PlanCoast
|Adriatic|Baltic|Black Sea|

Baltic
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Adriatic
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HANDBOOK on
**Integrated Maritime
Spatial Planning**

> Experience
> Tools & Instruments
> Case Studies

from the
INTERREG III B CADSES
PlanCoast Project

Foreword

Welcome to this Handbook on Integrated Maritime Spatial Planning (IMSP).

Its purpose is to provide practitioners as well as decision-makers and stakeholders with the tools required to produce an integrated spatial management plan for coastal and marine areas.

Each chapter of the handbook contains:

> an introduction / background note

> the main text guiding you through the relevant steps, models and check lists,

> a series of additional information boxes

> illustrative examples from the PlanCoast pilot projects, and

> a box summarising the main messages of the chapter.

The first two chapters address political decision-makers and others responsible for policy in the context of maritime and spatial planning. They explain why we urgently need a new approach to coastal and marine planning and introduce IMSP as a tool of choice.

Guided by the question of what makes a successful maritime spatial plan, the second part of the handbook clarifies the practical steps that spatial planners should take.

The third section draws up the political and administrative framework for IMSP.

The handbook is not a recipe book to be followed in strict order from beginning to end, but rather a "pick-and-mix" approach in which appropriate sections may be adapted to the particular circumstances. This is also due to the fact that IMSP is not a linear but a complex process, which needs to take into account various factors at each step.

At the time of writing this handbook, Integrated Maritime Spatial Planning is still in its infancy. It is expected that it will continue to evolve in order to better meet the needs of all stakeholders. The Federal Ministry of Transport, Building and Urban Affairs is prepared to follow and actively shape these developments in Germany, just like other partners of the INTERREG IIIB PlanCoast project do in their countries.

There is still much to be done, and much to be discovered about the problems of maritime management and their solutions. Feedback from users of this guide is therefore very welcome. We nevertheless hope that this handbook will provide you as a reader with a well-founded introduction to the subject and support you in your decision-making processes.

Manfred Sinz

German Federal Ministry of Transport, Building and Urban Affairs (BMVBS)

Coasts and inland seas are in many respects the most valuable areas worldwide. They are places of outstanding natural beauty, a desirable place to live, and a busy economic powerhouse providing work for growing numbers of people. As the coast becomes more crowded, new and increasingly space-consuming uses claim a share of the sea. Growth of the waterborne transport, offshore energy generation, aquaculture or marine protection areas are just a few examples.

New approaches are needed to arbitrate between these often conflicting or competing activities. As early as in 2001 the Ministry responsible for regional development in Mecklenburg-Vorpommern (Germany) took up the idea of using the strengths of spatial planning for developing an integrated approach towards coastal and marine areas. The BaltCoast project, in which the ministry acted as lead partner and which ran in the Baltic Sea region until 2005, was the first project to apply the concept of ICZM to prosperous urban as well as offshore areas and combine it with the strengths and tools of spatial planning. The so-called BaltCoast recommendations have since then found their expression in many policy documents, not least in the concept of **Integrated Maritime Spatial Planning**, now actively promoted in the EU Blue Book. Integrated Maritime Spatial Planning evolved as a combination of tools and procedures taken from terrestrial spatial planning and the principles of Integrated Coastal Zone Management (ICZM).

With the PlanCoast project we have taken our efforts even further, not only spatially by exchanging experiences with partners in the Adriatic and Black Sea, but also in terms of the instruments provided. This Handbook is a first compilation of possible **tools and instruments** that can be applied in developing effective Integrated Maritime Spatial Planning. We hope this document will serve to share our PlanCoast experience with an even wider audience, providing a point of reference for all those about to embark on the new adventure of IMSP.

Dr. Bernhard Heinrichs

PlanCoast Lead Partner

Ministry of Transport, Building and Regional Development Mecklenburg-Vorpommern

Contents

Introduction

1

1.1 The PlanCoast Project

Integrated Maritime Spatial Planning (IMSP) has become an acknowledged and recommended management approach in the EU. Nevertheless, there is still a lack of experience and capacities available to the policy makers and practitioners to implement these recommendations.

PlanCoast Structure

WP 1
ANALYSIS of the role of Spatial Planning in ICZM

WP 3
Sea-Use Planning in Action

WP 2
GIS

WP 4
ICZM in Action

WP 1
Strengthening the role of Spatial Planning in ICZM RECOMMODATIONS

WP 5
Transnational dissemination of results and experience
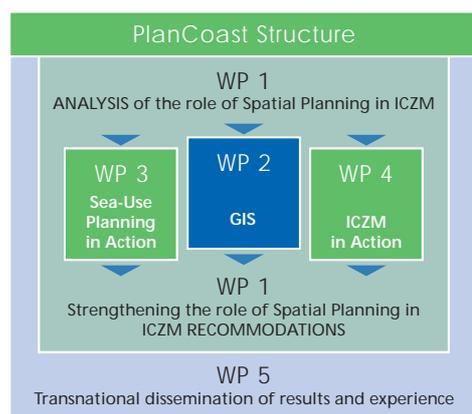
The **PlanCoast** (2006–2008) INTERREG IIIB CADSES project with a total budget of 2 Mio € brought together 16 partners representing spatial planning and environmental departments or responsible regional authorities from Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Germany, Italy, Montenegro, Poland, Romania, Slovenia and the Ukraine. The PlanCoast Lead Partner, the Ministry of Transport, Building and Regional Development of Mecklenburg-Vorpommern (Germany), managed the project with the assistance of sustainable-projects (s.Pro), a company based in Berlin.

The aim of PlanCoast was to provide best practice examples and tools for effective integrated planning in coastal zones and marine areas. A key objective was to show the strengths of spatial planning instruments in facilitating effective ICZM and maritime policy. Work packages were devised to analyse the role of spatial planning within ICZM, sea use planning in practice and ICZM in action. Another work package dealt with the special role and potential of modern GIS and information exchange as a necessary pre-condition for good maritime spatial planning. Pilot projects were set up to implement various aspects of IMSP.

PlanCoast Conferences	Specific Focus
Kick-Off Conference: July 2006 / Ancona, IT	> Overview on International ICZM / MSP Developments > Exhibition on Pilot Project IMSP Areas > Stakeholder Meeting: Palombina Beach
2nd Conference: May 2007 / Constanta, RO	> Exchange on Pilot Project experience > Preparation of PlanCoast EU Green Book contribution > Stakeholder Meeting: Romania Black Sea Coast
MSP Study Tour: July 2007 / North Germany	> Introduction to concrete conflict resolution methods / methods at German Baltic Sea 12 sea mile zone > Introduction to MV cadastre and GIS tools > Introduction to German MSP for North and Baltic Sea EEZ at Hamburg BSH
3rd Conference: Sept 2007 / Split, HR	> Presentation of overview on status quo in Adriatic Sea on MSP > First Discussion of PlanCoast Messages with focus on triggers for IMSP > From an Adriatic to a Mediterranean Perspective
4th Conference: Nov 2007 / Berlin, DE	> Internal workshop on PlanCoast Messages and Handbook > Presentation of first set of PlanCoast results and messages > New tools for MSP: what can science offer to planners? > International Policy Developments: From Green to EU Blue Book > Climate Change effects and impacts on IMSP
Final Conference: March 2008 / Ravenna, IT	> Presentation / Launch of PlanCoast Handbook > Final Pilot Project results > Specific issues of IMSP: offshore wind power and sand extraction

In the first stage of the PlanCoast project, information was gathered in all partner countries on the respective national frameworks for spatial planning in coastal and marine areas. Except for Germany, all partner countries concluded that a considerable legislation gap still exists with regards to IMSP. PlanCoast events, publications and the constant dissemination of project results to a wide audience were intended to generate much needed political awareness for the need and development process of IMSP.

In 2007 a key part of the project began with the implementation of **pilot projects** by the PlanCoast partners. The pilot project areas, situated on the Baltic, Black and Adriatic coast and seas, were chosen to reflect spatial conflicts of interest at various scales. Solutions were sought in form of new, **integrated spatial plans.** The previously installed **Geographic Information Systems (GIS)** provided technical aid for mapping and analysing the different uses and conficts. Detailed descriptions of the 18 case studies can be downloaded from the PlanCoast website (www.plancoast.eu).

Fig. 1 Map of PlanCoast regions

The PlanCoast case studies clearly illustrated the need for Integrated Maritime Spatial Planning. This handbook resulted from the desire to capitalise on the experience gained throughout the project and to make available results to a broad audience of planners and other stakeholders.

▶ ## PlanCoast Partners

Baltic Sea	Adriatic Sea	Black Sea
Germany: Ministry of Transport, Building and Regional Development Mecklenburg–Vorpommern	**Albania:** ECAT Tirana	**Bulgaria:** District Administration Centre, Varna
Federal Ministry of Transport, Building and Urban Affairs	**Bosnia & Herzegovina:** Neretva Cantonal Ministry of Physical Planning	Black Sea NGO Network
Poland: Maritime Office, Gdynia	**Croatia:** Priority Actions Programme/Regional Activity Centre (PAP/RAC)	**Romania:** National Institute for Marine Research and Development, „Grigore Antipa"
Regional Spatial Planning Office, Pomorskie Voivodship	**Italy:** Emilia–Romagna Region, DG Environment	National Institute for Research and Development on Territorial and Urban Planning „Urbanproiect"
	Ancona Municipality	**Ukraine:** Ukraine Scientific Center of Ecology of Sea (UkrSCES)
	Montenegro: Public Enterprise for Coastal Zone Management	
	Slovenia: Regional Development Centre, Koper	

1.2 EU Policy developments during the PlanCoast project period

The PlanCoast project evolved at a time of great changes within the international framework governing coastal and maritime management. At the launch of the project in 2006 ICZM and sea use planning were still considered separate approaches. Not until the consultation process on the EU Green Book on Maritime Policy, to which PlanCoast contributed, did it become clear that they are actually two sides of the same coin. Various approaches to maritime spatial planning had already been debated, and a range of terms are employed to refer to spatial planning in the coastal and marine areas. The **Blue Book on Maritime Policy**, published in October 2007, was first to officially label these approaches **Integrated Maritime Spatial Planning (IMSP)**, meaning a spatial planning approach which equally covers on- and offshore areas. The Blue Book recognises that IMSP will yield its full benefits only if all coastal Member States introduce such systems, use compatible and comparable systems, and learn from each other's experience. This is exactly what the PlanCoast project set out to do.

Gaining widespread support for the idea of IMSP was a long process and would not have been possible without the work of transnational organisations such as UNEP-MAP, UNESCO, VASAB or HELCOM. Numerous conferences also contributed, not least the PlanCoast conferences.

IMSP means a spatial approach which covers both on- and off-shore areas

▶ **How the EU Blue Book views IMSP**

IMSP as a tool

"Maritime spatial planning is a fundamental tool for the sustainable development of marine areas and coastal regions."

"The Green Paper on Maritime Policy identifies the increase in often competing activities on coasts and seas as a source of potential conflict that needs to be managed. As part of an overall integrated management approach, spatial planning is seen as a potential aid in this regard."

IMSP as a requirement

'Integrated maritime spatial planning across EU waters is a fundamental requirement for the continued sustainable development of maritime economic activities because it provides a neutral tool to arbitrate between conflicting or competing activities or interests.'

1.3 The IMSP approach

Integrated Maritime Spatial Planning combines the tools and procedures of terrestrial spatial planning with the principles of Integrated Coastal Zone Management (ICZM). IMSP views coasts and seas as constituent parts of an integrated system, both in terms of ecology and socioeconomic factors. Through intensive stakeholder involvement and the use of Geographic Information Systems (GIS), IMSP extends terrestrial spatial planning and principles of ICZM to the open sea. Because of the many interconnections between land and sea, IMSP considers terrestrial and marine space as equally important.

To facilitate integration at a process and technical level, IMSP borrows a range of soft tools taken from ICZM. This handbook, however, is not about ICZM per se. As its title indicates, it is solely focused on IMSP and the IMSP process. For the interested reader, many other more specialised publications exist for the specifics of the more informal ICZM approach (see Annex).

IMSP borrows soft tools from ICZM

We use the term Integrated Maritime Spatial Planning (IMSP) rather than Marine Spatial Planning or Coastal and Marine Spatial Planning in order to conform to the new EU terminology.

1.4   The Plan Coast Handbook

▶   **Purpose**

This handbook was written primarily for planners to show what they can do. It also adresses decision-makers and politicians to raise awareness for IMSP. Intended as a practical guide to planning and implementing IMSP, it takes readers through the different stages of the IMSP process and explains key elements that are necessary for success. In particular, the handbook contains:

> recommendations to decision-makers for creating the IMSP framework,

> recommendations to planners on how to tackle existing problems,

> a structured approach to planning and implementing IMSP,

> specific tools and instruments,

> concrete case study examples from PlanCoast pilot projects.

The handbook also provides information on where to find other background material on Integrated Maritime Spatial Planning.

▶   **Target group**

Principally, this handbook addresses all stakeholders involved in coastal and maritime planning, ICZM and maritime management. It also addresses key decision-makers at different political levels in in order to raise awareness on the needs and benefits of IMSP.

The first two chapters explain the purpose and potential benefits of IMSP and particularly address decision-makers, politicians and planners. The following chapters present the different steps involved in implementing IMSP and are intended as a practical aid for planners. Although it is helpful to do so, the handbook does not need to be read in chronological order.

All PlanCoast partners have contributed to the text, case study examples, figures and other material. It therefore reflects a wide range of experience, backgrounds and settings. Even though PlanCoast was situated in the Baltic, Adriatic and Black Sea context, the handbook can obviously be applied anywhere in Europe and beyond.

1.5 Summary of PlanCoast key messages

Message 1

Carry out a regular stocktake of coastal and marine uses
Maintain an updated database of uses and their impacts

Message 2

Prepare integrated and constantly updated maps of marine spatial uses everywhere
(ongoing spatial observation/ monitoring)

Message 3

Prepare integrated maritime spatial plans only where and when needed

Messaage 4

Make full use of participative planning
by applying informal tools such as moderated meetings, working groups and media

Message 5

Draw up a national strategy for integrated offshore development which:
– is based on a guiding vision,
– considers land and sea,
– is coordinated cross-sectorally,
– is tied into international developments,
– may be further refined in regional strategies (allowing for a nested approach),
– is revisited and revised at regular intervals.

Message 6

Help create the legal framework for IMSP
– identify basic policies that rule coastal and offshore developments
– operationalise existing laws and strategies through directives
– prepare and adopt specific maritime legislation for offshore areas

Message 7

Improve quality, comparability and accessibility of spatial data by implementing the EU INSPIRE Directive

Agree on systematic information exchange

– Link coastal and marine data collection
– Bring together coastal and marine data collection and data management in one institution
– Formalise data flow: create a regularly updated coastal and maritime cadastre

Collect data according to needs
– For monitoring of trends and sea uses collect relevant data regularly and continuously
– For case specific planning in limited sea areas, collect data according to most acute spatial problems

Message 8

The phases of Strategic Environmental Assessment can be used to structure the IMSP process

Introduce Territorial Impact Assessment (TIA) as extension of Environmental Impact Assessment (EIA) for projects

Message 9

Maritime Spatial Plans have to be considered as a basis for all sectoral decisions

IMSP is more than a technical exercise – it is a political responsibility

Political awareness-raising is necessary

Message 10

New institutions may not be needed ...
– ... but existing ones may need to be improved.
– Clear responsibilities need to be assigned.
– There should be one co-ordinating body.

Use different levels for different tasks
– International level: agree common regulations
– National level: responsible for overall framework
– Regional level: cross-sectoral agencies to take the lead in implementation
– Local level: case specific solutions, acute conflict resolution, controlling

Message 11

Improve effectiveness of cross-border consultations for offshore development plans and projects

Use and strengthen transnational coordinating bodies

Develop transnational concerted plans for offshore infrastructure corridors

Integrate existing project results and recommendations into international policy

Why Integrated Maritime Spatial Planning?

2

IMSP is needed because …

… more and more uses demand a share of marine space

… the nature of marine resource use is changing

… land uses have impact on sea and vice versa

… not all impacts can be managed there, where they occur. Some, such as shipping will demand a wider regional or even international approach

2.1 Growing and changing pressures

Coasts have long been focal points for a wide range of uses. The sea, too, has been used in various ways for centuries. The concept of sustainable resource management was developed to respond to mounting pressure on coastal and marine resources, with particular attention on the viability and wise use of ecosystems. Also the Integrated Coastal Zone Management (ICZM) approach has been designed to ensure the sustainable management of coasts.
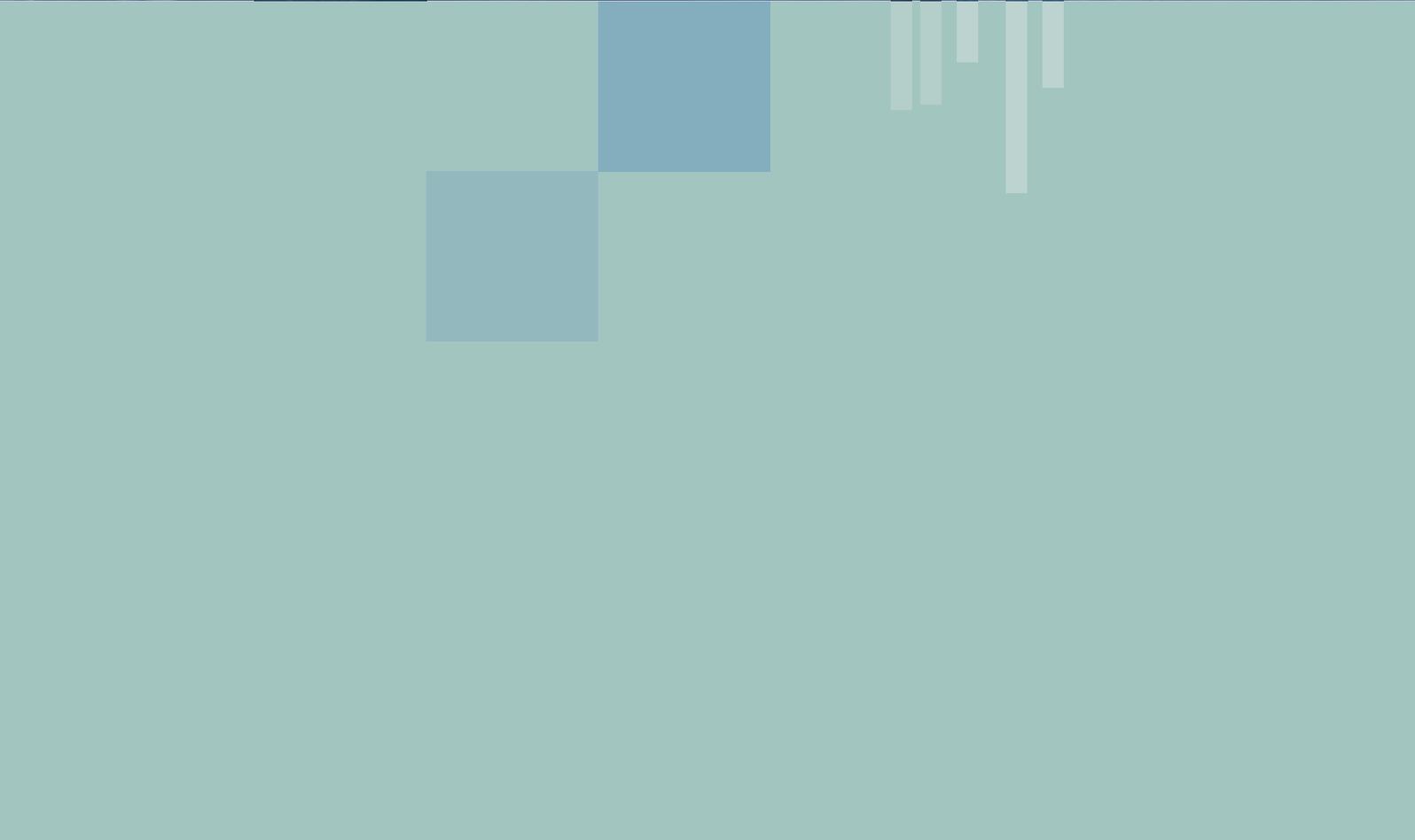
Sectors with relevance to German coasts and seas:

> *Aggregate extraction and mining*
> *Agriculture*
> *Aqua- and mariculture*
> *Cables and pipeline*
> *Coastal defence*
> *Development of sea ports*
> *Dumping at sea*
> *Fishing*
> *Marine protected areas and coastal nature reserves*
> *Oil and gas extraction*
> *Open seascapes*
> *Shipping*
> *Tourism*
> *Wind energy and offshore wind farms*

Whilst these approaches have brought some success in terms of conservation and integrated management, an additional trend has begun to emerge. As more and more uses demand access to marine resources, space itself is becoming a valuable resource. Somewhat surprisingly, the sea, that open, untouched expanse, is visibly 'filling up'. With space no longer unlimited, a structured approach to using space is becoming necessary. Integrated Maritime Spatial Planning serves this purpose in that it specifically deals with **space.**

To better understand the benefits and also specific features of IMSP, it is useful to look at the causes for the current increase in spatial demand. Why is space suddenly becoming tight, and will pressure on coastal and marine space continue to increase?

One reason for the increasing spatial pressure is that long-standing sea uses are simply becoming more intense. Shipping for example has grown enormously both in terms of transport volume and frequency, with further growth expected. The port of Hamburg, for instance, is forecast to nearly treble its cargo volume by 2025 compared to the 2004 figure, which corresponds to a growth rate of 5.3% (PLANCO 2007).

Pressure on marine space is also growing on account of new forms and new types of use. Some of these have challenged existing concepts of how we use the sea, in particular marine space. Wind and wave power, mariculture and also marine nature reserves are examples of uses that are static as well as spatially intense. Once established, static uses are difficult to re-locate, either because they depend on a key resource (e.g. a particular habitat) or because of infrastructure investment (e.g. an oil platform). Not only do these uses require large areas, but also a degree of permanence. Some assurance is therefore needed that they will be able to occupy these spaces without any disruption for long periods of time.

Environmental change represents a third reason for spatial pressure on coasts. Climate change is a particular concern. Threats of rising sea levels, for example, could lead to increased 'coastal squeeze': As re-location of existing uses may become necessary, additional pressure on densely used coastal land or areas further inland could result. Similar scenarios could be drawn up for sea areas in the context of increased storminess or changes to key ecological parameters such as salinity.

▶ ## Interchanges and long-range impacts as sources of pressure

Pressure on space also originates from knock-on effects of developments on neighbouring space or areas further afield. This is where different types of interchange come into play.

In the sea, interchanges are particularly important because of the special nature of the marine environment. Although it is not per se a tool of nature conservation, IMSP can be used to support the ecological integrity of coastal and marine systems. Uses can be sited, for example, where they cause least environmental impacts. This also refers to long-range impacts, some of which may not be immediately apparent. As a hypothetical example, an area allocated to offshore wind farming might make good sense in terms of spatial planning in the sea, but this no longer constitutes a wise planning decision if offshore wind farms turn out to impact on the migratory behaviour of protected bird species.

Sea uses may have far-reaching impacts on spatial use on land. Shipping may well take place in the sea but needs land-based ports as well as transport infrastructure in order to function. As the number and intensity of uses grow, spatial forms of land-sea interchange will become more intense.

It is worth remembering that spatial knock-on effects can also be cumulative and may be felt a long way from their point of origin. There are also indirect spatial impacts that arise from increasing sea uses. Offshore wind farming or gas platforms, for example, depend on regular servicing, which might bring employment to coastal regions, which could lead to demands for additional housing and transport. All of these would need to be accounted for in land-based spatial plans.

▶ ## What actually drives these changes?

In order to understand both current and emerging pressures, it is helpful to look at the driving forces that shape both current and emerging patterns of use. Where do pressures originate, and what might planners expect in the near and medium term?

Trends – as well as visible impacts - are shaped by two main types of driving forces. The first are so-called **external drivers**, which often originate on a broader international scale. A useful example is global economic liberalisation, which can become noticeable through shifting patterns of trade. A typical impact might be an increase in the volume of shipped goods or the growing importance of a particular shipping route. Climate change is another external driving force, as are wider social and political developments, for instance at an EU level. The EU Habitats Directive, for example, drives developments in that it demands the designation of marine protected areas.

Reasons for IMSP:

> *increasing density of use*
> *increasing spatial intensity of use*
> *climate change, leading e.g. to more coastal squeeze*
> *growing interlinkages between land and sea use*
> *cumulative and indirect impacts*

External driving forces set the wider economic, social and political stage and are usually imposed on coastal countries from outside. Individual countries or coastal regions, for example, will find it difficult to influence climate change, and changing patterns in global trade will simply 'happen' irrespective of whether a country is supportive of such changes or not. This also renders them more unpredictable, in that small changes can have considerable impacts and that they can change direction quickly and profoundly.

Internal driving forces, in contrast, are home-made. This time it is the country, or even a specific coastal region, which is actively driving developments. In Germany for example the coastal state of Schleswig-Holstein strives for leadership in certain maritime industries and has provided a number of incentives to support relevant initiatives. National or regional policy frameworks that facilitate specific developments, for instance renewable energies or biodiversity, also constitute internal driving forces. Internal and external drivers can reinforce one another, which can lead to rapid rates of change and growth of key sectors. A prime example is the rapid growth of offshore renewable energies, which is driven by international and national policy, economic incentives and broad support within society.

There is a hierarchy of external and internal driving forces. Decision-making at higher levels influences factors that are external to decision-makers at lower levels. For example, international markets collectively determine world commodity prices, whilst national governments can influence prices with trade and production taxes and subsidies. A national government can set water pollution standards that affect emissions from individual waste water treatment plants. For the plant manager, the regulation is external. Some factors may be external in the short run but subject to change by a decision-maker over longer periods (MILLENIUM REPORT 2005).

Driving forces to consider:

> *trade barriers or incentives*
> *commodity prices and markets*
> *technology development*
> *macroeconomic policy*
> *societal norms and values as well as freedom of choice*
> *climate change*
> *social and political framework*
> *demography*
> *institutional and cultural globalisation*
> *raw materials and energy*

CASE STUDY >>>

Energy policy as a driving force behind offshore wind farming in Germany

In Germany, energy choices are driven by a combination of factors. One is the increasing commitment to renewables at both international and nationallevel. Internationally, the EU has agreed to increase the share of renewables in its total energy use to 20% by the year 2020 (EU CLIMATE CHANGE 2005). German national targets seek to increase the same share to 50% by 2050. This commitment is accompanied by changes in the traditional energy mix. There is a national policy to phase out nuclear energy, and coal-and gas fired power stations are viewed increasingly critically on account of their high CO_2 emissions. But how to make up for the shortfall? As far as renewables go, solar, biomass and wind all have limitations. Wind farms lack suitable sites, and there is mounting public resistance to wind farms on land. It is therefore not surprising that offshore energy production has become a favoured energy choice in Germany.

Federal government estimates that 20.000 – 25.000 MW of installed offshore capacity could be achieved by 2030, which would be equivalent to 15% of the country's electricity needs. To speed up offshore developments, a series of steps have recently been taken to facilitate the licensing and construction of offshore wind farms including the provision of economic incentives. These include introduction of preferred areas for offshore wind farm development, greater planning security through the provision of maritime spatial planning instruments for the Exclusive Economic Zone and a minimum price of 6.19 cent/kWh for electricity generated from offshore wind farms (set out in Germany's 2004 Renewable Energy Sources Act). Technically, at least, all factors are in place to drive a fast expansion of offshore wind farming.

▶ The problem of uncertainty

Neither drivers nor impacts are entirely predictable. Climate change, for instance, is a significant driving force, but we cannot be sure of the precise impacts in terms of sea level rise, storminess or water temperature. It is even more difficult to determine the extent, severity and impact of these changes on the ecology and human systems. But uncertainties even exist with internal drivers, in that policies may not have the desired impact or fail economically.

The point is that change carries risks but also opportunities. Driving forces merit careful observation and interpretation in order to spot future trends, opportunities and constraints as early as possible. Whilst not all pressures can be influenced, impacts always demand a structured response. One role of coastal and maritime planners will be to provide just this through carefully assessing impacts and suggesting a balanced response.

Planners will need to suggest a balanced response

▶ From a land-sea to an integrated spatial perspective

Helped by recent policy-making, there is considerable interest within the EU to turn regional seas into economic powerhouses. With a clear interest in strengthening key maritime industries, growth can be expected in fields such as shipping and mariculture, but also in innovative technologies such as hydrogen generation or blue biotechnologies. There is also considerable interest in clustering compatible sea uses and maximising synergies. It thus seems likely that more and more key industries will be sited in the sea or require access to marine resources.

What does this mean for spatial planners? Clearly, external and internal drivers will put increasing pressure on coastal and marine space. Space, already tight, will become more valuable.

Fig. 2 How do we integrate land and sea? (ROBERTS, 2007)

Spatial planners will play an important role in ensuring the sustainable management of coastal and marine areas, and a fair and equitable access to space as a key resource. They will need to weigh options carefully, bearing in mind that sea uses have impacts on land and vice versa. They will also need to provide the necessary space for adaptation to change, both on land and in the sea.

Successful IMSP, however, requires a decisive shift in thinking. Frequently, planning still tends to think of land and sea as separate entities. As sea uses grow in intensity and diversity, an integrated planning approach needs to become the norm. The factors outlined above make clear that land and sea represent a true continuum – not only ecologically speaking, but also in terms of spatial impacts of uses.

▶ **Current management failures**

Current coastal and marine resource management can be criticised for being piecemeal approach. There is little assessment of cumulative impacts or overview of competences. Managing sea uses is usually permit-based, with permits granted as long as environmental impact assessments yield favourable results. Although the principle of sustainable development has become widely accepted, integration in terms of coastal and maritime spatial planning is still difficult to achieve.

2.2 Benefits of Integrated Maritime Spatial Planning

▶ **A tool to promote integration and a look at the 'bigger picture'**

IMSP has many benefits, not least better co-ordination of decision-making

The most significant purpose of IMSP, and at the same time its greatest advantage, is its ability to facilitate integration. IMSP is designed to optimise decision-making in a way that ensures the best use of available resources, combining those uses which are compatible and limiting those which are incompatible.

Because of its integrative approach, and because of its consideration of multiple rather than single resource use, IMSP is a means of actively promoting synergies and facilitating co-use. 'Bigger picture' therefore both refers to the often complex spatial context within which MSP takes place, as well as the complexity of stakeholder interests that come together in the coastal zone. MSP provides a means of strategic conflict resolution at a regional rather than a project level.

▶ **Co-ordination**

One objective relates to the idea of bringing together often disjointed decision-making regimes under one umbrella. In this instance, IMSP has a central co-ordinating function. It helps to overcome the limits of administrative boundaries, facilitating a regional seas approach to marine resource management and leading to more consistent decision-making.

▶ **Providing certainty for investors**

IMSP is an essential tool for guiding future sea uses in that it provides an indicative framework for action. IMSP is therefore a means of increasing investor confidence in regulatory processes and decision-making, especially if coupled with tools such as licensing (also called for by the EU).

CASE STUDY >>>

IMSP can facilitate sustainable economic development

▶ IMSP as a means of protecting marine biodiversity

IMSP can be used to create a coherent network of protected sites at a national and international level. Conservation needs can be considered on a par with other sea uses and given spatial priority where necessary. Because of its comprehensive approach, IMSP is useful in creating networks of protected areas or priority areas for nature conservation, in particular when combined with sea use zoning.

▶ Pro-active rather than reactive management

In the past, marine resource management has often been reactive in that it responded to undesired impacts or developments. Because of its ability to integrate perspectives, IMSP is able to take a pro-active role in planning, setting out a future framework and targets for spatial use. Forward-looking planning can therefore supplement or even replace the often ad-hoc system of decision-making and regulation.

▶ Facilitating competitiveness, entrepreneurship and innovation, as well as assisting disadvantaged areas

IMSP provides a means of visualising future trends and demands and provides a framework for responding to these. In line with EU demands set out in the Blue Book, this can ensure better access to markets, for instance by providing transport connections, links to other countries, or supporting the development of ports as a key for future

competitiveness. The establishment of maritime industry clusters on the mainland and on the coast is another example of this. In line with its forward-looking nature, IMSP is a means of ensuring the continued spatial availability of coastal and marine areas for future uses.

IMSP can also be used to actively promote disadvantaged areas and ensure more equitable access to marine resources and the benefits arising from their use. Again, the placement of key industries could be a means for steering development, for instance in rural or structurally weak areas of coast and coastal hinterland. Indirectly, IMSP can also be used to facilitate urban regeneration, such as that of former port areas.

▶ Ability to be implemented at different scales

IMSP is not prescriptive in terms of the spatial scale it uses. IMSP can be done at a regional, national or international level, depending on local context and above all need. There is also the possibility of creating a nested approach, with different plans created for different sea areas. As on land, these can become increasingly detailed the more local they become. The advantage of this nested approach is that it ensures greater overall coherence of planning.

▶ Increase stakeholder participation

IMSP should involve many stakeholders in a participatory process

In order to achieve a truly integrated approach, IMSP needs to involve a wide range of stakeholders and interests. In line with demands made in ICZM, more participatory approaches of decision-making need to be considered. This is related to questions of equal representation of stakeholders and involving 'quiet' stakeholders that are underrepresented in current decision-making processes.

▶ Greater transparency

In combination with respective stakeholder participation, and employing appropriate techniques of dissemination, IMSP provides greater transparency on current developments and expected trends to users and communities of interest. Given appropriate systems of data gathering and management, information can be made available which will allow stakeholders to judge how their activities might impact on other uses and the environment. This can contribute once again to more forward-looking rather than reactive management and also contribute to lessening conflicts of interest because of more information becoming more readily accessible.

▶ Improving information and data management

IMSP will only be effective if appropriate data is collected and made available through sea use maps. As such, IMSP is a means of enforcing coherent mapping of the sea. Where resources are scarce, IMSP can help to prioritise data collection and processing by prioritising information and monitoring needs. Because it is inherently cross-sectoral, IMSP can facilitate the exchange of information and data between different agencies and institutions.

▶ **Summary of expected benefits of IMSP**

> *better visibility of existing and proposed uses, a look at the "bigger picture"*
> *better co-ordination of uses*
> *ensures best possible co-existence of use by taking into account cumulative impacts and synergies between uses*
> *providing greater security for investors*
> *pro-active rather than reactive forward looking planning*
> *facilitating equitable access to marine resources*
> *more long-term planning, by taking into account the demands of new and as yet unplanned forms of use*
> *greater overall coherence through nested approach*
> *securing greater acceptance of marine forms of use amongst stakeholders and actors*

CASE STUDY >>>

Potential benefits of IMSP in the Northern Adriatic

The Northern Adriatic is affected by changing global and national conditions. As a sea, it is becoming more important geo-strategically, which is likely to lead to increases in maritime transport. Also, the area is well suited to establishing a gas terminal, which could supply the EU with energy products. At the same time, an initiative is being prepared to declare the Adriatic as a Particularly Sensitive Sea Area, which will require appropriate management. It will thus be necessary to develop a harmonised vision for the northern Adriatic area at an international strategic level, including Slovenia, Croatia and Italy. IMSP could be used to coordinate future uses of the Northern Adriatic between the three countries within the framework of a cross-border maritime spatial plan.
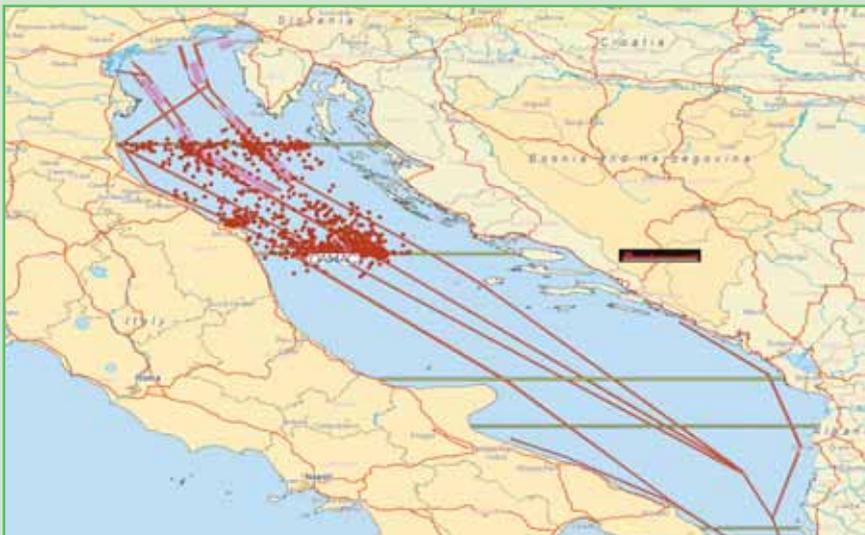
Fig. 4 Shipping intensity in the Northern Adriatic in 2005
(DAMAC project, Marche Regione, Italy 2007)

2.3   Challenges / Difficulties

▶ **What are the main challenges IMSP faces?**

One of the major challenges of IMSP is that it transfers an essentially land-based approach to an environment which significantly differs from the terrestrial environment. Less is known about the marine environment than the terrestrial environment; it is more difficult and expensive to obtain data, and much of our current knowledge is based on assumptions rather than proven facts. Water and other resources (e.g. fish) cannot be confined to administrative boundaries, representing resources which need to be managed in an international context. And although there are clear issues of scale, the marine environment cannot be managed entirely independently of the mainland.

IMSP is not a stand-alone instrument for the sustainable management of coasts and seas

Another challenge is that IMSP does not represent a stand-alone instrument in the sustainable development of marine resources. It can allocate space, contributing to conflict reduction and the maximisation of synergies, but it cannot control the quality of uses. Other instruments therefore need to be employed alongside IMSP.

Plans are only as good as their implementation. In a marine context, this matters because it is much more difficult to control sea uses than land uses.

Most importantly perhaps is that IMSP does not take decisions by itself. Future sea use is a matter of continuous choice and setting priorities. This requires dialogue between the stakeholders involved – again, taking into account land-sea interchanges and the sometimes remote impacts of sea uses on land and vice versa. It also requires participative means of decision-making, in particular in the context of equitable access to resources.

For countries without a tradition or established land use planning, these challenges may be considerable and even appear daunting. At the same time, IMSP is an opportunity to engage in something altogether new. Stakeholder participation, involvement of the public and the development of participative processes are particularly important here and can lead to a whole new way of perceiving and utilising maritime space.

▶ **Criteria for success**

> *IMSP requires international and cross-boundary coherence*
> *IMSP requires consistency between managing land and sea use*
> *IMSP must be an adaptive process and not a one-off exercise*
> *IMSP requires agreed criteria for measuring and evaluating spatial impacts of uses (task for science)*
> *IMSP requires agreed criteria for setting priorities for future use (societal choice)*
> *IMSP should differentiate between outputs and outcomes*
> *IMSP requires appropriate tools and processes of implementation such as impact assessments or ICZM strategies, as well as widespread stakeholder involvement*
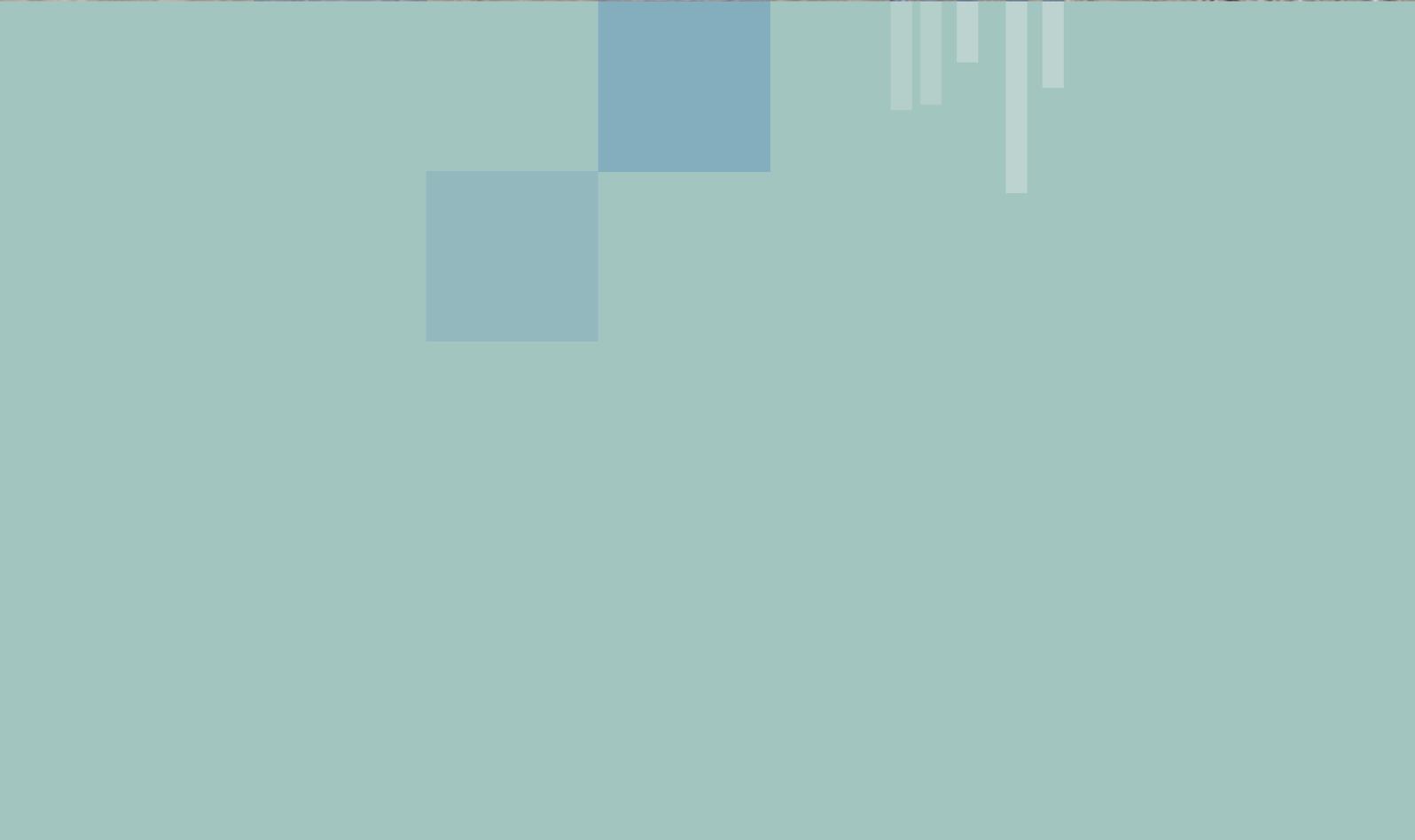
3

Before embarking on any planning process, consider the following important points:

Is IMSP really needed? In a sea area without any conflicts of use it may not be necessary to draw up a spatial plan. A general stocktake and an assessment of spatial trends are useful tools to help decide whether IMSP is necessary or not.

IMSP is a participatory process. You should strive to involve stakeholders as early as possible if the spatial plan is to be widely accepted and successfully implemented. Will you be able to commit to a transparent, open-ended process and keep that commitment alive?

IMSP is time-consuming and labour-intensive. There is no point in drawing up a plan if you are not prepared to follow it through or do not have other stakeholders' support.

3.1 The IMSP decision tree

▶ **How do I know whether IMSP is needed or not?**

The chart below represents a decision tree for anyone considering an IMSP-based approach for a specific area. It is not meant to be prescriptive and recognises there may be good reasons for drawing up an IMS-Plan irrespective of whether spatial conflicts exist.

▶ **An IMSP decision tree together with key outputs of different stages**

> *Decide*

... which precise area you want to consider. Is it geographically delineated or does it have administrative boundaries? If necessary, adjust to a different scale and spatial dimension.

> *Take stock*

... of the coastal and marine environment in your area (Chapter 4.1).

Consider:

> *the coastal and marine ecosystem: what are the particular characteristics?*

> *the socio-economic system that depends on using coasts and seas*

> *the current political and institutional context*

> *the current drivers that might lead to spatial impacts or changing pressures of use.*

Early indications for IMSP: sensitive and/or fragile ecosystems, large-scale uses, rapid changes to the socio-economic or political system (strong drivers)

A key output of this stage could be a series of maps showing current patterns of use.

> **Assess the trends of use**

… resulting pressures and spatial threats on the coast and in the sea. Consider both intensity and diversity of uses (Chapter 4.2).

☐ *intensity and diversity of uses increases.....* > **indication for IMSP**

☐ *intensity and diversity of uses stable..........* > *IMSP may not be needed*

☐ *intensity and diversity of uses decreases....* > *IMSP may not be needed*

A key output of this stage could be an additional series of maps showing specific pressures, land-sea interchanges or degrees of vulnerability.

> **Assess the spatial impact**

… of current and likely future uses and the spatial conflicts that might arise (Chapter 4.2).

☐ *spatial impact likely to increase................* > **indication for IMSP**

☐ *spatial impact stays the same....................* > *IMSP may not be needed*

☐ *spatial impact decreases...........................* > *IMSP may not be needed*

☐ *spatial conflicts set to intensify.................* > **indication for IMSP**

☐ *spatial conflicts set to remain the same.....* > **indication for IMSP***

☐ *spatial conflicts set to decrease................* > *IMSP may not be needed*

*if conflicts are already problematic

> **Decide**

… based on the above, decide whether IMSP is needed at this stage or not. Irrespective of your decision, carry out regular monitoring of the above parameters. If and when necessary, revise your decision.

> ### *If you decide to go for an IMSP*

... the actual planning process will consist of the following steps:

Step 1: **Assess the context**

... and establish a general framework within which IMSP will take place. An output could be a list of opportunities and constraints arising from national and international policies and laws or a national IMSP strategy

Step 2: **Draw up a vision**

... and a set of aims and objectives for the area under consideration. A key output is a short document setting out the vision together with specific aims and objectives for the coast and sea.

Step 3: **Refine the stocktake**

... with respect to the aims and objectives drawn up earlier. An output could be more detailed maps.

Step 4: **Analyse the specific spatial conflicts**

... that arise in the area and set out a process for dealing with conflicts.

Step 5: **Develop solutions**

... for the specific problems identified. This is usually a joint exercise involving many stakeholders and the general public.

Step 6: **Translate these findings into a spatial plan**

... for the sea and the coast. The plan should be set out in written form as well as a map.

Step 7: **Facilitate the implementation of the plan**

... make it as easy as possible for others to put its resolutions into practice.

Step 8: **Evaluate the results of the spatial plan**

... after a set period (e.g. 5 years). Have the original aims and objectives been achieved? Revise the plan as necessary and repeat the original stocktake.

3.2 A complex process

By now it should be evident that the planning process is much more than just drafting a plan. What is described here is a cyclical approach which contains both political and technical elements and where participation and acceptance play a crucial role. Although there is a logical sequence to the steps presented, IMSP is not necessarily a linear process. Some stages may need to be done out of sequence or repeatedly, and different stages of IMSP may as well occur in parallel. Do not expect a sleek and tidy process and be prepared that IMSP is time-consuming.

It is also important to remember that the actual planning process cannot be considered in isolation. Instead, it is influenced by a range of external factors. These include the political and legal environment, international policy frameworks, but also practical considerations such as data availability. Data plays a role at different stages of the process, with a clear link between a guiding vision, planning and data collection.

The natural and socio-economic environment

Availability and quality of data

3 *Refine the stocktake*

4 *Analyse the spatial conflicts*

2 *Draw up a vision, aims and objectives*

5 *Develop solutions*

Stakeholder perspective

1 *Assess the context*

6 *Draft a spatial plan*

8 *Evaluate the results*

7 *Implement the plan*

Public acceptance

Institutional and legal framework

Other strategies affecting the marine and coastal environment

The wider IMSP environment

specific planning area

The IMSP process

Fig. 4 The IMSP process

3.3 Getting organised

There are several organisational issues that should be clarified at the very beginning of the planning process. These include:

> Appropriateness of scale and delineation of planning space: What is the spatial dimension of the project in question?

> What is the timeline and schedule of the project?

> What are the financial possibilities and limitations of the project?

> Who needs to be involved at what stage of the IMSP process? Who are the main stakeholders in the area, and what is the best way to approach them? Both institutional stakeholders and the general public should be considered, going beyond those with a statutory remit or legal influence. Business stakeholders should specifically be included. Involvement is particularly important when it comes to developing a guiding vision, which will need broad acceptance by a wide range of stakeholders. It is also important to ask who needs access to which information at which stage.

> How will the results of each step be translated into the next step? What are the specific outputs and outcomes of each planning stage?

> Who will lead the planning process and act as a coordinator?

> Who will be responsible for implementing and evaluating the plan?

Laying the
ground for IMSP
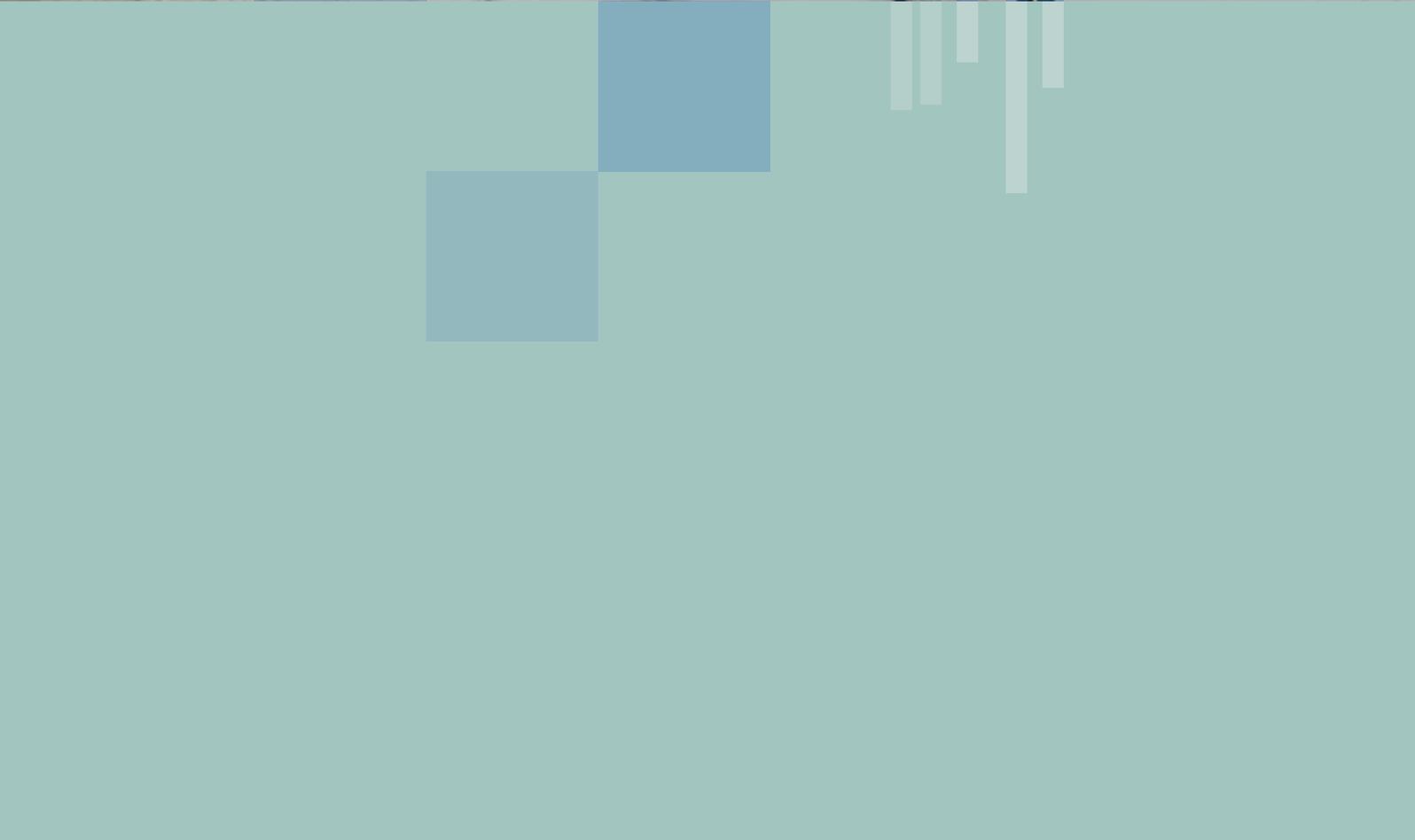
4

Stocktaking is important in its own right since it provides essential spatial data and a basis for regular spatial monitoring

Maps showing current sea uses or patterns of use are not the same as a spatial plan. They represent the status quo, and not a future vision of the area.

4.1 The essential role of stocktaking

Any decisions concerning IMSP need to be based on taking stock. What is going on in coastal and marine areas, and what is likely to happen in the next few years?

A stocktake is a means of gathering information on the current status quo of the coastal and marine environment. Its purpose is to bring together a wide range of baseline information: on the environmental and socio-economic status of an area, key system interchanges, the institutional framework and the stakeholder context. Naturally, both coastal and marine areas should be covered. A stocktake should also take account of any obvious trends and developments in order to be able to assess spatial pressures at a later stage. Consider the following questions to guide the stocktake:

> What are the specific characteristics of the coastal and marine environment? Are there any particularly sensitive or fragile areas, for example?

> Are there any specific economic and social factors that need to be considered? Are there any sectors that crucially depend on a certain type of coastal or sea use, for example? What of other forms of valuing the coast and the sea, for instance as a place of beauty or recreation?

> What is the current political and institutional context? Which institutions have a statutory remit for the coast and the sea, and what voluntary organisations play a role? Are there any key policies for the area?

> What are the main pressures on the coast and in the sea, and are there any particular threats? What are the main driving forces likely to shape coastal and marine development in the near future? Here it may be useful to look at the impacts of coastal and marine uses and to weigh up positive and negative effects.

A stocktake can be done at any spatial level and at various levels of detail. Although a stocktake should strive to be as comprehensive as possible, collating all necessary information is likely to be a gradual process. At this stage, the stocktake is used simply to gather information, providing the necessary background information to decide whether IMSP is needed or not. The stocktake may need to be refined at a later stage to reflect specific planning aims.

An important consideration in setting up a stocktake is to do this with a view to regular spatial monitoring. Monitoring means that the information brought together in the stocktake will regularly be re-assessed and updated if necessary.

▶ **The benefits of a cadastre of maritime uses**

A useful tool to keep an eye on things and to structure information is a **cadastre of coastal and maritime uses**. Essentially, a cadastre is a database containing spatially

relevant information on a wide range of uses. Such a cadastre would need to be regularly updated and require institutions and other stakeholders to regularly supply data.

CASE STUDY >>>

A cadastre of uses in Mecklenburg-Vorpommern

The term 'regional planning register' or cadastre (Raumordnungskataster) describes a geo-information system which is used to continuously record, store and analyse spatially relevant planning and measures. Apart from existing use, it also shows all spatially significant plans and projects as well as entitlements regarding the use of certain resources. Some of the most important benefits of the cadastre include:

>   it helps to get the best possible and up-to-date overview of current spatial use, the state of the environment and acute spatial demands,

>   it helps to harmonise planning measures,

>   it provides essential background information to upper spatial planning authorities for approving or rejecting planning applications,

>   it provides information on the sectors affected by a planned development and who will need to be included in formal consultation processes,

>   it provides information on conflicts of use.

In Germany, the cadastre is maintained by the upper planning authorities in each state.

A new development in Germany is that the regional planning register will be further developed on the basis of ArcGIS, with the objective of creating not only a cadastre, but a spatial planning information system. This will be made available to three user groups at different levels of access: professional users, which will have access to full geoprocessing ArcInfo, semi-professional users which will be able to use ArcView for basic map-based queries and analysis, and the general public, which will have access to a 'GIS for everyone' based on a photomap viewer.

In Mecklenburg-Vorpommern, the four regional planning offices will be able to edit all plans and measures applied for, digitalise in ArcGIS and display thematic maps in ArcView. Themes that are registered at the regional planning offices include settlement areas, protected buildings, protected areas, agricultural areas, forestry use, utilities, waste disposal, military use, transport, pipelines and cables. Additionally, external databases can be used to show nature conservation areas, protected landscapes, nature parks, Natura 2000 areas and groundwater protection areas.

Maps generated from the cadastre can be used for public information purposes and be made available on the web. In Mecklenburg-Vorpommern, a public geo-portal was opened in 2006 which enables everyone to search for geographical information in a quick and readily accessible way.

▶   **Special focus on uses which transcend land and sea**

The stocktake should pay particular attention to uses that have impacts on both land and sea. Examples of such integrated themes are beach use, estuary management, ports and harbours. Tourism is another good example in that it impacts on land through the construction of hotels, transport infrastructure and quality of built infrastructure, and on the sea through issues such as beach use, provision of marinas and port facilities. We should not forget socio-economic impacts of sea uses on the mainland at this stage.

▶   **What is the output of a stocktake?**

Apart from an initial overview of the current situation, a key output of stocktaking is a **map of current uses and pressures**. The map should cover both land and sea areas. Importantly, however, stocktaking is an ongoing exercise. Monitoring pressures, spatial needs and impacts is not a one-off, but needs to be done at regular intervals to show up trends and developments. A map of uses and pressures, therefore, also needs to be regularly updated in order to reflect ongoing developments.

CASE STUDY >>>

Mapping marine uses on the Romanian Black Sea

A maritime spatial plan for the Southern Romanian Black Sea part a is currently being drawn up. The area addressed by the plan is the Romanian territorial waters and the adjacent zone. So far the shipping routes, the anchorage areas, the nature protection areas (Natura 2000, RAMSAR sites and World heritage), the gas and oil exploitations & connecting pipelines, the fishing areas and telecom cables were mapped. The mapping exercise has also identified pollution hotspots, defined as the dominant point sources on the Black Sea coast affecting Romania. There are also some domains that should be mapped, but where the information is not accessible, namely sand and gravel extraction sites and military training areas.
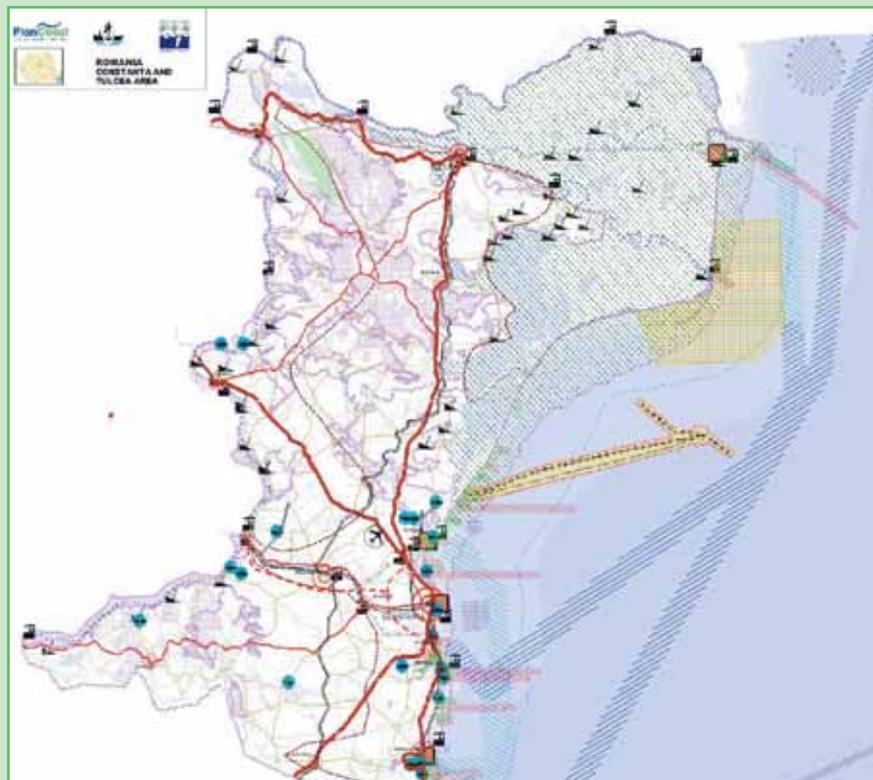
Fig. 5 Marine uses in the Romanian Black Sea

CASE STUDY >>>

Development of German sea use maps (EEZ)

In Germany, spatial planning in the EEZ became a federal responsibility in 2004. The Federal Maritime and Hydrographic Agency (BSH) is responsible for drafting the spatial plan, carrying out a strategic environmental assessment, and organising public participation including transnational consultation. The spatial plan will be implemented as a statutory ordinance by the Federal Ministry of Transport, Building and Urban Affairs (BMVBS).

Working within the UNCLOS framework, and guided by the national legal framework, the spatial plan can address the following uses: shipping (partial), resource exploitation, submarine cables and pipelines (partial), marine scientific research (partial), wind energy, fishing (partial) and protection of the marine environment. The spatial plan will attempt to spatially separate conflicting uses where possible and assign priority to certain uses in accordance with UNCLOS, e.g. shipping. Targets and principles will also be defined in order to minimise conflicts.

Around 1997, the BSH began to take stock of current uses in the EEZ. Maps were produced for both the North Sea and the Baltic Sea. This marked the beginning of a continuous process, with more information added at each stage. The maps have since undergone numerous revisions and updates to reflect changes in patterns of use and also draft suggestions for priority or exclusion zones (e.g. for offshore wind farms). The maps below show a progression of maps drawn up in 2002, 2004 and 2007. Importantly, the maps do not correspond to a spatial plan, but simply state the respective status quo at the time.

Fig. 6 Areas where applications have been received to construct offshore wind farms (red) and protected areas (green) in the North Sea. Blue lines are shipping routes, and blue hash is a pilot area for hydrogen production (BSH 2002)

Fig. 7 All uses in the North Sea. Pink lines are data cables, green lines gas pipelines, blue and green dots are Natura 2000 sites, orange areas are sediment extraction sites, and red boxes are offshore wind farms (mostly planned and awaiting approval) (BSH 2004)

Importantly, none of these maps represent a spatial plan for the EEZ. They are, however, essential tools for highlighting the density of uses and different spatial demands. The spatial plan for the EEZ, currently still at the development stage, will begin by defining shipping areas and then adding other areas dedicated to other uses.

Fig. 8 The beginnings of a spatial plan. Blue lines are shipping lanes, red areas are preferred areas for offshore wind farms, and blue areas are Natura 2000 sites (BSH 2002)
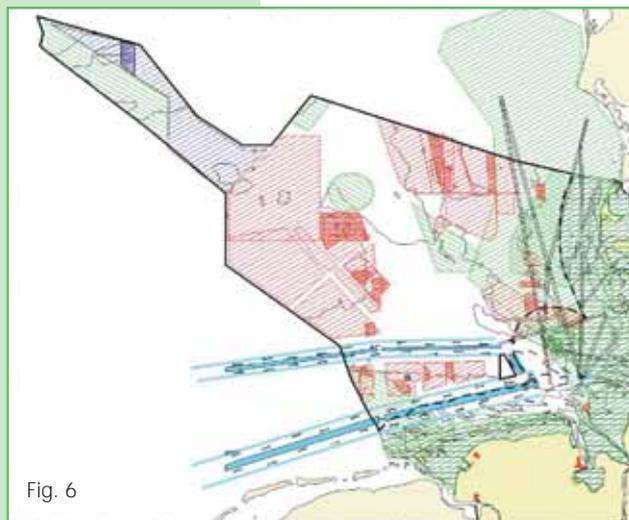
Fig. 6

Fig. 7
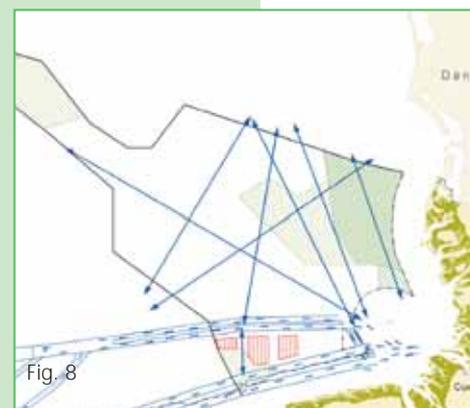
Fig. 8

▶   **Issues of scale**

Stocktaking needs to take into account the fact that uses and impacts occur at different scales. Some uses may only take place in specific localities and only have limited, local impacts. Others might cover large areas and lead to large-scale national or even international impacts.

Maps should be drawn up at the appropriate scale. This will affect the resolution of maps. National maps could represent an overview, whilst local plans might show much more specific detail. The objective should be to produce a series of nested maps that fit together like a jigsaw.

4.2   Spatial impact and compatibility of uses as key parameters

Uses always have impacts, but not all impacts trigger IMSP.

IMSP should be done only where uses have a distinguishable spatial impact and where spatial incompatibilities lead to conflicts.

As a general rule, planning is only needed in cases of conflict arising from incompatible spatial demands. There is no need to develop a spatial plan where uses are not in conflict with one another.

To decide whether a spatial plan is needed, it helps to look more closely at spatial needs and spatial impacts. Consider the following guiding questions:

>   Which uses have which spatial needs, and are there any uses that are developing particularly rapidly? Mariculture and offshore wind farming are examples of uses that need a lot of space and are reasonably rapid in their development, meaning they are dynamic and spatially intensive.

>   Which forms of use are likely to translate into particularly severe spatial impacts? And which are restricted to specific areas because of specific resource needs?

>   Which are spatially compatible with one another and which are incompatible? A quick sketch may be sufficient to establish this.

Involvement of responsible institutions on both sides of the planning divide is advantageous at this assessment stage. Land-based institutions should be involved in marine spatial assessments and vice versa, in particular where relevant ministries are concerned.

▶ **Spatial impact as a key parameter**

IMSP implies that it is possible to identify the spatial needs and spatial impacts of uses. Spatial impact is a useful concept when it comes to considering the knock-on effects of specific uses on surrounding areas or other uses.

What does spatial impact mean? Here we use it to describe the actual demand a particular use makes on space. It is different from spatial need in that it refers to actual space taken up rather than a theoretical need. The fact that offshore wind farming has high spatial needs, for example, does not automatically mean that large areas should be given over to that use. The spatial impact of offshore wind farming may therefore be quite small. Spatial impact is no absolute measure, but a relative concept which always depends on the respective area context.

Any fixed areas given over to a specific use, such as military areas or nature reserves, fixed maritime infrastructure such as oil terminals or sea ports, nursery grounds for fish, bird corridors or shipping corridors, represent spatial impacts. The Habitats Directive, which requires EU states to designate marine protected areas, also leads to spatial impacts in that priority areas for nature conservation will need to be designated. Some uses have secondary or indirect spatial impacts or spatial knock-on effects, such as cable connections from offshore wind farms to the mainland or the need to build more transport infrastructure to cope with the increased flow of goods through sea ports.

Bearing in mind the three dimensions of the sea – i.e. water surface, water column and sea floor - spatial impact can vary in size and shape as well as time, not only affecting the visible surface of the sea, but also different water depths and sediment.

The spatial impacts of pressures can be:

> *short- and long-term*
> *immediate and long-range, as well as*
> *direct and indirect*

▶ **Spatial incompatibility as a second key parameter**

High spatial impact per se is not always problematic. Problems only arise when incompatible demands are made on space. In some areas, uses will be incompatible with maintaining key ecosystem functions. Conflicts can also arise when two mutually exclusive forms of use lay claim to the same space.

Spatial incompatibility describes a situation where different types of use cannot co-exist in the same area. Although some mitigation may be possible through appropriate management, some general idea of spatial compatibility can probably be established for most types of uses. Offshore wind parks for instance are likely to be incompatible with shipping routes for safety reasons no matter what management regime or type of sea. A designated nursery ground for fisheries is unlikely to be compatible with sand and gravel extraction in both the Baltic Sea and the Adriatic. Offshore wind farms, on the other hand, are spatially compatible with certain types of mariculture in that these sea uses do not spatially interfere with one another.

Spatial incompatibilities can also arise from land-sea interactions or less apparent connections between land- and sea-based uses, such as coastal tourism requiring unimpeded views of the horizon for aesthetic reasons.

▶ **Visualising spatial compatibilities**

For planning purposes, it is important to visualise what the spatial incompatibilities in a given area may be. A checklist drawn up on the basis of common sense is a useful starting point. In the example below, uses are checked against one another, indicating uses that are spatially compatible, potentially compatible and incompatible.

Legend: ■ incompatible ▧ conditionally compatible □ compatible

		Offshore wind farms	Marine protected areas	Fisheries	The sea as a public good	Cables	Tourism	Shipping and shipping routes	Harbous and ports	Agriculture/run-off	Sand and gravel extraction	Oil and gas exploration	Dumping of dredging material	Mariculture	Coastal service centres	Nature conservation	Coastal protection	Military use
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Offshore wind farms	1		■	■	■			■			■	■	■					■
Marine protected areas	2	■		■	▧	■	▧	■	▧	■	■	■	■	■				■
Fisheries	3	■	■		▧	▧		■	■	▧	▧	■	▧	■				■
The sea as a public good	4	■	▧	▧				▧			■	■	■	■				■
Cables	5		■					▧		▧	■	■	■			▧		
Tourism	6		▧													▧	▧	■
Shipping and shipping routes	7	■	■	■	▧	▧					■	■	■	■				■
Harbous and ports	8		▧	■								▧				■		
Agriculture/run-off	9		▧	▧	▧									▧		▧		
Sand and gravel extraction	10	■	■		■	■		■				■	■			▧		
Oil and gas exploration	11	■	■	■	■	■		■	▧		■		■	■		▧		■
Dumping of dredging material	12	■	■	▧	■	■		■			■	■						■
Mariculture	13		■	■	■			■			■	■	■			▧		■
Coastal service centres	14																	
Nature conservation	15					▧	▧		■	■	■	▧		▧			▧	▧
Coastal protection	16						▧				▧					▧		
Military use	17	■	■	■	■		■	■				■		■		▧	▧	

Fig. 9: Estimates of spatial compatibility of different types of sea use (GEE et al. 2006)

▶ The importance of regional differentiation

A checklist such as the above can act as a basic guide. A more differentiated assessment of spatial needs, impacts and compatibilities still needs to be done in order to account for specific situations and specific environmental, economic or socio-political circumstances. Pressures of use for instance may be quite different in different countries depending on the speed of development, the relative significance of pressures and internal driving forces. Different countries may also have different priorities of development. Below is an example from the Adriatic Sea, which makes clear that different uses are regarded differently in terms of the pressure they exert and the urgency they carry.

<table>
<tr><td></td><td>Emilia-Romagna</td><td>Slovenia</td><td>Croatia</td><td>Bosnia and Herzegovina</td><td>Montenegro</td><td>Albania</td></tr>
<tr><td>Nautical tourism</td><td>+</td><td>++</td><td>++</td><td>+</td><td>+++</td><td>+</td></tr>
<tr><td>Maritime Transport</td><td>+++</td><td>+++</td><td>+</td><td></td><td>+</td><td></td></tr>
<tr><td>Fishery</td><td>++</td><td>+</td><td>++</td><td>+</td><td></td><td>++</td></tr>
<tr><td>Aquaculture</td><td>++</td><td>++</td><td>++</td><td>+</td><td>+</td><td></td></tr>
<tr><td>Water quality</td><td>+++</td><td>+</td><td>+</td><td>+++</td><td>+</td><td>+++</td></tr>
<tr><td>Energy generation</td><td>+++</td><td>+++</td><td>+++</td><td></td><td></td><td></td></tr>
<tr><td>Military uses</td><td></td><td></td><td>++</td><td></td><td></td><td>+</td></tr>
</table>

Fig. 10 Examples of most important issues and sea uses on the Adriatic Sea

Message 3

Prepare integrated maritime spatial plans only where and when needed

4.3 Recognising the importance of participation

Being a participative process, IMSP involves a wide range of stake-holders.

Stakeholders are institutions, organisations and individuals interested in or affected by the management of the area for which the plan is being prepared.

Traditionally, spatial plans and other policy documents have been produced through what is essentially a linear process. Plans go through several stages of consultation with specialists. Stakeholder consultation usually takes place towards the end of the planning process.

In contrast, **participative planning** means that the entire process of drafting the plan, and the stages leading up to it, are shared by all those interested in or affected by it. Although still a process with a defined outcome, it is no longer strictly linear in that it can take various routes to accomplish what it set out to achieve.

There are many reasons why working closely with the stakeholders needs to accompany every step of the planning process. Since the 1998 Aarhus Convention basic access to information and citizen involvement have become statutory requirements worldwide. In the traditional planning and management processes, however, **actual citizen involvement in decision-making** is still very limited.

Intensive participation is important during the entire IMSP process

This calls for urgent change. Authorities should be aware that widespread stakeholder involvement is not done for its own sake, but a vehicle to achieving more widely accepted coastal development. Although more time-consuming initially, participative planning can lead to savings in the long term. Close cooperation with stakeholders yields the following considerable advantages:

> The added value of insider knowledge to a frequently narrow expert view

> Cost and time efficiency by avoiding possible disputes and trials

> Improved publicity and policy acceptance

Participative planning is not the same as informing the general public, but both are important and should go hand in hand

The last point in particular is crucial for the success of a maritime spatial plan: implementation of the plan's measures is largely dependent on stakeholder willingness to co-operate.

It is important to differentiate between stakeholder involvement, consultation and information. Stakeholder involvement means participative planning as described above. Consultation means stakeholders are consulted at certain stages of the process, perhaps by asking for comment. Information gives the stakeholders no opportunity to influence the plan, but but is a one-way, passive process.

For the general public, a minimum requirement should be to provide information in an accessible and transparent manner at different stages of the process. There should also be opportunity for becoming more actively involved if desired, as only information is not enough for truly participative IMSP process.

Examples of voluntary informative measures are newsletters, flyers, stakeholder meetings and workshops, exhibitions and fairs, websites and media cooperation. These measures can also be used to transform a consultative processes into real participation.

▶ **Using a facilitator**

The objective of bringing together different stakeholders should not be to achieve a compromise, but to collaborate and agree solutions acceptable to all!

In the participative approach, overall responsibility for and co-ordination of planning in co-operation with the stakeholders ideally lies with one person designated to take the work forward. It is not necessary for that person to be fully skilled in all aspects, as their role is to facilitate dialogue and organisation rather than writing contents of the plan. A professional facilitator, or moderator, will significantly contribute to ensuring sensitive and effective management and the involvement of stakeholders. This requires social competence and professional understanding of communication processes.

▶ **Identifying the stakeholders**

The general stocktake described in Chapter 4.1 should identify all relevant stakeholders in the area. General public should also be considered, going beyond those with a statutory remit or legal influence. Business stakeholders should specifically be included.

At the preliminary stage it is useful to identify the most powerful and influential stakeholders in the area. This should not be difficult, since usually there is a clear link between key stakeholders and the conflicts which triggered the preparation of a given spatial plan.

Stakeholders can be grouped into those who are primarily active in the political, economic, social, technological, legislative or environmental field. An appropriate relationship with each of the groups can then be planned and managed. However it is important that numbers do not become as large as to make constructive discussion and agreement difficult. Importantly, stakeholders opposing or sceptical to the plan development should not be neglected, on the contrary. Their winning-over may be vital to the production of an effective plan.

▶ ### Establishing good communication

The first step to successful stakeholder involvement is to establish a good working atmosphere among the members of the group preparing the plan. Mutual respect and confidence will not occur as a result of a single meeting, but will develop gradually during the whole process. This does not mean that there will be no disagreements or difficulties, but the process of dialogue between participants will tend to build team-work and feelings of **responsibility** for the plan and its postulates. This initial stage of work tends to be the longest, since establishing working methods of communication with the stakeholders is often very time consuming. The effort invested here, however, should be seen as an investment: Once established, mutual trust, contacts and communication patters will be to the benefit of subsequent stages of the project and speed up processes considerably.

Participative processes need to be actively developed – this takes time and effort

▶ ### Be clear about the objectives and outputs

Conflict resolution works better if all parties involved, despite the different positions represented by them, start off with a common goal i.e certain improvement of an area. Otherwise the parties are either not prepared to enter into the process at all or work with different agendas.

It is important to be clear about the desired outcomes and outputs before embarking on an IMSP initiative. Will it merely be a mapping exercise, which shows uses and changes on different kinds of spatial maps? Or is the output of IMSP an actual strategy, perhaps a spatial management plan? Is IMSP a means of complying with EU regulations (e.g. the Habitats Directive), or is it used to implement a much wider, common vision? Or is IMSP simply a process, a way of getting sectors around a table and debating future marine resource use? In fact, desired outputs of IMSP may well be all of these.

▶ ### Stakeholder involvement is not a one-off exercise

Participative processes do not evolve automatically. The various actors need to be stimulated to take part in the process not only once, but repeatedly during the IMSP process. This requires guidance by the facilitator who should drive the process forward with timetables, deadlines and documented intermediary results. It is of benefit if the overall goal can be sub-divided into a number of measurable goals to be reached step by step. Stakeholders need to see clear, visible and deliverable benefits from the whole exercise. At the same time, they should not be misled into unrealistic expectations which ultimately cannot be met.

Activity	Advantages	Disadvantages	Comment
Stakeholders' forum	Good PR, genuine opportunity for genuine exchange of views, can lead to topic groups and other more suitable mechanisms.	Conflicts may get out of hand, requires skilful handling, discussions can be dominated by strong personalities, difficult to keep to agenda, poor vehicle for introducing new ideas.	Needs careful presentation, provision of venue, handling of agenda, time-consuming but often necessary.
Workshops	Encourages 'grass roots' to express views; people feel views are valued; can be very creative; flexible, targeted debate, possibly less confrontational, involves interested and well informed; helps start a common outlook.	May arouse expectations that can't be met; needs careful management, continuity and follow-up, depends on quality of facilitation; doesn't necessarily represent a balanced point of view.	Results depend strongly on participants. Useful in a range of contexts, e.g. smaller community sessions, to break up larger meetings, sometimes known as scenario workshops.
Newsletter	Sets scene for dialogue, opportunity for all to contribute, strong image of the project, can be co-ordinated with a website.	Open-ended commitment, can suffer from 'fatigue' if process extended, may use too much professional terminology.	A useful tool of communication, but must be attractive, relevant, accessible and clear.
Exhibitions	Can be seen by whole community, opportunity to imaginatively present context and issues, useful for distributing newsletters, leaflets, and questionnaires or as back cloth to meeting, staff can directly answer questions and attract interest.	May be poorly attended, not all venues equally attractive, runs risk of dullness	A useful resource when combined with wider information programme.
Local media	Large potential audience, relatively cheap, good for public relations, raises awareness.	Uncertainty over how media will use material; may not use it at all, get story wrong, or stress conflicts.	Good PR skills required, still results may be disappointing.
Flyers	Useful to identify key issues, easy to produce, useful public relations, wide coverage.	Takes time and money to produce, may over-simplify, may encourage unjustified claims.	Probably works best with targeted groups on specific issues, otherwise too expensive, stakeholders likely to want full documents.
GIS based website	Large potential audience, raises awareness and provides open access to data, positive image.	Intimidating medium for many sectors of population, needs constant updating to remain relevant, can be expensive and impersonal.	A website without GIS can also be a good idea.

Fig. 11 Tools intensifying the stakeholder involvement (HYDER 1999, 77-85)

▶   **Education and training**

Participative planning works better if it is preceded by awareness-raising and training.
Stakeholders who understand the threats to the coastal and marine environment, the
interchanges of the coastal and marine environment, and the importance of integration
at different levels will be better prepared and more willing to engage in the process.
Again, awareness-raising is not a short-term measure, but likely to be spread over

time. Different forms of awareness-raising will need to be found to address different types of stakeholders, for instance politicians and planners. Commonly used tools that can be adapted from an ICZM context include workshops, newsletters or web-based information and education.

CASE STUDY >>>

Education and Training in the Oder Estuary region

Education of key stakeholders and decision-makers is a special focal point of the national research project "ICZM Oder" in Germany. Specifically, target groups for project-related activities include established professionals, young professionals and professionals to be. Different formats were chosen to provide education and training for each of these: An online study platform for established professionals, summer schools and postgraduate professional training for young professionals, and a nature guide and school projects for professionals to be.

An e-Learning tool called "IKZM-D Lernen" was established which supports images, videos, audio, animation and text documents. The objective is to transfer scientific and other background knowledge necessary for ICZM in the Oder region. The tool provides modules on a wide series of topics (e.g. tourism, eutrophication, Agenda 21, Natura 2000, ICZM tools etc.) and is made available for free.

Experience has shown that it is important to address practitioners directly. It is also better to adapt existing programmes rather than establishing new ones. Since passive e-learning is not generally successful, a combination of e-learning with face-to-face training using different teaching methods (presentations, role plays, …) is useful. This is particularly the case for young professionals and professionals to be, because it permits active application of what has been learned through e-learning. The e-learning tool IKZM-D-Lernen does, however, work for different learner levels.

Information dissemination is another focal point of IKZM Oder.

The following principles can also be adapted to IMSP projects:

Fig. 12 Overeiw of information dissemination at various spatial levels (MAACK 2007)

Experience with information dissemination has shown that it is best to use & develop existing networks to distribute information. A combination with other relevant information (e.g. as part of a regular newsletter) can make the product more attractive. When it comes to websites, it is helpful to combine a project website with databases since that makes the website more attractive. For the general public, awareness raising needs specific and eye-catching events that everyone can relate to. Naturally, project information for the general public needs to be presented in a non-scientific, easy to relate manner (MAACK 2007).

CASE STUDY >>>

Institutional concertation and cooperation in Emilia-Romagna

The Emilia-Romagna Region, with R. L. n. 20/2000 about "land use and land protection", has introduced the following principles which have been applied to the planning process: subsidiarity, institutional concertation and cooperation, sustainability (both environmental and territorial), planning process simplification.

In Emilia-Romagna region subsidiarity is an important principle because the planning and management must be set on the authority closer to the citizen, while seeking the scale more suitable to effectively deal with and to solve problems generated by planning actions.

The Planning Conference is a new step in the planning process. It is a sort of public participation, which has to be done for land use plans and sectorial plans with territorial results, with the aim to assess objectives of the plan, relationship with other relevant plans, strategies, the results of cognitive frame and consistency with sustainability objectives.

In fact, the conference involves both public and private subjects in the construction of a shared diagnosis of the condition of the territory and of its possible development. The Authorities which are involved in the conference are: province, bordering local municipalities, other associations of local municipalities, environmental protection agencies, public services, trade and industry associations, representatives from nature conservation, the health and transport sector, the river management authority, technical services and water reclamation etc.

The first phase of the Planning Conference is given over to a presentation of the work so far, and relevant material is disseminated. During the second step the participants give same agreements, contributions or measures that must be included in the plan.

Between the first and the second step thematic meetings take place. Parallelly, administration which is responsible for the plan carries on a public consultation with the citizens and the results of these activities are discussed with the participants at the planning conference.

During the third step, administration which is responsible for the plan answers any questions and accepts or rejects the comments that have been received. The fourth step is the final contribution before the conference is closed, which must be included in the objectives, strategies and policies of the plan.

The conference procedure foresees an intense reciprocal communications and a series of institutional agreements before adoption and approval of the plan.
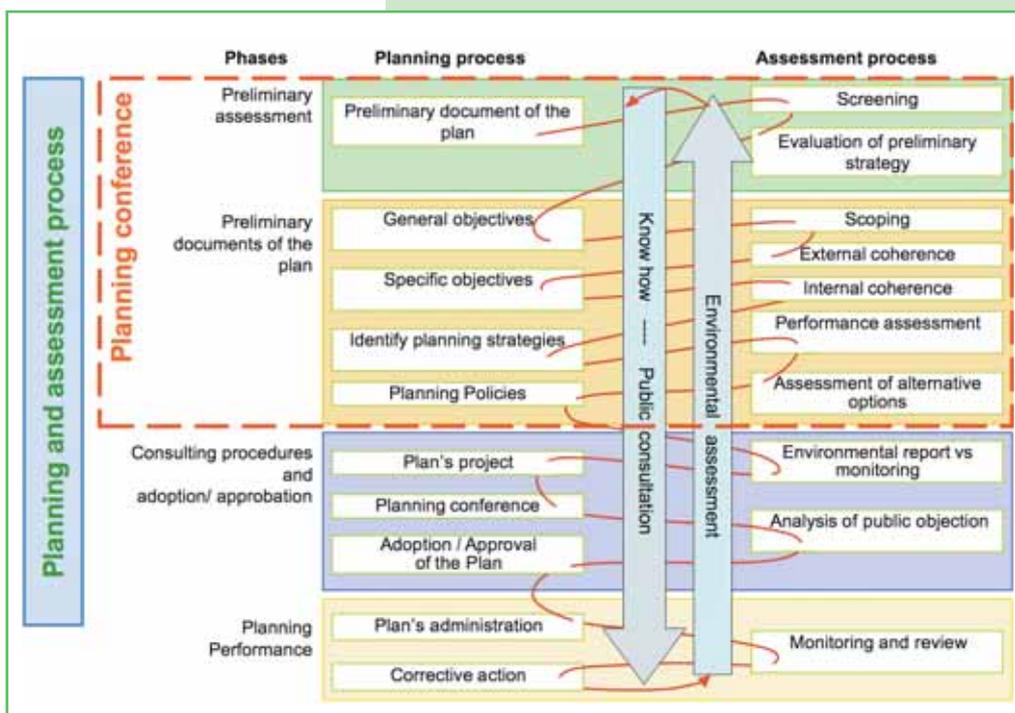
Fig.13 Planning conference in Emilia-Romagna (ROMANI 2008)
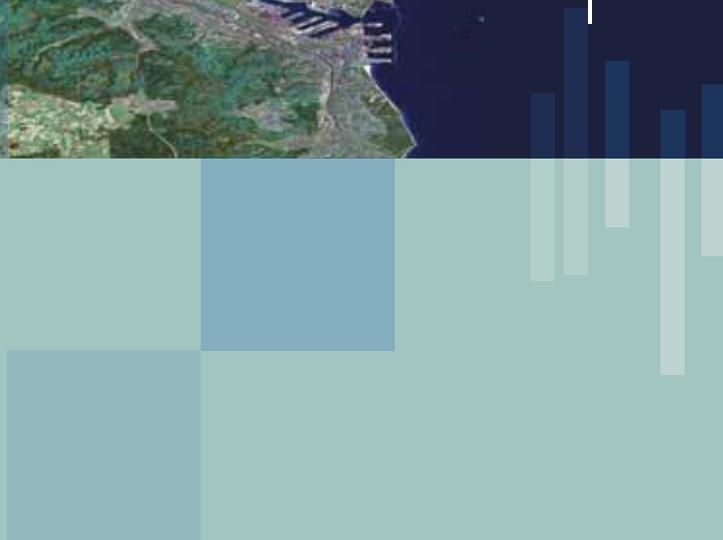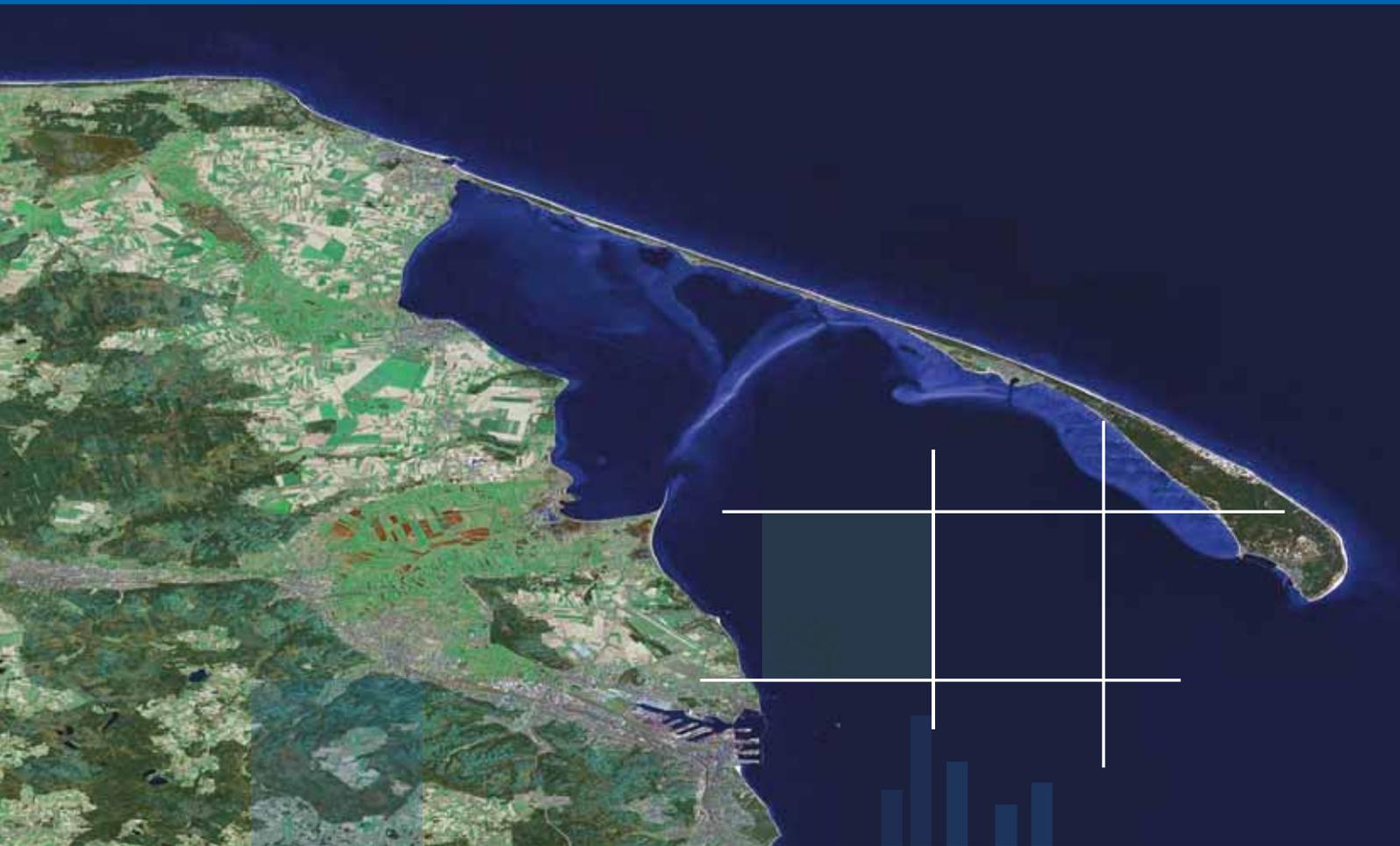
5

> You have decided that IMSP is necessary
> You have delineated an IMSP area and are ready to engage in the IMSP process
> It is time now to consider the individual steps in some more detail

Step 1:

Assessing the context and establishing a general framework for IMSP

Irrespective of the scale, an integrated management plan cannot be drawn up in isolation. Planners will need to take account of a wide range of policies and trends that affect the coast and the sea above and beyond the specific IMSP area.

▶ The very first task: Review the existing framework within which IMSP will take place

As a first and essential step in the IMSP process, planners need to review the existing policies affecting the coast and the sea. This should include national and regional policies, but specifically also include international policies such as EU Directives and other agreements and regulations. The purpose of this is to identify aims, objectives and targets that have already been set out for the coast and the sea and which planning will need to take into account. Examples could be objectives for water quality, economic development, energy or nature conservation. They could also be more general aims such as facilitating sustainable development or enhancing biodiversity. Both mandatory policies and voluntary agreements need to be considered in this context.

Although this analysis will take time, the advantage is that it will provide IMSP with a clearer framework to work in. It will highlight existing opportunities and also constraints in terms of assigning spatial priorities. Designations such as Natura 2000, for example, will in all likelihood need to be treated as given, leaving planners with limited room for manoeuvre. With good knowledge of the current policy framework, planners will also be able to specifically encourage certain developments whilst restricting those that run counter to key objectives. A look at existing policies and wider policy objectives can also help in setting out a vision for the specific coast and sea area in question.

The following are examples of documents to consider, but the list is by no means exhaustive:

> *ICZM strategies*
> *national and regional laws*
> *EU Directives and other EU documents, e.g. the EU Blue Book*
> *international agreements, i.e. IMO, UNEP-MAP, HELCOM*
> *visions for the sea and the coast (e.g. national strategies for sustainable development, renewable energies, biodiversity etc)*
> *maps showing international shipping routes or pipelines*

▶ **Where possible, draw up a guiding framework for IMSP at the national level**

In order to facilitate IMSP at all scales, it is recommended that **a national strategy is drawn up for integrated offshore development**. Integrated refers to both spatial integration in the sense of land-sea-integration, as well as institutional integration, in that sectors and administrative levels need to work together. The national strategy should set out overall aims and priorities for offshore development, including economic, strategic and ecological issues. The strategy should consider land-sea interconnections and naturally take account of the likely spatial impacts of the proposed developments on land and in the sea. More specific ideas on what an IMSP strategy should contain can be drawn from the EU Blue Book and the forthcoming EU Guidelines on that topic.

Integrated Coastal Zone Management (ICZM) can be a useful framework for identifying common issues, as well as strategic objectives to be pursued for land and sea. From such strategic objectives, a planning framework can be drawn up to guide future land use and sea use. This in turn can then be further refined in spatial plans and approaches such as zoning.

According to its Blue Book the EU Commission

> has invited Member States to draw up national integrated maritime policies
> will by summer 2008 propose a set of guidelines for these national integrated policies and develop a road map for spatial planning
> will organise a stakeholder consultation process by 2009 and
> will set up a system for exchange of best practice among authorities

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▶ **Establish a legal framework for IMSP**

Although planners themselves will not always be able to influence law-making, it is important to push for an appropriate legal framework for IMSP. This might mean extending existing spatial planning law to coastal waters and the EEZ, or require the drafting of a whole new set of regulations. Whatever means is chosen, an integrated spatial plan needs to be based on planning law that extends to both land and the sea.

Planners can contribute to this process by identifying all policies and laws that affect coastal and offshore developments. On that basis, gaps can be highlighted and the effectiveness of the current framework checked.

Whilst the presence of a strong legal framework is important, it is the practical application and operation of this framework which ultimately counts. In cases where implementation is weak, planners can lobby for improved operationalisation through directives, incentives or sanctions.

Message 5

Draw up a national strategy for integrated offshore development which:
– is based on a guiding vision,
– considers land and sea,
– is coordinated cross-sectorally,
– is tied into international developments,
– may be further refined in regional strategies (allowing for a nested approach),
– is revisited and revised at regular intervals.

Message 6

Help create the legal framework for IMSP
– identify basic policies that rule coastal and offshore developments
– operationalise existing laws and strategies through directives
– prepare and adopt specific maritime legislation for offshore areas

Step 2:

Drawing up a guiding vision

The success of IMSP depends on setting out a clear vision, specific aims and objectives for the area in question. All three need to be agreed by relevant stakeholders in order to secure wide acceptance.

▶ **What is a vision?**

Put simply, a vision is a description of what is desired for the area in question. It can be stated in one sentence, in a brochure or as a sketch, and can be general or specific. An example of a broad and general vision is that of the SMAP III programme for the Mediterranean: " Promoting awareness and enabling a policy framework for environment and development integration in the Mediterranean with focus on integrated coastal zone management".

CASE STUDY >>>

Palombina beach

Palombina beach is situated in Ancona on the Western Adriatic coast of Italy. At present, it is not in a state desired by the inhabitants and city council. Infrastructure and bathing facilities emerged in a haphazard manner without a continuous concept. Since the beach is tightly wedged between the harbour, a major road, a railway track and the city airport, it has very low environmental and recreational qualities (dirt, noise, air pollution).

Palombina beach now

In order to improve the overall value of the beach, the city council decided to prepare an integrated spatial plan in cooperation with the local stakeholders.In the initial phase of the project work the following three visions were suggested:

1. Coastal promenade with transport facilities hidden in a tunnel
2. Artificial islands for the services
3. Sand nourishment to broaden the beach

Within several stakeholders' meetings the third vision has been selected and will be realised through a private-public partnership with the Ancona Harbour.

Fig. 14 Different visions for Palombina beach
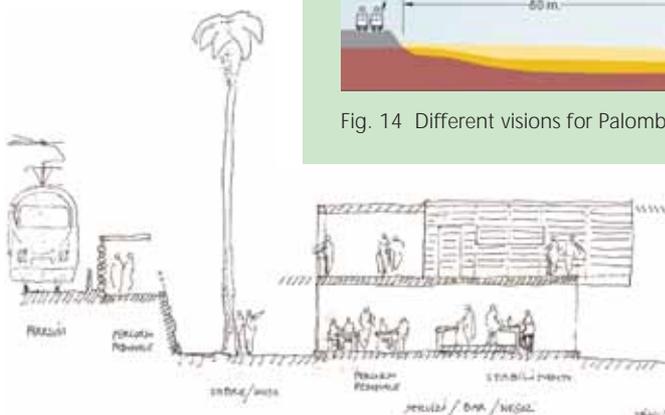
▶   **Developing the vision**

A vision can either be derived from existing policy documents, for instance national or regional ICZM or maritime strategies, or it can be created solely for the area in question. Visions can exist at different scales, ranging from national all the way to local scale. The use of scenarios can help in contrasting different options for the future and making their consequences more readily understood.

Most importantly, the vision needs to be accepted and carried by all relevant stakeholders. The best way of achieving this is by involving them in a participatory, transparent process in the creation of the vision. It is important to go beyond stakeholders with a statutory remit or legal influence, but to involve also those with economic and social/cultural influence.

Once the vision is in place, it should be specified in terms of concrete aims. What does the vision set out to achieve? These will serve to guide the entire planning process, limiting the amount of work, money and data that needs to be collected to this pre-defined scope.

CASE STUDY >>>

Scenarios for the West coast of Schleswig-Holstein

As part of the national research project 'Coastal Futures', scenarios were drawn up to show different development options on the West coast of Schleswig-Holstein. Taking today as a starting point, what could the region actually be like in 2030? Essentially, this was an exercise in 'reasonable extrapolation', describing an assumed end state and then asking what driving forces, societal preferences and circumstances could lead to this end state. The five scenarios in "Zukunft Küste – Coastal Futures" describe different patterns of spatial use, each of which sets different priorities of use and gives different weight to societal, political and technological drivers. In each pattern, one type of use is accorded greater importance than others.

> Coast and sea (primarily) as natural space,
> Coast and sea (primarily) as tourism and recreation space,
> Coast and sea (primarily) as a source of renewable energies,
> Coast and sea (primarily) as industrial space,
> Coast and sea (primarily) as transport space.

For each of these five scenarios, driving forces were identified and described (e.g. different values in society, different economic conditions). Pressures on natural and anthropogenic systems were also described. Because offshore wind farming is a focal point of Coastal Futures, each scenario also incorporates assumptions with regards to offshore wind farm development (e.g. large sea areas given over to offshore wind farms). Using the period 1995 to 2005 as a baseline, it was possible to partially model ecological and regional economic effects for each scenario. The impacts of different degrees of offshore wind farm development can also be partially modelled.

The five scenarios were then used in a stakeholder workshop to discuss consequences of different types of development and preferences. A preferred option and vision for the future was developed out of these.

▶ **Stakeholder involvement**

As described in the previous chapter, it is essential to see the IMSP planning process as a joint effort of plan-makers and stakeholders. In the following they are referred to as the **planning team**.

The development of a guiding vision is the first joint task of the planning team. A first milestone is to achieve free exchange of information about the area and a constructive discussion. Apart from really getting to know the area, this will provide better understanding of each side's views, feelings and values.

CASE STUDY >>>

Western Gdańsk Bay

Due to its proximity to the large Gdansk-Sopot-Gdynia agglomeration and its unique natural features (the entire area is covered by NATURA 2000 sites), Gdansk Bay is clearly the most intensively used and conflict-riddled section of Polish coastal waters.

During the preparation of the new maritime spatial development plan for the western part of the Gdansk Bay, plan makers from the Gdansk Maritime Institute were faced with several thousand pages of existing policy documents related to this area. Additionally, prior to preparing the plan, stakeholders were given a direct opportunity to participate. They submitted claims and comments and took part in a preliminary stakeholder meeting. This meeting revealed some of the very divergent visions, goals and demands of each stakeholder.

Fig. 15 Different uses in the Bay of Gdansk

> The regional environmental authority demands consideration of NATURA 2000 management plans, with special focus on conservation measures for certain endangered species (in addition to a general ecosystem approach).
> The environmental NGO vehemently supports this claim.
> The Marine Observatory Hel urges that fish protection measures should become an integral part of the plan.
> The fishermen's association demands the protection of fishermen as a social group ("Birds are here only on few months a year, we - always!").
> The Maritime Museum Gdansk wants to extend the archaeology protection zone over even broader areas of the bay, and discover new underwater wrecks with tourism in mind (underwater guided tours like Vasa Museum in Sweden).
> Municipality A wants to develop a marina with 300 moorings.
> The neighbouring municipality B wants to enlarge its untreated sewage output in the sea.
> Municipality C says that the IMSP measures should be kept low key, in order not to interfere with the municipality's own planning.
> All municipalities stress tourism as their main developing sector.
> The Pomorskie regional government also sees tourism, and here mainly boat tourism and sports fishery, as the main focus for development.

▶ **The problem of value judgements**

It is very unlikely that all the stakeholders will have the same perception of issues, threats and problems that exist in the area. Each will have their own ideas on what should be done. It is worth remembering that any consideration of spatial impacts and preferences for future developments involve value judgements. The current debate surrounding the visual impacts of offshore wind farms in Germany is a good example to show that even minor spatial impacts can be judged unacceptable by certain stakeholders. To agree on acceptable levels of impact, and to agree on an optimum balance of uses, a process of deliberation will be necessary.

To come to a solution, it pays to ask what the respective stakeholder values are that exist behind the actual arguments. What is most important to which stakeholders, and to which degree might they be willing to compromise? Once these issues have been discussed, it should be possible to agree on a few main points which are of interest and concern of all the stakeholders. These ideas can be now translated into one vision for the area, a vision that everyone is capable of undersigning.

Developing a vision is a stage where play is allowed.

Planning is not about what looks possible right now, but about a future vision.

Don't be limited in thinking by current problems and what appears possible, but aim high!

Step 3:

Refining the stocktake and mapping

At this stage, data become a crucial commodity. Structures and mechanisms should be created in order to ease data flow. Coastal and marine data collection and data management should ideally be brought together in one institution.

Once the general framework for IMSP has been established and a guiding vision has been drawn up, it is time to revisit the stocktake and to analyse it with respect to the aims set out in the vision.

▶ **What needs to be done at this stage of the process?**

The stocktake carried out earlier should have provided a good general overview of the current status quo on the coast and in the sea. If the stocktake was done at a larger spatial scale than the planning area, it may be necessary to refine it to take into account the specific setting of the planning area. This could mean more specific data collection and the production of more detailed maps.

Maps are only as good as the data they are built on

If the stocktake already provides the required information at the right scale, take a good look at the pressures. Where do you expect major spatial conflicts to arise in the planning area? Maps that highlight specific risks or vulnerability of certain areas to change or pressures can be very useful at this stage to highlight particularly sensitive areas or those facing particularly high pressure of use. This however presupposes that the right pressures have been identified using suitable indicators.

Mapping current uses and pressures is strongly linked to the issue of data. Maps and plans are only as good as the information they are built upon. The use of Geographic Information Systems (GIS) can result in a wide variety of maps, which makes it even more challenging for planners to select those technical options best suited to a particular planning task.

▶ **Problems with data collection**

Data is often widely distributed between different sources, so that it can be time-consuming to get an overview on what data is available where. Also, access to coastal and marine information is frequently restricted, as some coastal players are unwilling to share their data. Spatial information often becomes subject to unfair trading between the private sector and financially limited planning institutions. Some public or semi-public institutions such as hydrographic agencies are keen to make profit on the data they collect or the maps they produce.

CASE STUDY >>>

Ancona Municipality

For the above mentioned new local spatial plan for Palombina beach, the Ancona Municipality is experiencing acute problems in data-collection.

The main difficulty concerns the data property and the confidentiality of collected data, both in public-to-public and public-private relationships. In some cases the data access is restricted by confidentiality, even when it does not refer to any sensible aspect of the user or his community. In other cases data are collected by private agencies that require a consultation fee. Unfortunately, this is a common situation in Italy, where stocktaking, data collection and dissemination for public purposes is still unregulated by law.

▶ A formal cadastre as a solution?

A convenient solution to such problems has been found in the German terrestrial spatial planning system, where the flow of data is formalised by the so-called **cadastre**. All relevant authorities and companies are obliged by law to provide certain data to a co-ordinating unit in regular intervals, e.g. every six months. The law also specifies the format and other parameters of required data. Once it is ready, the cadastre is accessible to all participating parties and public institutions so that everyone can benefit from it. Adopting such a coastal and marine cadastre by the national legislations could be a large step towards simplification and cost-efficiency of coastal planning.

Read more on the cadastre in chapter 4.1

In most countries monitoring of the sea and coast has been institutionalised. Frequently, it involves a multitude of authorities. The PlanCoast experience has shown that much duplication and confusion could be avoided if this task were assigned to **one central institution**, possibly with regional or local branches. This institution would act as a focal point for the collection and distribution of maritime data, and could possibly manage the maritime cadastre. In order to ensure unbiased public service it should be provided with adequate financial and methodological support from government.

▶ Public access to data

There is a significant correlation between data collection (stocktaking) and public participation. On the one hand, public participation can provide important information on coastal and marine uses. On the other, public participation is strongly dependent on accessibility of information. Participation in non-transparent conditions could result in misunderstandings, lack of acceptance and even additional conflicts. In IMSP data should therefore not only be collected , but also shared.

Access to data and information enhances acceptance

Issues of access to spatial information are currently high on EU agenda with a new proposal for a Directive called INSPIRE. INSPIRE stands for „infrastructure for spatial information in Europe" and requires governments to make geographical data more compatible in transboundary context. The idea is to ensure that spatial data is collected to the same standards and scales across Europe and freely available to all.

Proposed in January 2007 by the EC, the INSPIRE Directive seeks to ensure that:

> Spatial data is collected only once, at the level best suited to the task;

> Data from different sources should be capable of being shared among many users and applications;

> All levels of government should have access;

> It is possible for spatial data collected at one level of public authority to be shared between other public authorities;

> Data needed for good governance should be available on conditions that do not restrict its extensive use (EU INSPIRE 2005).

The implementation of the INSPIRE directive will be expensive and challenging for the European authorities who maintain electronic maps and spatial data bases: metadata will have to be regularly updated, and existing information has to be harmonised. All in all it should, however, considerably improve the conditions for the coastal and maritime planning.

▶ **What data should actually be collected for a specific spatial plan?**

Before all kinds of data are collected, it is worth remembering that IMSP is all about space. Although basic environmental parameters provide essential knowledge for planners, the main purpose of a spatial stocktake and mapping exercise is to assess current patterns of use, with additional focus on spatial needs and potential future spatial demands.

Therefore, when we say relevant data, we mean data which provides information on space and spatial impacts. With this in mind, the first step will be to assess what data are available at all.

▶ **The need to be selective**

Data gathering is time-consuming and should therefore be selective – focus on data quality, reliability and relevance

Clearly, a complete survey of all available data and filling all existing gaps is highly time- and cost intensive, since it is much more difficult to collect data in the sea than it is on land. In order to avoid unnecessary investigations it makes therefore sense to limit the scope of data still to be collected.

When it comes to limiting the amount and type of data to be collected, data quality is a good place to start. Plenty of data can be generated on all kinds of subjects and in many different forms, but not all data is going to be useful for the specific spatial problem. Sorting through available data is often more time consuming than data collection itself. A useful general rule is that spatial planning data should be up-to-date, objective, reliable, relevant and comparable. Processed data – or metadata - which has been analysed, quantified and qualified in a certain context - is of much greater value for mapping purposes than raw data.

Apart from data quality, relevance is another limiting factor. At an early stage of the IMSP process it can be difficult to know whether certain information will be relevant or not. In the context of sustainable, integrated planning all data is potentially relevant since changing conditions and interconnections between land and sea and different types of use have to be taken into account.

A good method for establishing relevance and limiting the volume of information to be collected is by using a compatibility matrix presented on page 36. The most acute conflicts as resulting from the matrix are at the same time focus of most intensive data collection.

A decision-making tree for data selection could be the following:
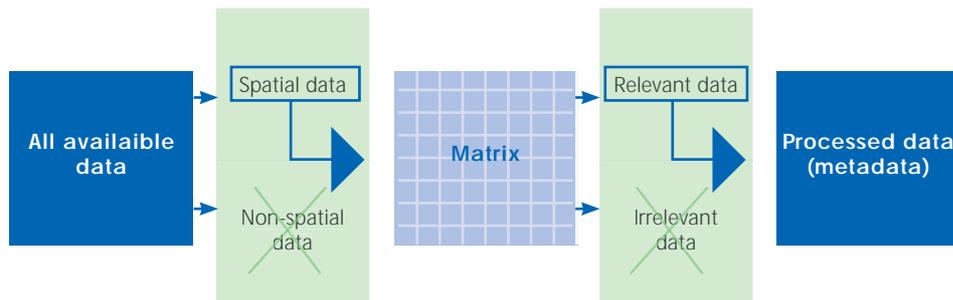
Fig. 16 Possible decision-making tree for data selection

CASE STUDY >>>

Odessa 12 smz

Oil spills present a serious threat for the Black Sea. The Ukrainian Scientific Center of Ecology of Sea (UkrSCES) is preparing maritime spatial plans and a GIS-based interactive map service on accidental oil spills in order to enable a quicker reaction to such accidents. Basic data sets for these ecological sensitivity maps are: meteorological, hydrological and geological data, data on existing pollution and natural assets (phytoplankton, benthos, fish, birds etc.). Shipping routes, ship parameters and aspects of distribution in time are other important parameters.

Underwater infrastructure such as pipelines would be an example of unnecessary information for this specific planning. They can be neglected without loss of overall functionality of the plan.

Fig. 17 Data collected for the 12 smz maritime plan of Odessa

Step 4:

Analysis: identifying issues and problems

The direct result of the previous planning stage is a specific **map of current uses**. By this stage you should also have an idea which uses are generally compatible with one another, which have high spatial needs and which are developing particularly rapidly. Drawing up a map of conflicts can be helpful in order to show the urgency and severity of existing uses and to point towards potential future conflicts.

▶ **A participative approach to analysis**

A conflict map can be a driving force behind the making of the Maritime Spatial Plan

Instead of the traditional expert-led approach, a good way of starting off the difficult analytical stage is by inviting stakeholders to join the planning team and turning analysis into a participatory exercise.

Topic Groups can be useful to discuss each of the main issues/problems/threats that have been identified. Each group should be tasked with producing more in-depth understanding of a specific issue. These discussions should take place within an informal workshop atmosphere and end with a plenary session in which the results of each topic group are shared with the others.

An outcome of this analytical stage should be to reduce the problems to as small a number as possible. The result should be a list of strengths, weaknesses, opportunities and threats (a so-called SWOT analysis), which are recognised and widely shared between the stakeholders.

Problem as a point of departure

Planned change (Vision)

> Landscape
> Criteria for vulnerability (ecological or cultural or both)
> Vulnerability models for environmental systems

> Social requirements
> Criteria for attractivity of various land-uses (agriculture, industry tourism, housing etc.)
> Attractivity models for new development

Conflicts between interests in development and conservation
> Plan alternatives Al, A2, A3 ... An
> Evaluation of alternatives
> Negotiations – selection of the alternative to be further elaborated into a plan

Plan

Fig. 18 An example for a general planning scheme (PAP/RAC)

▶ Vulnerability assessments as an analytical tool

Vulnerability assessments can help to decide what use is best suited where, and whether limits of any kind should be imposed. Vulnerability assessment is a strategic planning tool primarily designed to identify potential environmental threats arising from planned uses ex ante. Added benefits include knowledge exchange among different disciplines and between experts, policy makers and general public, as well as integration of public value orientations in decisions about spatial planning and management.

The following conditions are required to draw up a vulnerability assessment for an area:

> Environmental and territorial data

> A set of formally approved or commonly agreed environmental protection objectives for the concerned area (including SPAs, water protection areas, agricultural land etc.)

> A set of planned land uses, projects and measures; and their detailed (as far as possible) characteristics relevant for the area

> Knowledge about cause-effect relationships (environmental impacts); usually available as expertise from experts

> Knowledge about priorities, value orientations (collected from relevant stakeholders, general public; reformulated if needed during the process)

> Data processing hardware and software

Ideally, the vulnerability assessment is prepared using GIS support. This makes it a dynamic and flexible tool, ready for update with new or refined environmental data and applicable to new planning challenges and requirements.

All the potential users should be actively involved in the preparation of the assessment since they will be using it as a support tool for their decision-making and planning.

CASE STUDY >>>

Vulnerability assessment along Ferrara coast in Emilia-Romagna, IT

Ferrara coastal area lies in the Po delta coastal plain, characterized by low topography with large areas below sea level, intense morphodinamic evolution and a high level of human pressure and turistic exploitation of the beaches.

This pilot project checked the application of regional ICZM guidelines at a local scale in Ferrara's Territorial Coordination Plan. According to the ICZM recommendation, a detailed vulnerability assessment (VA) has been carried out with particular attention to the evaluation of the most critical factors such as coastal erosion, flooding and salty water intrusion in the ground water. Most relevant data have been analysed and combined in GIS by using spatial multiple criteria analysis. For each critical factor vulnerability indexes have been identified as listed in the following table:

Critical factors	Vulnerability indexes
Coastal erosion	Beach width , Beach elevation, Coastal slope Shoreline accretion/erosion rate, Subsidence rate, Artificial defence
Flooding	Topography, Subsidence rate, Wheather condition (sea state), Sea level rise
Salty water intrusion in ground water	Geological setting, Hydraulic parameters, Resistivity, Aquifers exploitation

The resulting vulnerability classification has been outlined in several thematic maps, which show the most critical zones of Ferrara coast.

Fig. 19 Vulnerability maps relative to:

1) subsidence and sea-level rise

VULNERABILITY
- Very Low
- Low
- Moderate
- Modrate/High
- High
- Very High

2) beach erosion

3) subsidence and altimetric setting
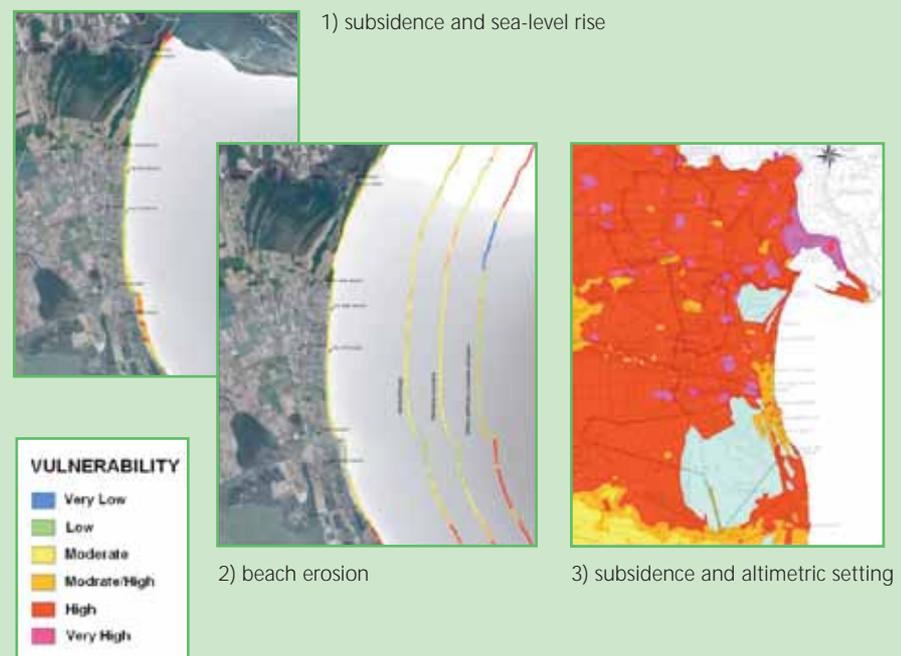
In a next step, the pilot project had to ensure coherence between the various planning choices and the vulnerability. For this reason an initial series of criteria and suggestions to support planning has been identified. Attention was focused on areas with ongoing planning projects and other investments or where the natural situation is critical.

The final results have been presented in a matrix confronted with the plan objectives, in order to identify conflicts and to suggest corrective actions. For each critical case analysed, consequences for the provincial and town administrative bodies could be anticipated (see matrix below).

		PLAN'S OBJECTIVES AND POLICIES				
		Complete the town's plan for urban area	Concentration of production activities	Development of the harbour system	Reclaim of heritage buildings	Improve the tourism's structure
PLANNING SYSTEM'S SENSIBLE COMPONENTS vulnerability	**Salt water intrusion into aquifers** – high	– Connection to waterworks – Reduce of groundwater extraction				
	Flooding of coast – high vulnerability for the long period	– Connection to waterworks – Reduce of groundwater extraction – Reuse of sand extracted from the civil works for beach nourishment		– New buildings is not allowed in the beach area – Connection to waterworks – Reduce of groundwater extraction	– New buildings is not allowed in the beach area	
	Coastal erosion – low			– Harbour development according to the littoral morphodinamic and coastal processes		

Fig. 20 Example of an interaction matrix

CASE STUDY >>>

Vulnerability to oil spills as a trigger for international spatial planning suggestions in the Central Adriatic

D.A.M.A.C. (Environment Defence of the Adriatic Sea and Communications) is a partnership between the Marche Region (IT) and Zadar County (HR) to promote integrated management and sustainable development in the Central Adriatic. Oil spills and their impacts on the Adriatic constitute a major focus of the project.

In order to calculate risk, a methodology was developed that takes into account hazard, vulnerability and exposition to danger. Hazard was calculated on the basis of number of vessels carrying dangerous cargo (petrol, chemicals), concentration of maritime traffic in general and natural phenomena (e.g. storm, waves, sea currents). Vulnerability applies to both the marine ecosystem and the human population. Exposition is calculated based on estimates of natural ecosystem values, as well as economic values of the fishing and tourism industry. On the basis of this information, risk maps have been drawn up modelling the impacts of potential oil spills in the Adriatic. Planning measures have also been suggested in order to minimise oil spill risks as much as possible.

The example is a calculation for a 'soft disaster' based on the MEDSLIK model. An oil spill was assumed with a total of 1920 litres released. This map shows the situation 450 hours after the spill first occurred.

A total of 47 km of coast are affected. Assuming that this will lead to a 3-month closure of all affected beaches in the summer months, economic losses to the tourism industry can be calculated for all affected communities (e.g. loss of overnight stays, losses for restaurant and other tourist trade).

Black dots on Fig. 21 are important fishing grounds (on example of calamares catch). This shows potential dangers of an oil spill to fishing as a key industry.
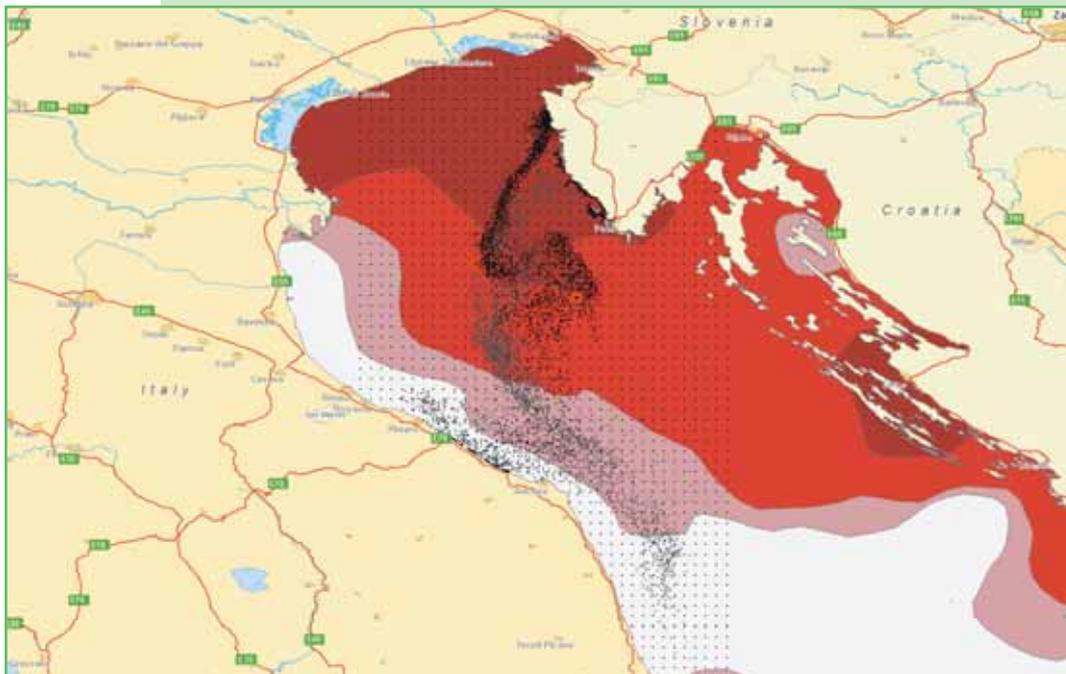
Fig. 21 Oil spill risks related to fishery on North Adriatic (DAMAC project, Marche Regione, Italy 2007)

Fig. 22 Planned Adriatic motorway on the sea along the ecological protection zones (DAMAC project, Marche Regione, IT 2007)

A planning measure suggested as a result of these vulnerabilities and risks is the agreement on an international motorway of the sea along with specific ecological protection zones, shown in the following map. The motorway is shown in purple, territorial waters dark blue, and international waters light blue. A second planning suggestion made by the DAMAC project is to designate all international waters an ecologically sensitive zone. Complementary management tools outside the remit of spatial planners would be to limit passage of vessels in bad weather or to introduce an automatic identification system for vessels.

Developing solutions for the problems identified

Although it is advisable to consider the entire IMSP process a collaborative exercise, it is here that widespread stakeholder and public consultation becomes essential. IMSP will only be successful if the plan is accepted and 'owned' by as many stakeholders as possible.

▶ **Rating spatial impacts**

Rating of pressures and impacts is a prerequisite for drawing up a spatial plan

In the previous step the specific pressures and vulnerabilities of the planning area should have become apparent. The all-important question at this stage is how expected spatial impacts are rated in the specific context of the planning area. Do the expected spatial impacts lead to any negative impacts or not, and could this be avoided through appropriate management or planning? How can stakeholders agree on this rating? You will also need to decide which uses should be given priority over others and whether there should be any limits on any particular uses. Last not least, potential future risks and uncertainty in planning will need to be considered.

A precautionary approach may well be beneficial in cases of doubt. Visualisation, scenarios and other decision support systems can help to show the advantages and disadvantages of different development options.

CASE STUDY >>>

The use of scenarios in coastal planning in North Western Germany

The aim of the EU Interreg IIIB project ComCoast (Combined Functions in Coastal Defence Zones) was to combine different concepts of land use and coastal protection. Innovative technical solutions were investigated in order to develop from a single line of coastal defence to a multifunctional coastal protection zone. The participation and evaluation process conducted within the German case study of the ComCoast project clearly demonstrated the benefits of spatial coastal protection concepts. The pilot area contained different coastal protection elements such as barrier islands, wide foreland, as well as main and second dike lines.

The intention of the case study was to think about and to create new land use patterns for the year 2050. Therefore, three scenarios were developed to describe reasonable future circumstances for different sectors.

> Scenario A „business as usual": maintaining the status quo;
> Scenario B „worst case": no communication between users, worse economic conditions and natural disasters;
> Scenario C „sustainable development": natural disasters with positive and innovative impulses and well economic conditions.

The main principle of the case study was to build consensus between a range of 'players':

1) The first step discussed local impacts and effects of the scenarios. Players had to develop consensus on desired future circumstances in different sectors and for different user perspectives.

2) In the second step players had to think about their own possible reactive strategies to the new circumstances in the year 2050. Afterwards, the ideas had to be shared with all the other attendees. The aim of the second step was to build consensus on future land use in the year 2050 for each scenario. Within a virtual box „Design Elements" were provided like pieces of a jigsaw to create a visual image of what the new landscape would look like. These design elements were implemented in a Geographic Information System, showing their respective economical, ecological and social value.

3) The third step was to weigh the different design elements. The intention was to identify the degree of multifunctionality of the design elements. A scoring matrix was provided where the attendees had to express their preference for a design element under a certain user perspective. The weights of each design element were calculated by combining the preference points from all user perspectives. Weights thus indicated the relevance of different design elements for different users. For example, the design element „salt marsh" is relevant for nature conservation and coastal protection. Using the scoring matrix, the three scenarios were compared with respect to sustainable development and the multifunctionality of their constituent design elements. Scenario C won.

An interesting result of this process was that the scoring matrix helped with deliberation and negotiation processes. The scoring was done in one-to-one meetings before a consensus workshop on the matrix took place. Comparing the one-to-one results with the outcome of the consensus workshop showed that the joint deliberation phase was not dominated by one representative, but that all groups were considered equally. Feedback of the attendees showed that all were happy to participate as early as possible in such a process to develop appropriate strategies for the coming future. (KRAFT et al. 2007)

▶ **The essential role of planning objectives**

Objectives represent the link between the analytic and constructive part, between the current status quo and the desired future state. There is a hierarchy of aims and objectives:

Planning objectives range from the general to the specific

> General aims (similar to a vision) e.g. 'sustainable development'

> Leading aims e.g. 'quality improvement of ground management'

> Strategic aims e.g. 'support to marginalised territories'

> Concrete objectives, e.g. 'creation of scientific database about the region X'

Given how much of a plan's quality depends on proper aims and objectives, goal-setting is a rather underestimated task. Objectives should again be specified collaboratively, in a participatory process that follows on from the identification of key issues and problems above. Here, a simple trick can be useful, which is to turn problems on their head in order to transform problem-centred into solution-oriented thinking.

If the problem is for example:
"there is not enough spawning ground for fish and this leads to lower catches",
the objective should be:
"to ensure that sufficient protected areas exist for fish spawning…".

This simple process, however, depends on a clear understanding of both nature and cause of the problem. It may seem that in some coastal areas the problems are far from simple, yet work within the issue groups can often reduce them to an agreed set.

▶ **Cost-benefit analysis**

Cost Benefit Analysis is an economic tool to aid decision-making, and is typically used by governments to evaluate the desirability of a given intervention. The aim is to assess the efficiency of the intervention relative to the status quo. The costs and benefits of the impacts of an intervention are evaluated in terms of the public's willingness to pay for them (benefits) or willingness to pay to avoid them (costs). Inputs are typically measured in terms of opportunity costs - the value in their best alternative use. The guiding principle is to list all of the parties affected by an intervention, and place a monetary value of the effect it has on their welfare as it would be valued by them.

Cost-benefit analysis: who is willing to pay for what?

The difficulty of Cost Benefit Analysis applied in spatial planning, is that it acts in an environment where money and market prices normally do not exist. This project-oriented tool tries to quantify the value of certain planning measures as as opposed to damage caused by inaction. Measuring the monetary costs and benefits in environment-oriented projects is, however, very difficult. Another fairly often critisied aspect of this approach is the very narrow focus on money as equivalence unit, whereas commons such as nature, space or landscape are argued to possess qualities beyond those of simple consumer goods. This is why the last years have seen growing popularity of multidimensional evaluation methods based on indicator matrices and rules of so-called fuzzy logic - descriptive qualification instead of quantification.

▶ **Optimisation of land-sea use as a guiding principle**

The next step is to consider how these objectives can be achieved. The aim of the spatial plan, of course, is to optimise land and sea uses and to resolve conflicts of use. Various types of action can be taken, each of which involves a series of specific tools.

SEA, EIA and impact assessments can be used as optimisation tools

Whereas most of the above tools (scenarios, vulnerability assessment, cost-benefit analysis) are optional, other optimisation **tools** like SEA, EIA or NATURA 2000 impact assessments have become a statutory requirement in many countries. Planners usually have little choice in applying EIA or SEA; they simply need to be done according to certain rules. Their implications for Integrated Maritime Spatial Planning are nevertheless worth mentioning.

The last section introduces a less known tool called Territorial Impact Assessment (TIA) which has the potential of becoming a perfect complementary tool for IMSP.

▶ Environmental Impact Assessment (EIA)

EIA – Environmental Impact Assessment is the oldest member of the assessment family, also known as tools for implementing sustainable development. Classic EIA is not subject of this handbook because:

> EIA is designed for one specific project and does not consider cumulative impacts as required by IMSP.

> EIA is a post-evaluation tool that does not change the planning process but only optimizes its outcomes.

> The scale of EIA is often only local.

> EIA focuses on environmental impacts only and is therefore not cross-sectoral.

▶ Strategic Environmental Assessment (SEA)

SEA (Strategic Impact Assessment) is an interesting subject related to IMSP since their objectives and methods often overlap. The phases of the SEA process (see table below) are very similar to the IMSP stages.

SEA is an integrative tool to support cross-sectoral approaches, with the ultimate goal of long-term sustainability of policies.

It has been designed to optimise sectoral, non-integrated policy documents such as energy, waste, tourism or transport development plans and programmes. The tricky part is that SEA also includes all regional and local development plans including the spatial plans, and even the so-called integrated spatial plans.

What consequence will it have for IMSP? The limited practice of IMSP so far makes it difficult to foresee what the interaction between SEA and integrated spatial planning will be.

Combining tools can save time and money

What seems like duplication (determination of environmental impacts, public participation, implementation, monitoring) can actually be combined, saving time and money. An SEA procedure which is well anchored within the corresponding stages of the IMSP process can provide **added value** in terms of even better understanding the environmental, social and economic impacts and interrelations. In any case SEA should not be seen as another bureaucratic requirement only – it is better to regard it as a 'second check' on the overall sustainability of the plan.

Directive 2001/42/EC, known as the SEA Directive requires member states to develop a legally enforced assessment procedure to describe and assess the environmental impact of all policy documents required by law (plans, programmes and optionally policies) and consider these findings when making consecutive decisions.

SEA has been developed as an 'upgrade' of EIA, applying both higher up in the decision system and earlier in time than the classic project-level EIA. Also the scope of assessed aspects has been broadened from environment only to social, economic and cultural issues (the full sustainability pyramid).

The Directive defines the following phases of the SEA process:

1. *„Screening": investigation of whether the plan or programme falls under the SEA legislation,*
2. *„Scoping": defining the boundaries of investigation, assessment and assumptions required,*
3. *"Environmental Report": documentation of the state of the environment,*
4. *Determination of the likely (non-marginal) environmental impacts,*
5. *Informing and consulting the public,*
6. *Influencing the decision taking based on the assessment, and*
7. *Monitoring of the effects of plans and programmes after their implementation.*

▶ **Territorial Impact Assessment (TIA) for large-scale projects**

Territorial Impact Assessment (TIA) is an assessment tool which can be used as a prerequisite or even alternative to IMSP. In Germany TIA has been applied to large-scale infrastructure projects at an early planning stage, when an alternative location for the proposed infrastructure is still an option. TIA can help the decision-making process by highlighting advantages and disadvantages of particular sites over others. It also checks whether a proposed development complies with overall spatial planning objectives.

Examples of potential TIA application are: large offshore wind farms, oil pipelines, high voltage cables, holiday villages on the coast or large scale transport infrastructure. In case of an offshore wind farm, a TIA can be used to consider alternative sites in order to minimise impacts on bird migration, collision risks with shipping and impacts on tourism. In case of an oil pipeline, a TIA can help if there is a choice between several pipeline routes.

TIA shares certain features with Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA). While EIA exclusively focuses on the environment, and SEA applies to programmes rather than projects, TIA extends the EIA approach to the entire spatial impact, including environment, economy, society and culture. As a spatial development tool, it is a means of ensuring balance between conflicting objectives and achieving optimum planning solutions.

In large-scale infrastructure projects, TIA can highlight advantages and disadvantages of different locations

TIA is a **participatory process**, which involves all relevant stakeholders. These include the project developer, the relevant spatial planning authority, the relevant sectoral authorities, other institutions, NGOs, municipalities and the general public.
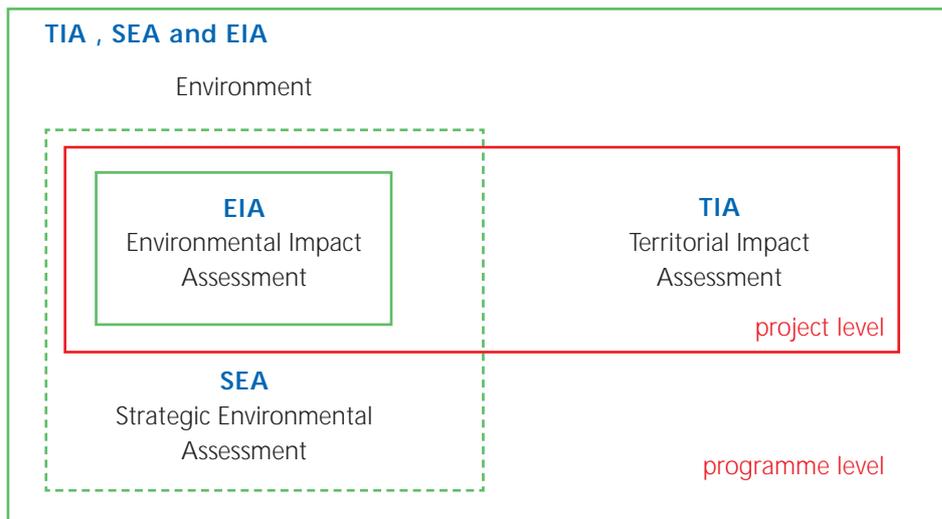
Fig. 23 Relationship between TIA, SEA and EIA (HEINRICHS 2007)

The main benefits of TIA result from the fact that it is applied early in the planning process. Although TIA is not a statutory requirement, the results of a TIA have to be taken into account in the subsequent planning process. Particular benefits arise if TIA is linked to EIA, which has to be carried out for all projects anyway. This saves time and makes the early stages of the planning process more efficient.

Benefits of Territorial Impact Assessment:

> *TIA manages conflicts by facilitating early participation of target groups*
> *TIA minimises negative impacts and costs of proposed developments because it optimises the choice of location or routing. It therefore makes technical planning more efficient.*
> *TIA ensures planning reliability by providing developers with early and reliable information on realisation chances of their project.*
> *TIA shortens the overall planning process by pre-checking crucial points and excluding non-viable projects.*
> *TIA ensures that spatial planning objectives are adhered to. TIA results must be taken into account in the subsequent process.*
> *TIA provides support to local administrations in case of large-scale investments.*

▶ **Mainstreaming nature protection**

Protection and preservation areas are by far not the only means of protecting nature and landscape. Ideally, ecological goals and measures should be mainstreamed, i.e. integrated in all sectoral policies such as transport, tourism, energy etc. Still, the strict protection of some particularly endangered areas is indispensible in the coastal zones, where space is generally scarce and ecologically sensitive.

▶ **Marine Protected Areas management planning and impact assessment**

Marine Protected Areas (MPAs) are a relatively new and increasingly popular instrument for protection of the sea and coast with outstanding environmental and landscape quality. In the European Union it is clearly a consequence of the 1992 EU Habitat Directive which encourages the designation of Special Protection Areas (SPAs) for birds and Special Areas of Conservation (SACs) for other species and for habitats. Together, SPAs and SACs make up the NATURA 2000 coherent network of protection areas also on water. Apart from that, many countries have designated off-shore MPA's according to national regulations.

There are two main implementation tools for protection of the NATURA 2000 network: NATURA 2000 Impact Assessment and management plans. The impact assessment is required for all plans and projects that either intersect a NATURA 2000 site or are located outside of it, but are in suspection of having a negative impact. The result has binding legal consequences and could even lead to banning of the project. On the other hand, such assessment should lead to optimising the project to the benefit of both the environment and the people living in the area.

The obligatory NATURA 2000 management planning is a very important tool for offshore spatial planning. Unfortunately, very few sites in Europe possess such management plans, and if so, they are often over-restrictive and not operational enough to keep up with the rapidly developing offshore economy. On the contrary, good management plans should, beside the obvious restrictions, show the possible links and synergies between protection and economical development, health and cultural values. Such approach to management planning is recommended both for NATURA 2000 sites, Water Framework Directive water basin plans and in fact to all other forms of area protection, except restricted core zones of national parks.

Message 8

Use phases of Strategic Environmental Assessment (SEA) to structure the IMSP process

Introduce Territorial Impact Assessment (TIA) as extension of Environmental Impact Assessment (EIA) for projects

Particularly Sensitive Sea Areas

(PSSA) are defined by the International Maritime Organisation (IMO) as an area in need of special protection on account of its ecological, socio-economic or scientific significance. Usually, PSSAs are defined in response to vulnerability to international shipping activities. When an area is designated as a PSSA, specific measures can be approved by the IMO in order to reduce the risk created by the shipping activities. 10 sea areas are currently designated as a PSSA, including the Baltic Sea. The Adriatic Sea is currently proposed as a PSSA.

Drawing up a plan

At this stage, the results of the above steps are translated into a specific planning document and map. Space is allocated to different uses through means such as zoning.

▶ **Is a map of uses / conflicts not the same as a spatial plan?**

Whilst a map of current uses is an important prerequisite of the planning process, it should not be confused with the plan itself. The following table points out the differences:

Map of uses	Spatial plan
Should be drawn up everywhere	On the sea draw up only when needed
Shows the status quo on how IS the space used	Shows the desired direction and vision of how coastal and marine space SHOULD be used
Can visualise changes and developments in space and time	Analyses the maps and scenarios according to set criteria
Is a necessary first step to a spatial plan	States how the vision will be achieved and specifies measures

A spatial plan is a vision of the future

In contrast to a map of uses, a spatial plan thus implies choice and direction. It is a reflection of decisions that have been taken with regards to priorities of use: a vision of what will be rather than what is.

A spatial plan consists of two parts: a cartographic visualization and a legal document describing the specific measures applied.

▶ **First rule: Keep it simple!**

As spatial plans are, or should be, strategic policy documents, the aspect of their practicability is extremely important. It is in nobody's interest to produce pages of theoretical expertise. Instead, a spatial plan should be a practical tool, which gives full value for the cost and joint efforts invested by the stakeholders (see Step 7: Implementation).

▶ **Zoning**

Zoning means that different priorities are set for different sections of the planning area. It takes into account the specific characteristics and limitations within the planning area, including sections' suitability for certain uses, sensitivities or vulnerabilities. Here are some examples of measures and spatial categories that can form the backbone of zoning:

Marine ecosystems and their components are not managed – it is human uses that can be managed!

Spatial categories:

> **priority areas** which are reserved for a specific form of use and where other conflicting uses are excluded,

> **reserved areas**, where certain uses are given priority over others,

> **areas suitable for particular uses**, available to defined uses which are then excluded from all other areas.

CASE STUDY >>>

Wismar Bay, Germany

Wismar Bay on the German Baltic Sea coast is an area where undifferentiated demands of tourists had led to undifferentiated demands made by nature protection, with resulting impacts on regional development. As part of the BaltCoast project, a study was carried out that first of all identified all nature conservation and tourism demands. A comparison of demands showed that conflicts were overrated and could often be solved through spatial differentiation. It became apparent that both tourism and nature protection were influenced by seasonal variation. Whereas tourism uses are concentrated around summer, the time with highest demand for nature protection is winter. It also became clear that any increases in disturbance caused by new tourism developments (e.g. from new harbours) was mostly concentrated in areas already highly frequented.

On the basis of these findings it was possible to present differentiated maps for Wismar Bay with three types of areas:
a) Areas with conflicts identified and rated
b) Areas with priority for natural development
c) Areas with priority for economic development

In a third step coordinated solutions were sought and agreed by all stakeholders for the areas with identified conflicts. The process of spatial differentiation within Wismar Bay has therefore reduced conflicts to a minimum.
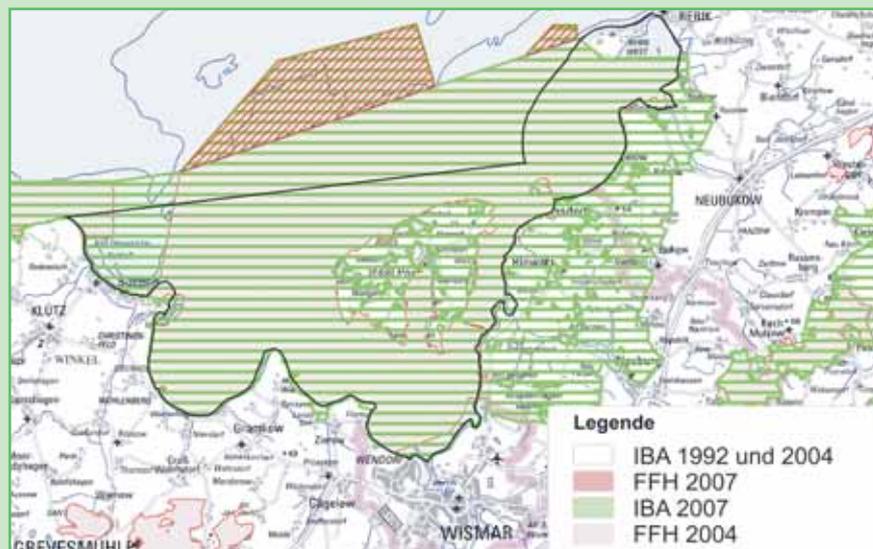
Fig. 24 Areas with priority for natural development, Wismar Bay

▶ How to do zoning

As a first principle, zoning needs to be in line with national priorities, policies and strategies, as well as international conventions and standards. These include sustainable development strategies, national spatial development strategies, transport policy, energy policy, Natura 2000, international shipping routes etc.

Where no national or higher level strategy/guidelines exist, the quality of your own goal setting as described in Step 2 becomes even more important!

Remember that we never know what future uses might arise in a seemingly conflict-free area. Reserving areas for future developments is therefore a useful principle.

Within this framework, the first task at hand is to identify the so-called "immovables" since space will need to be allocated to these first. Immovables are those uses that require a very specific area and cannot be moved to alternative locations. Options might exist for co-use and for restricting the spatial extent of such uses, but not for a large-scale spatial shift. NATURA 2000 sites, fixed infrastructure such as ports, shipping routes guided by UNCLOS (United Nations Convention on the Law of the Sea) and extraction sites are generally immovables. A decision will be made at this stage whether areas allocated to immovables should exclude other forms of use or not. Immovables should first be considered in the context of national and international spatial priorities, which should have been identified in the very first planning stage. Regional and local priorities are also important, in particular where important economic sectors and traditional forms of use are concerned. A list of immovables could be drawn up, ranked according to urgency. Immovables are also the first uses to be mapped.

Zones need to respect existing priorities, strategies and "immovables"

Setting out immovables in this way delineates the planning space which can then be allocated to other uses. As a guiding principle, space should be allocated in such a way that areas are as suitable as possible for the use in question (including economic considerations), but the lowest possible negative impact is incurred. Here again it is recommended to work closely with the most important stakeholders, such as the local authorities, representatives of harbour authorities, shipping, nature protection, fishery and other sectors that shape maritime space.

▶ Limits of zoning

Irrespective of the clear benefits of zoning it should be, as all other measures, needs-driven. In most cases it takes great deal of flexibility and coupling with other forms of resource management. This is particularly important where ecological resources are concerned. Fish or birds will not be impressed by spatial plans, but move around as environmental conditions dictated. Reserve areas or human activities may therefore need to be shifted, limited or otherwise adapted over time to make sure the original objectives are met.

CASE STUDY >>>

Defining suitable fishery areas in the German Baltic sea

In Mecklenburg-Vorpommern, fishery and aquaculture is one of a range of sea uses that are particularly relevant at present. Nevertheless, it is not considered in the offshore state spatial development programme (LEP). The reason for excluding fisheries was insufficient data. To remedy this and to ensure that fisheries are included in the next LEP, a project was set up between the Spatial Planning Authority and the State Ministry of Agriculture and Fishery. The spatial planning task was to protect spawning and breeding areas, keep fishing areas free from disturbance, and harmonise different demands and needs. The main question for the project was how to actually identify marine reserve areas for fishery. Areas used by fishermen and spawning areas were identified as a first guideline to identify important areas.

A consultant was then employed with the following brief:

> to establish relevant basic data and information needed for identifying areas for fishing, spawning and fish breeding,
> to characterise the spawning and fish breeding areas in terms of user conflicts and potential threats and present the results in GIS-based maps,
> to describe fishing areas in terms of commercially relevant species, fishing tools, closed seasons, spatial and temporal extent of fish catches in coastal waters, expected / potential use conflicts and potential threats and present the results in GIS-based maps.
> to overlay different user interests,
> to classify or rate the fishing, spawning and fish breeding conservation areas,
> to propose suitable spatial categories.

Initially, the consultant was dealing with the question of where important fishing areas are located. In fact, very few sections of the coastline are not used by fishermen, which might suggest that the entire coastline is more or less important for fishery. Other, more specific data therefore had to be collected to determine where, and if, marine reserve areas for fisheries should be located.

The consultant put forward a proposal based on the concepts of

> fish conservation area (Fischschonbezirke)
> Protected spawning ground (Laichschonbezirke) and
> Special marine habitat for breeding and other fish habitat function (e.g. habitats required for reproduction and hatching)
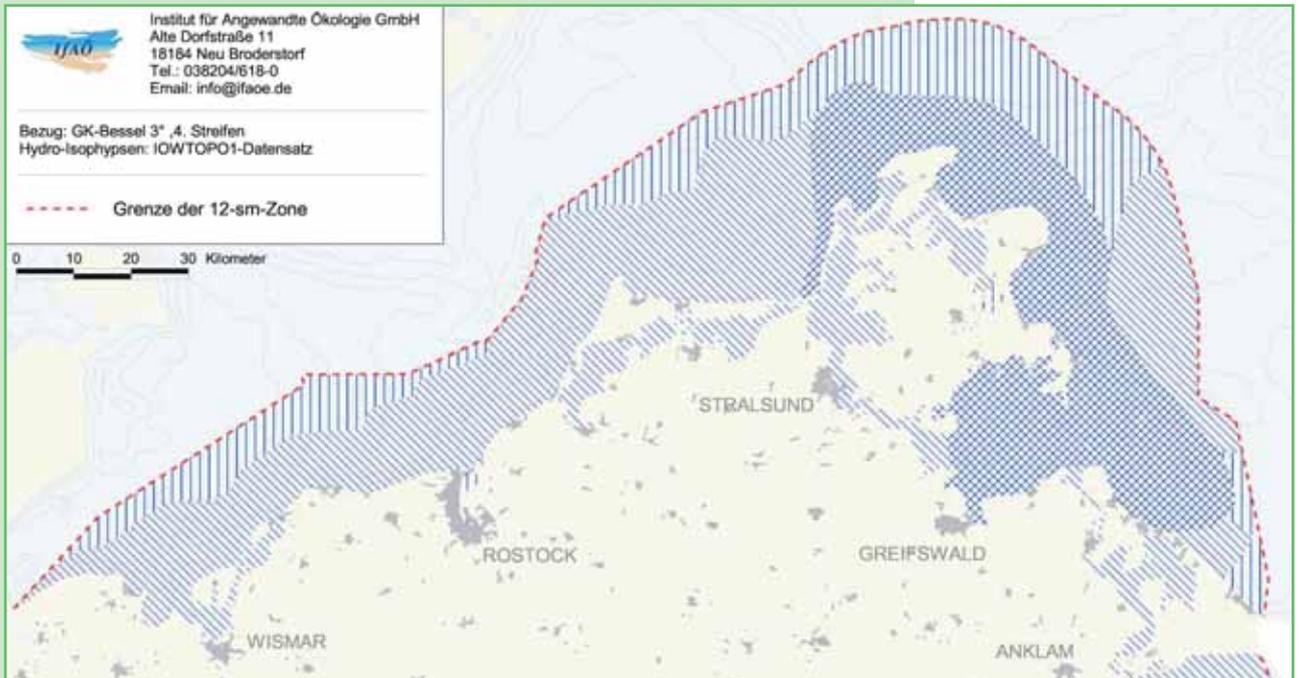
Fig. 25 Fishing locations in Mecklenburg-Vorpommern (HEINRICHS, 2005)

The consultant worked out a proposal for marine reserve areas for fishery, which are illustrated in this map as "areas with special function of the natural base of fish fauna".

A recommendation was not to establish an area category in the SSP for "relevant fishing areas", but to include this as an informal map.

As result of expert interviews and analysis of fishing statistic three kind of fishing locations with different degree of importance have been identified:

> prominent fishing locations illustrated cross hatch,
> special fishing location illustrated diagonal hatch and
> additional fishing locations marked in straight line.

Good information and data are available for the eastern areas, but not for the rest of the coastal sea. More data will therefore need to be collected. The consultants proposed that this map too could be used as background information and included in the SSP as an informal rather than programme map.

Next, the task of the spatial planning authority is to decide, whether it will adopt this proposal or if changes will be necessary. This procedure will continue in close collaboration with the Ministry for Fisheries.

Implementation

▶ **Since plans are there to be implemented …**

Implementation is the crucial stage of the IMSP process, although it is not strictly a responsibility of spatial planners and therefore outside the scope of this handbook. Nevertheless, some general points on conditions for successful implementation can be given.

▶ **… planners should make sure to facilitate implementation as much as they can**

National regulations on IMSP need to make sure that other policy documents give maximum consideration to maritime spatial plans

Spatial plans, as such, are rarely directly implemented. Their implementation takes place more indirectly as a result of various decisions taken on their basis, or at least by taking them into account. Once approved, the spatial plan therefore lives countless ‚second lifes' in form of subsequent laws and regulations issued e.g. on transport, fishery or other sectoral policies.

Whether immediate implementation is the result or not, planners can take steps to ensure that plans are straightforward and easy to put into practice.

To begin with, the spatial planning document – i.e. the zoned map and the accompanying descriptive part – should be supplemented with a specific description of who will be responsible for what. Setting out responsibilities as clearly and concisely as possible is one way of ensuring that implementation can and will take place. The spatial plan should therefore include:

> the addressee of each measure, i.e. the institutions or persons responsible for realisation
> priorities of different measures.

As a second step, which can be done as part of the actual spatial plan or become a separate implementation strategy (e.g. a management plan or part of a regional development plan), the following can additionally be specified:

> a timeline for implementing the measures,
> estimated cost and suggestions on how the necessary funds can be obtained.

The advantage of being as precise as possible at this stage is that it becomes much easier to track potential problems. It will also be possible to specify a point in time for evaluation: Have all addressees delivered what they were supposed to deliver in the time specified? If any problems are experienced, what are they and can they be remedied? These and related aspects are dealt with in the subsequent evaluation step.

▶ The benefits of a participative process

At this stage, the essential role of stakeholder integration in the planning process becomes obvious. The more participative was the planning process, the less likely it is that conflicts will be experienced over implementation. Remember too that implementation out at sea is difficult to police. The wider overall acceptance, and the greater overall 'ownership' or identification with the plan, the greater the likelihood that everyone will want to see it implemented – and actively see to its implementation!

CASE STUDY >>>

Debina, Poland

A good example for participative conflict resolution was given by the new integrated spatial plan for the Debina coastal municipality in Pomorskie, Poland.

The coastal area of Debina is situated in a swampy, below-sea-level ground within the buffer zone of the Slowinski National Park. Its only protection from the sea is a system of low sea dykes. Nevertheless, in the old spatial plan parcels have been designated as buiding ground and sold to private parties. The main goal of the new spatial plan was therefore to prevent the construction of houses in this highly sensitive and risky area.

The authors of the plan, the Regional Spatial Planning Office in Slupsk, decided to go beyond the regular statutory stakeholder consultation process (with claims collected from local authorities) and directly approached the land owners. In a series of informal meetings the impacts and risks connected to the construction of houses in this difficult area will be discussed and alternative locations proposed. This will help to avoid unnecessary costs and conflicts, as individual decisions made after this information campaign will be the sole responsibility of the investors.

Debina area

CASE STUDY >>>

Voluntary agreements on the Greifswalder Bodden

Stretching between the city of Greifswald and the island of Rügen, the Greifswalder Bodden is a Natura 2000 site which is valued primarily as a stop-over point for migratory birds and as a breeding ground. At the same time, it is a highly popular area for watersports, offering excellent boating, canoeing and angling. The conflict potential is clear, but how to avoid potential clashes between these key interests?


Fig. 26 Greifswalder Bodden
(www.wassersport-im-bodden.de)

Formal options for achieving nature conservation protection are an obvious option, but these take time. Creating a new National Park, for example, or even passing a bylaw for regulating boating traffic could take ten years or more. There is also the problem of acceptance of such top-down options. For this reason, the WWF instigated a plan for "bottom up nature conservation", involving users from the very beginning and jointly developing voluntary regulations which would be widely accepted by all. Thus the "Voluntary agreement on nature conservation, water sports and angling in the Greifswalder Bodden and the Strelasund" was born. Its aims are to protect the area in the long term, to regulate boating by agreeing spatial and seasonal restrictions, and to incorporate the voluntary agreement in the official Natura 2000 management plan.

The WWF considered itself as a facilitator and 'motor' throughout. Funding was provided by INTERREG III, the lottery and the Manfred-Hermsen foundation. Beginning in 2000, the first step was to bring together all interested parties, which in this case were nature conservation NGOs, the state Ministry for the Environment, as well as a wide range of local user groups and associations. Actual negotiations then took five years, with the last agreement signed in 2005.

The agreements have the status of a regulation under public law. They are voluntary, but binding to the signatories. They comprise a framework agreement, signed by the state Ministry for the Environment, user associations, WWF and nature conservation NGOs, and four regional agreements governing the use of specific areas, signed also by local user associations. The agreement, which will run for 3 years initially, also stipulates that regular monitoring and evaluation will be carried out.

An elaborate information system was developed together with local sports associations to ensure that local and visiting users are aware of the agreements. A website, leaflets, posters and a guidebook "Boddenatlas" provide information, and a boat tour was arranged by the WWF to eleven local harbours and marinas in an attempt at raising as much awareness as possible. So far, monitoring results are encouraging, with 86% of boat users respecting the agreement in 2006.

The WWF describes the project as follows: "It took many meetings, joint boat tours and a lot of patience to achieve mutual understanding and work out agreements that benefit everyone, nature conservationists, water sports people and anglers. Hundreds of conversations with boat users have shown us that people are very willing to respect nature's needs. It helps that we have people in our team who also like sailing, which is good if you want to really convince people." Partners are convinced that the agreement will become permanent and serve as a model for other areas and regions.

▶ Does implementation mean that laws have to be passed?

In order to fully apply the tool of Integrated Maritime Spatial Planning, spatial plans should become legal acts. This will ensure that they are respected by all, even most reluctant stakeholders. At least in the initial phase of IMSP, 'integration' will thus be imposed in a more or less top-down process. In countries where laws that guide spatial planning on land are well established and working, it may be a simple case of extending these laws to the sea. In countries without spatial planning traditions, new solutions will need to be sought. Legal provisions also need to ensure that requirements specified at a higher spatial level are implemented lower down. Rules or objectives laid down in a regional spatial plan, for example, will be useless if they are ignored at the local level.

On the other hand, it would be unrealistic to expect every aspect of implementation to be guided by law. In case of specific resolutions of the plan, voluntary agreements and overall acceptance (see above) may well constitute the better option. This, however, requires bigger initial costs than a simple ban on certain activities.

▶ What if a legal framework has not yet become available?

The lack of a legal framework for IMSP should not become an excuse for not drawing up an integrated maritime spatial plan in the first place. On the contrary: drawing up a spatial plan can become an important tool for generating political awareness of the benefits of IMSP, which in turn can trigger political interest and action. This is the approach adopted by most of the PlanCoast pilot projects.

▶ Successful implementation includes lobbying for the benefits of IMSP

In order to successfully implement an integrated maritime spatial plan, awareness-raising is essential. Politicians and other key stakeholders should acknowledge the many benefits of IMSP, in particular with respect to the economic advantages that result from more effective resource allocation and less time wasted in complex negotiations over permits. Planners can play their part by lobbying decision-makers, providing information and inviting civil society to the table. Although a well-planned IMSP process is time-consuming and expensive, the long-term benefits in terms of greater security for investors and reduction of conflict potential will pay dividends. Economic and qualitative monitoring of the real and perceived benefits of IMSP therefore become all-important (see Step 8 Evaluation).

Message 9
Maritime Spatial Plans have to be considered as a basis for all sectoral decisions
IMSP is more than a technical exercise – it is a political responsibility
Political awareness-raising is necessary

▶ IMSP is a political responsibility

Although the drafting of an IMSP is a technical exercise, the IMSP process is definetely a wider political responsibility. IMSP will only be successful if it is taken on board by all relevant stakeholders and receives support from politicians working in different sectors and at different scales. Planners can actively lobby for such support by pointing out the potential benefits that arise from a well-structured and properly implemented IMS-Plan.

Step 8:

Evaluation

> *if you don't measure results, you can't tell success from failure*
> *if you have no measure of success, you can't learn from it*
> *if you can't recognise lack of success you can't correct it*
> *if you can demonstrate success, it is easier to win public support*

The results and continued appropriateness of the spatial plan need to be checked at regular intervals. Points to consider include:

> Have the original objectives (visions) been achieved?
> Is the plan still appropriate or have circumstances changed? (e.g. development of new external driving forces or emergence of new trends)
> Does the vision need to be adapted? (e.g. new priorities emerging)

Evaluation only makes sense if the real situation can be compared to the desired end state. Usually, this end state would be specified in the spatial plan. Based on the evaluation results, action can then be taken to correct undesired trends or to continue successful management practices.

Evaluation: key principles

Clarity: Understand who will use the outcome of the review, why and how.

Focus: Have a mixture of key information on core objectives (long-term) which is complemented by more routine information (short-term).

Balance: Ensure that the information is not too costly to collect and reflects the range of plans objectives.

Still relevant: Undertake regular appraisal to check that the plan still reflects what you want to achieve. Have the objectives changed?

Robust: Ensure that the indicators can be audited by external bodies and that they are SMART (Simple, Measurable, Achievable, Realistic, Timely).

▶ **Spatial monitoring and indicators**

There are two possible approaches to spatial monitoring:

1) One begins by taking the desired outcome (which should have been clearly stated in the spatial plan and describe the desired end state of the coast and sea) and then developing a selection of key parameters that describe these outcomes. Indicators and data needs are specified last of all.

2) The other approach begins by developing possible indicators first, and then focuses on parameters.

Indicators may need to be adapted to local conditions or spatial scales and will need to be ranked in some way.

Goal	No.	Indicator	Measurement
To control further development of the undeveloped coast	1	Demand for property on the coast	– Size and proportion of the population living in the coastal zone – Value of residential property
	2	Area of built-up land	– Percent of built-up land x distance from the coastline
	3	Rate of development of previously undeveloped land	– Area converted from non-developed to developed land use
	4	Demand for road travel on the coast	– Volume of traffic on coastal motorways and major roads
	5	Pressure for coastal and marine recreation	– Number of berths and moorings for recreational boating
	6	Land take by intensive agriculture	– Proportion of agricultural land farmed intensively
To protect, enhance and celebrate natural and cultural diversity	7	Area of semi-natural habitat	*Under development*
	8	Area of land and sea protected by statutory designations	– Area protected for nature conservation, landscape or heritage
	9	Effective management of designated sites	– Rate of loss of, or damage to, protected areas
	10	Change to significant coastal and marine habitats & species	*Under development*
	11	Loss of cultural distinctiveness	*Under development*
To promote and support a dynamic and sustainable coastal economy	12	Patterns of sectoral employment	– Full time, part time and seasonal employment x sector – Value added x sector
	13	Volume of port traffic	– Number of incoming and outgoing passengers x port – Total volume of freight handled x port – Proportion of freight carried by short sea routes
	14	Intensity of tourism	– Number of overnight stays in tourist accommodation – Occupancy rate of bed places
	15	Sustainable tourism	– Number of tourist accommodations holding EU Eco-label
To ensure that beaches are clean and that coastal waters are unpolluted	16	Quality of bathing water	– Percent of coastal bathing waters compliant with the Guide Value of the European Bathing Water Directive
	17	Amount of coastal, estuarine and marine litter	– Volume of litter collected per given length of shoreline
	18	Concentration of nutrients in coastal waters	– Riverine and direct inputs of nitrogen and phosphorous to inshore waters
	19	Amount of oil pollution	– Volume of accidental oil spills – Number of observed oil slicks from aerial surveillance

Fig. 27 Some examples of indicators' development for key management objectives in Emilia-Romagna, Italy

▶   **Separating delivery and impact of the plan**

There are two elements to evaluation: one, the spatial impact of the plan, and two, the delivery of the plan. Both need to be considered separately since they have different requirements. A crucial element in both cases is the definition of indicators that allow you to track and measure change.

In terms of space, evaluation means regular monitoring of key spatial parameters. Evaluation of delivery is only possible if tangible objectives and specified milestones have been defined beforehand. In both cases the fundamental question to be asked is " Have

the results, which were sought/expected, been achieved on time and within resources, and if not, why not?" If the desired results have not been achieved, it will be necessary to revise the plan or elements of its implementation. Decisions may be to provide more resources, to give the plan more time to be implemented, or to change priorities for space. Remember that the reasons for not achieving the desired results may also be outside the remit of the plan.

▶ Evaluating the delivery process

When it comes to evaluating the delivery of the spatial plan, different criteria need to be applied. Questions to be asked include the following:

> Has the plan been delivered according to the timetable specified?

> Has the plan been delivered within budget?

> Have all those who were allocated specific tasks delivered these?

When it comes to evaluating the actual planning process, consider these:

> Have all relevant stakeholders been included or has anyone been excluded?

> Have conflicts of use been successfully resolved, or do significant disagreements over spatial use remain?

> Has the public been informed and provided with opportunities to become involved?

> Is the plan widely accepted?

Regular interviews with stakeholders and network and communication analysis can be helpful tools in this context.

▶ Evaluating the benefits of the plan

Evaluation means ascertaining whether the plan has achieved the desired outputs

Essentially, this deals with the question of whether the spatial plan has delivered the desired benefits of the stakeholders involved. This should include economic benefits in terms of investment made in maritime industries, jobs generated from maritime industries, or money saved on repeated exercises of conflict resolution. It could also measure the benefits arising from clearer application and approval procedures for new maritime uses: Has the spatial plan helped to speed up these procedures or not, and do clear guidelines now exist for what will be approved in what sea areas? Last not least, the benefits of the plan and the planning exercise can also be measured in stakeholder satisfaction: Has the planning process led to better communication between stakeholders, clearer responsibilities, a reduction in conflicts? The latter will require qualitative tools such as interviews with stakeholders, which are time-consuming but certainly pay dividends when it comes to improving the plan next time round.

Highlighting the success of the plan in delivering key benefits is an invaluable tool in political awareness-raising. Demonstrating that IMSP does yield measurable results will also go a long way towards ensuring continued financial support for IMSP.

6

6.1   Scales and responsibilities

Disrespective of who does what, it is important to ensure integrity of aims and objectives and be consistent all the way from international policy objectives through to local planning objectives

▶   Different scales for different tasks

Maps and plans at different scales not only make sense from the point of view of spatial impact. IMSP should also reflect the fact that different issues are best dealt with at different levels and that IMSP cannot be carried out by one level alone. There is also the issue of continuity: A local plan, for instance, only makes sense if its key objectives do not contradict with what is said in a regional plan. Different administrative levels therefore need to work together in order to ensure a co-ordinated overall approach.

It is important to be clear about what each level can and cannot do. The international level, for example, is best equipped for agreeing common rules and regulations, but cannot be expected to develop local plans. Vice versa, in most countries it would not make sense to task the local level with the development of a national IMS Plan.

▶   Who should be responsible for IMSP?

As a general rule, local issues are often best dealt with at a local administrative level. Issues affecting the EEZ are best delegated to national or international authorities. Responsibilities for IMSP should be assigned accordingly. The regional level plays a key role in that it often brings together cross-sectoral agencies to take the lead in implementation.

The diagram below is a generalised representation of which administrative level should ideally be responsible for IMSP at different geographical scales.

	Coast	12smz	EEZ	beyond
International				
National				
Regional				
Local				

responsibility

Fig. 28 Most suitable responsibility scheme for IMSP

Although planners are always forced to work within the existing administrative system, it is generally useful to assign planning responsibilities at a lower rather than higher administrative scale. The size of a country and the length of the coastline however do play a role, so that there cannot be any hard and fast rules. In Germany, a large country with a reasonably large coast, the federal Länder now hold planning powers for the land and the 12 sea mile zone. In smaller countries, it may be more appropriate to assign these responsibilities to local municipalities or districts.

The reason for 'downscaling' responsibilities for IMSP has to do with being close to the issues. Real agreement on how to deal with issues will be easier if there is a sense of caring for the issues (ownership) – not only of the resource, but also of the issues to be dealt with, the planning process and implementation.

▶ **Institutional implications and the need for a central coordinating body**

In most countries, new formal institutions will not be needed for implementing IMSP. In large countries with large coastlines and complex situations however, it may pay to do exactly that. The UK for example is currently establishing a new maritime agency, which will bring together different ministries, industry and other stakeholders in an attempt at bundling a broad range of responsibilities and tasks. The new agency will also have responsibility for maritime spatial planning.

The success of IMSP depends on co-operation across sectors and spatial scales

Whatever the institutional context, working together across administrative boundaries and sectors is essential if a co-ordinated IMSP framework is to be achieved. A particular point is that land-sea co-ordination should be strengthened. A co-ordinating mechanism or agency needs to be established, which can either be placed with an existing institution or become a separate entity. Whoever takes on the role of co-ordinator not only needs to feel responsible, but also take on responsibility for organising and implementing IMSP.

The need for co-ordination is so strong that it may pay to make the establishment of a cross-sectoral co-ordinating body a legal requirement.

CASE STUDY >>>

Romanian National Co-ordination Body for ICZM

Romania is the only Black Sea country, and one of the few world-wide, which has a special legal and institutional framework for ICZM.

In 2004, following the recommendation of the Romanian ICZM strategy the National Comittee of the Coastal Zone (NCCZ) was founded under the responsibility of the Romanian Ministry of Environment and Sustainable Development.

The Technical Secretariat of NCCZ is based at the National Institute for Marine Research and Development "Grigore Antipa" in Constanta and operates via its 6 thematic working groups:

WG 1: delineation of the coastal zone, urbanism and spatial planning;
WG 2: coast protection;
WG 3: technical and legal assistance;
WG 4: ICZM policies, strategies and action plans;
WG 5: monitoring and surveillance;
WG 6: information and communication.

The National Committee has 46 permanent members representing 40 organisations such as the ministries related to coastal zone county councils, coastal municipalities, the Danube Delta Biosphere Reserve Administration, research institutes, NGOs and many others.

The main task of the NCCZ is to endorse plans and studies regarding integrated coastal zone management and local and regional spatial planning, as well as assessing environment impact of activities in the coastal zone. Besides implementing the EU ICZM recommendation, its aim is also to facilitate the implementation of the Water Framework Directive, NATURA 2000 and other water related directives.

In practice, however, the NCCZ is experiencing some problems. Due to lack of financing, all work needs to be done on a voluntary basis. Working procedures are also unclear: officially only members of NCCZ can take part in working groups, whereas often specific experts/consultants would be needed. Until now only WG 1 and 4 started their work. The technical secretariat has only an administrative role at the moment, but wishes a more technical-supportive role as well.

Meeting of the Romanian ICZM Comittee

▶ **What should the co-ordinating body do?**

A central task of the co-ordinating body should be to bring together information, actors and stakeholders, and act as a facilitator in drawing up and implementing integrated marine spatial plans at different levels. The coordinating unit should be a neutral player with regard to socio-economic issues and sectors. Its role is purely a technical one. It should be supervised by a democratically elected body or public authority.

There should be clear rules of representation in such coordinating bodies, ensuring that all relevant interests on both land and sea are taken into account. The co-ordinating body should hence be required to consider land-sea integration in all its deliberations.

Suggested tasks of the co-ordinating body:

> *Securing involvement of relevant stakeholders and establishing dialogue between them,*

> *Creating a common information basis and agreeing on formats of data generation, collection formats and data evaluation,*

> *Facilitating the preparation and concertation of the entire planning process, beginning with the identification of a common vision,*

> *Facilitating implementation by creating the necessary links between IMSP planning and the delivery phase,*

> *Carry out the evaluation of the spatial plan.*

CASE STUDY >>>

Morsko Dobro, Montenegro

In Montenegro the narrow strip of 6 meters together with the entire 12 sm zone has traditionally been defined as maritime public domain for general and special public purposes. The Public Enterprise for Coastal Zone management (an organisation called 'JP Morsko Dobro') is the sole owner of this space. Executive functions in terms of adopting spatial plans, issuing licences and approvals, etc. are in the hands of local and state bodies. JP Morsko Dobro generates income from renting out the public domain, investing income into protection,

Public beach in Montenegro

maintenance, construction and development of the coast. It seems reasonable that JP Morsko Dobro should also be entitled to prepare Maritime Spatial Plans in Montenegro.

6.2 International policy processes

▶ EU level

Since the 1970s there is a growing consciousness of the significance of healthy and well-managed coasts and seas for the European community. After the 1993 Rio de Janeiro World Summit where ICZM has officially been identified as an approach for achieving such, joint activities began to work out the best implementation methods. Between 1996 and 1999, EU member countries implemented a **Demonstration Programme on ICZM** (or ICAM) which provided technical information on the sustainable management of coastal areas, ensured discussion on a wider level among various stakeholders including planners, managers and users of coastal areas. The Demonstration Programme resulted in consensus on ICZM measures, written down in form of the **EC ICZM Recommendation** published in 2002. The recommendation required every coastal member state to prepare a national strategy on ICZM, or otherwise to submit a progress report.

In order to assist the implementation of recommendations in the member states, an EU Expert Group was formed and a series of fora and meetings were held with periodical reporting patterns. In 2006 the report **Evaluation of ICZM in Europe** (RUPPRECHT 2006) was published, which identified challenges and priority issues in integrated coastal area management in the EU member states. The most important conclusion of this report were that only 7 member states had actually adopted a national ICZM strategy in line with the 2002 Recommendation. 6 countries had adopted spatial planning documents including ICZM, whilst a national strategy was still being developed in 11 countries.

The 2005 **EU Marine Strategy** is one of seven thematic strategies proposed by the Commission to address various environmental areas and form part of this new approach to environmental policy-making. Based on a deep review of existing policy, and scientific and economic analysis as well as an extensive consultation process it aims to protect marine ecosystems, progressively reduce marine pollution and ensure sustainable use of marine services and products by applying principles of good governance. The Marine Strategy is to be seen as the environmental pillar in the wider context of the new EU maritime policy.

Message 10

Use different levels for different tasks
New institutions may not be needed ...
– ... but existing ones may need to be improved.
– Clear responsibilities need to be assigned.
– There should be one co-ordinating body.

Use different levels for different tasks
– International level: agree common regulations
– National level: responsible for overall framework
– Regional level: cross-sectoral agencies to take the lead in implementation
– Local level: case specific solutions, acute conflict resolution, controlling

The 2006 Green Book on the Future Maritime Policy of the Union emphasised the need for an integrated approach to maritime affairs. The introduction of common standards in maritime spatial planning was, among other issues, subject to a one-year stakeholder consultation process. As a result, in October 2007 the so-called **Blue Book on EU Maritime Policy** was published, which acknowledges the undisputed need for community regulations on maritime spatial planning. Similar to fisheries or ecosystem protection there is now consensus that the piecemeal rules should be replaced by a system that takes into account the full range of human activities and natural interactions in the coastal zone.

The **Blue Book Action Plan**, published alongside the Blue Book, outlines how the Commission will continue to develop its maritime policies in an integrated manner, listen to stakeholders and maintain transparency. In 2008 the Commission will issue a **road map** setting out the steps for creating a system for the exchange of best practice among authorities in maritime spatial planning, which will be inaugurated in 2009. Moreover, member states are encouraged to create their own **national maritime strategies**, for which guidelines will be issued in 2009.
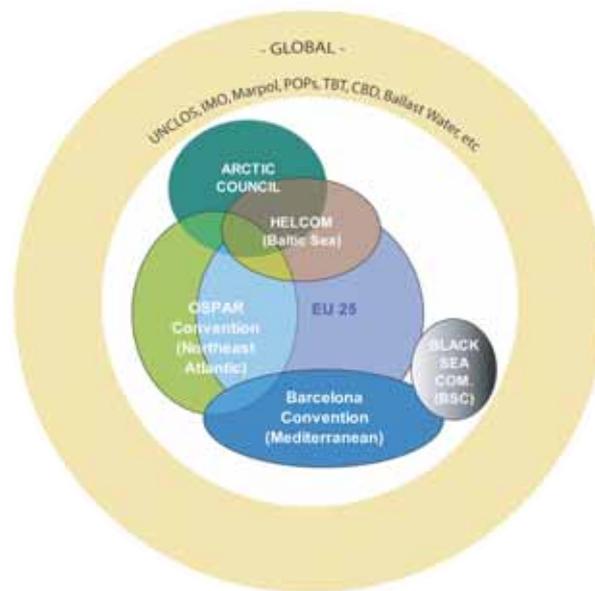
Fig. 29 International framework for IMSP in Europe (EU Marine Strategy 2006)

▶   **Baltic Sea region**

VASAB (Vision and Strategies around the Baltic Sea 2010) is a co-operation of Ministers responsible for spatial planning and spatial development in the Baltic Sea region. The cooperation prepares policy options for spatial development in the Region and promotes exchange of know-how on spatial planning and development between the Baltic Sea countries, including Norway and Belarus.

Right from the beginning of its work VASAB has paid considerable attention to the role of spatial planning on the sea and in the coastal zone. In 1996 the 4th Ministerial Conference in Stockholm adopted the "Common Recommendations for spatial planning of the Coastal Zone in the BSR". Within its Wismar Declaration adopted in 2001, VASAB then called explicitly not only for an enhanced integrated development of coastal zones and islands, but also for the extension of spatial planning to off-shore areas and initiated the BaltCoast project, which was the forerunner of PlanCoast. At the 6th Ministerial Conference held 2005 in Gdansk the "Connecting Potentials" policy paper was adopted, which calls for the introduction of maritime planning as a tool to prevent conflicts of use in intensively used offshore areas. In consequence a new VASAB working group on "sea-use-planning and integrated costal zone management' was formed. Currently VASAB is preparing a Long Term Perspective 2030 for the spatial development of the Baltic Sea Region with a vision that is clearly based on its maritime identity.

The Helsinki Commission (**HELCOM**) is the most prominent transnational, intergovernmental organization dedicated to the protection of the Baltic Sea from all sources of pollution. HELCOM is the governing body of the „Convention on the Protection of the Marine Environment of the Baltic Sea Area" - commonly known as the Helsinki Convention. HELCOM can point to numerous achievements through policy, e.g. stricter controls on industry (permits are now compulsory for industrial emissions), improved joint monitoring of the state of the marine environment, and elimination of illegal discharges by ships into the Baltic Sea.

On 15th November 2007 all HELCOM parties adopted the **Baltic Sea Action Plan**, an ambitious programme set to restore the good ecological status of the Baltic marine environment by 2021. Globally, it is one of the first schemes to implement the ecosystem approach as defined in the 1992 Rio Declaration on the management of human activities. The common vision of a healthy Baltic Sea has been defined together with all participating stakeholders:

'A healthy marine environment, with diverse biological components functioning in balance, resulting in a good ecological status and supporting a wide range of sustainable human activities'.

This vision is reflected in a series of tangible ecological objectives, e.g. the "clear water" objective which demands phosphorous and nitrogen inputs to the Baltic Sea to be cut by 42% and 18% respectively.

The cross-sectoral plan identifies the specific actions needed to achieve agreed targets within a given timeframe for the main environmental priorities: combating eutrophication, curbing inputs of hazardous substances, ensuring maritime safety and response capacity to accidents at sea, and halting habitat destruction and the ongoing decline in biodiversity.

Broad-scale marine spatial planning was one of the new concepts adopted within the HELCOM Baltic Sea Action Plan. HELCOM partners agreed to jointly develop broad-scale, cross-sectoral, maritime spatial planning principles based on the Ecosystem Approach by 2010, as well as test, apply and evaluate these by 2012 in co-operation with other relevant international bodies.

> *The 'HELCOM Recommendation 28E/9 on development of broad-scale marine spatial planning principles in the Baltic Sea area' recommends that the Contracting Parties:*
>
> > *jointly develop the marine and coastal broad-scale spatial planning common principles to facilitate the protection and sustainable use of the Baltic Sea;*
> > *fill in data gaps in spatial data e.g. on marine and coastal biodiversity, natural resources, use of land and water areas, demography, traffic, shipping;*
> > *develop joint solutions to the problems associated with access to spatial data;*
> > *provide HELCOM and other relevant parties with the necessary spatial data for marine and coastal broad-scale spatial planning;*
> > *identify and map interacting and/or conflicting interests, obligations and uses of the sea, primarily to broaden the HELCOM GIS as a data source and an effective tool to be used in marine broad-scale spatial planning (compatible with the European Environment Agency database including spatial data);*
> > *carry out consultations jointly concerning activities which may have transboundary negative effects on the environment and coastal populations.'*

In order to implement the HELCOM Baltic Sea Action Plan and the related European legislation on Maritime Spatial Planning a regional pilot study called HELCOM SCALE was launched to run between March 2007 and March 2008.

▶ ### Mediterranean region

The Mediterranean Action Plan (**MAP**) strives to protect the environment and to foster sustainable development in the Mediterranean basin. It was initiated in the 1970s by UNEP (United Nations Environmental Programme) in order to protect the Mediterranean from further degradation and pollution. The MAP involves 21 countries bordering the Mediterranean Sea, as well as the European Union.

In 1995, the Barcelona Convention on Protection of Mediterranean was revised and expanded to coastal areas. ICZM was announced as the official tool for ensuring sustainable development. UNEP-MAP activities positively support IMSP activities in Mediterranean countries and should further be used to create synergies between national and regional initiatives.

Priority Actions Programme/Regional Activity Centre (PAP/RAC), established in 1978, is a key component of the Mediterranean Action Plan (UNEP-MAP). One of six RACs within MAP, the Centre has built up a global reputation due to its expertise in ICZM. The multidisciplinary nature of ICZM is carried out through **Coastal Areas Management Programmes** (**CAMPs**). CAMP aims to implement practical coastal management projects in selected Mediterranean coastal areas, applying ICZM as a major tool.

Fig. 30 Implemented CAMP projects (PAP/RAC)

The main task of the **Mediterranean Commission on Sustainable Development** (MCSD), established in 1995, is to help facilitate sustainable development in Mediterranean countries and other stakeholders in the region. The **Mediterranean Strategy for Sustainable Development** (**MSSD**), prepared by the MCSD and adopted by all parties to the Barcelona Convention in 2005, is a framework strategy. Its purpose is to adapt international commitments to regional conditions, to guide national sustainable development strategies and to initiate a dynamic partnership between countries at different levels of development. It has strong commitments related to coastal zone management.

January 2008 marks a milestone in the history of the MAP ICZM initiative. By signing the **UNEP MAP Protocol on Integrated Coastal Zone Management** in the Mediterranean the 14 countries Algeria, Croatia, France, Greece, Israel, Italy, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syria and Tunisia have agreed to introduce institutional and coordinating measures allowing them to better manage their coastal zones, as well as deal with emerging environmental challenges such as the climate change. All other contracting parties to the Barcelona Convention announced their plans to sign the Protocol in the near future.

The ICZM Protocol is a unique legal instrument in the entire international community. It provides guidelines for defining the coastal area, principles and elements of ICZM, coordination among institutions, protection and sustainable use of coastal area, preserving special coastal ecosystems, coastal erosion, cultural heritage, public participation, training, collaboration and scientific research.

In 1974 a co-operation on the protection of the Adriatic was established in the form of a joint trilateral **Croatian-Italian-Slovenian Commission for the Protection of the Adriatic**. The Commission acts through various working groups: co-operation and joint activities in cases of accidental pollution of the Adriatic Sea; navigation system and routes; monitoring of the state of the Adriatic and its protection. The Commission is also collaborating on the **Adriatic Master Plan 2020**. It is suggested by Slovenia that the Trilateral Commission initiates preparation of the common Maritime Spatial Plan for the Northern Adriatic or at least its most crowded part – the Gulf of Trieste. In the framework of such a plan, protection and development interests among the countries of the region should be harmonized.

INTERVIEW

**Interview with the Slovenian State Secretary of the Ministry of Environment,
Dr Mitja Bricelj**

What is the historic background of the Trilateral Commission?

Dr Mitja Bricelj: The historic background of the Trilateral Commission is the Yugoslav-Italian Agreement on the Protection of the Waters of the Adriatic Sea and Coastal Waters against Pollution, signed in Belgrade on 14 February 1974.

What is the current function of the Trilateral Commission and how is it currently organised?

M.B.: The main functions of the Commission are to study all problems connected to the pollution of the Adriatic Sea waters and coastal areas, and to advise governments on what it believes is necessary regarding research, bilateral programmes and their harmonisation. We propose measures to eliminate the current causes of pollution and prevent new causes to arise, and help to implement international regulations.

What role could you foresee for the Trilateral Commission in the realisation of an MSP in the Northern Adriatic area?

M.B.: The Slovenian vision as chairman of the Commission is to actively participate in implementing the ecosystem approach and principles of integrated costal zone management. The Commission is the only international body in the Adriatic with a legal basis. It is the right body to launch the process of preparing a common Marine Strategy for the Adriatic Ecoregion and a Marine Spatial Plan based on dialogue and cooperation.

Do you have a specific good practice example in mind, one on which the Trilateral Commission could build its IMSP work?

M.B.: There are examples of successful sub-regional cooperation in fields related to maritime spatial planning – for example in the prevention of accidents at sea and responding to the consequences of pollution. Together we are preparing the Ballast Waters Management Plan for the Adriatic and promoting Integrated Coastal Zone Management as a part of the UNEP-MAP Protocol on ICZM.

Can you imagine the Trilateral Commission eventually developing into an Adriatic Commission?

M.B.: The Adriatic Sea is a single ecoregion shared by 7 states. It is also one of the European subregions as defined in the 2007 Marine Strategy Framework Directive. Transboundary and integrated management is possible only on the basis of cooperation and compromise. This is the reason why the Commission should grow into an Adriatic Commission which brings together all Adriatic coastal states and allows us to discuss and harmonise all decisions on the future development of our common sea. Under the Slovenian presidency this process will be launched.

▶ **Black Sea Region**

Similar to HELCOM, the Commission on the Protection of the Black Sea Against Pollution (the **Black Sea Commission** or BSC) is an intergovernmental body established in order to protect the Black Sea against pollution. It implements the Convention on the Protection of the Black Sea Against Pollution (**Bucharest Convention**), as well as Protocols and the Strategic Action Plan for the Rehabilitation and Protection of the Black Sea.

There are seven BSC **Advisory Groups**, which provide expertise and information support to the Commission. One of these deals with the development of common methodologies for integrated coastal zone management (ICZM) in the Black Sea countries. The main product of the ICZM Advisory group is the **Regional ICZM Strategy for the Black Sea** with its Action Plan 2004-2007. It comprises proposals for improving the legislative and institutional framework, developing informational, analytical and economic ICZM instruments, establishing an ICZM monitoring and reporting system, as well as carrying out local ICZM pilot projects and training and education measures.

Although the regional ICZM Strategy for the Black Sea has so far only been signed and adopted by one country (Romania), its principles were successfully tested in two pilot projects in Akcakoca (Turkey) and Krasnodar (Russia). The most important lesson learned from non-implementation of the ICZM Strategy in the Black Sea region is to include and harmonise the ICZM Action Plan with the updated version of the overall Black Sea Strategic Action Plan.

6.3   Financing IMSP measures

▶ **Initial IMSP costs as a barrier**

Comprehensive collection and generation of additional maritime data; the preparation of studies and analyses or facilitation of participative processes are all measures, which are part of differentiated integrated maritime spatial plans. All of them actually require substantial financial resources.

This handbook has laid out many tools and strategies on how to avoid excessive costs i.e. by reducing data collection to specific fields of conflicts or coordinating and harmonising data collection. It has also given good arguments that the initial costs are more than offset by the financial benefits generated from the existence of such Maritime Plans, due to increased investment security and conflict avoidance at a later stage.

Nevertheless the pre-financing and/or project design often still presents a major barrier to a full IMSP development in many countries throughout Europe – and of course – also world-wide.

Message 11
Improve effectiveness of cross-border consultations for offshore development plans and projects
Use and strengthen transnational coordinating bodies
Develop transnational concerted plans for offshore infrastructure corridors
Integrate existing project results and recommendations into international policy

▶ **International and national funding sources**

Many of the above mentioned international support processes have the added benefit of being indirectly linked to funds.

As part of its integrated maritime policy, the Directorate General for Fisheries and Maritime Affairs has for instance issued tenders (in 2008) for **pilot projects** and preparatory actions in fields such as maritime monitoring and surveillance, data access and habitat mapping with a total budget of almost 10 million. Also the EU's 7th framework programme (FP7) funds substantial **research activities** in the area of maritime affairs.

Much of the recent progress in **coastal and maritime management** has, however, been achieved through EU structural programmes such as **INTERREG** (supporting economic, social and spatial cohesion throughout the EU and candidate countries). ICZM and maritime spatial planning have become an established element of INTERREG programmes in all regions and many players are currently using this opportunity to use these co-funding opportunities to exchange experience and initiate pilot IMSP measures.

Many of the EU funds are also open to its neighbouring countries via external fund programmes. The EU Action Programme 'SMAP' (Short and Medium-term Priority Environmental Action Programme) is a framework programme of action for the protection of the Mediterranean environment and an important source of funding for ICZM activities.

But also other international funds are available for supporting measures in those areas. The Mediterranean Action Plan is funded via contributions of parties contracting to the Barcelona Convention. An additional source of funding is also GEF (Global Environment Facility), and the Black Sea Commission activities for instance have long been funded by the World Bank.

Annexes
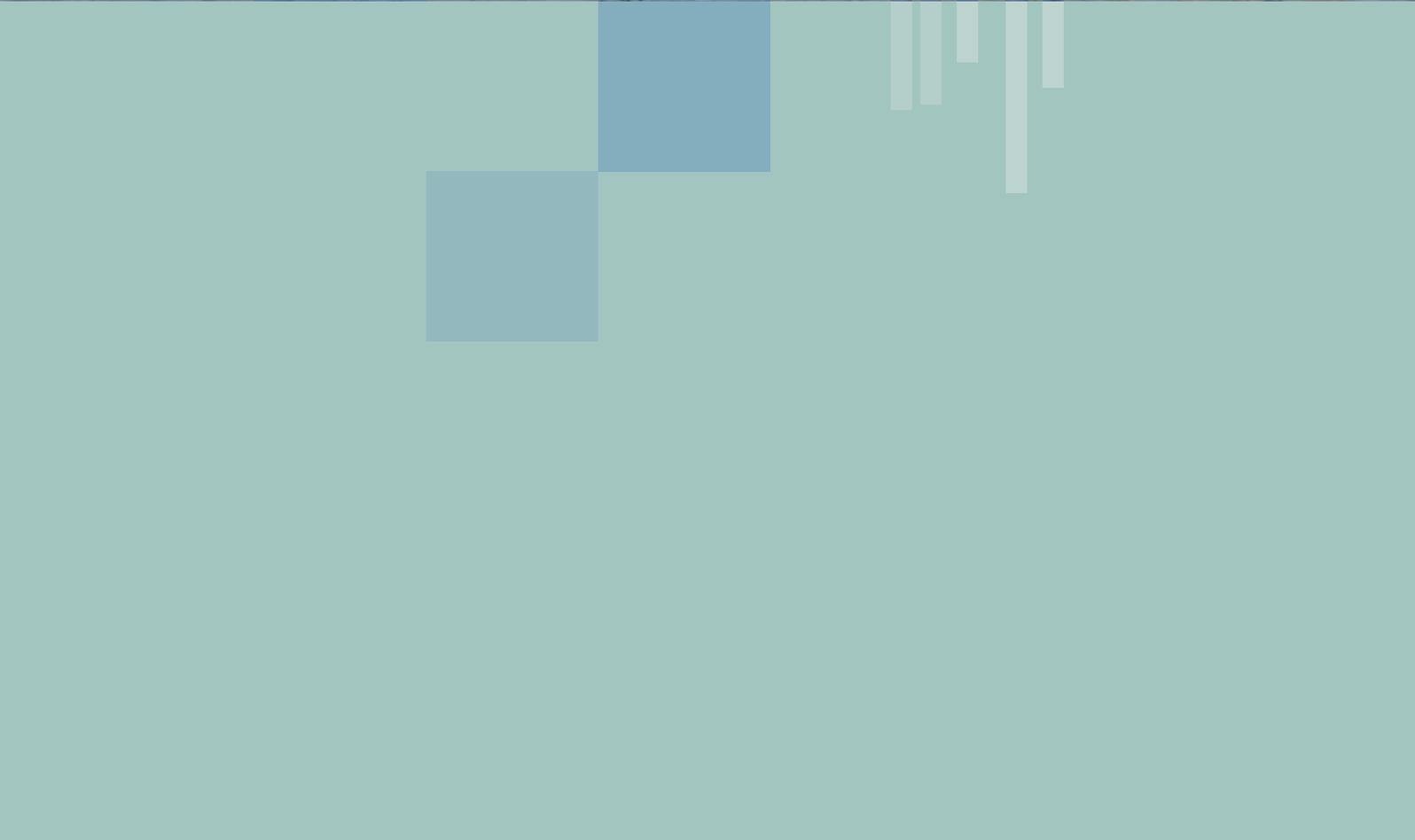
7

7.1 List of acronyms

CMSP	– Coastal and marine spatial planning (we use IMSP instead)
EIA	– Environmental Impact Assessment
EEZ	– Exclusive Economic Zone
HELCOM	– Helsinki Commission
ICAM	– Integrated Coastal Area Management, other term for ICZM
ICZM	– Integrated Costal Zone Management
INTERREG	– Donor programme stimulating interregional cooperation in the European Union
IMO	– International Maritime Organisation
IMSP	– Integrated Maritime Spatial Planning
MSP	– Marine spatial planning (we use IMSP instead).
SMAP	– Short and Medium-term Priority Environmental Action Programme for the Mediterranean
SEA	– Strategic Environmental Assessment
SPA	– Special Protection Area (of the NATURA 2000 Directive)
TIA	– Territorial Impact Assessment
UNCLOS	– United Nations Convention on the Law of the Sea
UNEP-MAP	– United Nations Environment Programme Mediterranean Action Plan
VASAB	– Visions and Strategies around the Baltic Sea 2010

7.2 Other PlanCoast materials

In the framework of the PlanCoast project, numerous other materials have been prepared and published on Integrated Maritime Spatial Planning. All material is available as a download on the PlanCoast website: www.plancoast.eu.

The following table gives a first overview of the PlanCoast material:

▶ **Specific Reports**

FAHRENKRUG, Katrin, RAVE, Torben: Best Practice in Marine Spatial Planning – Description of four Case Studies in Europe and Overseas. Prepared by Raum&Energie for Priority Actions Programme/Regional Activity Centre PAP/RAC, Final report, September 2007

GEE, Kira 2007: Marine spatial planning – a theoretical overview. Prepared by s.Pro for Priority Actions Programme/Regional Activity Centre PAP/RAC, Final report, September 2007

SCHULTZ-ZEHDEN, Angela, SCIBIOR, Katarzyna: Marine Spatial Planning. State of Art of Coastal and Maritime Planning in the Adriatic Region. Prepared by s.Pro for Priority Actions Programme/Regional Activity Centre PAP/RAC, Synthesis report, October 2007

▶ **National Reports on current policy, procedures, legal bases, practice of maritime spatial planning**

MSP ALBANIA 2007 by ECAT Tirana
MSP BOSNIA AND HERZEGOVINA 2007 by Neretva Cantonal Ministry of Physical Planning
MSP BULGARIA 2007 by Varna District Administration
MSP CROATIA 2007 by PAP/RAC Split
MSP ITALY 2007 by Emilia Romagna DG Environment
MSP MONTENEGRO 2007 by JP Morsko Dobro
MSP POLAND 2007 by WBPP Slupsk and Maritime Office Gdynia
MSP ROMANIA 2007 by Urbanproiect
MSP SLOVENIA 2007 by Regional Development Centre Koper

▶ **Documentations**

> Final PlanCoast Conference, 27th-28th March 2008, Ravenna (It)
> 4th PlanCoast Conference 20th-22nd Nov 2007, Berlin (De)
> 3rd PlanCoast Conference, 20th-22nd September 2007, Split (Cr)
> Study Tour, 3rd-6th July 2007, Germany
> 2nd PlanCoast Conference, 31th May-2nd June 2007, Constanta (Ro)
> 1st Kick-off Conference, 13th-15th July 2006, Ancona (It)

More information on www.plancoast.eu:

The PlanCoast Website will continuously offer updated material on IMSP.

▶ **Pilot Projects**

The material on pilot projects will only be made available as downloads after publication of this handbook as some of the pilot projects are still ongoing until end of 2008.

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7.5   PlanCoast partners' contacts

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Notes