



European Commission

No 43 April 2009



# FISHERIES AND AQUACULTURE IN EUROPE



 **A strategy for sustainable and prosperous aquaculture**

 **Auctions:**  
switching to telematics

 **Clusters maritimes:**  
a key role

## Shows and exhibitions

### **World Ocean Conference, Manado (Indonesia), 11-15 May 2009**

The international community will come together at this world conference to discuss maritime issues related to climate change.

**> For more information:**

Tel: +62 21 351 90 70 – ext.1773

E-mail: [info@woc2009.org](mailto:info@woc2009.org)

Website: [www.woc2009.org](http://www.woc2009.org)

### **European Maritime Day, Rome (Italy), 19-20 May 2009**

In celebration of this European day, the European Commission will host a conference with workshops in Rome, in partnership with the Italian government.

**> For more information:**

Website: <http://ec.europa.eu/maritimeday>

### **Fishtech, Verona (Italy), 21-24 May 2009**

This event focuses more specifically on aquaculture techniques and technologies and the development of farmed products.

**> For more information:**

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E-mail: [ipackima@ipackima.it](mailto:ipackima@ipackima.it)

Website: [www.fishtech.it](http://www.fishtech.it)

## Institutional agenda

**Upcoming Councils** of the Fisheries Ministers of the 27 European Union Member States:

- 23 and 24 April 2009 in Luxembourg,
- 25 and 26 May 2009 in Brussels,
- 22 and 23 June 2009 in Luxembourg.

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### **Note to readers**

We welcome your comments or suggestions at the following address: European Commission – Directorate-General for Maritime Affairs and Fisheries – Information, communication, inter-institutional relations, evaluation and programming Unit – Rue de la Loi/Wetstraat 200 – B-1049 Brussels or by fax to: (+ 32) 2 299 30 40 with reference to *Fisheries and aquaculture in Europe*.  
E-mail: [fisheries-magazine@ec.europa.eu](mailto:fisheries-magazine@ec.europa.eu)

For further information on maritime affairs and fisheries, please consult the following sites:

[http://ec.europa.eu/commission\\_barroso/borg/index\\_en.htm](http://ec.europa.eu/commission_barroso/borg/index_en.htm)

<http://ec.europa.eu/fisheries>

<http://ec.europa.eu/maritimeaffairs>

*Fisheries and aquaculture in Europe* is a magazine published by the Directorate-General for Maritime Affairs and Fisheries of the European Commission. It is distributed free on request (see subscription coupon on page 12). *Fisheries and aquaculture in Europe* is published five times a year and it is also available on the Maritime Affairs and Fisheries DG website: [http://ec.europa.eu/fisheries/publications/magazine\\_en.htm](http://ec.europa.eu/fisheries/publications/magazine_en.htm)

Editor: European Commission, Directorate-General for Maritime Affairs and Fisheries, Director-General.

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## For sustainable and prosperous European aquaculture

European aquaculture has many strengths: high domestic demand, a wide variety of fish and shellfish farms, dynamic and high-level research, competitive technology, skilled and experienced operators and businessmen, climate conditions and sites suited to a large number of species, rules and practices that respect the environment, and wholesome and high quality products. Aquaculture plays an important economic and social role in the Union.

However, the different branches of European aquaculture are also faced with challenges that have an impact on production and the further development of this activity. Growing difficulties obtaining space (especially in coastal areas), fish farms' strong dependence on a high quality environment and water, the obligation to respect strict environmental standards, competition with third-country imports (particularly from Asia and South America) and the lack of familiarity with the sector on the part of financial institutions, insurance companies, public authorities and even consumers, all represent bottlenecks that prevent European aquaculture from contributing to the sector's growth at global level. Despite its many strengths, for the past decade or so European aquaculture has stagnated, with production of just over 1.3 million tonnes of fish, molluscs and shellfish.

The Commission explored the reasons for this stagnation and sought to identify its causes by means of a wide consultation of stakeholders. This reflection has resulted in a new strategy meant to give fresh impetus to the sector. The public authorities, whether local, regional, national or European, have a key role to play to further this impetus, develop the sector's competitiveness, promote the environmental, social and economic sustainability of the activity and improve its governance.

The European aquaculture sector has real prospects for the future. It is up to the public authorities and political leaders to make the choices that will enable it to participate fully in the global expansion occurring in this sector and to respond to consumers' demands.

The Editor



## □ Aquaculture: growth opportunities



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Aquaculture production in the EU-27 amounted to around 1.3 million tonnes of fish, molluscs and shellfish, a turnover of around EUR 3.5 billion. The sector provides jobs for some 65 000 people.

**Although aquaculture is growing in leaps and bounds globally, European aquaculture is stagnating. Based on an analysis of the challenges, opportunities and difficulties encountered, the Commission proposes, in a Communication to the European Parliament and the Council of Ministers, to give fresh impetus to a strategy designed to enable European aquaculture to take an active part in today's 'blue revolution'.**

Aquaculture is the fastest growing food sector worldwide, with average annual growth of 6 to 8%. Global production amounted to nearly 52 million tonnes<sup>(1)</sup> in 2006, an expansion of one third since the start of the millennium – in only six years! Spectacular growth in Asia and South America in particular has contributed to this phenomenon. At global level, aquaculture already provides nearly half the fish, shellfish and molluscs for human consumption.

According to projections made by the United Nations Food and Agriculture Organisation (FAO), world consumption of fish and seafood will continue to rise. Fish stocks are limited, even disregarding the problem of overfishing. So while fishing will remain essential for supplying a large part of worldwide consumption, rising demand cannot be met fully by wild-harvested fish.

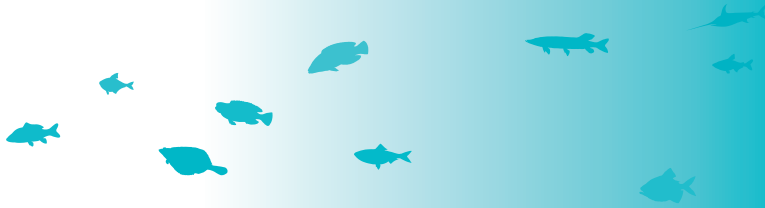
These prospects suggest that European aquaculture has a bright future, which is true. It is already an important economic sector today: in 2005, production by the EU-27 aquaculture sector amounted to around 1.3 million tonnes of fish, molluscs and shellfish, representing a turnover of about EUR 3.5 billion. The sector provides jobs for some 65 000 people.

### **A strategy to bolster European aquaculture**

For now, though, European aquaculture is not participating fully in this global expansion. Between 1995 and 2004, total aquaculture production in the EU-27 rose by only 3 to 4% until 1999, or less than half the global growth rate. From 2000 to 2004, EU production stagnated. With demand from European consumers rising constantly, imports account for more than 60% of European consumption.

<sup>(1)</sup> These figures do not include aquaculture plant products (aquatic plants and seaweed).





That is why the Commission launched in 2002 the first strategy for the sustainable development of European aquaculture<sup>(2)</sup>, a major contribution to ensuring the continuity, safety and quality of European fish farming production. Most of the measures set out in the 2002 strategy that come within the remit of the European public authorities have now been implemented. It will be necessary to go even further to meet the challenges still ahead for European aquaculture. That is the subject of a Communication adopted on 8 April 2009 by the Commission, entitled 'Fresh impetus for the strategy for the sustainable development of European aquaculture'.

In addition to the sharp rise in demand, European aquaculture benefits from a number of strengths and opportunities for its expansion.

The sector has advanced research and technology, sophisticated equipment, qualified entrepreneurs and innovative small and medium-sized companies. A solid legal framework for the protection of health and the environment is another of its assets. With consumer demand increasingly focused on quality products that are environmentally acceptable, safe and completely traceable, European aquaculture is prepared to meet their expectations.

Lastly, the enlargement to 27 countries, which results in higher production, new types of farms and new internal markets, is yet another opportunity not to be missed.

### Major challenges

There is no lack of challenges, however, one being the increasing competition for space in coastal areas, which can hamper further development of coastal aquaculture farms and fish farming.

Strict European regulations on environmental protection, animal health and product safety ensure the superior quality of European products. Yet they also lead to real price pressure exerted by imports from Asia and Latin America, where production capacity has expanded sharply in the last few years.

High research and development costs for the improvement of breeding conditions and the development of treatments and vaccines, as well as clean technologies for health and environmental protection, can curtail the development of new activities.

The fresh impetus proposed by the Commission is meant to respond to these challenges by making the most of the strengths of European aquaculture and supporting the sector's efforts.

### Promoting competitiveness

The first focus of this strategy is to promote the sector's competitiveness and diversity. Competitiveness will be guaranteed first and foremost by advanced research and technologies. The EU has already contributed amply to the development of aquaculture research and technologies (EUR 98 million were allocated to aquaculture research projects, including EUR 32 million for small and medium-sized enterprises, under the Sixth Research Framework Programme). The Commission's Communication nonetheless highlights the importance of maintaining this support. This promotion of research has many priorities, including the development of technologies for better protection of the environment and human and animal health, support for activities that cannot be entirely financed by small and medium-sized enterprises and those with high investment risks, and global problems such as climate change and its impact on aquaculture. By the same token, the Member States and the sector are urged to increase funding for aquaculture projects in the context of the European Research Area.

Another measure aimed at improving competitiveness is the promotion of clear national and regional rules allowing fair competition for space. The choice of sites and spatial planning are fundamental to the development of aquaculture activities (see our report on page 7). The rules must make it possible to provide the information required to establish an economic activity, to give guarantees to investors, avoid conflicts and build synergy between aquaculture activities and the environment. This integrated approach to maritime spatial planning is promoted in the context of maritime policy<sup>(3)</sup>.

Competitiveness is also tied to the commercial context: the European aquaculture sector has to cope with rising production costs but prices are under pressure. The Commission is considering various actions: better organisation and more cooperation in the sector (producer organisations, inter-branch relations), better consumer information and marketing tools such as labels.

The EU should also strengthen its position on the global market by selling its know-how and disseminating its high level of technical skills.

(2) Communication from the Commission to the Council and the European Parliament: A strategy for the sustainable development of European aquaculture – COM(2002) 511 final.  
(3) Roadmap for Maritime Spatial Planning: Achieving Common Principles in the European Union – COM(2008) 791 final.

## Guaranteeing respect for the environment and product quality

Guaranteeing that aquaculture respects strict environmental protection standards in the EU is a major challenge. But it is also an opportunity. If European aquaculture failed to respect the environment, it would jeopardise its own survival, because, on the one hand, the public authorities would not allow this, and, on the other, because citizens and consumers have become demanding and vigilant in this respect. Efforts will continue to focus on protecting water quality (both water consumed by fish farms and waste water discharged downstream), but also on possible interactions between wild animals and farmed animals (particularly escaped fish). The Commission notes that certain aquaculture practices have a beneficial impact on the environment, in particular through their influence on the protection of coastal zones, wetlands and biodiversity.

Animal health and welfare must form an integral part of the strategy for modern and thriving aquaculture, both for economic reasons (good health is essential to the optimal growth of farmed aquatic animals and high production yield), commercial reasons (a better image of the aquaculture sector) and of course public health and respect for the environment.

Lastly, different measures are planned in the interest of maintaining high food safety requirements.

## Aquaculture: a diversified activity

Aquaculture is a varied sector that includes the farming of not only saltwater and freshwater fish, but also molluscs and shellfish, produced in different types and according to different breeding methods: open or closed, extensive or intensive, on land, in lakes, in tanks – fed by rivers or even groundwater –, in coastal waters or further offshore. Originally a small-scale activity, certain branches of this sector now reflect all the characteristics of a high-tech industry. Although the sector is still largely dominated by SMEs, certain large firms are now emerging in the main links of the supply chain (fish reproduction and fattening, feeding, processing and marketing).

## Enhancing the sector's image and governance

The new European strategy for aquaculture also stresses enhancement of the sector's image and improved governance.

In terms of image, the public authorities should promote the importance and value of aquaculture not only as a sector that produces wholesome foods, but also as an important economic and environmental player.

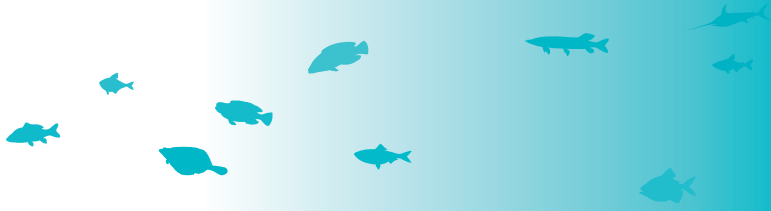
The Commission also calls for simpler administrative procedures and lower administrative costs for operators.

## A 'blue revolution' for Europe

Modern aquaculture represents a major revolution in the production of fish and foods of aquatic origin in general. The rapid expansion of aquaculture has often been referred to as a 'blue revolution'. Although it offers tremendous possibilities, it nevertheless faces sizeable challenges. The strategy proposed by the Commission aims to tap the development potential of European aquaculture while guaranteeing environmental sustainability and the strictest health standards. This dynamic can only bear fruit if the other stakeholders, the Member States and economic operators, take it up and act effectively at their level.

**European aquaculture is not participating fully in the sector's global expansion. Between 1995 and 2004, EU aquaculture production rose by only 3 to 4% until 1999 and stagnated between 2000 and 2004.**





## □ Aquaculture competes for space



© Lionel Pageul

Oyster farming is not practiced on beaches alone. Oyster farmers need a lot of space on the ground, right next to the oyster beds and the sea. They also need tanks for storage, ripening and purification.

**Shellfish cannot be raised just anywhere. An aquatic site has to meet precise criteria to be suitable for shellfish farming. This activity can only be carried out in select areas that have to provide enough space to allow it to develop its full potential. On a densely occupied European coast, this can happen with the right planning, in partnership with other sectors and with respect for the environment. *Fisheries and Aquaculture in Europe* takes a look at how Normandy is encouraging the development of its young shellfish farming sector.**

In Normandy, oyster harvesting was originally a job for fishermen. For centuries, they dredged flat oysters onto sandbanks in the Seine Bay and Mont-Saint-Michel Bay. The oysters were then allowed to mature in sheltered sites rich in plankton, e.g. the Saint-Vaast-la-Hougue basin. Subsequently, the farming of cupped oysters – Portuguese to start, followed by Japanese – created the need for breeding grounds protected from currents. Cupped oysters were being farmed like flat oysters, on the ground, but their lack of stability compared to flat oysters made them sensitive to the slightest movement.

Then, in the 1960s, emerged the technique of oyster breeding in pockets attached to tables. These new techniques enabled producers to use less sheltered sites but which nevertheless have to meet exact criteria in terms of sea currents, water purity, presence of plankton, intertidal surface and accessibility. In the 1970s, shellfish farming in Normandy developed in four ‘crûs’ or sites that meet these requirements: West-Cotentin (around Agon-Coutainville), East-Cotentin (around Saint-Vaast-la-Hougue), Isigny-sur-Mer (around Utah Beach) and Côte de Nacre (around Arromanches). In just a few years production rose from 1 000 tonnes of shellfish to 30 000 tonnes of oysters and 25 000 tonnes of mussels, making Normandy the youngest but the leading shellfish farming region in France.

This expansion obviously could not come about haphazardly. Any area beyond dry sand is the national public domain and is managed by the time-tested system of concessions. The production capacity of each zone is determined scientifically

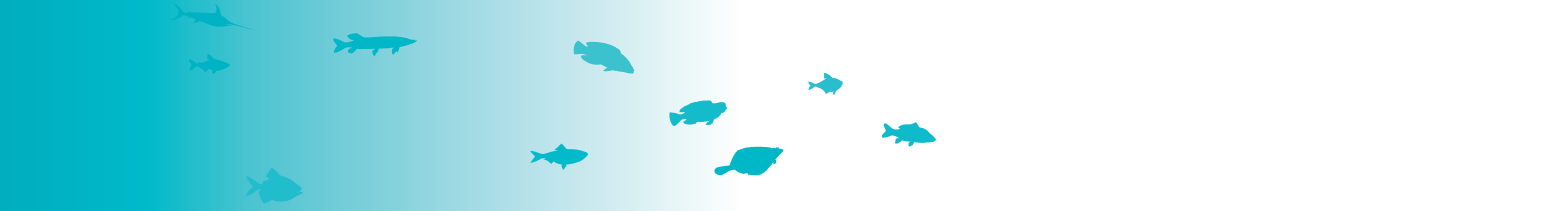
in terms of its plankton level and the number of concessions granted depends on this capacity. With operating periods of 35 years, this part of the activity remains stable, with no recent developments.

### Space on terra firma!

However, oyster farming is not practiced on beaches alone. Oyster farmers need a lot of space on the ground, right next to the oyster beds and the sea. As the oysters fatten, they have to be transferred and divided up into new pockets, which is done on land. Equipment, tractors, trailers, etc. also require storage space. A sales area and logistics platform are also needed to organise packing and shipping.

What also takes space are the seawater tanks needed for temporary storage and ripening (Normandy has around 30 clayey basins capable of producing green oysters) and essential for purification. Depending on the quality of the water in which it is produced, a mussel or oyster must spend a shorter or longer period in a tank of clean and oxygenated seawater before being marketed.

The 1980s saw the development of cooperative shellfish sites covering several hectares and providing collective facilities (seawater supply and purification tanks) and clean surfaces for each company. The problem is that, despite stable production, these land sites need to expand.



**A French law adopted in 2000 obliges municipalities to group into coherent entities and, in cooperation with all local stakeholders, set up spatial management plans, known here as territorial coherence plans.**

*'Although water quality has improved over the years through efforts in the realm of wastewater collection and treatment, its improvement is not keeping up with the changing regulations we have to respect,' explains Joseph Costard, an oyster farmer and president of the Normandy-North Sea regional section of the National Oyster Farming Committee.*

Regulations on the purification of shellfish are evolving as scientific knowledge advances. Zones where shellfish did not have to be purified will soon be changing status to come into line with the rules. This will inevitably increase the need for tank areas and this is where oyster farmers run into inevitable problems of competing for space in coastal zones.

### **Territorial coherence**

The main competitor to shellfish farming is the residential sector, both tourism and secondary residences. Normandy has a beautiful coast and countryside, only two to three hours from the Paris region. Many city dwellers come to the area for holidays and fresh air or even for retirement. This activity is hardly compatible with the industrious nature of shellfish farmers, who work year round in rhythm with the tides. The coming and going of tractors at dawn, the flurry of delivery trucks, the starting up of pumps to fill or empty tanks are a disturbance to those seeking calm and wanting to recharge their batteries. The sector therefore has an impact on the tourist sector.

If the region attracts so many occasional or intermittent residents, it is because its environment has remained virtually intact: little industry, no major coastal cities, non-intensive agriculture and belated development of tourism which has made it possible to prevent the coast from becoming a sprawl of concrete... *'We are not competing with the environment,' Costard continues, 'but we have to make do with it. Obviously, the coast is a fragile area and we cannot set up operations without some kind of rules. The dune belt has to be respected as well as any wetlands just off the coast, and so we have to build a partnership with environmental defence groups in order to operate under the best conditions.'*

This type of dialogue was made mandatory by a French law adopted in 2000, which obliges municipalities to group into coherent entities to set up spatial management plans that take account of all the competing interests, known here as territorial coherence plans (SCot). Such a plan is being developed in Pays de Coutances, which encompasses the shellfish farming area of West-Cotentin.

*'We have to develop without doing damage,' explains Yves Lamy, the mayor of Coutances, who is also Chairman of the SCot Commission. 'That means that we have to build amenities but especially that dialogue is needed among the regional players so that such amenities are identified and do not mushroom. That's the role of the SCot. For example, allowing shellfish farming production areas to spring up anywhere and everywhere would destroy the coast without ensuring the operator's optimal development. But sitting down together with associations, with those in the business, with elected officials to choose the best place to provide such access will result in coherence and protection of the coast.'*

After their dialogue, the Pays de Coutances grouping of municipalities will have its territorial coherence plan laying down guidelines for the region's future. In the short term, the aim is to work on building capacity to treat waste water and runoff water so that the inland areas do not endanger shellfish farming. In the medium term, sufficiently large areas will have to be set aside so that the land-based activities have enough room to develop. And in the long term, thought needs to be given to the coexistence of the different activities which all help shape the region's prosperity and identity.





## □ Fish auctions group together

**The traditional auctioneer is becoming an endangered species, but computerisation helps auctions reach a much wider clientele and raise the prices paid to producers.**

One has to be used to getting up early to remain alert. The light is dim, cell phones are in silent mode and whispering is the rule. Only the muffled voice of the sales attendant announces the batches of fish to buyers. There are 20 or so seated in the sales room of the Belgian fish auction in Zeebruges (Flemish Region), on seats equipped with telephones and all the outlets required for modern interfacing. All have their eyes glued to the large screen at one end of the room.

The uninitiated see nothing more than a circular dial whose cursor turns counter-clockwise surrounded by mysterious figures and letters. For those in the know, it is much simpler. The cursor turns as the price declines for each batch, which can be identified by different codes indicating the species, quantity, quality, vessel, etc. The sales system is also very simple: the first buyer who stops the downward race of the cursor with a click of the mouse or by pressing a remote control button gets the batch at the price indicated.

The principle is exactly the same as for traditional fish auctions, which are still widespread in Europe. In the traditional system, the auctioneer recites the prices and an imperceptible nod or movement of the buyer's hand or eyelid corresponds to the click of the mouse. This system is hardly more comprehensible to the layman than its computerised version. The untrained ear and eye would have a hard time following the prices, recognising the buyer's signal or sometimes even identifying the buyer on the basis of the scribbled slip of paper the auctioneer places on the batch...

### Expanding the clientele

Yet the basic difference between the two systems resides not so much in computerisation as in telematics. The 20 or so wholesale and retail fish traders present that morning at the Zeebruges auction were not the only buyers: others were taking part at home or from another port, with nothing more than a computer and an Internet connection. And even as remote buyers participated in the morning's auction in Zeebruges, some of those present physically were simultaneously attending auctions in Ostende, Scheveningen and/or Urk, using two or three portable computers open in front of them.

*'The main goal of using telematics is to have more customers,'* explains Eddy Landuyt, sales manager for the Zeebruges auction. *'We currently have 450 buyers on the whole system, which enables us to get better prices.'* The principle of supply and demand prevails: if demand increases as supply remains constant, the fish are sold at more attractive prices for producers.



**An auction is no longer a sales platform for just a single fishing port. It is now a commercial enterprise offering comprehensive solutions to its fish-trade clients.**

This same logic has led certain European auctions to set up a network. There are currently two main networks based on the North Sea: PEFA (1) and EFICE (2). The advantage for the auctions is to increase prices by expanding the customer catchment area. The advantage for fish traders who buy is to secure access through a single platform to a wider variety of products thanks to the specific characteristics of each port, since some are more active in pelagic fishing while others offer more flat fish, more cod, etc. The Italian auction in Cattolica (Emilia-Romagna) has joined PEFA for the same reason, in particular to facilitate purchases of *vongole*.

An auction is no longer a sales platform for just one fishing port. It is now a commercial enterprise offering comprehensive solutions to its fish-trade customers. The remote clientele has brought significant changes. First, as the customer no longer comes in person to assess the goods, the auction must guarantee the quality of the products on offer. *'We now have two quality managers who evaluate the goods and enter the assessment into the system during the night,'* explains Eddy Landuyt. The other change is logistical. More and more transport operators are not buyers and therefore do not know what their customer has purchased. The auction therefore takes charge of delivering batches up to the loading wharf installed for this purpose. It provides an all-round service.

(1) [www.pefa.com](http://www.pefa.com)  
(2) [www.efice.com](http://www.efice.com)

## Maritime clusters: drivers of economic development and innovation in Europe

**A recent study by the European Commission highlights the important role played by maritime clusters over the last 15 years or so in the development of Europe's maritime sector. These structures bring together enterprises, economic operators and institutions all based in the same geographical area. They offer a favourable environment to companies by enabling them to cooperate in areas of common interest, notably research and development projects, share experiences and best practice, and carry out promotion campaigns.**

The European Union is a leader in the global maritime sector. Some 40% of the world's fleet is European, for example. What is more, Europe dominates the promising market of offshore energy production (harnessing the power of tides, wind and currents).

Sea-based activities have major economic and social knock-on effects. The European maritime sector represents more than 4.7 million direct jobs. In some countries, the percentage of maritime jobs is particularly high, especially in Malta (13.51%), Cyprus (12.02%), Estonia (6.54%), Greece (6.39%), Latvia (5.36%) and Denmark (5.26%). The wealth created by each person employed in the maritime sector amounts to an average of EUR 39 000. Many maritime industrial activities are also concentrated along Europe's coasts, and beaches remain the leading tourist destinations in Europe.

To boost the development potential of the maritime sector and keep a strong competitive position in the global market, more and more groups of economic and institutional players – maritime clusters – have been set up in the last 15 years. Such organisations stimulate the economy of regions where sea-related activities are concentrated. Clusters, which concern different sectors (shipbuilding, conventional or renewable energy production, fisheries and tourism), bring together companies, specialised suppliers, service providers and institutions (universities, trade associations, etc.).

### Objective: cooperation

The European Commission, which supports the creation of clusters, wished to study the role they play in strengthening and developing the maritime sector.

A key point is that the creation of clusters leads to a significant increase in discoveries in terms of research and innovation. This role is especially important because European companies have to contend with strong global competition and can only continue to thrive by developing more advanced technologies and more sophisticated products.

Clusters also allow better collection and sharing of information, whether economic, scientific or operational. Exchanges of best practice are a particularly eloquent example of this advantage.

Another major advantage is that clusters represent a solution to recruitment difficulties in the maritime sector, in particular in the offshore sector. Being organised in clusters makes it easier for employees in one sub-sector to transfer to another. For example, the experience of an employee who has worked for years in the offshore sector can prove very useful at a later stage of his career in port services.

In addition, these structures create awareness among the general public, which is often not well informed on the importance of the maritime sector because these firms are located a long way from urban centres. The implementation of common communication actions contributes to such awareness.

Clusters also make for progress in the area of sustainable development.

### Top-down or bottom-up?

The study notes the great diversity of maritime clusters in terms of organisation, geographical location and types of members, but, on the whole, it makes a distinction between two categories of clusters. The first, top-down clusters, are launched by the public authorities. This type exists in Germany and Denmark, for example. The main strength of such clusters lies in the fact that all sea-related sectors are also taken into consideration and that they benefit from high budgets and long-term vision.

The second type, bottom-up clusters, are developed by private initiatives and are far more numerous. They are found in France, Spain, Italy, Finland, Sweden, Norway, the United Kingdom and Poland. Bottom-up clusters have the advantage of relying mainly on the effectiveness of enterprises and the development of swift and operational solutions.

### Clusters: an undeniable factor of dynamism

Various studies on clusters (in different fields, not just maritime clusters) have highlighted the importance of their role in the economy. A comparison of data on the regions with the best employment and added-value performances, and the presence of clusters, shows a connection between economic prosperity and the existence of an active cluster in the region. Obviously, this is not a one-way street: a region with a high level of economic activity and employment offers an environment that is more conducive to the development of a cluster.

Different figures confirm the importance of clusters. For example, companies that belong to a cluster are more innovative than others. Cluster members register more trademarks (29% compared with 14%) and patents (29% compared with 12%)<sup>(1)</sup>. Furthermore, 85% of companies that belong to a cluster find that this contributes to their competitiveness.

(1) Innobarometer 2006.



## Added value and employment in all sea-related areas for the European Union and Norway

	Added value*	Employment**
BE	4 000	48 100
BG	500	103 300
CZ	100	4 000
DK	8 700	144 700
DE	17 200	287 300
EE	1 000	39 700
IE	2 100	38 400
EL	6 400	279 200
ES	23 000	876 400
FR	25 400	503 700
IT	24 300	724 700
CY	1 200	41 800
LV	1 000	55 400
LT	500	34 500
LU	100	1 100
HU	300	6 000
MT	500	20 100
NL	11 500	190 500
AT	300	4 000
PL	3 400	147 000
PT	2 800	171 200
RO	1 200	136 600
SI	200	10 000
SK	50	4 000
FI	3 200	50 100
SE	3 800	70 400
UK	28 400	634 400
NO	15 100	156 300

\* Direct (Σ direct) added value = EUR 186.8 billion

\*\* Direct (Σ direct) employment = 4.78 million persons

Source: Policy Research Corporation

Regardless of their differences in terms of size, area of competence or financing mode, clusters are all created to encourage competition, promote sea-related activities and coordinate the activities of the different sectors. Clusters serve as fora for dialogue between the public authorities and private partners: more than 68% of the companies belonging to a cluster recognise that the public authorities play a fundamental role in supporting it.

## Recommendations

A number of recommendations were issued as a result of this study. For example, maritime clusters could contribute to the development of an economic database to be placed on the site of the European Cluster Observatory ([www.clusterobservatory.eu](http://www.clusterobservatory.eu)). To encourage employment and innovation, a platform could also be set up to allow an exchange of information on employment issues. Results in the field of innovation could also be reinforced by this type of European cooperation, along with environmental protection data.

## Distribution of maritime clusters

The main maritime sectors that create jobs in Europe are coastal tourism, navigation, maritime equipment, transport, ports and shipbuilding. In terms of added value, coastal tourism comes before navigation, followed by ports and shipbuilding.

In the **traditional maritime sector** (shipbuilding, yachts, offshore energy production, fresh water navigation, etc.), the main maritime clusters are based in Western Europe, and in particular along a line running from Le Havre to Hamburg. A second region is based in the Mediterranean (south of France and northwest Italy), but it is the northern region that shows the highest added value per person employed.

In the **recreation and tourism sector**, southern Europe stands out, as well as the south of the United Kingdom, an important region for cruises, among others.

In the **fisheries sector**, clusters form more of a patchwork: there is an important concentration of activity on the French and Spanish Atlantic coasts, and in northern Europe, in Norway and Scotland, but also in southern Italy and Portugal. In terms of added value, however, North-west Europe (Norway, the United Kingdom and France) carry more weight. The Baltic States, Poland and Romania are also major employers.

However, an accurate assessment of the economic role played by clusters is still hard to attain because these results can only be measured relevantly after a longer period of time. It does seem obvious from the statistical data that regions with important clusters are more prosperous. That is why the European Commission encourages the creation of new clusters and the strengthening of the existing ones, as well as the networking of data to expand opportunities for cooperation and exchange of best practice.

# In brief

## European Maritime Day in Rome

European Maritime Day will be celebrated on 20 May to highlight the European Union's maritime economy and culture. The Member States and maritime regions are invited to organise their own events. The Commission will be hosting an event in Rome focused on the stakeholders of Maritime Europe. On 19 and 20 May, they will be invited to attend a number of workshops to review the progress of the European Union's integrated maritime policy.

**For information see:** <http://ec.europa.eu/maritimeday>

## A synopsis of the CFP



In the run-up to the forthcoming reform of the Common Fisheries Policy, the Commission has published 'The Common Fisheries Policy – A User's Guide', which reviews the state of the fisheries sector and progress in the management of this activity that is fundamental to the EU's food supply. The 15-chapter brochure presents the CFP and describes how it steers the exploitation of fishery resources.

It contains 22 fact sheets presenting

the main issues related to this policy: regional advisory councils, TACs and quotas, discards, the Baltic, the North Sea, the Mediterranean, multiannual plans, the northern agreements, partnership agreements, etc. The brochure is available in the 23 official languages of the European Union. To obtain a paper copy or to download it, see: [http://bookshop.europa.eu/eubookshop/index.action?request\\_locale=EN](http://bookshop.europa.eu/eubookshop/index.action?request_locale=EN)

## Measures to protect Central and Western Pacific resources

With the scientific community calling for a significant reduction in fishing pressure on bigeye tuna, the Western and Central Pacific Fisheries Commission (WCPFC) has adopted, for the first time in its youthful existence, a three-year management plan for this species and for albacore. The plan entails a reduction in catches (30% over three years for bigeye tuna) and a periodic ban on the use of fish concentration devices. It also contains monitoring and surveillance measures, as well as a ban on discards in both fisheries. The WCPFC adopted other measures, in particular a capacity restriction for swordfish fishing to prevent overexploitation of the stock. A list of vessels engaging in illegal fishing was also adopted, along with measures to set up a centralised satellite-based vessel monitoring system (VMS). This system, under study for quite some time, was placed in service on 1 April 2009.

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