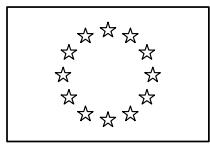


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COMMISSION OF THE EUROPEAN COMMUNITIES

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**COMMISSION STAFF WORKING DOCUMENT**

**Maritime Clusters**

## ***Introduction***

Europe's maritime history has laid the foundations for our continent's leading role in trade and industry. The 'globalisation' that we are witnessing today would not be possible without ships. And shipping and shipbuilding were truly globalised long before the word was even invented.

The Commission services wish to seize the opportunity represented by this maritime policy initiative to take stock of the situation with regard to maritime clusters in the EU with a view to building a bridge between Maritime and Cluster Policies and identifying some of the drivers and characteristics of successful European Maritime Clusters.

The Maritime Policy Green Paper asked stakeholders: *What role can maritime clusters play in increasing competitiveness, in improving the attractiveness of maritime jobs and promoting a sense of maritime identity? and How can the EU promote synergies between interrelated sectors?*

Many respondents urged public authorities at European, national and regional level to play their part in encouraging maritime clusters. Given the strong interdependencies between maritime industries, maritime stakeholders frequently saw clusters as a useful tool to enhance the knowledge and skills base, notably for SMEs, to raise performance and further competitiveness. Many noted that clusters can be instrumental in strengthening the links between maritime enterprises and with research entities and educational institutes, and advocated more cross-sector mobility.

Suggestions for the promotion of clusters included carrying out an analysis of cluster features or defining, clarifying the role of clusters through for example, the provision of better data and statistics. Some suggested that clustering could be particularly relevant in specific circumstances, e.g. emerging hi-tech sectors or to boost areas in decline.

The development and implementation of a comprehensive response to these and other relevant issues will of course take some time and will be the subject of further initiatives in the coming months and years.

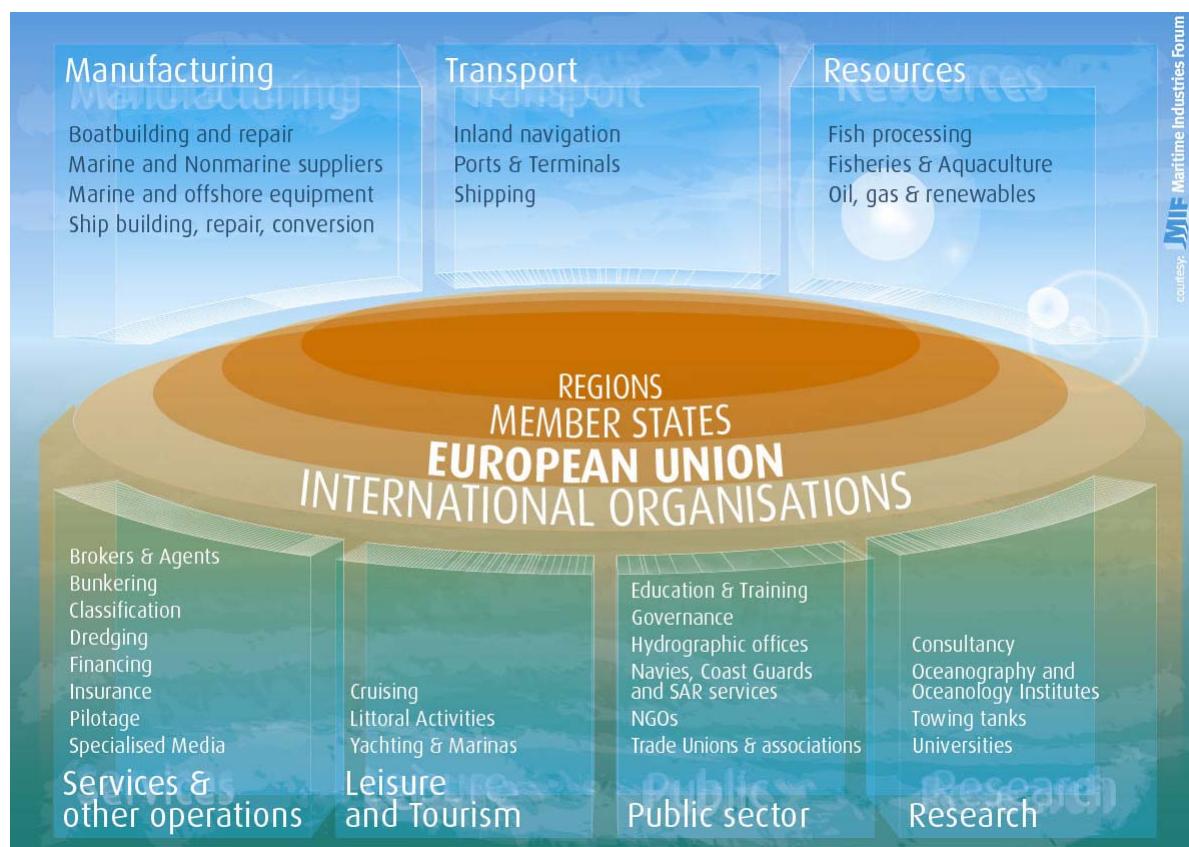
## **Chapter 1-Maritime Matters**

### **1.1 Snapshot**

Whilst the availability of accurate, up to date information on the size and economic importance of European maritime clusters is one of the gaps that needs to be tackled in the context of this exercise, we can safely say that between 3% and 5% of Europe's GDP is generated by marine based industries and services – not counting the value of raw materials such as oil, fish or gas. These enterprises provide employment to over 3 million people. Europe's coastal regions generate around 40% of total GDP. Almost 90% of the EU's external trade and 40% of its internal trade are transported by sea. Europe controls in the region of 40% of the world's merchant fleet.

European maritime operators also hold significant global market shares in a wide range of other maritime sectors and services, such as, for example, ports with around 40%; marine commerce, again around 40% or offshore oil and gas at more than 20%.

The extent of European maritime clusters is illustrated in the following chart.



### **1.2 The economic importance of Europe's maritime sectors**

The maritime industries and services encompass a wide range of sectoral economic activities, from shipbuilding to shipping and ports, to fisheries and aquaculture, to recreational activities and tourism, to offshore energy exploration and extraction, and to a large number of related technical and economic services. Calculating the economic value of the oceans and seas is difficult, as statistical data, in particular at the level of the EU-27, is incomplete. Nevertheless, the data reproduced below provides a rough impression of the maritime economy's direct

worth (although some of the data must be used with caution e.g. with relation to marine equipment or renewable energy).

2004	World value (in € Million)	European value (in € Million)	European share of world value
Shipping & Transport	342,743	151,137	44.1%
Marine Tourism	168,189	71,812	42.7%
Offshore Oil & Gas	91,146	19,112	20.9%
Fish/Seafood Processing	79,859	8,241	10.3%
Marine Equipment	72,871	16,675	22.9%
Fishing	55,983	4,758	8.5%
Shipbuilding	37,746	13,143	34.8%
Ports	25,017	10,478	41.9%
Marine Aquaculture	23,876	3,483	14.6%
Cruise Industry	12,000	2,365	19.7%
Research & Development	10,629	3,273	30.8%
Seaweed	5,988	n/a	n/a
Marine Commerce	6,840	2,736	40.0%
Marine IT	3,570	1,382	38.7%
Minerals & Aggregates	2,741	1,344	49.0%
Renewable Energy	128	121	94.5%
Marine Biotechnology	2,190	n/a	n/a
Submarine Telecoms	1,126	185	16.4%
Ocean Survey	2,013	538	26.7%
Education & Training	1,537	n/a	n/a

Table 1: World marine sectors, IMI<sup>1</sup>

And whilst it is not feasible to consider all its inter-related facets here, it might be useful to briefly review the size and characteristics of some of its key components.

### 1.3 Shipping and ports

Shipping and the related maritime activities play a strategic role in the EU. The EU's merchant fleet is by far the largest in the world both in terms of tonnage controlled and by flag. EU shipping companies are amongst the largest in the world, and, with around 25% of

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<sup>1</sup> [Marine industries global market analysis](#), March 2005, Douglas-Westwood Limited, Marine foresight series no 1 of the Marine Institute, Galway, Ireland (IMI 2005).

the world tonnage under EU Member States flags, EU residents control nearly 40% of the world's merchant fleet.

On average, some 3,5 billion tonnes of cargo and more than 350 million passengers pass through European seaports each year. Around 350,000 people work in ports and related services, which together generate an added value of about € 20 billion.

Shipping today is the key instrument and facilitator for ensuring economic growth and prosperity through trade. It is also a way to promote the EU's internal market and territorial cohesion, by linking its insular territories to the mainland. Such a European presence on the world stage associated with a dynamic maritime cluster is a valuable asset which has to be preserved as well as strengthened. In a global and open economy this requires efficiency, competitiveness and quality of service.

#### ***1.4 Shipbuilding and marine equipment***

Europe's highly-specialised shipbuilding industry is competitive, flexible, and well equipped to face the future with confidence. Europe boasts around 150 large shipyards of which about 40 are active in the global market for large sea-going commercial vessels. Direct employment by shipyards (civil and naval, new building and repair) in the European Union (EU) stands at around 140,000 highly skilled professionals with many more jobs now outsourced to the vibrant marine equipment industry which employs a further 350,000 people.

Europe's shipyards account for some 20% of the worldwide production capacity (in volume terms) of merchant ships and they are global leaders in the production of passenger and cargo ferries, cruise ships, dredgers and a number of highly specialized smaller vessels such as fish production vessels, mega-yachts, research vessels, etc. Significant market positions are also held in latest generation transport vessels such as containerships, product & chemical carriers, multipurpose cargo vessels and car carriers as well as in high value-added vessels such as LNG carriers, off-shore and inland waterway vessels. Moreover, Europe's status as the region with the highest global turnover has persisted for most of the last decade. Europe's competitive advantage in shipbuilding, as in many other maritime sectors, has been and will continue to be based upon its ability to construct the most advanced products. In fact, Europe accounts for almost all ship innovations. This is made possible by the successful and continued development and application of innovation and research. That is why; in today's knowledge economy the creation of the most favourable conditions for innovation is vital.

The European marine equipment industry is a world leader with around a 35% share of the world market. Equipment accounts for a large part of the value of a ship and the European marine equipment industry has about twice the turnover of the yards. The export quota (to non-European economies) is nearly 50%. In many instances, it is the marine equipment industry that actually drives innovation and progress in the sector. It is noteworthy that marine equipment can account for some 70% of the value of a ship, a percentage that is even higher for naval vessels.

The recreational marine industry<sup>2</sup> meanwhile comprises some 37,200 businesses, mainly SMEs. The sector performs well in this highly competitive and knowledge-based market. The

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<sup>2</sup>

Boat building, engine manufacturing, hi-tech electronics, equipment, finance and infrastructure

past decade has yielded steady growth and forecasts point to an average 5-6% annual growth in the coming years<sup>3</sup>.

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Source - European Union Recreational Marine Industries Group (EURMIG)

## **1.5 Tourism**

The European Commission is paying due regard to the marine tourism-related issues raised within the context of the Maritime Policy, notably through the ongoing work on an "Agenda for a sustainable and competitive European tourism". Being a sector that has grown considerably in recent years and also contributed significantly to the European economy, coastal tourism must deal with sustainability issues to remain competitive.

The oceans and seas also generate income through many activities related to tourism in coastal areas. The direct turnover of marine tourism in Europe is conservatively estimated at over €70 billion in 2004. But it is clear that this figure is a gross underestimation of maritime tourism's overall impact on the local economy in coastal areas as it neither takes into account indirect factors such as hotel accommodation, restaurants or travel nor cruising in the open seas.

The cruise industry in Europe has undergone considerable expansion over recent years with an annual growth rate of more than 10% since 2001. Nearly 3 million Europeans took cruise holidays in 2004, of which 2 million sailed in European waters. This contributed to more than 8.5 million passenger calls in European ports. Business continues to grow, with European cruise passengers expected to increase to 4 million in 10 years<sup>4</sup>. These figures indicate a rising contribution of the cruise industry to the European economy and the creation of thousands of new jobs throughout the continent in tourism, shipping, shipbuilding - as virtually all cruise ships are built in Europe - and many related sectors.

## **1.6 Extraction of materials from the oceans and seas**

The sea also plays a major role in energy supply. More than a third of worldwide oil was produced offshore in 2004 and this is expected to increase to around 40% by 2015. This is largely due to the increase of production in the deep offshore. During the same period, offshore gas production is expected to increase significantly. In 2004, production of oil and gas in Europe covered some 40% of the EU's demand for oil and some 60% for gas. Approximately 80% of this comes from the North Sea. The oil and gas sector continues to generate new technologies, even outside its own sector. For example, technology for acoustic positioning, allowing us to 'see' in all directions below the water surface, was developed for better pipe-laying, and has been adapted to serve fishing boats.

The marine environment is also increasingly delivering other potential opportunities for energy generation. Offshore wind energy, ocean currents, waves and tidal movements also have enormous potential to provide vast amounts of energy and if successfully exploited, they could contribute a substantial supply of electricity in many parts of Europe.

## **1.7 Aquaculture**

Aquaculture is another promising industry. With the world's growing population, and the increasing consumption of fishery products on one hand and with fish stocks under pressure on the other, captures will not be able to grow and aquaculture production will have to increase to meet demand. Aquaculture currently accounts for around 20% of the EU's total

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<sup>4</sup> IMI 2005 p. 65, GP Wild in *Economic impact of the cruise industry in Europe*, European Cruise Council 2005.

fisheries production and this is expected to grow to more than 50% by 2030<sup>5</sup>. The challenge will be to manage this increase in a sustainable and environmentally friendly manner.

## ***Chapter 2 – Maritime Clusters***

### ***2.1 Clustering***

Before looking at some of the characteristics of clustering in the maritime world, we might review our understanding of clusters in general and why they matter.

This staff working paper will not dwell on the definition of clusters or their evolution. That is for more horizontal deliberations on cluster policy in general. In that context, the Commission is planning to issue a Communication on cluster policy in 2008.

That envisaged Communication will facilitate the elaboration of appropriate policies and actions of relevance for maritime as well as other clusters. For our purposes here, it may nevertheless be useful to recall that the concept of clusters is generally taken to mean “*geographic concentrations of interconnected companies and institutions in a particular field*” or “*geographically co-located end producers, suppliers, service providers, research laboratories, educational institutions, and other institutions in a given economic field*<sup>6</sup>”. This also implies that there is: a critical mass of companies active in various parts of the relevant value chain; enhanced co-operation and keen competition between the different actors in the cluster and proximity of suppliers and service providers.

Strong clusters often give businesses access to assets that they cannot afford individually such as knowledge, export markets, common distribution or marketing. Clusters can especially help small and medium sized enterprises and research institutes to get access to trans-national research projects, either as subcontractors for one of the project leaders or by bundling their capacities and resources. Clusters can help in increasing the productivity of companies, drive innovation and productivity growth, stimulate the formation of related, new businesses and make the whole greater than the sum of its parts.

Training and research centres, financial institutions, innovation and intellectual property consultants, local and regional development agencies and other support organisations are all key players in maximising firms’ creative business potential. Being part of a cluster can improve access to information and qualified workers and make it easier to source inputs and suppliers. And where they work best, they can become engines of value creation and innovation.

Increased regional specialisation is a symptom of greater globalisation and there seems to be link between cluster presence and regional economic performance. It is also true that innovation plays a pivotal role in delivering such increased prosperity in advanced economies. Innovation arises when a critical mass of like-minded, highly skilled and knowledgeable actors interact and share their insights. That is why innovation benefits from geographic proximity. It is also why it makes sense to nourish and nurture such togetherness and interconnectedness – in the form of clusters – in the maritime sphere as elsewhere.

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<sup>5</sup> Executive Summary, Farming the Deep Blue, James Ryan.

<sup>6</sup> PORTER (November-December 1998), <<Clusters and the new Economics of Competition>>, Harvard Business Review, Boston

<sup>7</sup> CH. KETELS, O. SOLVEL, <<Innovation Clusters in the 10 new Member States of the European Union, Europe Innova Cluster Mapping>>, p9

Research competence and capacities ranging over the various activities of the maritime domain and co-operating in a cross-sectoral way are fundamental means to support cluster development. Research excellence centres also foster and support better co-ordination and communication between the marine scientific community and maritime enterprises; thereby contributing effectively to sustainable development and innovation. At the same time, clusters can contribute to identifying gaps and priorities for research.

This fact is particularly important in the maritime industries where the pivotal importance of improving research, development and innovation in the maritime cluster has, for instance, most recently been recognised in the Progress Report on the LeaderSHIP 2015 initiative - concerning the competitiveness of the shipbuilding industry, adopted by the Commission in April 2007<sup>8</sup>.

## ***2.2 Clustering in the maritime context***

The nature and extent of the sea related activities that are encompassed within the broad understanding and common usage of the term ‘maritime clusters’ are illustrated in the diagram presented in chapter 1. The term covers manufacturing industries like shipbuilding, transport (shipping) and infrastructure (ports and terminals), ocean and sea resources like aquaculture, service providers such as classification societies, leisure related activities like yachting, specific public sector organisations and services like the coast guard and sea related research and consultancy. Clustering works very well for many maritime businesses, as their activities (e.g. shipping, shipbuilding and ports) are often closely inter-related. Local and regional clusters bringing together different sectors and different stakeholders to develop synergies between their activities are a promising development in the European maritime community. The linkages are multiple, ranging from increased awareness of market developments via better links between research and technology development to the strengthening of employment through targeted training and better mobility.

Indeed, a lot of initiatives to develop clusters at regional or national level are already ongoing and some of them are described hereafter. These clusters contribute to better quality and higher standards for European maritime products and services, and a higher rate of integration of the maritime economy. They contribute to economic growth and employment as well as the sustainability of the overall maritime economy. Furthermore, by integrating environment-related aspects (risks prevention, integrated management of coastal zones, sustainable tourism...), they also contribute to the improvement of the quality of life in coastal regions. Despite the diverse range of activities and business interests of the maritime industries and services, it is the common know-how and scope for synergies between them that have linked the various actors together in successful European maritime clusters.

## ***2.3 European Network of Maritime Clusters<sup>9</sup>***

A recent European level initiative is the European Network of Maritime Clusters which was founded in November 2005 by bringing together the maritime cluster organisations of ten European countries (Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Poland, Sweden, and the United Kingdom). It constitutes a pragmatic platform for the exchange of best practices. Indeed, the main stated objective of the network is “*to learn from*

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<sup>8</sup> COM(2007) 220 final of 25 April 2007 - <http://europa.eu.int/comm/enterprise/maritime/index.htm>

<sup>9</sup> WIJNOLST N. (September 2006), <<Dynamic European Maritime Clusters>>, p127

*each other and to promote and strengthen the maritime clusters of member states and Europe as a whole<sup>10</sup>*”. The European Network of Maritime Clusters is organised flexibly with members invited to cooperate on a voluntary basis. The book “Dynamic European Maritime Clusters” published in September 2006 is an example of such an undertaking.

#### **2.4 Examples of successful national and regional clusters**

Meanwhile at national and regional level much is being done by economic operators with the support of public authorities to exploit the potential of maritime clusters as competitiveness enablers. The Report on National Approaches to Maritime Affairs, published alongside the Green Paper on a future Maritime Policy showed that 16 of the 27 Member States were engaged in supportive measures to promote clusters or networks.<sup>11</sup>

The Netherlands was among the first to develop a maritime cluster concept after its economic challenges in the mid-1980s. With the support of the Dutch government, the Dutch maritime cluster<sup>12</sup> brings together representatives from ports, the offshore sector, shipping, shipbuilding, marine equipment, manufacturing and dredging and enjoys good cooperation with several research institutes.

The Danish Maritime Authority<sup>13</sup> launched a growth agenda for the Danish maritime cluster focusing on political framework conditions. While setting quality shipping as a prerequisite, the project concentrates on knowledge with notable attention for innovation and education. To identify the Danish challenges, performance is benchmarked against competitors.

In the UK there are several examples of national and regional cluster-type initiatives. Sea Vision UK<sup>14</sup> aims to raise the profile of the sea, including the maritime sector and sets a blueprint for co-operation across the sector for the future. Sea Vision UK builds on existing initiatives and delivery will be done locally and regionally. Maritime Plymouth<sup>15</sup> encourages cooperation and allows all users of the sea, for pleasure or profit, to make their voices heard, through liaising with local government and other maritime organisations. In the East of England, the Haven Gateway Public/Private Partnership provides a framework through which partner organisations can work together to promote economic opportunities and secure future prosperity, focusing on port and related transport and logistics activities<sup>16</sup>.

Since 2005 a regional maritime cluster in Schleswig-Holstein<sup>17</sup> brings together industry, politics and science in order to create a “maritime model region”. Its activities focus on fostering links within the local maritime community and with other partners, providing information and raising awareness about the cluster and developing common projects in areas such as skills, cooperation, innovation or internationalisation.

Within the broad framework of the French Pôles de Compétitivité<sup>18</sup>, two maritime competitiveness poles were launched in two maritime regions in order to create economic

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<sup>10</sup> WIJNOLST N., VALLAT F. (September 2006), <<Dynamic European Maritime Clusters>>, p5

<sup>11</sup> [http://ec.europa.eu/maritimeaffairs/suppdoc\\_en.html](http://ec.europa.eu/maritimeaffairs/suppdoc_en.html)

<sup>12</sup> <http://www.dutch-maritime-network.nl/english.html>

<sup>13</sup> <http://www.sofartsstyrelsen.dk/sw164.asp>

<sup>14</sup> <http://www.seavisionuk.org/>

<sup>15</sup> [www.maritimeplymouth.co.uk](http://www.maritimeplymouth.co.uk)

<sup>16</sup> <http://www.haven-gateway.co>

<sup>17</sup> <http://www.maritime-times-cluster.de/>

<sup>18</sup> <http://www.pole-mer-bretagne.com/> and <http://pole-merpacatvt.fr>

welfare and jobs. They bring together partners from business, science and education to work together on innovative and competitive projects in areas such as security, safety, fisheries and manufacturing.

This marriage of science and industry is often cited as of the key competitiveness enablers flowing from a well structured maritime cluster many of which seem to possess the following critical success factors: a common strategy, solid partnerships, focus on technologies with potential in high-growth markets and an international dimension.

## ***2.5 Value of maritime clusters***

The existence of the above and other structures bears witness to the relevance of clustering for the maritime industries. Indeed, in a number of maritime industries, most of the value-added is produced by subcontractors whose input, innovative power and reliability are vital to the main manufacturers. Clusters are particularly important for the interaction between maritime manufacturing and a wide range of services (which themselves may have particular relations to other ancillary services such as insurance or brokerage), as well as for the relations between social partners. Clusters can offer maritime subcontractors access to information and knowledge that they cannot afford to acquire based on their own limited resources.

Through their participation in clusters, maritime sub-contractors can also develop expertise that open up new market opportunities. Through joint training and education strategies, clusters can be instrumental in reinforcing the skills base and improving the attractiveness of the profession by facilitating career switches or mobility between sea and land-based professions. Indeed, in recognition of this, the Human Resources Working Group of the Maritime Industries Forum<sup>19</sup> ("MIF") commissioned a well received and practical Career Path Mapping Study<sup>20</sup> that showed that despite significant obstacles the maritime arena continues to offer many rewarding and exciting career opportunities.

In this respect, it is also noteworthy that for shipbuilding, maritime transport, inland waterways transport, fisheries and the hotel and catering sector, social dialogue committees already exist which allow social partners to develop joint strategies. In Europe's technologically advanced shipbuilding industry, for example, a highly-skilled workforce is a key factor in turning knowledge into wealth and ensuring productivity, innovation and competitiveness. As noted in the LeaderSHIP 2015 Progress Report of April 2007, referred to earlier, the Commission shares the view of the social partners that success is created by shipyard workers using their knowledge and experience. Yards need to recruit, retain and retrain quality workers to maintain their skills base and know-how and secure their long-term success. In recognition of this, the Community of European Shipyards Associations (CESA)<sup>21</sup> and the European Metalworkers Federation (EMF)<sup>22</sup> established a formal Social Dialogue Committee for the shipbuilding and ship-repair sectors in September 2003. This is the first of its kind in the metal trades in the EU and bears witness to the working environment in most European yards that is characterised by professionalism and mutual respect.

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<sup>19</sup> <http://www.mif-eu.org/>

<sup>20</sup> [http://www.mif-eu.org/Career\\_Path\\_Report.pdf](http://www.mif-eu.org/Career_Path_Report.pdf)

<sup>21</sup> <http://www.cesa.eu/>

<sup>22</sup> <http://www.emf-fem.org/>

Maritime clusters also contribute to the introduction of more environmentally sustainable solutions for example by jointly developing and using better quality fuels or renewable energy systems.

The regional nature of shipbuilding activities - which are often at the heart or origin of a distinct maritime cluster, also requires special acknowledgement. Yards cannot be moved in the same way as other industries. Historically, this has led to regional centres, characterised by a cluster of maritime industrial activities. However, whereas traditionally most subcontractors are located near the yards, economic activities and jobs are also generated in regions further away.

### ***Chapter 3 – EU support for maritime clusters***

During the early 1990s, the maritime sector started to realise some of the potential of cooperation and dialogue at European level, bringing together key players in order to develop common policies and activities aimed at generating more maritime growth and employment while striking the right balance between environmental aspects and the economic and social pillars of development. Subsequently, common industry and technology platforms were created.

#### ***3.1 Maritime Industries Forum (MIF)***

In 1992 the Maritime Industries Forum (MIF) was set up with the following key objectives: Provide a permanent interface to the Commission for industry; Foster the creation of synergies between maritime activities in various sectors; Provide input to the political debate and support the decision making process; Improve the involvement of Member States in maritime policies; Maintain and promote a competitive maritime cluster for Europe and Enhance the visibility of maritime industries towards the general public.

The MIF is run by and for Europe's maritime industries with the Commission services supporting the Executive Secretariat. It brings together over 30 maritime organisations and its plenary session is the focal point around which its activities are organised. The day to day management of Forum is guided by a group of Industry Co-ordinators with the main activities being carried out by a range of working groups tackling challenges in areas like transport, human resources and the environment.

Industry generally welcomes the opportunities that the MIF presents to enhance co-operation between the sectors. The transport sector for example, uses its framework as a means to complement regular contacts between the different players (shippers, forwarders, ports, terminals, pilots, towage companies, dredgers, ship agents and brokers, inland ports, barge operators, unions, dockers, etc.) with *ad hoc* meetings on specific issues that can result in the elaboration of joint positions that are submitted to the different EU Institutions.

Other industries have commented that the MIF has allowed the actors of the maritime industry to better understand each other's problems – thereby facilitating common learning, benchmarking and peer pressure. These synergies have, it is claimed, made it possible to increase the strength of the industry in the global arena, allowed the sector to speak with a common voice, in particular to the European Institutions and contributed to the cross-fertilisation of technology. The offshore oil and gas industry has also remarked that by including offshore oil and gas activities within its remit, the MIF has opened its doors to a high-tech industry which can help the competitiveness of the sector has a whole.

The MIF also includes the maritime trade unions amongst its membership and these have notably stressed the diversity and coverage of the forum, the inter-dependence of the maritime industries and their need for the right regulatory and fiscal measures to ensure the long term sustainability of the maritime sector in the EU. They highlight the human element in these considerations and underline the need to promote the sector and encourage recruitment into the maritime industries.

However, a continuously changing market and policy environment is creating ever new challenges and the MIF must accordingly adapt and change to remain relevant and effective. Some key stakeholders, have voiced concerns about the ability of the Forum to deliver on its stated objectives with its current structure and advocated a significant revision of its structures. This could imply an updated MIF organisation that can actively develop, launch and drive initiatives. Calling for intensified, combined efforts to better communicate their contribution to society, shipbuilders and others believe that the MIF needs more resources, from both industry and public authorities, to do more and better realise its potential.

### ***3.2 WATERBORNE Technology Platform***<sup>23</sup>

The WATERBORNE Technology Platform was established during 2005 MIF Plenary, in Bremen having evolved from the R&D working group of the MIF. It is a forum for all stakeholders to agree on a medium to long term vision for waterborne research; assess the key challenges for the maritime industry and waterborne transport and operations; formulate the Research & Development (R&D) actions to be fulfilled for meeting these challenges in a Strategic Research Agenda (SRA), and promote the mobilisation of the necessary resources.

WATERBORNE has already developed its own vision of the potential contribution of research, development and innovation to future European maritime excellence in its “Vision 2020” document - with the following ambitious targets and innovation challenges: safe, sustainable and efficient waterborne transport, a competitive European waterborne industry, managing and facilitating growth in transport volumes and changes in trade patterns. It has also elaborated a Strategic Research Agenda (SRA) that translates the necessary steps to achieve this vision into concrete R&D milestones.

The Platform is particularly successful in carrying forward the long and challenging process of coordination of the European and National research policies, thanks to a real involvement of the Member States, through a Mirror Group, working closely with the Support Group which brings together industry stakeholders. Today, WATERBORNE is recognised as the prime adviser to the Commission on maritime R&D and has significantly contributed to the establishment of the FP7 work programme and call texts.

### ***3.3- Statistics/Data gaps***

Statistical data on maritime clusters is lacking. The picture of the maritime cluster in terms of e.g. activities, distribution of turnover, employment or export value, and its relation with the economy as a whole remains too vague.

The competitive position of sectors, nations, companies are more and more linked with external factors and relations within clusters. In order to know what the growth of a cluster

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<http://www.waterborne-tp.org/>

will be, it is essential to have views of the economic relevance of the sector and the impact it has on the rest of the economy<sup>24</sup>. The latest study on the economic importance and impact of the Maritime Industries in Europe was carried out for the European Commission in 2001 drawing on the then latest available statistics, largely dating from 1997 or 1998.

There is great diversity in the functions and organisational models of European maritime clusters and it is important to have a solid understanding of what makes clusters successful and what good experiences exist in Europe. That is why the Commission services will soon launch an assessment of the drivers and characteristics of maritime clusters by *inter alia* carrying out a strengths-weaknesses/opportunities-threats ("SWOT") analysis of them; mapping existing clusters in close association with the European Cluster Observatory; analysing key trends and forecasts; presenting an overview of national maritime policies and recommending evidence based EU policy interventions to enhance the European maritime sector. It is expected that the study will contribute to a better understanding of the maritime sectors and come up with policy recommendations.

Meanwhile in acknowledgement of the fact that socio-economic data on the EU maritime sector is neither comprehensive nor extensive, a separate study has been launched by the Commission services in order to carry out the necessary data gathering and analysis with a view to creating an integrated statistical database for maritime affairs.

## ***Conclusion***

The current maritime policy initiative of which this paper is a part has contributed to a revival of interest in maritime affairs and highlighted the importance and interconnectedness of sea-sustained activities. The maritime industries matter and contribute significantly to Europe's prosperity. Clusters help innovation to arise and take root. And innovation plays a pivotal role in delivering such increased prosperity in advanced economies, like ours.

Europe's competitive advantage in most maritime sectors has been and will continue to be based upon its ability to provide the most advanced products and services. In today's knowledge economy, the creation of the most favourable conditions for innovation is vital.

That is why the European Commission is already doing a lot to support maritime clusters. In addition to the support given to clusters in regional<sup>25</sup>, research and other policies, specific initiatives like the MIF and the Waterborne TP translate the objectives of our industrial policy<sup>26</sup> into practical tools for industry. Concrete and creative actions in the fields of cluster mapping and others in the PRO INNO Europe<sup>27</sup>, European Cluster Alliance, European Cluster Observatory or Europe INNOVA<sup>28</sup> contexts are delivering useful results. Our regional<sup>29</sup> and research policies recognise the potential of maritime clusters and are actively supporting their development.

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<sup>24</sup> POLICY RESEARCH CORPORATION N.V., <<Economic Impact of Maritime Industries in Europe>>, executive summary -

[http://ec.europa.eu/enterprise/maritime/maritime\\_industrial/economic\\_impact\\_study.htm](http://ec.europa.eu/enterprise/maritime/maritime_industrial/economic_impact_study.htm)

<sup>25</sup> [http://ec.europa.eu/regional\\_policy/index\\_en.htm](http://ec.europa.eu/regional_policy/index_en.htm)

<sup>26</sup> Mid-term review of Industrial Policy (COM) 2007374 of 04/07/07

<sup>27</sup> <http://www.proinno-europe.eu>

<sup>28</sup> <http://www.europe-innova.org/index.jsp>

<sup>29</sup> See example in annex.

Much is therefore already being done and in many ways the maritime sector is playing a leading role in developing appropriate structures and initiatives. The above mentioned studies in the fields of maritime cluster analysis and mapping and statistics will facilitate a better understanding of the nature and potential of maritime clusters in Europe and contribute to the elaboration of any appropriate interventions and policies in the context of the general cluster policy which the Commission intends to present in a Communication in 2008.

## ***Annex***

*An example of maritime clusters supported by the EU Cohesion Policy (2000-2006) is the Interreg IIIC programme: Project "InterMareC - Using maritime clusters to stimulate growth in coastal regions"*

*The three coastal regions Schleswig-Holstein (Germany), Brittany (France) and Pomorskie (Poland) are all peripheral regions that can benefit from direct access to the sea and the related maritime sector. However, their maritime potential is at present insufficiently used. As a consequence, dynamic regional development is hampered. The central problem is the complexity of the maritime sector. The various actors involved from the maritime economy, research, and public authorities are operating in many different fields. The generation of significant new impulsion through an overall strategy supported by cooperation on regional, national and international level, as well as increased transparency of the existing potential in the maritime economy, industry and research, would foster more dynamic regional development.*

*The overall objective of InterMareC is to initiate, develop and establish an interregional maritime cluster. This should open up prospects for growth in the maritime sector and boost the regional economy and job market. For the bottom-up development of the cluster, InterMareC concentrates on three priority themes: offshore and oceanographic technologies, coastal services and activities, and ship and boat-building. InterMareC fosters cooperation between local and regional actors from the maritime sector; especially by creating innovative cooperation between maritime companies, scientists and public authorities (Triple-Helix-Principle). This improves the accessibility of resources and competences and results in a more effective utilisation of their potential. Activities that are being carried out in the sub-projects include the organisation of workshops, seminars, congresses and fairs, and development of new products and services for the deep offshore market in underwater acoustic and robotics, meteocean, hydrodynamics and environment. The overall aim to promote regional development is based on implementation of activities such as operationally oriented concrete projects, preparatory projects and strategic/ know-how management projects".*