Federal Ministry
of Transport, Building
and Urban Affairs

4th International PlanCoast Conference

Climate change and growing sea use pressures: solutions offered by Maritime Spatial Planning

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PlanCoast
Adriatic | Baltic | Black Sea

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Preface

Over a period of two years, the INTERREG IIIB CADSES PlanCoast project has focused on Maritime Spatial Planning and integrated coastal zone management (ICZM) in the Baltic, Adriatic and Black Sea regions. This conference organised by sustainable projects (sPro) on behalf of the Federal Ministry of Transport, Building and Urban Affairs (BMVBS) provided an opportunity to discuss the projects first results and recommendations in the context of other international developments and physical phenomena such as climate change.

In the first part the conference gave account on both positive experiences and challenges for Maritime Spatial Planning. Drawing on selected case studies, presentations particularly focused on the lessons learned from the PlanCoast partners. The questions discussed here concentrated on how to transform Maritime Spatial Planning into an effective instrument for sustainable development of coasts and seas.

The second conference section analysed the role of research and particularly scenarios as a decision-making aid in Maritime Spatial Planning.

The last thematic block was dedicated to the international progress in maritime policy and Maritime Spatial Planning in the context of global climate change as the major challenge. An overview of the latest EU developments with regard to the Blue Book on Maritime Policy as well as the German Maritime Spatial Planning in the EEZ was given, before presenting up-to-date knowledge on the potential impacts of climate change on the coast. In the view of the immense significance of these developments for Africa, the conference also offered a perspective from that continent. The closing panel discussion looked into the question, whether integrated coastal and maritime planning has answers to the challenges posed by global climate change, and what is needed in order to achieve such.

Over forty key German coastal players such as the federal and regional governmental authorities, nature protection organisations, marine science and other research institutes as well as other stakeholders participated in the conference. International participants included, beside the PlanCoast partners, representatives from the Baltic Sea region (Sweden, Poland, Latvia and Russia) as well as experts from the UK and Black Sea region.

Berlin 2007

Welcome

A very warm welcome to all of you, who have traveled far and wide to come to Berlin today: from Germany, from the Baltic and North Sea regions, from the Adriatic Sea, the Black Sea and even from another continent, from Africa.

The timing of this conference is perfect. Even though, when we began planning it two years ago, we did not know that the Blue Book would be published a month beforehand, and the HELCOM Action Plan one week before… . A new INTERREG Programme is also about to be launched.

Actually this is the fourth event in a series of conferences hosted by the BMVBS. We first took up coastal issues and in particular Integrated Coastal Zone Management in 2001. Since then, conferences in 2003 and 2005 have focused on various aspects related to coasts: on spatial planning of course, but also on changing trends, conflicts of use and integrated management. Documentation on these conferences is still available, in German at least and some of it also in English.

Two trends are noticeable when we look back over our conferences. One is that they became increasingly international. 2003 still focused on Germany, but 2005 already looked beyond our national borders and ICZM in other European countries. 2007, finally, is a truly international event, not only with international speakers but also an international audience. This of course makes perfect sense: after all, coastal countries all over Europe are faced with similar issues, and we can learn a lot by sharing ideas and developing solutions together.

Secondly, our conferences have become increasingly marine. From an initial focus on the landward side of our coasts, we have gone further and further offshore.

This is not surprising:

Maritime industries continue to grow, more and more uses compete for space in the sea, co-ordination and planning are necessary.

We were fortunate that this was mirrored by an growing interest and experience in Maritime Spatial Planning. 2005 marked the completion of the EU BaltCoast project, where first recommendations were developed for Maritime Spatial Planning in the Baltic Sea. PlanCoast has taken this one step further, covering also the Black Sea and the Adriatic Sea.

But just like the sea itself, we cannot stand still. Framework conditions continue to change, sometimes drastically so. The present conference is a response to some of these changes.

With this conference we have attempted to bring together three significant issues. They are changes in sea use policy, adaptation to climate change and integrated Maritime Spatial Planning. The conference is a platform for exchanging background information, ideas and experiences and for looking ahead in times of climate change and sea level rise.

At this point, I would like to thank all those who have organised the conference and look forward to an interesting, fruitful day.

Manfred Sinz

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

PlanCoast – Contribution to Maritime Spatial Planning

PlanCoast is an INTERREG IIIB NP CADSES project which started in April 2006 and will finish in the first half of 2008. It has 16 partners representing the Spatial Planning Departments or responsible regional authorities from Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Germany, Italy, Montenegro, Poland, Romania, Slovenia and Ukraine.

The second German partner is the Federal Ministry for Transport – BMVBS – who is the host of this conference.

PlanCoast has two main goals to achieve:

- To implement Integrated Coastal Zone Management (ICZM) by using spatial planning.
- To establish Maritime Spatial Planning (MSP) as a new tool promoted by the EU Blue Book on Maritime Policy

Why Maritime Spatial Planning?

"The necessity to decide is larger than the possibility to understand."

(„Die Notwendigkeit zu entscheiden reicht weiter, als die Möglichkeit zu erkennen.")

Immanuel Kant

Recent years have been marked by a notable increase in the demands that are placed on coastal and marine resources. Established uses are growing more intense, others are shifting to new locations, and yet other, entirely new forms of resource use are emerging that challenge how we look at the coast and the sea. The latter is particularly apparent in the marine environment, where offshore wind farms, port infrastructure, gas and oil terminals are examples of large-scale maritime infrastructure developing alongside more traditional, transient types of marine resource use. Many of these changes are particularly notable in European regional seas such as the Mediterranean, the North Sea, Baltic or Black Sea, where they have drawn the attention of politicians and resource managers at a regional, national and international level and where additional pressure is brought by issues such as climate change, global economic development and demographic change.

In Europe, Integrated Coastal Zone Management (ICZM) has become an established framework for addressing these changes. Maritime Spatial Planning (MSP) is a more recent arrival. Recognition has spread quickly, with countries and international institutions, NGOs and international conventions such as OSPAR all taking note. A range of recent policy documents, and notably the EU Blue Book on Maritime Policy explicitly refer to MSP as a tool in sustainable marine resource management.

Why this sudden interest in MSP and the growing activity in this field? One reason is that the seas are simply becoming to "full" for a purely sector-based approach. Clear rules are required to avoid clashes between incompatible uses and to secure the wise use of resources. Spatial planning has long become established on land, where it is regarded as a neutral arbiter between interests and where spatial plans and maps are drawn up to show how an area is to be used.

New pressures on coastal and marine resources

The exploitation of coastal and marine resources has long been a source of wealth and power and has contributed much to shaping national identities. Fishing, shipping, international trade, the exploitation of oil and gas and tourism are examples of established sectors that have developed over decades and sometimes centuries. Recently, however, other uses have begun to be added to the mix. Other sectors such as **renewable energy generation** and **mariculture** have grown in intensity as countries push for economic growth. A recent stocktake of the German coasts and seas has identified 14 sectors that depend on coastal and marine resources, but this list is by no means exhaustive. Major growth sectors such as **gas extraction and maritime transport** have also been identified for some of the Adriatic countries. More

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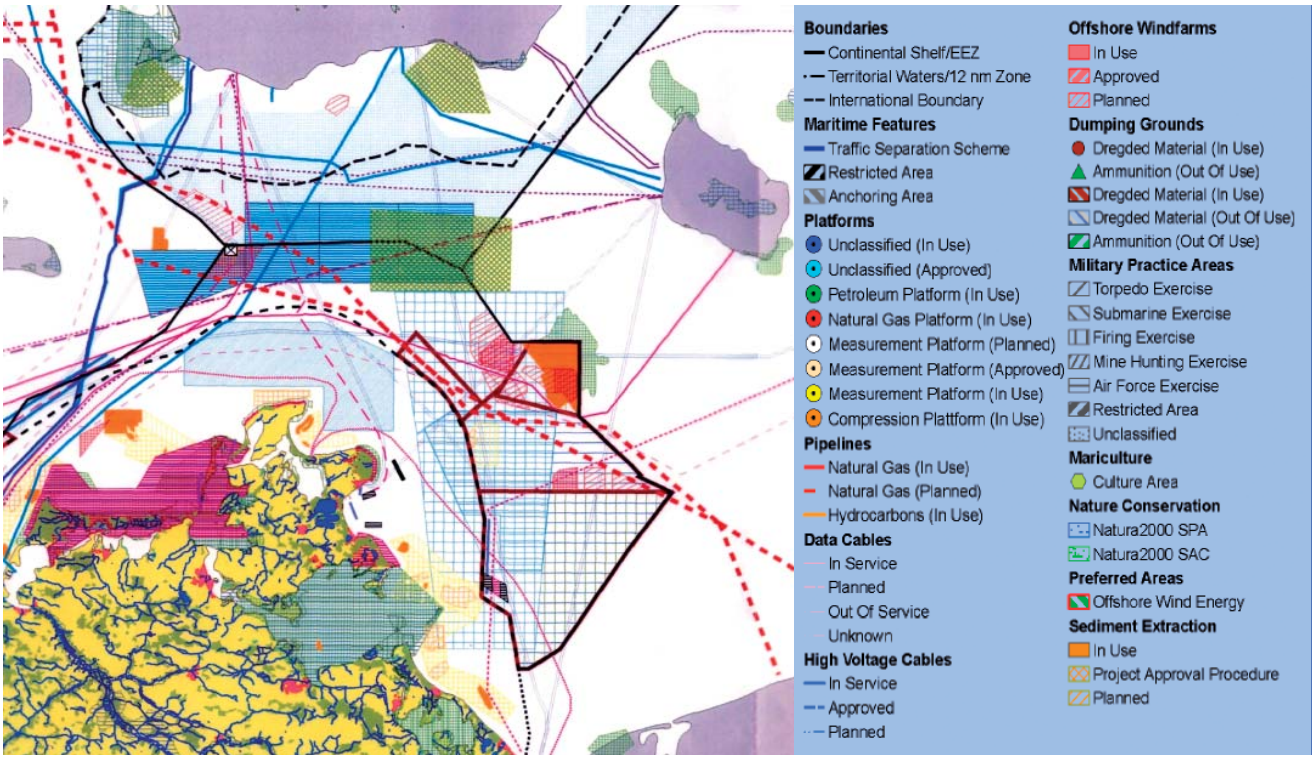
PlanCoast Lead Partner

forms of use are likely to emerge through continued innovation, together with shifts of activity caused by global forces such as international trade or climate change.

Map of uses in the German Baltic Sea



Benefits of Maritime Spatial Planning

A tool to promote integration and a look at the "bigger picture"

The most significant purpose of MSP, and at the same time its greatest advantage, is its ability to facilitate integration. MSP 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, MSP 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-ordinating function

One objective relates to the idea of bringing together often disjointed decision-making regimes under one umbrella. In this instance, MSP has a central co-ordinating function.

MSP helps to overcome the limits of administrative boundaries, facilitating a regional seas approach to marine resource management and leading to more consistent decision-making.

MSP as a means of marine biodiversity

MSP can be used to create a 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, MSP is useful in creating networks of protected areas or priority areas for nature conservation, in particular when combined with sea use zoning.

Providing certainty for investors

MSP is an essential tool for guiding future sea uses in that it provides an indicative framework for action.

MSP 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).

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, MSP 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 the ability to innovate, as well as assisting disadvantaged areas

MSP 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, MSP is a means of ensuring the continued spatial availability of coastal and marine areas for future uses.

MSP 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 siting of key industries could be a means for steering development, for instance in rural or structurally weak areas of coast and coastal hinterland. Indirectly, MSP can also be used to facilitate urban regeneration, such as that of former port areas.

Ability to be implemented at different scales

MSP is not prescriptive in terms of the spatial scale it uses. MSP 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

In order to achieve a truly integrated approach, MSP 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.

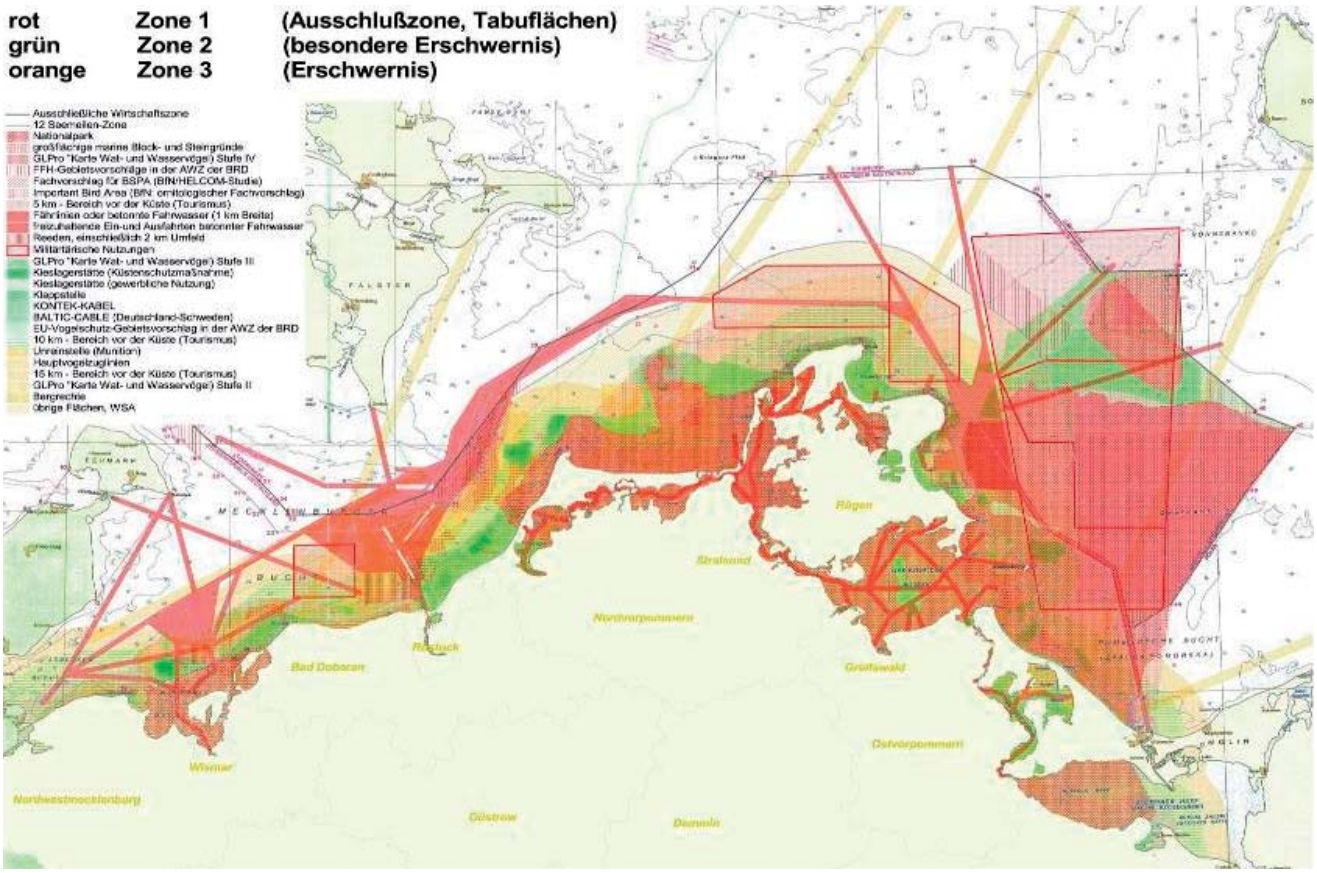
Greater transparency

In combination with respective stakeholder participation, and employing appropriate techniques of dissemination, MSP 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.

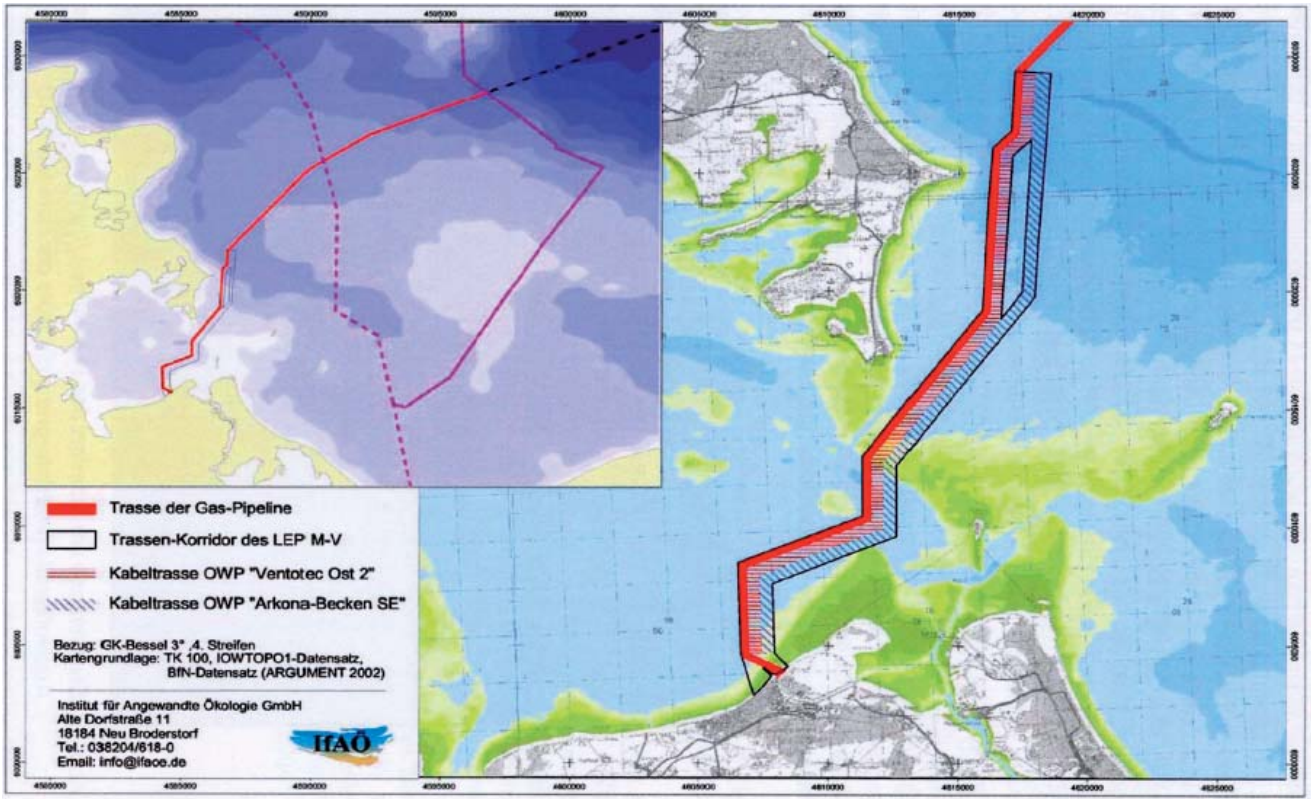
Improving information and data management

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

Selection criteria for off shore windfarms in MV



Detail: pipeline corridor planning



Which role does Territorial Impact Assessment (TIA) play in MSP?

Territorial Impact Assessment (TIA) provides a project orientated spatial conflict resolution, where a comprehensive spatial plan is not needed. Large scale infrastructure projects can thus be checked at an early stage of planning.

The range of issues undergoing a territorial assessment are very broad: from environment, through economic and social viability, to cultural assets.

What are the benefits of TIA ?

1. Managing conflicts by early participation of target groups

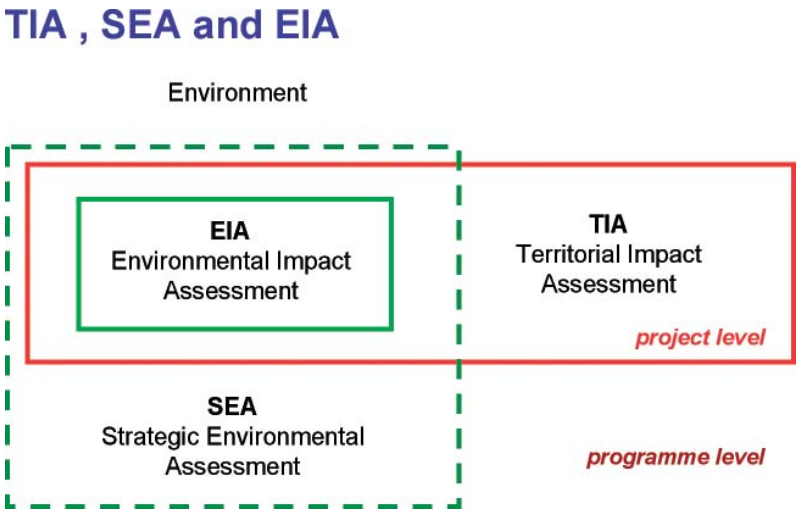
2. Minimizing negative impacts and costs by optimizing the choice for location / routing / technical planning

3. Ensuring planning reliability by giving early and reliable information about realisation chances

4. Shortening the whole planning process by pre-checking crucial points

5. Securing spatial planning objectives by the duty to take TIA results into account in the following process

6. Supporting local administrations in case of large-scale investments



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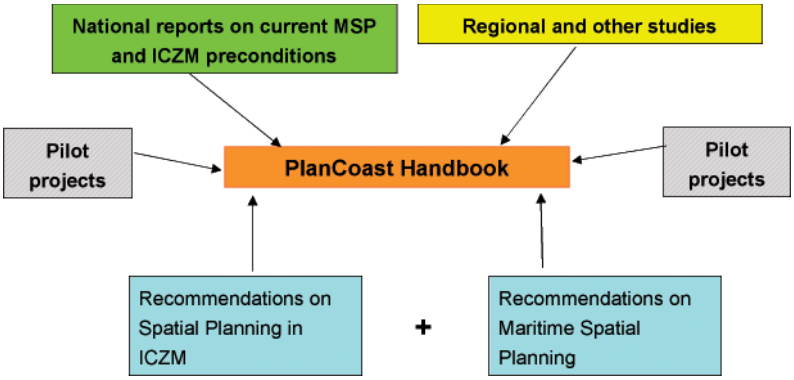
PlanCoast Key Messages: First findings and ideas

Angela Schultz-Zehden
PlanCoast Project Coordinator

Integrated Maritime Spatial Planning is one of the core issues of the Blue Book on the Future Maritime Policy of the European Union, which is based on the conclusions of numerous projects, which have been going on in this field during the last couple of years. Nevertheless there is still a lack of experience, tools and capacities available to those who should realise an effective integrated planning in coastal zones and off-shore areas. The main common output of the PlanCoast project is the **PlanCoast Handbook on Integrated Maritime Spatial Planning**, which is designed as to fill this gap. It is currently being prepared by the s.Pro team in cooperation with the project partners. Based on their experience in the implementation of their demonstration projects they provided the discussion basis for the concrete recommendations. Furthermore the handbook builds, of course, on the experience gained in former projects and pilot samples.



The handbook within the PlanCoast structure:

The Handbook will both explain the need for Integrated Maritime Spatial Planning (IMSP), and provide hands-on guidance for its effective implementation. It is therefore targeted at political **decision-makers** at all stages as well as **stakeholders** involved in planning and management in coastal zones.

The PlanCoast Handbook will include:

- Recommendations on how to tackle existing problems
- Tools and instruments pointing towards potential solutions
- Concrete case study examples from PlanCoast pilot projects
- Other background material on Marine Spatial Planning

Structure and main messages of the PlanCoast Handbook

Chapter 1. Why Integrated Maritime Spatial Planning

The first chapter will briefly characterize the growing pressures and conflicts calling for integrated action in maritime and coastal planning, including trends such as climate change and mineral oil shortage. Drawing on the results of other studies and experts' opinions, this extended introduction will summarize **the benefits of Integrated Maritime Spatial Planning** in a way that can be convincing to the policy and decision-makers in charge of coastal and maritime zones.

Chapter 2. When to do Integrated Maritime Spatial Planning

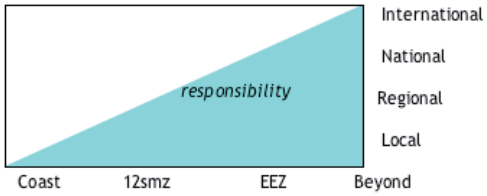
Human uses always have impacts, but not all impacts are spatially relevant. Spatial impacts (= those that require delineated area of sea) are e.g.: areas for extraction, military uses, fish nursery grounds, nature protection areas, wind parks, mariculture, shipping corridors, harbours etc. Conflicts arise from incompatibility between some of these uses, which can be derived from a **compatibility matrix**. The "when" chapter will provide a decision-making aid in situations when MSP is considered as a potential conflict-resolving tool. A distinction has to be made between "mapping" and "planning" of areas. Maps show what is currently there, but do not interfere in terms of zoning, etc. Planning is about the management of areas in that specific zones and use priorities are established.

An overall conclusion is that maps showing current uses (**stocktaking of coastal and marine uses**) should be prepared for the whole sea and coast area and constantly be monitored for new uses and possibly emerging conflicts. **Maritime Spatial Plans should be prepared when and where needed**, i.e. for the most relevant conflicts.

Chapter 3. Who should do Integrated Maritime Spatial Planning

This chapter will deal with the institutional basis for IMSP. One concluding message is that there is almost **no need to create new institutions** in charge of MSP, but existing ones need to be **more effective** and with a **clearer division of responsibilities**. For "integrated" MSP the coordination between the different institutions is the key factor. Thus a **coordinating body** (cross-sectoral agency) is recommended to take the lead. **Land-sea coordinating mechanisms** have to be created too.

For the vertical division of responsibility a direct relationship exists between the level of responsibility and how close to the coast the sea area in question is:



Different levels are responsible for different tasks:

- International: **common principles**
- National: **responsible for overall framework**
- Regional: cross-sectoral agencies to take the lead in **implementation**
- Local: **case specific solutions**, controlling, acute conflict resolutions

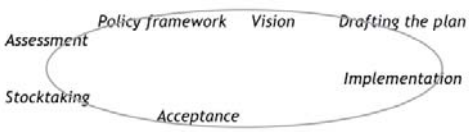
Chapter 4. How to prepare Integrated Maritime Spatial Plans

Establishing a policy framework for IMSP

The legal framework for IMSP should be created through:

- **Identifing basic policies** that rule coastal and offshore developments
- **Operationalising the existing laws** and strategies through directives
- Concept and adopt **specific maritime legislation** for offshore areas where needed

Planning is a cyclical process which contains both political and technical elements:



Vision

Clear planning aims and objectives („visions") are indispensable for an effective planning. **National strategies for maritime development** (see also EU Blue Book) should provide for such vision. They should be

- coordinated cross-sectorally
- tied into international developments
- may be further refined in regional strategies (allowing for a nested approach)
- revised and updated at regular intervals (e.g. when new priorities are emerging)

Data needs and data collection

In a sustainable, integrated spatial planning all data is potentially of significance. This is especially the case by overarching, anticipatory planning for large scale regions or even whole seas. There, at a more general level, **all the available data** should be collected –> **large scale stocktaking**.

This process of stocktaking can be much simplified and facilitated by the use of a **coastal and marine cadastre**: all the identified coastal players would be obliged by law to provide certain data to the coordinating unit in regular time spans, e.g. every half a year. The law would also define the form in which data should be provided. In turn, the cadastre would be accessible to all the participating parties – public institutions – so that they would equally profit from it.

However, data collection on and in the sea is much more cost and technically intensive than on land. There is an additional dimension, too (depth). That is why in **a case-specific planning** unnecessary investigations should be avoided –> **data should be collected according to the most acute problems**.

In terms of information sharing, a distinction has to be made between the type of data:

- Access to **raw data can be restricted** by rights & fees
- **Processed data** should be accessible to **professional circles**
- **Planning products** should be **freely accessible** to everyone

Stocktaking (mapping)

This chapter will define what is **stocktaking** for coastal and marine systems and why it is necessary.

What should a stocktake comprise of, and how it can be done in the most cost and time efficient way.

Assessment (planning)

In this section important technical issues will be tackled, such as:

- appropriateness of scale and **delineation of planning space**
- how to achieve an **integration of land and sea**
- how to assess future **risks** and
- how to deal with **uncertainty** in planning.

The issues of **public participation** (who should be involved in the planning process and at what stage) will be discussed here as well as the question of access to information.

Practical tools

This section recommends using **Territorial Impact Assessment (TIA), including Environmental Impact Assessment (EIA) procedures for projects** as well as other tools such as Vulnerability Assessment.

Chapter 5. How to implement Integrated Maritime Spatial Plans

Despite all the important technical issues, one should not forget that **MSP is a political responsibility of all political levels**, and not merely a technical exercise. The implementation chapter will deal therefore with problems and conditions of successful implementation of maritime spatial plans. It will draw attention to the importance of the planning context and to the fact that there is no single solution that fits all specific needs.

Informal processes are frequently underestimated in their potential to achieve acceptance for the creation and implementation of spatial plans. **Early stakeholder involvement, transparency and voluntary agreements** haven proven to be effective non-legal methods and but need to be strengthened in many countries. **Stakeholders' consultation in form of meetings, newsletters, working groups and/or moderated conflict resolution rounds** are a valuable tool that should be given more attention and be made legally obligatory.

Awareness raising, remarkably also of the political/administrative level is another important prerequisite.

Chapter 6. Supporting processes

The closing chapter draws attention to international policy processes as a framework supporting the implementation of IMSP, especially in the countries which have not developed the respective national policy framework yet. Apart from the EU wide process (EU Blue Book), the various transnational organisations in regional seas (Helcom, Black Sea Commission, Adriatic Commission, etc.) play an important role for establishing policy regimes in their respective areas.

The important and valuable input of international projects such as PlanCoast will be acknowledged here, but on the other hand the necessity of providing continuous financial resources and capacities for IMSP will also be emphasized. Also, **existing project results and recommendations should be better utilized**.

In the international planning context, the development of **transnationally concerted plans or offshore infrastructure corridors** are called upon. In order to reach such agreements, **the effectiveness of cross-border consultations for offshore development have to be improved**. A good way to achieve it is through **strengthening transnational coordinating bodies**.

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PlanCoast MSP pilot project example: Slovenia

The Slovenian coastal and marine area is subject to growing pressures, as a consequence of increased demand for marine and coastal space, often driven by conflicting interests. The main motivation for participation of the Slovenian partner in the PlanCoast project is to upgrade the management of the Slovenian marine and coastal areas towards sustainable development by promotion of Maritime Spatial Planning and integration of coastal and Maritime Spatial Planning within the framework of integrated coastal area management programme (CAMP Slovenia).

The Slovenian coastal area is geographically very limited. The coast is only 47 km long and the territorial sea encompasses 180 km^2. It is apart of the shallow North Adriatic/Gulf of Trieste, which is max. 50 m deep, while the Slovenian part is even shallower – 35 m.

The Slovenian coastal area and the territorial sea are considered a special national value, both for its economic importance and due to its natural and cultural features. The coastal area in Slovenia is a part of the South Primorska development region consisting of eight municipalities; three of them are situated on the coast (subregion Slovenian Istra). It encompasses 1,524 km^2, which is 7.5% of the national territory, and it has about 120,000 inhabitants (6% of the national population). According to the socio-economic indicators, it is one of the most successful regions in the country (in the second place according to GDP/capita). The service sector contributes 75% to its economy. Transport (with the Port of Koper), tourism and trade are the most important activities.

The main pressures on marine and coastal assets come from the energy sector, maritime transport, tourism, fishery and mariculture. The pressures represent a threat particularly to nature protected areas, biodiversity and cultural heritage.

Maritime transport: The Port of Koper is becoming an increasingly important development centre. There is a continuous growth over the last decades, with good prospects also for the future. In 1970, the quantity of handled goods reached 2 mio t, in 1980 it came close to 3 mio t, and in 1990 to 6 mio t. The growth was particularly intense in the recent decade, which is evident from the lower table.

Tourism: Tourism is the most important activity on the coast and also of national importance (almost one third of Slovenian tourist accommodation capacities are located there). The total number of beds in the area is 22,289. More than 525,000 tourists visit Slovenian Istra every year; more than half are foreign tourists. Around 2,000,000 overnight stays are realized yearly, most in the period from June to September, when especially the coastal strip is visited also by many daily visitors (Source of data: Statistical Office of the Republic of Slovenia, 2004).

Nautical tourism: Favourable conditions on the Slovenian coast also dictated the development of nautical tourism and the construction of modern tourist harbours – marinas. There are three marinas: Marina Koper (75 moorings and 45 posts on land), Marina Izola (705 moorings and 40 posts on land), Marina Portorož (659 moorings and 274 posts on land) and some minor mooring places. All marinas have ambitious development plans.

Slavko Mezek
Regional Development Centre Koper, Slovenia

Maritime transport at the Port of Koper

	1996	1998	2000	2002	2004	2006
General cargoes	668,584	597,988	699,031	1,145,414	927,222	1,180,924
Containers	698,550	717,863	915,575	1,206,114	1,593,434	2,120,807
Vehicles	209,553	345,837	331,299	221,960	472,568	570,214
Dry bulk cargoes	3,521,650	5,339,124	5,441,298	4,966,066	7,411,224	8,106,467
Liquid bulk cargoes	1,444,168	1,607,260	1,934,630	1,891,942	1,998,159	2,052,321
Total	**6,542,502**	**8,608,072**	**9,321,832**	**9,431,497**	**12,402,607**	**14,030,732**

Fishery and mariculture: The fisheries sector in Slovenia includes fishery economic activities (fishing and aquaculture) and the production of fish products. On average, the annual quantity of sea fishing in the period 1993-2004 was about 1,700 tons, while in 1990 it was almost 6,000 tons. The GDP contribution of fisheries is insignificant, however, the importance of fishery is greater due to the fishery related activities and the economic and traditional role of commercial fishing.

Energy: Lately there have been initiatives for the construction of gas terminals on the Italian side (initiators: the companies Terminal Alpi Adriatico, owned by the Spanish Endesa, and Gas Natural). One of the terminals is to be built off shore, right next to the maritime border between Slovenia and Italy, while the other one in an industrial area in the suburbs of Trieste, also not far away from the Slovenian border. The initiatives have brought on much opposition on the Italian side as well as on the Slovenian side, while, on the other hand, the German company TGE Gas Engineering has filed an application at the Ministry of Economy of the Republic of Slovenia for the construction of a gas terminal in the Port of Koper area, despite great opposition. The application represents a first step in the line of necessary formal and informal assessments, which would enable the placement of facilities for unloading, storage and gasification of liquefied gas.

Biodiversity and nature protection: Due to the shortness of its coast, Slovenia has only few coastal and maritime habitat types; however, they contribute significantly to the country's biotic diversity. The maritime and coastal habitat types in this area include: seaweed meadows, Posidonia meadows, estuaries, mudflats and sandflats, marine marshes and coastal lagoons, to mention only the most typical ones. Wetlands are vital for the survival of aquatic birds. They appear there in high density, which is certainly an indicator of wealth and diversity of these productive ecosystems. Most remaining coastal habitat types are now under legal protection. The national protected areas in South Primorska are Skocjanske jame, Skocjanski zatok Nature reserve, Secovlje Saltpans Park, Strunjan Landscape Park, Debeli Rtic and Rt Madona.

The reasons for introducing Maritime Spatial Planning in the northern Adriatic area originate from global and national conditions. On a global level we are witnessing the strengthening of northern Adriatic's geostrategic role, which will increase pressures on the use of maritime surfaces, mainly due to the growth of maritime transport and also because of the attractiveness of the area for establishing a terminal to supply the EU with energy products (which is indicated by the initiatives for the construction of gas terminals, both on the Slovenian and Italian side). On the contrary to this, an initiative to declare the Adriatic as a Particularly Sensitive Sea Area is being prepared, which will require appropriate management. Therefore, it will be necessary to harmonise a vision on future development of the northern Adriatic area, on a strategic level, between Slovenia, Croatia and Italy, and coordinate future uses within the framework of the cross-border marine spatial plan. The national reasons are mainly the necessity to create a consensus regarding the future use of maritime and coastal surfaces under the conditions of growing cumulative pressures in the mentioned coastal area and aquatorium and the related conflicts.

Within the framework of the PlanCoast project, the Slovenian partner prepared expert groundwork for the needs of Maritime Spatial Planning:

- Preparation of GIS data relevant to coastal or sea-use planning
- Promotion of the Marine Spatial Plan – national and for the North Adriatic
- Awareness-raising among local, regional, national and cross-border target groups
- Recommendations for the common principles of Marine Use Planning.

Inventory of the situation showed that today the prevailing uses in the Slovenian territorial waters are in particular the following: the entire north-western part of the territorial waters (on the border with Italy) is intended as a routing corridor in the traffic separation scheme, which was reconciled between Croatia and Italy. The middle part is intended for a fishing area (it also partly overlaps with the routing corridor); while the surfaces next to the coast are intended for bathing waters, port activities (commercial port, public transport ports, tourist ports, etc.), mariculture, two fishing reserves, and also the areas for the preservation of nature, biodiversity and cultural heritage. Density of the established regimes for partial sea use along the coast substantiates the need for the integration of planning on the shore and at sea. Therefore, it is essential to establish cooperation of the key partners on the national level (competent for the sea and the coastal strip) and the local level (competent for spatial planning).

The key findings of the report on Maritime Spatial Planning in Slovenia are:

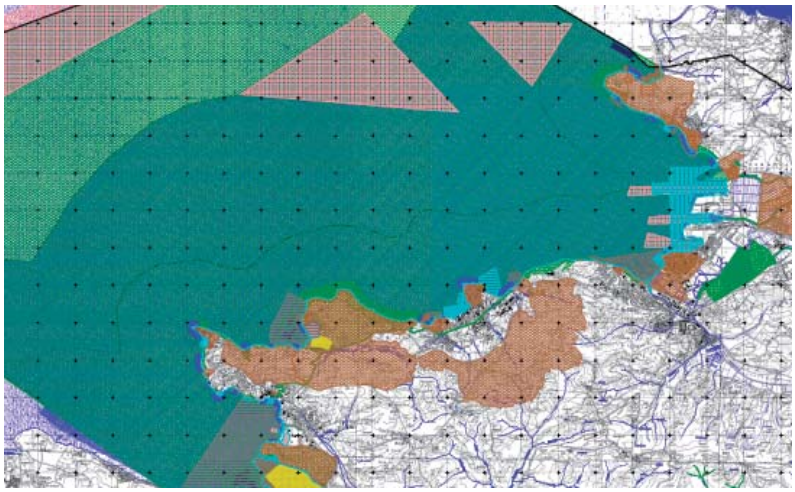
- No substantial changes in the legislation are necessary to enhance the Maritime Spatial Planning; the Maritime Spatial Planning can be implemented within the framework of the existing Spatial Planning Act.

- It is recommended that drawing up of the marine spatial plan should link to the Adriatic River Basin Management Plan in its part relating to the sea. It would be appropriate to establish the maritime spatial plan as one of the instruments within the framework of the management plan in the part which relates to the potential uses of marine assets, conditions and restrictions on use and other developments affecting the marine environment.

- The statutory procedure of the national strategic spatial plan preparation is suitable also for the preparation of the marine spatial plan. It is logical that the State will be responsible for the preparation of the marine spatial plan, as, in accordance with the Waters Act, it is responsible for the management of waters and the coastal and offshore areas, including the sea.

- A procedural deficiency of the statutory national strategic spatial plan preparation is that cooperation of the public is not foreseen in the process of preparation. We propose that in the case of the marine spatial plan preparation, a formal obligation of public discussion and public participation is provided. It is recommended that the public (consultative cores) participating in the preparation of the sea-related segment of the Adriatic River Basin Management Plan, are invited to take part in the drawing up of the marine spatial plan.

It is important to establish the Maritime Spatial Planning as a long-term process and not merely as a one-time action. This means that the act is periodically amended or supplemented by the procedure and integration of partners, as foreseen for the preparation of the act. We recommend that the periodicity of marine spatial plan preparation is harmonised with the drawing-up schedule for the Adriatic River Basin Management Plan.



Sea Use Map of the Slovenian Trieste Bay

The Slovenian territorial sea is a part of the Northern Adriatic, which is also shared by Croatia and Italy. Harmonization of the sea use and its resources in the framework of sustainable development is significant in areas where pressures are particularly explicit, and therefore also in the area of the Northern Adriatic. The Trilateral Commission (Slovenian-Croatian-Italian)

Planning example: waterfront promenade instead of a highway

Port of Koper

for the protection of the Adriatic and the coastal areas against pollution is an intergovernmental body which coordinates the measures for protection and the use of the resources of the Adriatic Sea.

Conclusions

The Slovenian coastal and marine area is subject to growing pressures resulting from the increased demand for marine and coastal space, often driven by conflicting interests. On a global level, we are witnessing the strengthening of northern Adriatic's geostrategic role, which will increase pressures on the use of maritime surfaces, mainly due to the growing maritime transport and also because of the attractiveness of the area for establishing a terminal to supply the EU with energy products (which is indicated by initiatives for the construction of gas terminals, both on the Italian and Slovenian side). On the contrary to this an initiative to declare the Adriatic as a Particularly Sensitive Sea Area is being prepared, which will require appropriate management.

Slovenian territorial waters are of a limited scope, the use of maritime surfaces has already been defined on the basis of various regulations in the field of maritime transport, protection of waters, fishery, protection of nature and biodiversity, protection of cultural heritage, bathing waters, etc. In the future it is also not possible to expect the initiatives for activities, which generally bring into action the preparation of marine spatial plans (wind farms and similar large scale structures), due to the mentioned spatial conditions.

The introduction of Maritime Spatial Planning is justified mainly because of efficient management of the mentioned maritime resources, the coordination of conflicting interests among the existing and new users of maritime surfaces, and particularly due to better integration of spatial planning on the shore and at sea.

It is reasonable to prepare a Marine Spatial Plan also for the northern Adriatic area because it provides a source of initiatives which require wider harmonisation among Slovenian, Croatian and Italian partners. We propose that the Trilateral Commission (Slovenian-Croatian-Italian) for the protection of the Adriatic and the coastal areas against pollution introduces the initiative for the preparation of a common Marine Spatial Plan for the Northern Adriatic or its most burdened part – the Gulf of Trieste. In the framework of the Plan, protection and development interests among the mentioned countries in this area should be harmonized.

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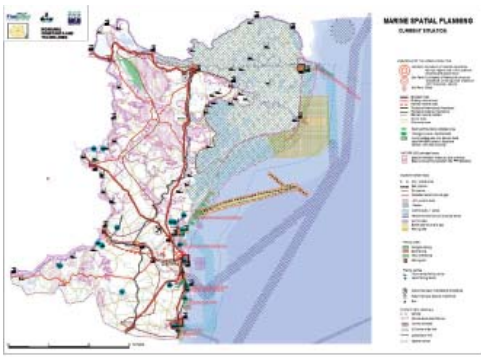
PlanCoast MSP pilot project example: Romanian 12 sea mile zones

In 2007, Bulgaria and Romania, two Black Sea littoral states, have joined the European Union and for the first time the prosperity, stability and security of the neighboring states around the Black Sea have become a concern to the EU. The countries bordering the Black Sea are Turkey, Bulgaria, Romania, Ukraine, Russia and Georgia but the catchment area of the Black Sea includes major parts of seventeen countries. The second, third and fourth largest rivers in Europe, respectively the Danube, Dnieper and Don rivers flows into the Black Sea.
The Black Sea is strategically located at the junction of Europe, Central Asia and the Middle East and currently it is facing a range of opportunities and challenges.



The major problems are:

- The decline in Black Sea commercial fish stocks
- The loss of habitats, notably wetlands
- The loss or imminent loss of endangered species
- The degradation of the Black Sea landscape
- The erosion process (especially on the Romanian coast with its sandy beaches, which are directly exposed to wave action)

The Romanian Black Sea Coast stretches out for 244 km and an important characteristic of the Romanian coastal area is represented by the differentiation between the northern unit (Musura Bay – Cape Midia – 165 km) and the southern one (Cape Midia – Vama Veche – aprox. 99 km). While the northern unit is focused on the preservation of nature (Danube Delta Biosphere Reserve – DDBR), the southern one has mainly developed harbor activities, industry and tourism.

The Romanian partners from the PlanCoast Project, the National Institute for Marine Research and Development "Grigore Antipa" and the National Institute for Research and Development on Urban and Spatial Planning "Urbanproiect" are aiming to develop the tools and capacities for an effective integrated planning in the coastal and maritime area. For the first time the plans are including the sea in their regulations, and are not strictly addressing the land area.

The main tasks are represented by the Marine Spatial Plan together with the two Romanian Pilot Projects: Sulina and Constanta area.

The Marine Spatial Plan is currently in the mapping phase. The area addressed by the plan is represented by 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, the telecom cables and the pollution Hot Spots have been mapped.

The pollution Hot Spots, defined as the dominant point sources on the coast of the Black Sea affecting human health, ecosystems, sustainability or economy, identified for Romania are: 1 fertilizer (Fertilchim), 1 petrochemistry (Petromedia) and 4 domestic (Constanta North, Eforie South, Mangalia, Constanta South).

The Black Sea Fiber Optic Cable System BSFOCS, operational since September 2001, has a length of 1300km but currently has no effect on the Romanian coastal area due to the fact that its landing points are

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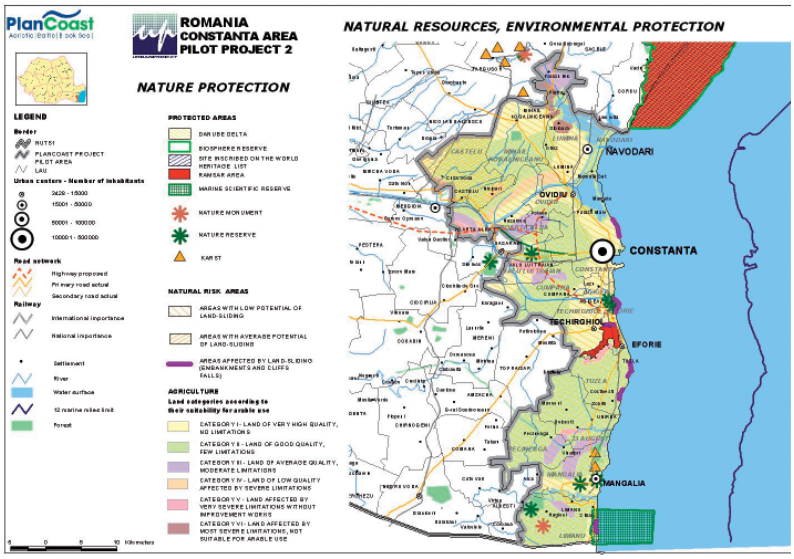
in Bulgaria (Varna), Russia (Novorossiysk) and Ukraine (Odessa).

As mentioned in the beginning, the Black Sea region is emerging as a strategic area of concern for the European Union and also for Euro-Atlantic alliance. This is most visible when we talk about the oil and gas pipelines. Currently in the Black Sea already exists and important submarine gas pipeline namely the Blue Stream. This pipe is aimed to supply Turkey with Russian natural gas via the Black Sea offshore area avoiding third countries. With its 1213 km it is considered one of the most advanced world-wide, from a technical point of view, due to the water depth up to 2150 meters and also the aggressive hydrosulfuric environment.

From a planning perspective the future development of new projects in this field is vital, on the other hand, the prediction is very difficult based on the fact that the decision is highly political.

The South Stream is a proposed gas pipeline to transport Russian natural gas to Italy. The 900 kilometers long offshore section of South Stream would start from the Beregovaya compressor station at the Russia's Black Sea coast, and would run to Bulgaria's Varna.



One argument supporting the future development of offshore pipelines in the Black Sea is represented by the fact that the Turkish Straits of Istanbul (Bosporus) and Canakkale have become a chokepoint, with the traffic in and out of the Black Sea being already stalled because of increased tanker volume.

If the mapping process of information regarding the suitable areas for wind farms and aquaculture is subject for future improvements, there are also some domains where the information is not accessible, namely the sand and gravel extraction sites and the military training areas.
In the pilot projects, the two partners from Romania have decided together to address both types of planning documents which are possible to be drawn for the Romanian Coastal Area. By this we mean Spatial Planning documentations and Urban Planning documentations.

Pilot Project RO1 Sulina, namely the General Urban Plan for Sulina City, is addressing the city of Sulina which is situated in the Northern part of the Romanian Black Sea Coastal Area and it is part of the Danube Delta Biological Reservation. Until now a new database has been created in geographical information systems (GIS) and a mapping of the current state of art has been conducted. The result of this pilot project will be the legally binding document for the future spatial development of this city.

Pilot Project RO2 Southern Romanian Black Sea Coastal Area, namely the Zonal Spatial Plan for this area, is addressing the Southern part of the coast, which is facing specific problems, different from the ones faced on the Danube Delta Biological Reservation. The economical pressure on the development of this area is much more visible, specific and balanced protective measure will be established through this plan.

In the begging, thematic maps for the waste and water management, natural resources, pollution and also the touristic pressure have been drawn. The next step was to address the socio-economical aspects of this area, mapping population evolution, the economical evolution and also the type and the quality of the current stock of dwellings.

Few conclusion can be drawn, some more general, like the fact that Romania is facing West rather than East with Constanta area being of high importance for Romania as a whole, but mainly as a gateway for goods and products. Also, only 40% of the Romanian coast is viable for economical development, the rest being a World heritage site which requires special restrictions.

For our studied area few tendencies have been identified. One is that we are witnessing a "Renascence" of our rural areas and it is expected that the future EU funds, available for Romania, will emphasize this. Another phenomenon identified is the dilution of the town borders with a clear tendency to build in the metropolitan area around the cities.

From a technical planning point of view, the Limanu case teaches us the need to establish restrictions on the land side when a nature protected area is situated on the sea, immediately near the coast.

In conclusion the pressure from the activities on the Romanian territorial waters is currently reduced, only few conflicts being identified, but there is a clear need of raising the awareness, among the actors involved, on the completely new spatial planning instrument represented by the Maritime Planning.

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Predicting Harbour Development: Forecast of the German sea borne traffic 2025

Dr.
Georg-Dietrich Jansen
PLANCO Consulting GmbH

Challenges for European Ports

Several 1.200 merchant ports operate along the European coast. They are key points of modal transfer between land and maritime transport. They handle 90% of the European international trade. Moreover and that is not well known, if we consider all tonkilometres carried out in the intra Community trade, 40% are handled by these ports. Ports are the direct and indirect source of more than half a million jobs.

In 2005 more than 3 billion tonnes transited through European ports. The traffic of bulk presented 50% thereof. Mineral energy products and liquefied gas are important components. However, Ro-Ro traffic also represented some 14% of the total. General cargo accounted for less than 10%. The strongest growth could be observed in the container transport, which represented one third of the total.

30% of the movements took place in the ports of Rotterdam, Antwerp and Hamburg. Quantities handled in the 9 biggest Mediterranean ports amount only to 20%. Considering these developments the European Port system is confronted by remarkable challenges such as:

- International transport growing quicker than economic growth,
- Development of container transport together with more effective, faster, safer and cleaner port operation requires major efforts in land acquisition and management as well as in social issues,
- The use of IT in navigation and telecommunication technologies offers prospects for productivity and new jobs,
- Environmental aspects (greenhouse gases, air quality) require modal diversification towards rail, inland navigation and maritime transport with ports as interfaces,
- Dialogue between port stakeholders and urban, regional players have to ensure social acceptance, to improve the image of the ports and to achieve a better spatial organisation.

These challenges can only be tackled, if there is an idea about the future development of the maritime transport.

Methodology of the Forecast

In the framework of the German-wide forecast of sea borne transport in 2025, a separate forecast of the cargo volumes that have passed through the involved ports was necessary. As this applies for airports as well, a separate forecast has been performed for air traffic. Both ports and airports have to be considered as singular traffic generators. As this forecast contributes to the forecast of traffic volumes on the traffic network in Germany, traffic from and to and via Germany had to be taken into account.

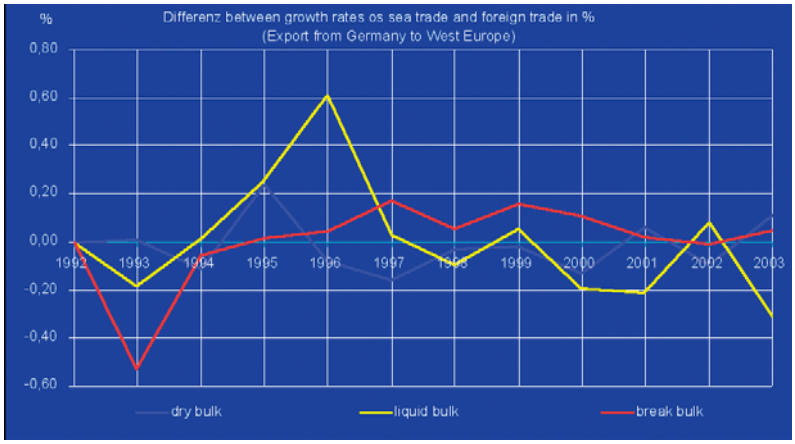
2004 Planco Consulting analysed traffic generation of these ports as basis for the 2025 forecast:

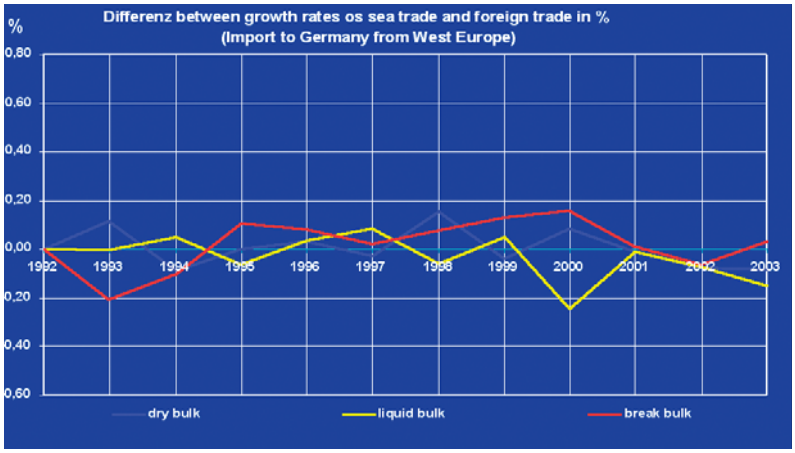
- **Rhine estuary ports:** Rotterdam, Antwerpen, Amsterdam, Seebrügge and Vlissingen;
- **German North Sea ports:** Hamburg, Bremerhaven, Bremen, Emden, Cuxhaven, Brunsbüttel, Stade, Brake, Nordenham and Wilhelmshaven;
- **German Baltic Sea ports:** Lübeck, Rostock, Kiel, Wismar, Stralsund and Sassnitz-Muchrane.

During the past decades Planco Consulting developed an approach to predict such transport developments. Considering all the statistical difficulties concerning trade statistics and traffic statistics, missing transit information and so on, a specific database has been established as basis for traffic projections. The approach presented in the following picture considers economical developments and all aspects linked to transport. E.g. the GDP development for the involved countries, which use the ports under consideration for ex- or importation of goods via transhipment using feeder services or in form of land transit, have been anticipated.

There is a close interdependence between economic development expressed by the GDP and the foreign trade as well as between foreign trade and maritime transport. The later has been analysed by comparing growth development of foreign trade and maritime transport to justify the application of the approach developed dur-

ing the past decades. As can be seen by the following graph, the difference between the yearly growth rates are negligible.



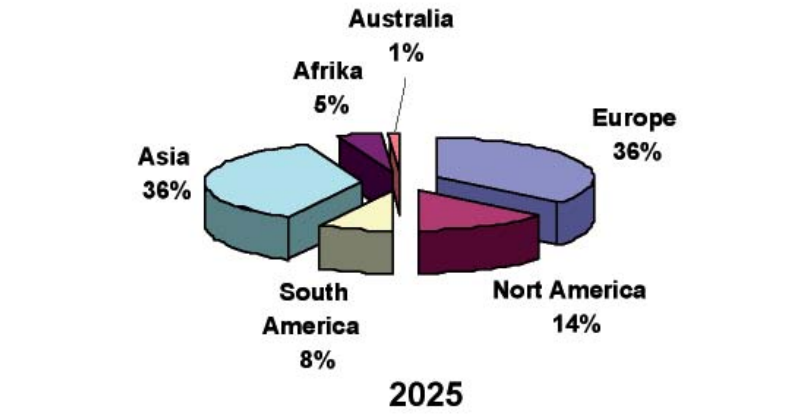


Summary of Results

Taking into account all aspects described so far and determining the maritime transport in all ports included in this analysis it is expected that the cargo will increase from **793 million tons in 2004 to 1.658 million tons in 2025**. This reflects an average growth rate of 3.6%. The average growth rate in the German ports will be with 4.6% higher than in the Estuary Ports. Some developments are selected here to demonstrate these developments. However, we are aware, that the time horizon 2025 is some how far away to forecast exact figures. May be we should present some corridors. Therefore these and the following figures have to be interpreted as an average with deviations.

In general the average yearly growth rate of containerised cargo are higher than those of non containerised cargos (bulk and break bulk). Particularly in Hamburg the anticipated average growth rate of containerised cargo with 6.5% per year is relatively high compared to those in the other North Sea Ports like Bremerhaven 6.0%, Rotterdam 5.3% and Antwerp 4.5%[1].

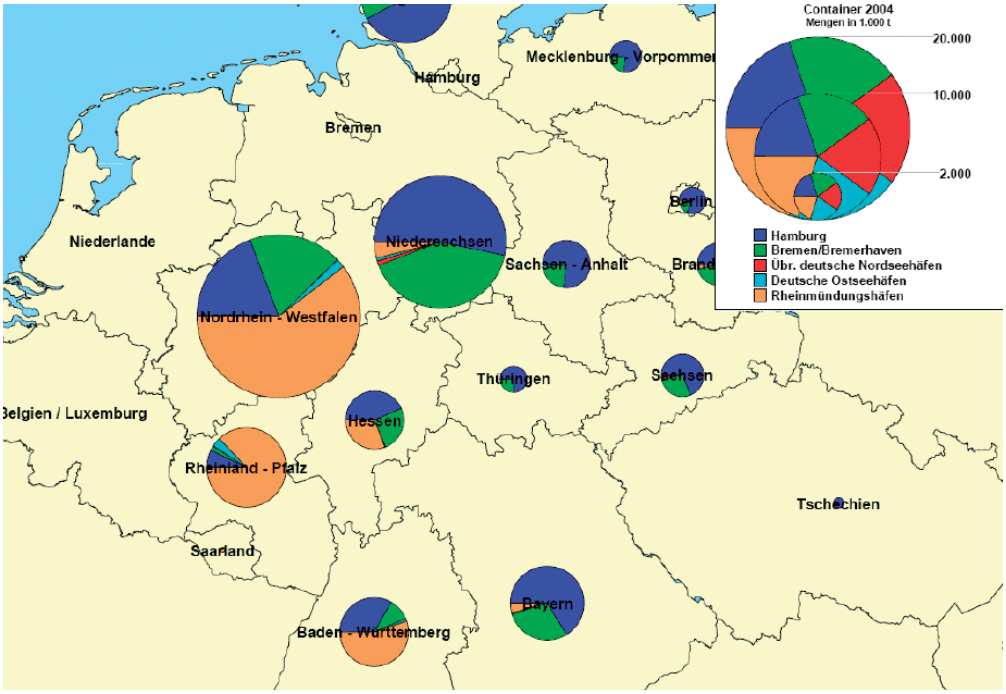
The regional distribution of container traffic is anticipated not to change significantly until 2025. The shares of main destinations are presented in the following graph.



However, container transport via German North Sea Ports and Rhine Estuary Ports from and to North-East-Asia (China) is supposed to increase by 6.3% per year in the average. The overall development in selected ports is presented in the following graphs.

(1)
In Antwerp only traffic from and to or via the German Network have been taken into account

The traffic increase via the involved ports heavily affects the respective hinterlands. The intensity of this impact in Germany can be demonstrated by the following maps for containerised cargos:



3 Concluding statements

Confronted with these developments, all involved ports have to significantly expand their capacity during the next 15 years. However, they have to respect social and environmental prerequisites, Therefore the following general recommendations should be taken into account:

- Increase port efficiency and productivity rates in terms of output or movement per ha,
- Integrate the transport chain (intermodal transport links),
- Use telecommunication to smoothen the interface between modes and operators,
- Explore alternative transport routes considering the capacity of hinterland links,
- Expand ports on the basis of large consensus of all stakeholders.

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Marine and Coastal Management in the UK: Views on recent developments

Introduction

Through my involvement in the EU Demonstration Programme on Integrated Coastal Zone Management and in the UK commission on ICZM, I am now looking back on over 10 years experience in coastal and marine management. Throughout this time I have maintained my links with coastal management and in particular, English local authorities. I provided support to the Local Government Association's (LGA) Coastal Special Interest Group by drafting responses to marine and coastal policy consultations on its behalf and previously was a key member of the team which produced the LGA's "Coastal Strategy: On the edge (2001)".

The vision of the LGA Coastal Special Interest Group is "……to established improved governance, management and community well being to ensure that the UK has the best managed coast in Europe, and to identify appropriate and sustainable funding strategies to support this aim."

The issues facing the UK coast can be distilled down to:

- Complexity and confusion in the legislation and policy governing the coast
- The separation of management systems across the land/sea interface
- Lack of funding to support local management initiatives.
- Lack of clear policy statements and visions for the coast

There have been two key developments in coastal management in the UK over the past 2 years; the production of the Consultation Document on ICZM and the forthcoming Marine Bill. In this paper Heidi outlines her views on these two initiatives from the perspective of local authorities and the development of ICZM in the UK. These are the views of the individual and may not be the views of the LGA Coastal Special Interest Group or Atkins.

Heidi Roberts
Principal Environmental Scientist, Atkins Water and Environment Consultancy

Developments in ICZM in the UK

The UK Government produced an ICZM Strategy Consultation Document following the EU Recommendation on ICZM. The Recommendation called for national stocktakes of coastal management and national strategies to be produced. Atkins undertook the UK Stocktake in 2005 and a consultation document on ICZM was produced by Government (Department of Environment, Food and Rural Affairs) in summer 2006. The document was entitled: promoting an integrated approach to coastal zone management (ICZM) in England. The document can be found on the Government's website :

http://www.defra.gov.uk/environment/water/marine/uk/iczm/index.htm

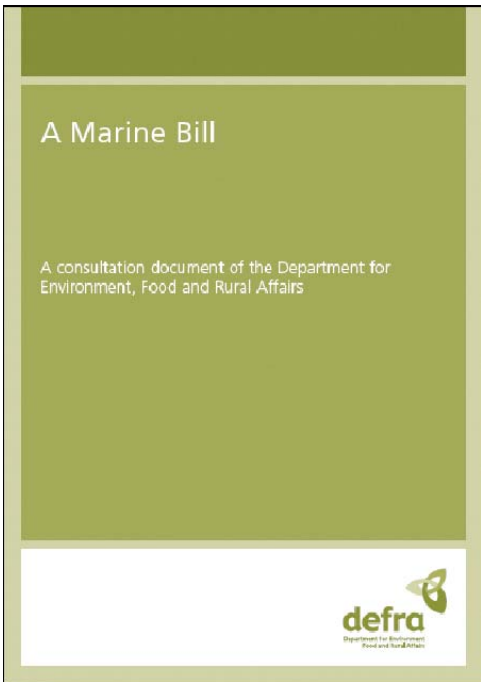
The consultation paper aimed to generate discussion and debate about ICZM in more detail, help us create the right approach towards achieving ICZM in England now and in the future.

Overall many coastal stakeholders were disappointed with the Consultation document as it did not progress the debate on ICZM in the UK and focused on reviewing the existing situation and communication between different sectors. The key concern was that the document focused on local partnerships continuing to deliver the bottom-up approach to ICZM. Whilst the LGA recognises that the role of partnerships is fundamental to the success of local ICZM delivery, it believed that they will not be able to truly deliver ICZM without the support of a national policy framework and possibly duties and powers for key organisations to participate and secure funding.

In response to the Consultation Document, the LGA called for more action on the coast, these actions sought to put ICZM on a more stable footing, providing legislative and funding support to enable it to function as a proper decision-making frameworks. Currently the existing system is simply a sticking plaster across the land sea interface which fails to link the terrestrial and marine planning systems and leaves local authorities with the complexities of managing disparate issues which fall outside regulatory control or under the jurisdiction of many different management frameworks.

A summary of responses to the Consultation Document were published in June 2007. The Government notes that the responses have been considered within the development of proposals for the Marine Bill which is discussed below. The Government was to publish details of actions which have been taken forward from the Document, or which it believes should be taken forward in future to promote and help to achieve ICZM in England. The programme for publication was towards the end of 2007, but nothing has emerged yet.

The timeframes has meant that consultees had to respond to the ICZM Strategy without knowing how much reference and profile would be given to ICZM in the Marine Bill. It was hoped that ICZM would be supported and promoted as the key mechanism for managing issues across the land/sea interface.



The Marine Bill

The Government has also been developing a White Paper for marine management and consultation has been undertaken on its development in summer 2006 and 2007. The White Paper was supposed to go to Parliament this year but has been deferred until the next session (2008). The Marine Bill focuses on 5 key areas for improving marine management. These are:

1. A new UK wide system of marine spatial planning;
2. A streamlined and consistent system for licensing marine developments;
3. A flexible mechanism to protect natural resources, including marine conservation zones with clear conservation objectives;
4. Improvements in the management of marine fisheries in relation to England, Wales and Northern Ireland and the ability to share the costs of management with commercial and recreational sectors;
5. A new Marine Management Organisation (MMO) delivering UK reserved functions plus UK functions.

The development of the Marine Bill is welcomed by local authorities and they are very supportive of the vast majority of its proposals. It hoped that the Bill will result in significant improvements to the management of the marine environment. At present this is managed sectorally and with little or no input from other departments other than Central Government.

Although being supportive in the main, local authorities are concerned about what happens at the land sea interface and how coastal communities can contribute to the management of developments or issues just off the beach/shore. The Marine Bill has referenced that ICZM will be the answer to this issue but does not explain what support ICZM would have or how this would work in practice. There is the continued concern that unsupported ICZM remains the management "sticking plaster" for the most complex of environments. This lack of integration risks marine management being a two tier system, with potentially conflicting ministerial responsibilities between land and sea.

The Marine Bill White Paper (second round of consultation), did specifically discuss the issues surrounding the land/sea interface which the LGA welcomed. However, there remains frustration that there has been little development in the proposals for integrating the land-sea interface and the importance of ICZM in providing a framework for decision-making. Indeed, the White Paper did not appear to have moved forward from the ideas put forward in the previous consultation document. In many aspects the proposals appear to be more nebulous than those presented in the previous document.

The LGA remains concerned that the White Paper shows poor recognition of the importance of local government, in particular that local authorities play a vital and integral role in the governance structure of coastal areas, and have an important role in democratic decision-making.

The Way Forward

The Government has provided a summary of consultation responses to the Marine Bill White Paper (Defra 2007). The LGA's views are recognisable and appear to have been supported by others.

A number of views suggested that coastal integration was only possible and achievable if it becomes a statutory process, as voluntary agreements or encouraging the various bodies with coastal interests to work together is not enough to achieve coastal integration (we have already tried that!). ICZM has been promoted by the consultation responses as the mechanism to address the land/sea interface. Indeed a large number of respondents favoured some form of legislative underpinning for ICZM and made suggestions about the form the duty should take and to whom it should apply.

This is a positive sign BUT we are unsure of if this will be addressed before the Bill goes to Parliament, which is planned for next year. The ICZM Strategy is unlikely to go anywhere in its current form as UK Government has now met the requirements of the EU ICZM Recommendation. Stakeholders are now hoping for the delivery of ICZM through the Marine Bill, if we don't get recognition here, we are unlikely ever to get it.

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Dealing with Alternatives: Decision-Making Process, Scenarios and Participation in Spatial Planning

Dr. Dietmar Kraft
University of Oldenburg

Principles of a Decision-Making Process

The main duty of spatial planning is balancing and coordination of various interests and needs, especially in coastal zones. Many sectoral interests and needs like agriculture, nature conservation, tourism and coastal protection are interacting in the coastal zones. These user perspectives have to be considered and integrated in a process of spatial planning. The process to make a reasonable and mandatory choice is a decision-making process. One definition of the term decision-making process is the study of identifying and choosing alternatives based on the values and preferences of the decision maker. In this short summary we will present one example according to this definition.

The intention of the Working Group Integrative Modelling at the ICBM, University Oldenburg, is to develop systems to support the decision-making process, to not only decide on the basis of the outcomes of these systems. Because, for the final decision one basic principle in participation processes cannot be ignored: negotiation and deliberation, i.e. discussions. Nowadays, the participation of stakeholders and/or institutions or organisations is mandatory. The involvement and engagement of the broad public is highly desired, but needs more emphasise and appropriate tools and methods.

Sustainable Development and Participation in the Coastal Plain

The aim of the EU Interreg IIIB project ComCoast (Combined Functions in Coastal Defence Zones) was to elaborate the combination of land uses with spatial coastal protection concepts and to investigate innovative technical solutions to widen a single of defence to a (multifunctional coastal protection) zone. These zones offer new opportunities for safety and for sustainable development of the coastal plain. Here, the results of the application of this concept in northwestern Germany, in the state Lower Saxony, where coastal protection is a statutory duty of the government, will be described. Within spatial planning coastal protection is only considered as sectoral planning. The main dike protects the flood-prone area and there are no protection zones considered. The participation and evaluation process conducted at the German case study within the ComCoast project has outstandingly shown which opportunities spatial coastal protection concepts offer. The pilot area consists of different coastal protection elements like barrier islands, a broad fore land, 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, scenarios have been developed to describe reasonable future circumstances for different sectors.

Three scenarios have been developed:

- Scenario A: „Business as usual“:
  the prolongation of 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 in this case study was to build consensus on every step in the process between the attendees. The process can be divided in three steps. The first step is the discussion about the impact and effect of the scenarios for the local situation. The attendees have to build consensus about future circumstances in different sectors and user perspectives. In the second step the attendees have to think on their own about possible reaction strategies for the new circumstances in the year 2050. Afterwards, the ideas have to be shared with all the other attendees. The aim of the second step was to have a consensus about the 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 new

landscape. These design elements were implemented in a Geographic Information System, because these landscape have been evaluated taking economical, ecological and social aspects into account. The third step was to weight the different design elements. The intention was to identify the degree of multifunctional use of design elements. The provided method was a scoring matrix where the attendees have to express their preference of a design element under a certain user perspective. The weights of each design element have been calculated by combining the preferences points under all user perspectives. So, the weights indicate the how relevant a design element is for different users. For example, the design element „salt marsh" is relevant for the user perspective nature conservation and for coastal protection. With the scoring matrix the three scenarios have been compared under the aspect of sustainable development and the multifunctional use of design elements. Scenario C won.

An outstanding result of this process was that with the scoring matrix the phase of deliberation and negotiation could be characterised. The scoring has been filled in before the consensus workshop in one-to-one meetings. A comparison of these results with the outcome of the consensus workshop about the scoring matrix show that the deliberation phase between all attendees was not dominated by one representative, all groups have been considered equally. The feedback of the attendees shows that all were happy to participate as early as possible in such a process to develop appropriate strategies for the coming future.

Perspectives – different kinds of decision-support

The example reveals the importance of actively involving people in a decision-making process. Every group has its own interests and needs, and sometimes it is hard to express these within formal spatial planning processes. On the other side the example shows that for pro-active planning processes new and innovative methods are necessary. But, there are many other decision support tools.

For example, to visualise and to explain the approval process for offshore wind energy farms an online game was developed at the ICBM. Within the ANEMOS game the player has to pass through different steps taking the various interests and needs of different pressure groups into account. The player takes the role of an off-shore wind farm planner. The player has to identify the appropriate area for his offshore wind farm. A questionnaire is used to score the importance of different user perspectives. The outcome of this questionnaire can be used as scenarios of the priorities the player defines and that sustainable planning at the sea should take into account. At the end of the game there is not only one successful winner. The ANEMOS game will sensitise the player to the different interests and needs of user groups and the effect these could have to the decision-making process.

Each decision-making process asks for specific methods or tools. The aims of these methods or tools can vary just like tasks and competences do. But, all these decision support tools or methods have a common basis: To support the user within the steps of decision-making, i.e. thinking, judging and selecting. „Thinking" about a problem or a specific task means to process available information and data, e.g. collecting and collating, analysing and characterising of information and data as first step. „Judging" expresses the process of froming opinion to choose or decide upon a certain measure. Finally, a decision has to be taken at the end of the process, i.e. „selecting" on the basis of the best available information and data.

The future tasks of our working group are the development and application of methods and tools to support decision-making processes with regard to adaptation strategies to the consequences of climate change. Here, the integration of different sectors and stakeholders is immanent, because the consequences of climate change have impacts on various land uses with multifaceted implications.

Investigation area of the case study in northwestern Lower Saxony, source: Google Earth, 2007.

Result of the consensus workshop about the new land use pattern in 2050.

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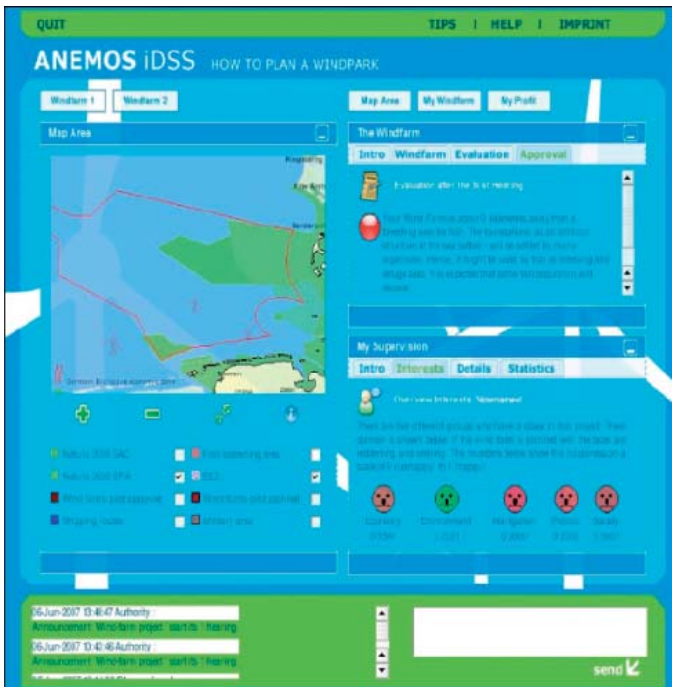
Screenshot of the ANEMOS online game.



The Action Plan for a European Integrated Maritime Policy: from the Green Paper to the Blue Book

Nicole Schäfer and
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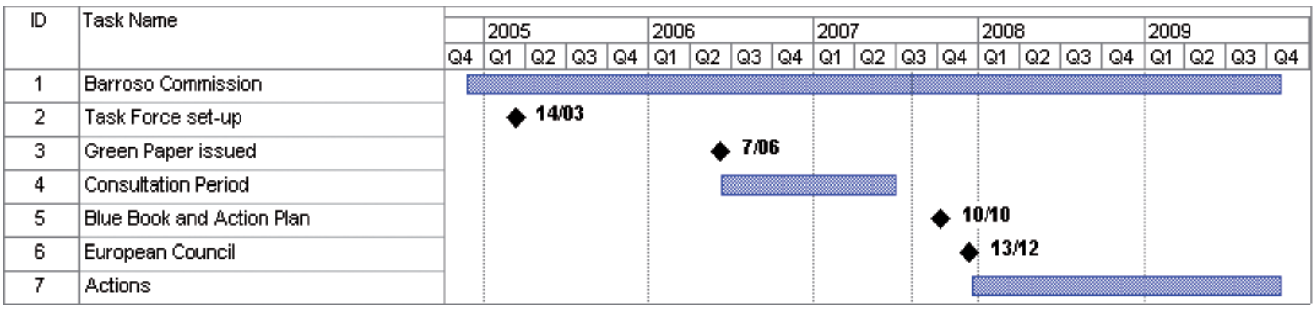
The Commission's Maritime Policy Action Plan, released alongside with the maritime "Blue Paper" on 10 October 2007 reflects the increased coordination of EU sea-related policies that has progressively developed since President Barroso's commitment to an EU Maritime Policy at the beginning of his term in office. Rather than developing policies in isolation, consulting only with counterpart ministries in Member States, listening only to lobbies from their own sector and presenting a fait-accompli to other Services, the Commission Services responsible for particular policies have taken on board input and suggestions from **other policy areas** at the outset of the process. This enhanced coordination has been achieved through over thirty inter-service **"project teams"**; each chaired by one Directorate General. These teams clarified what needed to be done on issues such as reducing excessive red-tape on internal EU sea voyages, increasing the currently unacceptably low number of European seafarers or dealing with the impact of expected changes in Arctic ice cover. They have then analysed opinions of stakeholders, identified how each Directorate General could contribute and collectively developed roadmaps and plans for achieving the desired objectives.

Presenting all the policies together in one document has enabled the Commission to provide a snapshot of what it is doing in the maritime area and a pointer to its priorities for the future. It constitutes a one-stop reference to stakeholders concerned with maritime issues and a checklist against which progress can be measured. The Plan is not static. Because ideas evolve and priorities change as new circumstances arise, the Plan outlines how the Commission will continue to develop its maritime policies in an integrated manner, listen to stakeholders and maintain transparency. These coordination measures include publication of annual reports and celebration of a maritime week.

Although all the policy initiatives take into account the concerns and objectives of a number of sectors, the majority of the legislative proposals will be under the umbrella of single policy areas. However, the process by which the maritime policy was developed has also resulted in the identification of a number of other issues that are truly cross-sectoral and that cannot be dealt with within the legal framework of any existing policy. This includes **Maritime Spatial Planning.**

The need for some sort of Maritime Spatial Planning is not disputed. Rules already exist for fisheries regulations, ecosystem protection or the expansion of economic activities and there is a consensus that these piecemeal rules should be replaced by a system that takes into account the full range of human activities occurring in spatially demarcated areas identified through a procedure that takes into account biophysical, socioeconomic, and jurisdictional considerations. The question is rather *"what should the EU's role be?"*.

EU Maritime Policy Timetable



It is instructive to read what those who replied to the Green Paper questions thought. More than 100 regional authorities or groupings provided contributions. In the "official" national contributions two major needs can be identified:

1. exchange of good practice and EU guidelines; and

2. better cooperation with neighbours

As far as exchange of good practice is convened Sweden noted that *"there is a lack of fora within the EU for discussions on these issues and they tend to be held in a disparate and unconnected way in various groupings"*. According to Denmark the EU should *"facilitate best practice"* and provide *"guidance for coordination of data collection"* and a *"one-stop shop for preparation of permission for large-scale projects at sea"*. Greece believes that an EU maritime policy could provide *"EU guidelines ensuring the harmonized implementation of MSP between EU Member States"* and *"promotion of experience, exchange and best practice among EU Member States"* and the Netherlands confirms that *"the exchange of best practices primarily at regional level could play an important role here"*. Spain suggests that *"it would be of great interest to establish a European framework of guidelines for the regulation of marine areas"*.

Finland "emphasises cross-border cooperation in order to achieve common goals". The Netherlands points out that "larger, cross-border projects (pipelines, wind farms) often call for common criteria and/or planning measures". According to Belgium "different spatial plans have to be integrated with the plans of neighbouring countries". Greece notes a need for "cooperation of EU Member States – particularly those sharing the same maritime area" and Sweden's contribution is almost identical "There is a need for increased cooperation between the Member States, especially around the same regional waters".

In response to these opinions and suggestions, the Commission will issue a road map in 2008 setting out the steps for creating a system for the exchange of best practice among authorities in Maritime Spatial Planning and integrated coastal zone management which will be inaugurated in 2009. A reflection on cross-border cooperation in maritime basins will be launched in late 2008 as part of a Green Paper on territorial cohesion which joins economic and social cohesion as an objective of EU regional policy under the new Lisbon Treaty.

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Integrated maritime policy in Germany

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Ladies and gentlemen,

I am pleased to focus my presentation this afternoon on four central issues:

- The development of Integrated Coastal Zone Management,
- The spatial planning procedure in the Exclusive Economic Zone
- The future maritime policy of the EU from a German perspective,
- The effects of climate change in the sea and on the coast and strategies for adaptation.

How did we develop Integrated Coastal Zone Management?

In recent years spatial planning has paid increasing attention to the development of maritime space – the sea, in other words. As early as 2001, the Conference of Ministers for Spatial Planning agreed that Germany's coastal states should extend their spatial planning programmes to include the 12 sm zone. Before that date, the Länder's spatial plans did not make any provisions for spatial development in the sea. New plans that remedy this are currently being drawn up, in some cases they have been completed already. Federal spatial planning has made a contribution in the drafting of the EU ICZM recommendation, which was put forward by European Parliament and Council in 2000. A study by Prof Buchholz at Hannover University, titled "Spatial Planning strategies for a more integrated management of the coast", provided the necessary foundation. This study was one of the first to raise issues beyond traditional forms of sea use. As a result, first basic guiding strategies were developed for spatial organisation in the EEZ. I'll come on to the current situation shortly.

In order to develop a national strategy, a stocktake had to be carried out, which was contracted to the Social Science Center Berlin on behalf of the Federal Ministry of Transport, Building and Urban Affairs. Led by Prof. Glaeser, the stocktake was done in 2003 and 2004 and covered the entire 2,500 km of the German North and Baltic Sea coasts. It served as a basis for developing first ideas for a national ICZM strategy from the perspective of spatial planning. The stocktake made clear that coasts and seas are faced with considerable pressure. Large-scale rapid changes particularly affect coastal waters and the EEZ, where growing internationalisation and intensification of use leads to competition for maritime space. Considerable interest also exists in extending port facilities and transport nodes, in order make use of the seas as transport and transit spaces. Balancing different interests and creating a polyculture of use is only possible through appropriate management and decision-making, processes in other words that can also include ICZM.

As far as our planning system is concerned, decisions taken on the landward side are reasonably clearly structured. To what degree does this apply to the sea? Here, new solutions are often needed.

Federal spatial planning policy makes every effort to contribute to the ICZM process internationally, focusing on economic, ecological and social needs in equal measure. The INTERREG III B project PlanCoast serves this very purpose, where you, the partners from the Baltic Sea, the Black Sea and the Adriatic, are engaged in further shaping the ICZM process. Sustainable use of shrinking resources and demographic developments on the coast are particular focal points.

Spatial planning in Germany is currently developing a joint strategy for spatial planning, which will bring together the Federal and Länder level. In this strategy, the mainland, coasts and seas are regarded as a continuous space for the very first time. I am convinced that this approach would not have been possible without the "philosophy" of ICZM. The success of ICZM, a voluntary instrument of co-operation, is mostly that it helps us recognise conflicts before they erupt and enables us to develop solutions. It is this which is the particular strength of ICZM.

Spatial planning procedure in the Exclusive Economic Zone (EEZ)

Maritime policy needs to consider the question of how space should be allocated. What should be permitted in that space within which limits?

It is clear that government is faced with new tasks and challenges arising from increasingly crowded seas. Recently, conflicts have emerged between old forms of use and "the new kids on the block", the rising stars of marine resource use.

Some of these are highly demanding of space. Offshore wind farming, for instance, has come into conflict with classic forms of use such as shipping, fisheries, extraction, research and defence. To arrive at well-coordinated solutions, development of the EEZ needs to be integrated and based on the principle of sustainable development. Spatial planning is based on these very principles.

Together with the Federal Maritime and Hydrographic Agency, we have been working on a draft spatial plan since 2005. The plan will take the form of statutory regulation and be put forward by the Federal Ministry of Transport, Building and Urban Affairs. So far, we have carried out a stocktake of the specific demands that are placed on the EEZ. This was done in a consultative process which included all relevant stakeholders (including neighbouring countries). Talks were held with the Water and Shipping Directorates North and North West, the coastal Federal states, the Federal Ministry for the Environment, the Federal Office for Nature Conservation and the State Office for Mining. Also, specifications were made for the SEA process, so that an SEA can actually be carried out (in line with the SEA Directive).

At present, we are developing aims and principles for spatial planning in the EEZ, including the designation of priority areas for specific forms of use. The spatial plan will take full account of the need to protect the marine environment, in line with national and international regulations. Once the plan is complete, its provisions will be legally binding and apply to both conservation and development projects. This will provide planning security to potential investors. Areas that have already been set aside for offshore wind farming before 2005 on the basis of the Marine Facilities Ordinance will be maintained. In the second half of 2008, a formal consultation process will be initiated on the draft spatial plan, in line with para. 18a of the Spatial Planning Act. This will involve public authorities, the general public, adjoining federal states and also neighbouring countries. The spatial plan is set to come into force in late 2008. As part of current legislative procedures, a so-called spatial planning clause is being added to the Marine Facilities Ordinance. This means that the future approval procedure for concrete projects and installations in the EEZ will need to take account of spatial planning aims and principles.

Future EU Maritime Policy from a German perspective

Federal government aims for greater integration of German maritime policy with EU maritime policy. The EU Green Paper is a step towards the development of a European maritime strategy. Protection of natural resources, environmental protection, fisheries, security and migration of people (referring in particular to the Mediterranean region) are key issues. Economic aspects are also crucial. Federal government welcomed the Commission's decision to develop a Green Paper on EU marine policy. Sustainable marine policy has to link up to relevant EU strategies such as the Lisbon strategy and the sustainability strategy, which set out EU commitments towards economic, social and environmental political renewal.

Led by the Federal Ministry of Transport, Building and Urban Affairs, Germany actively contributed to the development of the Green Paper. The position paper covers research, coastal defence, sustainable sea use, sustainable fisheries, energy generation, extraction, maritime transport and tourism.

Under the German EU Presidency, an intensive debate was held in May this year in Bremen, involving representatives from all over Europe in taking a look at future EU maritime policy. The conference was an important milestone, which not only took stock of past events, but also outlined perspectives for the future. Results led to the publication of the „Bremen Declaration" on future maritime policy of the EU. The declaration brings together issues and positions where consensus can be reached

and will be taken into account in further work. The German government favours an integrated approach which takes into account the interests of all marine activities. It supports the development of a comprehensive approach, which brings together existing marine conservation strategies, the EU fisheries policy and future maritime policy.

After the consultation phase on the Green Paper came to a close in June 2007, the Commission recently presented Member States with new documents (on 10 October). Here too, Government will make an active contribution. A common marine policy does not alter existing responsibilities, such as the principle of subsidiarity. It can, however, contribute to common objectives being pursued more effectively and jointly.

Climate change in the sea and on the coast and the question of future strategies of adaptation – my last focal point.

According to UNESCO around 60% of the global population live within 60 km of the coast. The coastal population is expected to drastically increase and even double within the next 20 to 30 years. Europe's coastal regions, where almost half the population lives within 50 km of the coast, are faced with increasing pressure, in particular in the Mediterranean region. Coastal regions have contributed much to the EU's economic prosperity.

In order to maintain this level of prosperity, we need to face up to questions of climate change and the changes that will result. Winter storms and flooding will become more frequent on our coasts, causing greater damage. The rate of coastal erosion will increase. Dykes will need to be raised. The public has become highly aware of climate protection and adaptation to climate change. Sometimes, the media overreact. But naturally, climate is high on the political agenda too. Germany is developing a national adaptation strategy, which is set to be passed by Cabinet by the end of 2008. Climate change, together with regulatory responses and the responses of the market economy, will trigger far-reaching changes. Whilst some are probably inevitable, others can possibly be avoided or at least mitigated with the aid of appropriate measures. There are risks and opportunities associated with climate change, and change will not only affect the environment. We will shortly hear from Prof Storch on this.

Our house is tasked with quite some homework in this area. I would like to mention just one, called "Shaping the future in times of climate change – shipping and waterways." A stocktake and evaluation are currently under way to bring together existing knowledge on climate change and the possible impacts it might have on maritime and inland water transport. The stocktake is carried out by the relevant Federal Authorities.

A comprehensive 5-year research programme which is meant to serve as a basis for future adaptation strategies naturally begins with a stocktake, which documents gaps in knowledge, describes uncertainties and ways of dealing with these. I look forward to the results.

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What does climate change mean for coasts zones in Africa?

The following is a summary of results of **28 vulnerability and adaptation (V&A) studies** relative to the impacts of climate change on coastal zones of 23 African countries. The great majority of these studies assessed the impacts of sea level rise without considering other changes in climate variables (temperature, precipitations). Most of the studies also didn't consider socio-economic scenarios and thus must be considered as minimum assessments.

Physical impacts

The more common physical impacts assessed are land losses either due to **coastal erosion or coastal inundation**. They represent between less than 0.1 to 3% of the total area of each country. If beaches are the most concerned by coastal erosion, muddy coasts and deltaic as well as estuarine coasts will be mainly affected by inundation due to their low topography.

Another physical impact of concern for most of the African coastal states is the **salinization** of soils, surface and ground waters. However, due to lack of data, expertise or models, very few countries tried to assess the impacts of climate change on their water resources.

The Senegal study for example evaluated the potential effects of a 0.5 m sea level rise by the year 2100. I had shown that the salt water intrusion will increase, inducing a contamination of wells located in the harnessing area. What might seem like a minor change is in reality going to have disastrous impact on the local communities.

In Gambia, it is considered that the saline front in the Gambia river will migrate by about 200 km upstream. In Egypt, it was estimated that with a 1 m sea level rise by 2100 about 5,000 km2 of agricultural lands (18.5% of the total agricultural lands) in the Nile delta will be affected by salinization.

In countries characterized by the presence of coastal lagoons, the concern is relative to potential **changes in the function of these lagoons due to a rise in sea level** that will overflow and sometimes destroy the low barrier beaches and, on the other hand, to changes in precipitation which will affect the discharges of rivers entering in the lagoons. It is anticipated that the lagoons will completely change and this will affect the ecosystems as well as the existing fauna and flora. This in turn will affect lagoonal fisheries and aquaculture.

Biological impacts

Two main ecosystems have been considered: mangroves and coral reefs. These two ecosystems are strongly linked with economic activities, mainly fisheries and tourism. They are also amongst the most productive ecosystems of the world.

In Cameroon, it is considered that mangroves will be affected by increased salinity (which would induce modifications in the plants zonation), temperature (increase in the rate of decomposition of the leaf litter leading to an higher rate of nutrient recycling; diminution of seed production due to flowering and fructification seasons too dry, sessile and fauna, changes in river discharges (in case of rainfall decrease). Last, there is a concern about the potential release of toxic metals accumulated in the mangroves in the form of sulphides that could be released if the soils are oxidized.

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Salinization

Man induced coastal erosion

Mangrove forest

In Senegal, potential changes in the substrate (from mud to sand brought by increased coastal erosion) and increase in salinity are considered as the main factors of degradation.

However, the balance between sedimentation and erosion as well as the rate of sea level rise would be also crucial in the response of mangroves to climate change.

Some countries, like the Congo Republic, expect a colonization of lagoons by mangroves since they will be open to the ocean. Other studies indicate that endangered species present in this ecosystem like manatees and marine turtles could be at risk as well as migratory birds. There is also a concern that adopting hard structures (dikes) to protect the river banks from inundation could disturb the natural response of mangroves to sea level rise.

Saint-Louis quays in Senegal

A real concern regarding the potential impacts of climate change on coral reefs was raised after the important bleaching event accompanying the 1997-98 El Niño event in the Indian Ocean and the Red Sea. In Comoros, for example, about 80% of the corals present on the plateau and 60% present on the reef slopes were destroyed. With a rise in sea surface temperatures due to climate change, most of the coral reefs will be destroyed by bleaching. One potential consequence could be an increase of the number of people affected by intoxications due to the consumption of marine animals. Another will be losses in biodiversity.

Fishery: an important economic branch

In Seychelles, it is also considered that more intense precipitations and floods on the high islands would induce important sediment flows which would seriously affect the coral reefs. Another concern for the health of coral reefs is the effect of increase in CO^2 concentration in the oceans that could reduce their calcification.

Socio-economic impacts

Population at risk is generally considered as the population living in risk zones that will be affected either by coastal erosion and/or by inundation on a yearly basis. Few studies considered the population growth rate to estimate the population at risk at the time horizon considered and what was generally assessed was the actual population at risk. Depending on the countries, this population at risk represents between 0.5 and 17% of the total population.

Other studies (Kenya, Benin) assessed the **production value at risk**. With one exception they do not take into account the economic growth rate and do not use discount rates. For these reasons, values at risk must be considered as minimum values. Despite of that, these values at risk represent a high percentage of the GDP (between 5.8 and 542%) which, according to the vulnerability classes used defines a high to critical vulnerability. These confirm the results of the Global Vulnerability Analysis, which indicated a high vulnerability of the socio-economic system for African coastal states due to their relative low economic development. Less affected are countries with a relatively high GDP, for example Mauritius.

Cameroon, Djibouti and Senegal studies tried to determine the impacts of climate change on their fisheries, which represent an important economic sector for most of the coastal states. Also, in absence of other significant protein sources, they are an essential component of the daily diet of the coastal population. Here the results of the climate change could be dramatic: in Congo e.g., it is predicted that more than 50% of the fish coming from the Conkouati lagoon could disappear due to a more important penetration of salty water in the lagoon.

The Cameroon study indicated that shrimp production could increase in case of rainfall increase, but due to inundation of low lying areas in the estuary (for a 1 m sea level rise), about 38 fishing villages (53% of all the fishing villages) will have to be displaced inducing the migration of 6,000 fishermen.

In countries where important agricultural products come from the coastal zones, potential losses in crop revenues are another concern. They could be at risk of inundation and salinization of soils. For example, in countries like Benin and Côte d'Ivoire important plantations of palm oil and coconuts are located close to the coast (77.4 km^2 in Benin representing 33.6% of the inundated areas). In Ghana, it is the shallots production which is at threat, while in Kenya losses of mangoes, cashew nuts and coconuts crops will attain 472.8 million US $ for a 1 m sea level rise.

In Guinea, rice culture is the main agricultural activity along the coast and it was estimated that by 2050, depending on the inundation level considered (4.6 to 5.7 m), between 132.6 and 234 km^2 of rice fields will be lost due to permanent flooding, representing respectively 17 and 30% of the existing rice fields.

In Nigeria, and in particular, in the Niger delta, another concern are the oil fields. It was estimated that about 259 producing oil fields will be located in the threatened areas, representing a value at risk of 10,790 million US $ for a 1 m sea level rise.

Adaptation strategies

Due to the socio-economic importance of coastal areas, most of the countries chose to save some important areas through coastal protection works. The most common adaptation options considered are seawalls and beach nourishment.

Considering the available results it appears that costs of adaptation are generally lower than the economic value at risk or at loss. This is a solid argument in favour of the adoption of concrete measures to limit the damages due to climate change in the coastal zones. Among the other adaptation measures that were considered are the following:

- Retreat and relocation is an option that was considered mainly for fishing villages. However, there could be some constraints to this measure for example, the lack of available lands, of political commitment but also the risks of losing certain ways of life. Moreover, relocation will have a significant monetary cost. For example Kenya estimated that to relocate about 21,000 people due to a 0.3 m sea level rise in the Kilifi district will cost 73.9 million US$. In the Niger delta it was estimated that relocation of 4,000 villages will cost not less than 1.6 billion US $.
- Reforestation of coastal dunes;
- The establishment of set back lines for all new land use development was also suggested as a potential measure. This will require new legislations in most of the countries.
- More globally, a number of studies indicated the need to develop adaptation measures in a global framework of integrated coastal zone management.

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Summary of panel discussions

1st Panel Discussion:

Moderator:
Christian Dahlke of Federal Maritime and Hydrographic Agency (BSH)

Panelists:
Bernhard Heinrichs (Ministry for Transport, Building and Regional Development Mecklenburg-Vorpommern), Giuseppe Bortone (Emilia Romana DG Environment), Heidi Roberts (Atkins Consultants) and Irene Lucius (EUCC Netherlands)

The first panel discussion followed the block of PlanCoast Key Messages and pilot project examples presented by Slovenia (Adriatic) and Romania (Black Sea).

Mr Dahlke started by enquiring about the conditions which trigger integrated planning actions in the Baltic, Black, North and Adriatic Sea. Were there any significant differences between the 4 regions in terms of pressures and important issues?

Heidi Roberts, representing the North Sea region, regretted that the British perspective was rather national – a pity given the importance of working with European neighbours. Pressures and also to some extent approaches were very similar. The main challenge in Britain was international cooperation eg with France.

Giuseppe Bortone gave an account of the ICZM process in the Adriatic region: "We started this process because we are seeking a new management model of our Adriatic sea, in a sustainable combination of uses such as industry, tourism and agriculture." In his view, gas platforms in the sea represented one of the biggest pressures in the Italian part of the Adriatic. There are over 500 gas terminals at the moment, and although most of these will close because gas is running out, the negative impacts would remain. The ICZM Strategy of Emilia Romagna took these into account. Another example of a potential conflict is the extraction of sediment.

Irene Lucius currently coordinates many projects in the Black Sea countries. Speaking from her experience in the region, she identified water pollution as a key problem. Uncontrolled development in the context of inactive spatial planning systems is another big challenge. International conflicts arise from lack of cooperation: when Turkey builds dams, for example, these cause sediment deprivation in Georgia. An ICZM strategy has been developed but it has not yet been adopted by the countries. An advisory group and detailed guidelines need to be worked out. A similar approach to PlanCoast combined with ICZM activities would be very useful.

Speaking for the Baltic Sea, Dr. Bernhard Heinrichs mentioned similar problems to the other regions and specifically highlighted pollution, sand extraction and offshore wind parks. A major obstacle to MSP development was the unwillingness of some authorities to provide key information (e.g. on shipping routes).

The next question concerned public participation in Maritime Spatial Planning and how to improve it as an effective instrument for sustainable development of coasts and seas.

From the Adriatic perspective public participation still has much unused potential. Although planning tools such as EIA include PP at a project level, it is not always used effectively. PP will play an increasingly important role in the context of increased sea use and the impacts of such changes on land. The Italian government, for instance, favours Emilia Romagna as a new "gateway to China", which would not only affect the sea, but also the mainland, not least through additional harbour and transport infrastructure. DG Environment is concerned about this vision: although shipping can indeed be improved, the impact of such developments on land might be extremely unsustainable.

On the Black Sea public participation was also considered a weak spot of spatial planning systems.

Heidi Roberts underlined the importance of involving local governments in planning processes for the North Sea.

Mr. Dahlke rounded up the panel discussion by speaking of his long experience with developing the maritime plan for the German EEZ and the planning of pipeline projects. He stressed the need to enhance international planning process-

es. The Espoo convention of cross border information rights and exchange of data is a formal basis, which however is not enough. More informal initiatives like this one or the BaltCoast project are needed.

2nd Panel Discussion:

Moderator:
Dr. Bernhard Glaeser (Deutsche Gesellschaft für Humanökologie)

Panelists:
Dietmar Kraft (ICBM, University of Oldenburg), Georg-Dietrich Jansen (PLANCO) Heidi Roberts (Atkins)

The second conference block analyzed the role of research and how future-oriented tools, such as scenarios, forecasts and visions, can serve as a decision-making aid in Maritime Spatial Planning. The discussion focused on the practicability of different decision-making aids.

Panelists agreed that scenarios need to be preceded by visions. In order to develop the most suitable methods, and in order to arrive at the results we want, a vision of the future is essential. Visions need to take into account social and environmental aspects and should lead to spatial planning.

Kira Gee referred to the Coastal Futures project, which attempts to develop and make use of visions of the West coast of Schleswig-Holstein. Stakeholders are involved in evaluating different visions and choosing responses to different developments.

3rd Panel Discussion

Moderator:
Kira Gee (s.Pro, Coastal Futures project)

Panelists:
Nicole Schäfer and Iain Shepherd (EC DG Fisheries and Maritime Affairs), Robert Kühner (BMVBS), Isabelle Niang (University of Dakar), Hans von Storch (GKSS Institute for Coastal Research)

The discussion first focused on climate change and how planners might make use of scientific results. Prof. von Storch pointed out that science could provide data as well as analyses of trends, but never certainty in terms of future risks. Planners however need to translate existing scientific information into likely spatial impacts. Planners and politicians need help with this step, with trust a key between scientists and other stakeholders a key aspect. Climate scenarios were considered a useful tool for mapping out plausible futures and debating possible responses. Scenarios, however, only show possible futures and do not provide certainty. For planners and politicians, a key message is therefore not to focus on an uncertain future, but on adaptation here and now and dealing with the climate risks that are already apparent.

It was said that regions could play a key role in forcing the process of climate-oriented policy-making. The message from science is that action now rather than later is a better strategy than waiting for “safer” scientific results. Mr Kühner said that Germany had not yet achieved its objectives with respect to mitigation and adaptation. Italy is preparing a national plan for adapting to climate change, and the Emilia-Romagna region is also making an effort. Mr Bortone agreed that action was needed now and that small steps towards adaptation would be beneficial given the uncertainties about the future.

Mr. Kühner stressed that there will always be a gap between scientists and politics since politicians need certainty and only think in short-term periods. Mrs Niang made clear that scientists work for society and that their role was to explain scientific results on climate change to the people for their benefit. All panelists stressed that politicians also need to be part of this dialogue. Changes in rhetoric might also help in that climate change is already taking place, so that strategies should focus on adaptation rather than avoidance. Mrs Schäfer confirmed that there is great interest at EU level to strengthen the dialogue between scientists and politicians in the maritime context.

The open discussion round tackled the question of how to ensure the continuity of data collection, storing and maintenance for MSP and climate change. The Espoo convention was claimed unsatisfactory in this respect, with data maintenance problems not only in Africa but also in Europe. Institutions are needed to act as “data caretakers”. Problems arise when data become a commodity, invali-

dating the former attitude of data representing a common good. Much hope is put in the HELCOM data working group and INSPIRE- the new EU directive on spatial data collection and compatibility. There is also the issue of who will pay for adaptation to climate change, particularly in Africa. Mrs Niang emphasized the potential role of global fund for adaptation and suggested a role for the UN.

Study tour to Oder Estuary ICZM Project 22nd of November 2007

On the last conference day a study tour was organised for the PlanCoast group and other foreign conference guests. Rothenklempenow – a small village in Mecklenbourg-Vorpommern close to the Polish border was destination of the first part of the trip. The Rothenklempenow manor house is hosting the office of regional Agenda 21. with its two permanent employees who are acting as regional contacts, coordinators and motivators promoting the Agenda-process, and at the same time contact persons to the ICZM Oder project.

The Oder estuary is located at the border between Germany and Poland and is characterized by a high nature potential with multiple forms of landscape and formative large coastal waters. The border region is suffering from massive economic problems and high discrepancies between East and West as well as between coast and hinterland. At present the increasing tourism development is the major hope for the future. The coastal waters are highly polluted by the river Oder (in Polish: Odra). Heavy eutrophication and water quality problems are both a problem for the tourism development as well as nature conservation in Germany and Poland. For these reasons tourism development on one hand, and nature preservation on the other hand are most important regional issues.

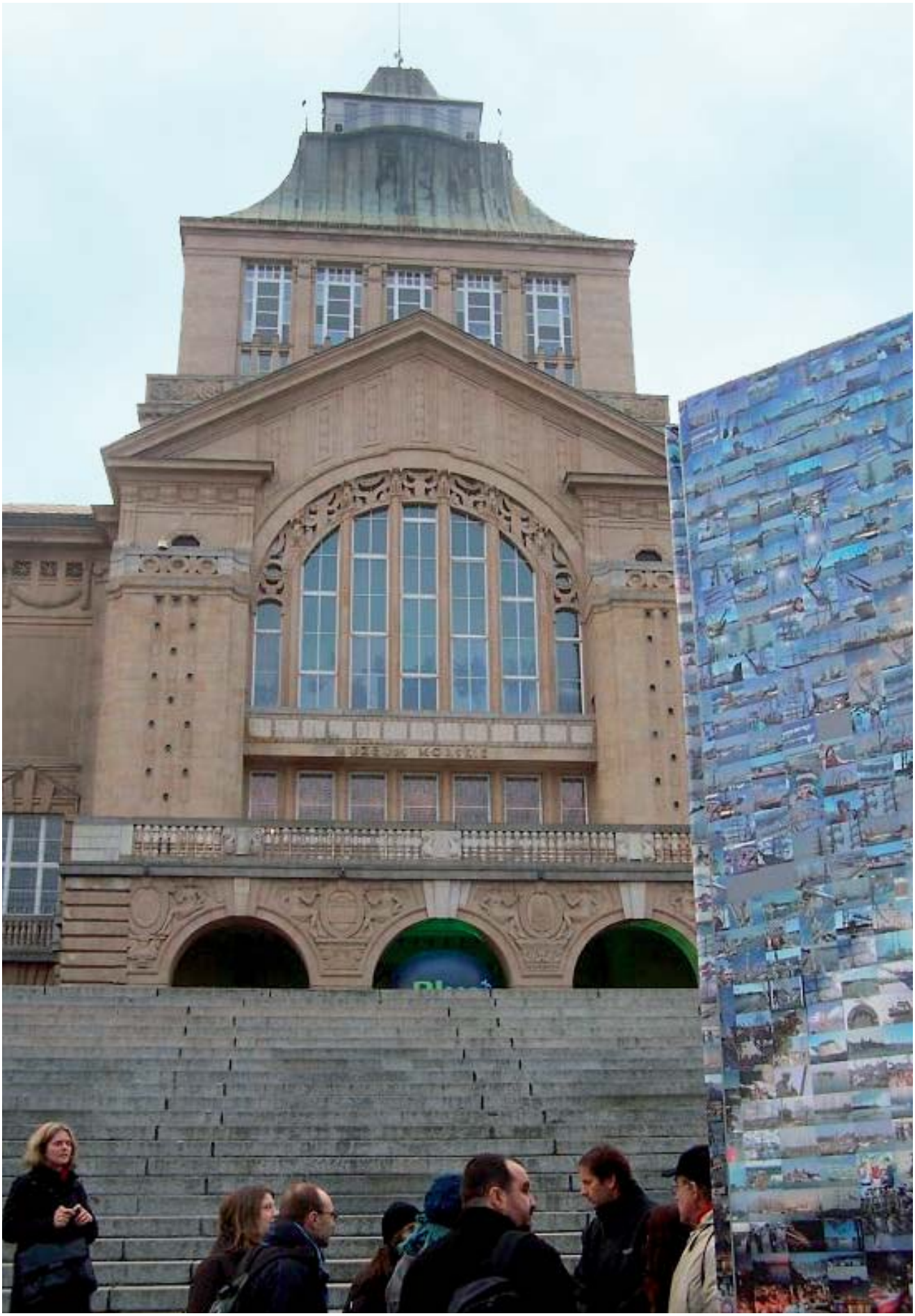
When aiming at a sustainable development of the region, tourism and environmental quality can only be regarded in the context of all other regional activities. A regional integrated coastal zone management (ICZM) is therefore imperative and has to link the German and Polish coastal region. The ICZM Oder Project (2004-2008 in two phases) is aiming to faciliate the process of providing and agreeing on methods and mechanisms for ICZM in the two countries.

The staff of the ICZM Oder project presented chosen aspects of their work, which are corresponding with the subject of the Berlin conference and the interests of PlanCoast participants:

1. Timo Fichtner (University of Applied Sciences Neubrandenburg):
   Regional Agenda 21 and pre-conditions for ICZM in the German-Polish Oder border region
2. Ralf Scheibe (University of Greifswald): Sustainable Tourism in the Oder region
3. Stefanie Maack (Leibniz-Institute for Baltic Sea Research): Information Dissemination & Coastal education as part of ICZM
4. Pina Springer (Leibniz-Institute for Baltic Sea Research): Regional Climate Change - Effects on water quality in the Oder estuary

After listening and discussing these valuable contributions, the participants continued their bus trip in direction Polish border and then Szczecin – the historical capitol, biggest city and harbour of the Pommern region. Szczecin (German: Stettin) has a long history of German, Scandinavian and Slavic interference as both conflict and coexistence.

Guided tour with Pawel Terefenko (EUCC The Coastal Union Poland) led us to some of the most important sights such as the national museum, the baroque Kings Gate and the Pommeranian Duchy Castle (Zamek Ksiazat Pomorskich). It the café of the castle there was a short presentation of the activities of EUCC Poland on the field of management of nature protection areas and ecological education.



Programme

Wednesday, 21th of November 2007

8.30 Registration

9.00 Welcome
Manfred Sinz, Head of Working Group Spatial Planning, Federal Ministry of Transport, Building and Urban Affairs

Block 1: PlanCoast lessons for Maritime Spatial Planning

9.15 PlanCoast contribution to Maritime Spatial Planning
Dr. Bernhard Heinrichs, PlanCoast Lead Partner, Ministry for Transport, Building and Regional Development Mecklenburg-Vorpommern

9.30 PlanCoast: Key messages
Angela Schultz-Zehden, s.Pro,
PlanCoast Coordination Office

9.50 PlanCoast MSP pilot project examples:
- Trieste Bay

Slavko Mezek, Regional Activity Center Koper, Slovenia
- Romanian 12 sea mile zone

Victor Gheorghe, Urbanproiect, Romania

10.30 Panel discussion with representatives from the Adriatic, Baltic, North and Black Sea regions
Moderated by Christian Dahlke, Federal Maritime and Hydrographic Agency

11.00 Coffee

Block 2: Specific aspects of MSP implementation

11.30 Dealing with alternatives: Scenarios and other decision-supporting systems
Dr. Dietmar Kraft, ICBM, University of Oldenburg, Germany

11:50 Predicting harbour development
Dr. Georg-Dietrich Jansen, PLANCO Consulting, Germany

12.10 Marine and Coastal Management in England and Wales: The view of the local government association
Heidi Roberts, Atkins Consulting, UK

12.30 Open question round
Moderated by Dr. Bernhard Glaeser, German Human Ecology Society, Germany

13.00 Lunch

Block 3: Progress in Maritime Policy and Marine Spatial Planning: Climate change as major challenge

14.00 The EU Blue Book: Current status and next steps
Iain Shepherd, European Commission, Maritime Task Force, Brussels

14.20 Towards an integrated maritime policy in Germany
Bernd Törkel, Head of DG Waterways and Shipping, Federal Ministry of Transport, Building and Urban Affairs

14.40 Climate change and its impact on regional seas: What do we know?
Prof. Hans von Storch, Institute for Coastal Research, GKSS, University of Hamburg, Germany

15.10 Coffee

15.40 What does climate change mean for coasts and seas in Africa?
Dr. Isabelle Niang, University of Dakar, Senegal

16.20 Open discussion round: How to ensure the sustainable development of coasts and seas in the face of climate change?
Moderation: Kira Gee, GKSS Coastal Futures, s.Pro

17.15 Summary and conclusion
Manfred Sinz
Dr. Bernhard Heinrichs

17.30 End

18.00 Reception