

## FUTURE DEVELOPMENT OF EUROPEAN MARITIME REGIONS

<sup>1</sup>PANAIT CORNEL, <sup>2</sup>STANCA COSTEL, <sup>3</sup>BUZU GEORGIANA

<sup>1,2,3</sup>Constanta Maritime University, Romania

### ABSTRACT

The *European Seas and Territorial Development, Opportunities and Risks (ESaTDOR)* project, financed by ESPON, was intended to analyze the current state of maritime regions, opportunities and risks for territorial development, as well as their effects on maritime regions under different scenarios until 2050. The paper aims to present the results of the project highlighting the most probable scenarios for future development of European coastal areas.

**Keywords:** *European maritime regions, territorial development.*

### 1. INTRODUCTION

The European Seas and Territorial Development, Opportunities and Risks project (ESaTDOR), funded by the European Observation Network for Territorial Development and Cohesion (ESPON), began in January 2011 and gathered experts from various universities and research institutes across Europe.

It is the first ESPON project to look at the European space as a whole and consider the seas an integral part of it, rather than merely an adjunct to the land. Moreover, it was meant to give a future-oriented vision of Europe, which could frame an informed discussion about the European maritime regions and the generation of proper policy recommendations for the stakeholders.

ESaTDOR project aims to:

- Analyse current patterns of land and sea use and land-sea interactions in maritime regions,
- Develop a typology of maritime regions based on these patterns and interactions,
- Identify developmental opportunities (and constraints) for different maritime regions,
- Explore best practice in terms of terrestrial-marine governance,
- Provide guidance and advice on how critical land-based and marine assets can be effectively and democratically managed, and
- Suggest further areas for research to maximise opportunities, but minimise human impacts on maritime regions.

When taking into consideration the present and future challenges on the European territory, as well as the diversity of European regions, the need for maritime planning became clear. To this purpose four spatial development scenarios have been drafted and tested, that could allow us to see their implications for each maritime region and, consequently, to find the ways to reach the most desirable outcomes from each scenario and draw political recommendations.

A mapping of the different patterns of sea use and land-sea interactions across Europe was conducted, in order to develop a maritime region typology. Three existing ESPON datasets were used in this attempt, namely Europe's Marine Environment, Land/Sea Flows and Europe's Coastal Areas. The former includes data

regarding the state of the marine environment, the second relates to the movement of goods and persons across maritime regions, while the latter gathers data on employment clusters in various maritime sectors. The four spatial scenarios have been built based on these three categories, as follows:

### 2. DEVELOPMENT SCENARIOS

This chapter presents each of the four scenarios, with a focus on their implications for the European maritime and coastal regions.

#### 2.1 A Europe of flows:

Globalization plays an important role in this scenario and brings about increased flows of goods, people and services. Maritime and inland connections become stronger. Regions become more dynamic and they adapt better to change. Under this scenario the emergence of transnational and cross-border zones is envisaged. The development of long distance networks and strategic energy and transport corridors connecting European centres of production and consumption with the rest of the world is also expected.

As far as Europe's Marine Environment is concerned, an increase of environmental risks in transport corridors and port areas is to be expected. A stronger competition between traditional and new uses of the marine space is also envisaged.

Regarding Europe's Land/ Sea Flows, this scenario anticipates a strong increase in long haul traffic, as well as potential expansion opportunities in less congested port areas. This will bring about the expansion of smaller ports focused on short sea trade and serving national and regional markets subject to appropriate landward connections being approved.

The cruise and leisure boating will expand beyond the traditional locations, while migration, both formal and informal will increase. The Arctic and Mediterranean areas will experience an increased incidence of accidents resulting in rapid development of maritime monitoring.

The satellite technology will be increasingly used, at the expense of telecommunication cables, which will

lead to a less significant role of the seas in this particular field. This first scenario announces an expansion of oil and gas pipelines in Mediterranean, Baltic and Black Seas, as well as in green grid infrastructure along Europe's western seaboard. The exploration of oil and gas is expected to expand in the Arctic area. At the same time, old oil and gas fields will take on new roles as carbon storage facilities.

The implications of this scenario for Europe's Coastal Areas include the growth of logistics services around key transshipment points, as well as the creation of opportunities for adding value to imported and exported goods. The rising of new maritime activities will also bring about new opportunities for cluster development. Lastly, an intensification and development of transnational and multimodal networks across land / sea is also envisaged.

### 2.2 *A Europe of creative cities:*

Under this scenario the weight lays upon large cities and centres of population and economic power. These are characterized by innovation, entrepreneurship and economic growth. The strengthening of transport between metropolitan areas will play an important part in the political intervention.

Regarding Europe's Marine Environment, it is worth noting that coastal cities, due to climate, natural resources and marine employment and investment opportunities will become more and more attractive. At the same time, the development of short sea shipping connections between clusters of coastal cities will lead to increased environmental risk in the Baltic and Irish Seas.

As far as Europe's Land / Sea Flows are concerned, this scenario anticipates the development and improvement of multimodal landward connections. Moreover, large coastal cities will become the focus of research and development regarding clean shipping, green grid development and marine renewables.

As for Europe's Coastal Areas, this first scenario implies the development of coastal cities both in terms of marine cultural heritage and research and development. Coastal cities are expected to become centres of excellence in maritime skills development.

### 2.3 *A Europe of balanced regions:*

This scenario is based on specific regional strengths and implies an attempt to reduce economic and social unbalances at local and regional level. The strengthening of public institutions at the regional scale is sought in order to facilitate a balanced development throughout Europe.

The future implications of this scenario on Europe's Marine Environment are as follows: Marine resources will be the key assets in regional self-sufficiency and development, which will lead to a differentiated development of European areas, according to their resources. An increased development of fixed development / infrastructure associated with renewable energy, oil and gas is expected in Northern Sea areas, which will compete with traditional marine users.

At the same time, those regions depending on tourism, fishing or marine aquaculture are expected to take more measures to preserve the marine environment.

As far as Europe's Land / Sea Flows are concerned, it is worth noting that the development and intensification of maritime transport connections will lead to the development of sea basins and sub-sea areas as cohesive regions. Regional self-sufficiency in energy and exploitation of diverse marine energy sources and associated infrastructure will become a key focusing point.

The implications of this scenario on Europe's Coastal Areas have to do with the cooperation, differentiation and specialisation between ports. Regional cooperation and flows will be encouraged by targeting of public money at relatively weak and underperforming coastal regions. In conclusion, the growth of maritime economic activity and intra-regional connections are highly expected.

### 2.4 *A Europe of self-sufficient towns:*

In this scenario, the focus lies on ecology, especially on energy supplies and climate change. Efforts are made towards greener energy, even with the cost of slower economic growth. With the increase of the importance of local markets comes the migration from urban centres towards rural areas. Bottom-up organisation and self-sufficiency are the key features of political intervention.

The implications on Europe's Marine Environment focus on the increased sustainable use of marine resources, so as to meet local resource needs. At the same time, this scenario envisages a decreasing of environmental damage associated with reducing long distance maritime traffic in certain areas. The introduction of higher environmental standards on flows from inland areas and areas outside the European Union are also expected.

Regarding Europe's Land / Sea Flows, this scenario envisages the expansion of smaller port and short sea shipping, as well as a growing role for inland waterways as sustainable transport routes. An increased protection of local energy resources for local communities is thought to oppose the multinational development interests in sea areas. Lastly, long haul shipping related to EU trade is expected to decrease.

As far as Europe's Coastal Areas are concerned, this scenario anticipates a small scale localised development responding to local and regional markets favouring small coastal towns. Small scale industry is expected to grow, as a response to the distinctive maritime character. Coastal areas of good environmental quality will be favoured, while coastal areas of poor environmental quality are expected to decline without public intervention related to regeneration and environmental improvement.

### 2.5 *Weaknesses of the four scenarios*

The four scenarios mentioned above proved to have several weaknesses when tested. The most relevant relate to the overlapping of the dimensions analysed and to the

poor effectiveness in finding and proposing alternative development paths.

Consequently, it was more helpful to the purpose of the project to focus only on two distinct spatial scenarios which could offer an idea of how the European territory might be structured in the future. The two scenarios are presented below.

### 2.6 Final scenarios

After the consultation of major stakeholders the two territorial development scenarios which were thought to provide the basis for a discussion on the future of Europe are considered to be *Europe of Flows* and *Europe of Self-Sufficient Maritime Regions*.

## 3. POLICY DEVELOPMENT

The project concluded on a number of recommendations related to relevant issues to be taken into consideration for future policy development.

It is clear that the marine environment is increasingly being recognised by many European coastal states as an integral part of their territorial space. The demands being placed on the marine environment are growing rapidly, and commercial exploitation of marine resources, combined with a need to protect environmental integrity, calls for more effective governance mechanisms (both in terms of structures and processes).

Maritime spatial planning is increasingly regarded as an approach that will bring about integrated, both sectorally and spatially (across territories), policy responses to deal with competing uses for marine resources. However there are challenges in terms of how effectively terrestrial planning regimes will link with new maritime planning regimes.

Furthermore given the broad nature of the project, our conclusion and recommendations are targeted at a variety of stakeholders at different levels (although often these should not be seen as being exclusively targeted towards a particular group). Our policy recommendations focus on technical issues associated with data and mapping, the role and scope of the EU in facilitating integrated sectoral policy both within the marine environment and in relation to land sea interactions, and specific thematic priorities.

### 3.1 Data and mapping

The fragmented, inconsistent and incomplete data which is collected for a variety of different purposes makes the process of integrated and consistent marine planning problematic. Work is already going on at a European level to try and address such issues, especially through the INSPIRE Directive. However, some inconsistencies exist between what is expected here and the requirements of the Marine Spatial Framework Directive.

**Recommendation 1.** There should be a rational and consistent approach to the collection of data, particularly within a marine context to facilitate integrated spatial planning. As part of this process, there needs to be

agreement about an appropriate spatial resolution that the data should be available at creating a marine equivalent of the NUTS regions on land. The use of grid squares enables a range of different data types to be consistently mapped across the regional seas. Furthermore inconsistencies of approach between European regimes, (e.g. MSFD and INSPIRE) should be resolved.

**Recommendation 2.** Data availability remains patchy and this should be addressed with agreement on: key information sets (for example, fisheries data, regarding the stocks and where they are caught and landed, is still problematic); collecting regional sea the data in a compatible manner; making critical data sets publically accessible (a particular challenge with marine data).

**Recommendation 3.** Data collection focuses mainly on land or sea based attributes, but there is a paucity of data or information which focuses specifically on the land-sea interactions; these are assumed but largely unproven. For example, the degree of dependence of coastal communities on their links to the sea.

### 3.2 Integrated Governance

Whilst there is a growing recognition that in policy terms the marine environment is an important part of European space, which needs to be managed carefully in its own right, there is also a requirement the inter-linkages between land and sea are carefully managed so that the opportunities for and threats to territorial cohesion can be sensitively and sensibly managed. In order for this to happen integration between land and sea regimes and between different levels of governance need to be further developed.

**Recommendation 4.** There is a need to think much more carefully and creatively around the regimes for managing the marine environment and there integration with each other and land based planning jurisdictions. Many of the regimes that have developed organically over time to deal with specific issues are sectorally specific, often regionally or sub-regionally sea focused and generally weak both politically and financially. There is a need for better integration between sectoral groups with an interest in the seas at a variety of scales. At a European scale integration of the marine into territorial cohesion agendas implies closer collaboration between DGs Environment, Energy and Regio (for example). Experimentation is taking place and some good practice is emerging. A facilitating and enabling role by the EU through supporting and improving programmes through financial support and encouragement is likely to produce more meaningful results. The development of regional seas and sub-regional seas basin strategies are illustration of this approach.

### 3.3 Thematic Priorities

Various sectors will continue to place demands on Europe's seas, and this in turn will intensify their use. The optimal development of sea related activities needs

to be undertaken carefully using a precautionary approach. A clear theme that permeates all potential policy development is that restoring and maintaining environmental quality is a prerequisite for the full potential of the seas to be realised.

Economic Activities Traditional maritime sectors are important for Europe and particularly some coastal communities. New maritime activities are likely to develop in the short to medium term and the emphasis needs to be on developing high quality, high value forms of employment, often associated with cluster and network development.

**Recommendation 5.** Further research is needed to investigate the relationship between coastal communities and the maritime economy, so that effective maritime cluster development can be facilitated and economies vulnerable to changing maritime economic circumstances can be carefully managed.

Energy Pipelines and Cables. With regard fossil fuels the importance of some traditional areas are likely to wane, although new prospects for exploration and exploitation are opening up. But the seas will remain an important source of energy as new renewable energy sources, wind, wave and tidal energy, develops. Meanwhile the seas are likely to be increasingly used as a conduit for energy supply between countries and across regions.

**Recommendation 6.** Careful consideration needs to be given to the effective planning and management of offshore energy activities as an integrated whole. This includes better access to information about the existing and potential offshore production methods and transnational grid and pipeline systems.

Transport remains a dominant sector within the European economy, although the disaggregation between the importance of land and sea based transport is difficult to ascertain. Innovation will be required to respond to changing global trends and to the requirements for transport to reduce its environmental impacts. Europe's transport sector is well geared to meeting these challenges.

**Recommendation 7.** For maritime transport to maintain its relative importance to Europe's economy, careful integrated planning will be needed to facilitate connectivity between Europe and the rest of the world, and within Europe and its regional seas.

### 3.4 Environment

There is a growing realisation that environmental quality sufficient to support a diverse marine ecosystem is critical for regional seas to realise their potential. Nevertheless there are some inconsistencies between European policy approaches making it difficult to achieve a consistent approach with regards to this important but complex dimension to the risks and opportunities for the seas.

**Recommendation 8.** There should be greater integration and internal consistency to measuring the quality of the marine environment between the INSPIRE and Marine Strategic Framework Directives and in the terminology used between the MSFD and the European Environment Agency.

### 3.5 Regional Seas

Whilst many of the regional seas are characterised by their distinctiveness and diversity, and the specific issues and policy recommendations are considered in more detail in the specific regional sea reports, there are a number of common themes which lead to generic recommendations.

**Recommendation 9.** There is a need to improve data collection and integration as a basis for better and more informed integrated land-sea research knowledge exchange and stakeholder capacity building.

**Recommendation 10.** Future research should focus on sustainable management and businesses practices to ensure that the uptake of territorial opportunities does not create unsustainable pressures on the environment.

**Recommendation 11.** Improved integrated governance at all scales needs to be effectively and efficiently promoted, with a particular emphasis placed on stakeholder and civic engagement.

## 4. REFERENCES

- Barca, F.,(2009) *An agenda for a reformed cohesion policy: a place-based approach to meeting European Union challenges and expectations*. Independent report commissioned by the EU Commissioner for Regional Policy.
- CEC (2007) *Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)*
- CEC (2010a) *Europe 2020: A strategy for smart sustainable and inclusive growth*, COM(2010)2020
- CEC (2010b) *Investing in Europe's Future: Fifth Report on Economic Social and territorial Cohesion*, Brussels Commission Communication COM (2007) 575 final of 10 October 2007 on an integrated maritime policy for the European Union.
- Commission Communication COM(2010) 771 of 17 December 2010: *Maritime spatial planning in the EU – achievements and future development*.
- DG Mare (2012) *Blue Growth Scenarios and drivers for Sustainable Growth from the Oceans, Seas and Coasts, Final Report*, May 2012
- ESPO, European Seas and Territorial Development, Opportunities and Risks (ESaTDOR) Project, *Final Report*, <http://www.espon.eu/>