example, that the senior managers

“...stressed CZM’s unique role in upgrading capacity for management in state and local government units. [...], they emphasized the crucial importance of public participation and the availability of discretionary funding for implementation and specific projects,”

“...stressed the inadequacy of the decision process prior to CZM and the importance of this institutional restructuring,”

“...observed that a major outcome of CZM is that only well-conceived development projects are proposed, that is, that CZM standards and requirements help to weed out the poor projects before they reach the stage of seeking official approval”

“...were forthcoming about failures. A number of them commented that issues like water quality protection, watershed management, and non-point pollution control are not yet well addressed in the coastal zone.”

Finally, [Hershman et al. \(1999, p. 127\)](#) concluded that “State CZM programs are effectively implementing the five CZMA objectives examined. However, this conclusion was based on assessment of the policies, processes, and tools used, and on only limited outcome data and case examples that were available.” This conclusion was, for example, seconded by the emphasis of the senior managers that “the role of changed governance

²Cliff or very steep bank.

arrangements and improved decision processes as a major outcome of the CZMA.” The second conclusion touches the quality and availability of data and information and the further development of indicators to be able to adequately assess the effectiveness. The third conclusion was the initialization of national outcome monitoring and performance evaluation system.

3.3.2 Reflection on the Eight ICZM Principles of the EU Recommendations

The assessment of the first period for the development of ICZM strategies and the respective Member States stock-take was conducted by [Rupprecht Consult \(2006\)](#). The comprehensive assessment is based on literature reviews and intensive information collection phase as well as on interviews of responsible organizations and institutions as well as several stakeholders. The distribution of the questionnaire was supported by certain coastal associations in the Member States. Despite these high efforts the feedback was very limited so that a reliable statistical evaluation was impossible. The questionnaire contained also open questions which provided valuable input for a qualitative assessment.

The following paragraphs summarize the main findings of the first assessment process of the implementation of the EU ICZM Recommendation.

In late 2006, 18 of 24 coastal Member States delivered their national reports to be assessed by the evaluation consortium. The overall impression of the status in 2006 was that ([Rupprecht Consult, 2006, p. 9](#)):

- no country has implemented an ICZM national strategy as prompted by the EU ICZM Recommendation
- in seven countries [...] the implementation of an ICZM strategy is pending
- in six further countries [...] documents considered as equivalent to an ICZM national strategy have been developed, or coastal zone management strategies become (or planned to become) an integral part of its spatial planning processes
- in eleven countries [...] no ICZM equivalent policies are in advanced stages of preparation, only fragmented tools are in place to address coastal issues.

Based on the interpretation of the qualitative part of the questionnaire and the interviews some pros and cons were featured. Beneficial effects of the EU ICZM Recommendation were, for example, “that new awareness and a high level of preparedness at the regional level regarding long-term coastal challenges” ([Rupprecht Consult, 2006, p. 10](#)) have been created. It also led to the revision of the traditional planning process to enable sustainable development. Furthermore, participatory action due to existing regulations already applied received a boost by the execution of the EU Recommendation. It was also acknowledged and, thus, proven that “ICZM [...] could become the instrument to link *terrestrial* to marine legislation, especially on a *Regional Sea level*” ([Rupprecht Consult, 2006, p. 10](#)). Aspects which have to be improved were, among others, a better cooperation

within Regional Seas, augmented stakeholder involvement and the desirable improvement of monitoring by joint methodologies and long-term funding of local ICZM efforts.

According to the assessment of the ICZM efforts in the North Sea Region all bordering Member States are equipped with a thorough toolkit of spatial planning methods. It was stated that some principles were already in place and some could be improved such as the application of adaptive management approaches. The main findings were summarized as follows (excerpt from [Rupprecht Consult, 2006](#), p. 12–13):

- One of the key obstacles to ICZM is the current strong legislative separation between land and sea-based activities in many of the North Sea countries [...]
- Regional Sea Partnerships of the key bodies such as National coastal forums could have a role by facilitating stakeholder participation and dialog in any future system of marine spatial planning.
- Address the problems of consistency, compatibility and accessibility of data collection and storage methods, as well as agreements on cross-border sharing of information in Regional Sea context.
- Develop a set of sustainability indicators that is regularly assessed on the basis of careful monitoring of the coastline and other information could provide the basis for a regular national reporting system to the EU, based as far as possible on data which are simple to collect.
- Use synergies between ICZM and the Water Framework Directive principles (e.g. public participation as key to ICZM and a requirement to WFD and the use of existing coastal observations).

Most Member States at the Atlantic have not already implemented an ICZM strategy. Also a cross-border strategy for the entire Atlantic coastline was missing at that time. [Rupprecht Consult \(2006\)](#) stated that some ICZM principles were recognized in national policies and some not. The assessment for the Atlantic coastal Region was as follows ([Rupprecht Consult, 2006](#), p. 14–15):

- No ICZM strategy has been implemented formally in the five countries. Only first steps have been taken. Spain has targeted the full implementation for 2008.
- Most strategy papers show clearly that the horizontal and vertical flow of information and participation has been neglected in former policies.
- There is a gap between theory and practice in meeting the principles of good ICZM in the countries' strategies. Several countries give the principles as goals of their ICZM, but the reports show that especially participation and communication have not been applied during the development.

Spain belongs to a great extent to the Mediterranean Region so that the main findings for this region will also be briefly touched ([Rupprecht Consult, 2006](#), p. 14–15):

- The most pronounced common problem to the majority of the countries along the Mediterranean is the artificialization of the coast driven by an ever expanding tourism: urban sprawling, building up of second homes, sealing of soils, etc. [...]
- There is a multitude of laws, however, a consistent set of laws directing coastal governance and management is usually lacking. The main legislative and policy frameworks governing

the development in the coast are usually planning instruments that have a physical preponderance and little room for needs of integration of different sectors and participation of stakeholders.

Besides the investigations on success factors and shortcomings of the respective ICZM strategy in each Member State (and the concentrated summary per Regional Sea) in the evaluation report reasons for the differences in the progress of the implementation process were mentioned. Nevertheless, the obstacles and barriers were obvious, but a few aspects have been found that ICZM delivers also an added value in the context of policies and legislation.

Finally, it was discussed whether an incentive approach or a Directive should be taken to foster and improve the implementation of ICZM in the EU, “[...], this evaluation concludes that the potentials of the current EU ICZM Recommendation are not fully exploited, and that an incentive-based approach will be more effective on the EU level” (Rupprecht Consult, 2006, p. 19). The following list indicates the themes where improvement shall be achieved: strengthen the European dimension of ICZM based on a Regional Seas approach, raise the profile of ICZM and enhance its integration with sectoral policies, elaborate the strategic approach of ICZM (oriented at a balanced ecological, social, economic and cultural development) and address major long-term risks: vulnerability to disasters and climate change, endorse awareness, guidance, training and education, enhance stakeholder coordination and participation, perform a mainstreaming of European policies, harmonize monitoring and evaluation frameworks, and improve the knowledge basis for ICZM.

In 2007 the European Commission reported to Parliament and the Council on the evaluation of ICZM in Europe (EC, 2007). This report was based on three different sources; amongst them one was the assessment report of ICZM. “A key achievement of the EU ICZM Recommendation has been to codify a common set of principles that should underlie sound coastal planning and management. While the evaluation confirms the relevance of these ICZM principles, the implementation of the EU ICZM Recommendation also reveals varying interpretations and understanding of ICZM across Europe. To foster a more coherent and effective implementation of ICZM, the principles need to be more operational and better communicated” (EC, 2007, p. 5–6).

Further descriptions are touching the different results and findings such as the need for joint action in monitoring or the necessity for improved cooperation and knowledge exchange between Member States, especially in Regional Sea areas. Furthermore, it is stated that the EU has to support the existing and emerging efforts of ICZM by a variety of instruments: “The Commission will continue to endeavor that these policies and instruments are coherent, so that the implementation at the lower local level of governance is facilitated. Since 2001 [...] the Commission has implemented a range of structured measures to improve openness, participation, accountability, effectiveness and coherence in decision making and implementation of EU policies” (EC, 2007, p. 8).

Finally, the report closes with the following directions to promote ICZM in Europe (excerpt from [EC, 2007](#), p. 9):

- To achieve a more coherent understanding and implementation of ICZM across Member States, guidance needs to be developed to clarify the principles underlying sound coastal planning and management and ways to operationalize them;
- given the high vulnerability of coastal zones to risks and possible impacts related to climate change, strategies to adapt to these risks should be developed and implemented in full coherence with ICZM strategies and instruments dealing with specific natural or technological hazards;
- more efforts are needed for comparative analyses and the communication and promotion of good practices regarding ICZM, including between coastal regions. The gathering of relevant data and effective information sharing and -use in policy and decision-making also needs to be furthered. The development of common indicators and a framework to assess the effectiveness and efficiency of ICZM will need to be continued.

A European Working Group was set-up in 2008 to discuss the performance of the EU ICZM Recommendations (see [EC 2009](#)). The report of this Working Group provides a condensed summary of beneficial and improvable aspects of the EU ICZM Recommendation and the process of reporting of Member States. It was their task to suggest a follow-up of the ICZM Recommendation from 2002. Members of the Working Group came from different countries and from different levels of administration and institutions. The discussed policy options as follow-up of the EU ICZM Recommendation were as follows ([EC, 2009](#), p. 7-8):

Revised Recommendation: “The Recommendation is likely to allow a more comprehensive and ambitious setting of the scope and objectives, compared to options based on legally binding instrument. The lacking binding character may be a weakness though to support effective implementation over a longer time-span.”

Framework Directive: “The Directive is binding upon each Member State as to the result to be achieved but leaves to national authorities the choice of form and methods.”

Decision: “[...] a form of programme at EU level, which could take the form of Decision (e.g. 6th Environmental Action Programme). Emphasis in this option would be on collective actions and commitments to support ICZM, rather than a more detailed framework for implementation of ICZM in and by Member States.”

Regional Sea Convention: “Working through [this instrument] may be an option to address in particular the different regional contexts. [...] The type of instruments available also varies among conventions (protocol, recommendation, action plan). This option should therefore best be considered as a complement to the other options above.”

Exercise

- Compare the [Hershman et al. \(1999\)](#) recommendations with the [Rupprecht Consult \(2006\)](#) recommendations. What are the similarities? What are the differences? To what extent do you guess that the different constitutions of the USA or the EU are influential to your findings?
- Read the success as well as the failed factors mentioned in [Rupprecht Consult \(2006\)](#) carefully. Compare these factors from 2006 with the current situation in selected EU Member States. For example, what about the performance of selected Mediterranean Member States according to the agreement on the Barcelona Protocol on ICZM in 2009?
- [Rupprecht Consult \(2006\)](#) touched the question whether the further implementation process of ICZM should be incentive-based or regulated by an EU Directive. Discuss the pros and cons of an incentive-based or a mandatory approach.
- One of the statements in the report of the EU Commission ([EC, 2007](#), p.9) was: "... strategies to adapt to these risks should be developed and implemented in full coherence with ICZM strategies and instruments ...". Most of the ICZM strategies of the Member States have been developed on the basis of existing rules, laws and directives. One should suppose that these regulations already consider different types of risk in one or the other way. If not, how can the relationship between sectoral policies and the ICZM strategy according to the handling of risk make a difference?
- Given the brief description of the conclusions for the follow-up to the EU ICZM Recommendation by the Working Group in 2009 and the listing of ICZM efforts. Find Regional Sea Conventions in Europe and describe in which way ICZM is considered. Draft a comparison between the EU Recommendation and the achievements of the Regional Sea Conventions according to ICZM efforts.

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