EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR MARITIME AFFAIRS AND FISHERIES

ATLANTIC, OUTERMOST REGIONS AND ARCTIC
MARITIME POLICY ATLANTIC, OUTERMOST REGIONS AND ARCTIC

NOTE FOR TG1
INCOMPLETE WORK IN PROGRESS

Subject **Blue Economy in the Five Atlantic Countries**

A revised analysis has been made about the size and nature of the blue economy in the EU countries bordering the Atlantic. The analysis considers the whole of these countries' economies, including those parts where activity is centred on the Mediterranean or North Sea. It includes some insights gained from the earlier Ecorys study. Their study provided some useful pointers to sources of data. However, nearly all the quantitative numbers have been recalculated because in the meantime newer data have become available and more appropriate methods ways found for determining the size of the maritime economy. It is not, however, a complete analysis. Rather it aims to illuminate broad trends which give input to a conversation on growth potential and options for political objectives.

The main conclusions are:

Coastal tourism in the Atlantic countries generates about €50 billion every year and employs about 700,000 people. Most of the tourists in France and UK come from within their own country but most in Spain and Portugal come from outside. Because of the popularity of short vacations, spending on travel is of the same order as that on accommodation. Most visitors from outside the destination travel to their destination by air so coastal tourism is responsible for significant employment in the airline industry. The continuing healthiness and good prospects of the sector provide employment opportunities for young people; indeed the industry has a younger age profile than average.

The region's shipbuilding turnover averages €13 billion per year and orders for warships account for most of this. Any consolidation in this sector along the same lines as has already happened in the aircraft industry is likely to result in job losses. The civil part of the industry is more productive. It exports more and has better long-term prospects than the military part but will need to continue to innovate, diversify and attract skilled engineers if it is to remain competitive.

The turnover for capture fisheries of the Atlantic countries averages €4.4 billion a year and the industry's added value of about half that figure is approximately the same as that of these countries' processing industry. Capture fisheries employs about 80,000 people with another 50,000 working in processing. The fleet consists of a rather efficient large scale and long-distance fleet employing many non-EU nationals and an inefficient small-scale fleet with ageing crews. EU subsidises them through Fisheries Partnership Agreements and the European Maritime and Fisheries Fund. It is difficult to see how profitability, wages and employment can simultaneously be maintained.

Commission européenne/Europese Commissie, 1049 Bruxelles/Brussel, BELGIQUE/BELGIË - Tel. +32 22991111
Office: J-79 02/26 - Tel. direct line +32 229-97959

iain.shepherd@ec.europa.eu

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1. Main Findings

2. Scope

The aim of this short paper is to examine the blue economies of the five Atlantic states, France, Ireland, Portugal, Spain and the United Kingdom. We examine their similarities and differences, their broad trends and how they are expected to evolve in the future. It considers the maritime economies of the countries as a whole – not only the Atlantic components.

3. Approach

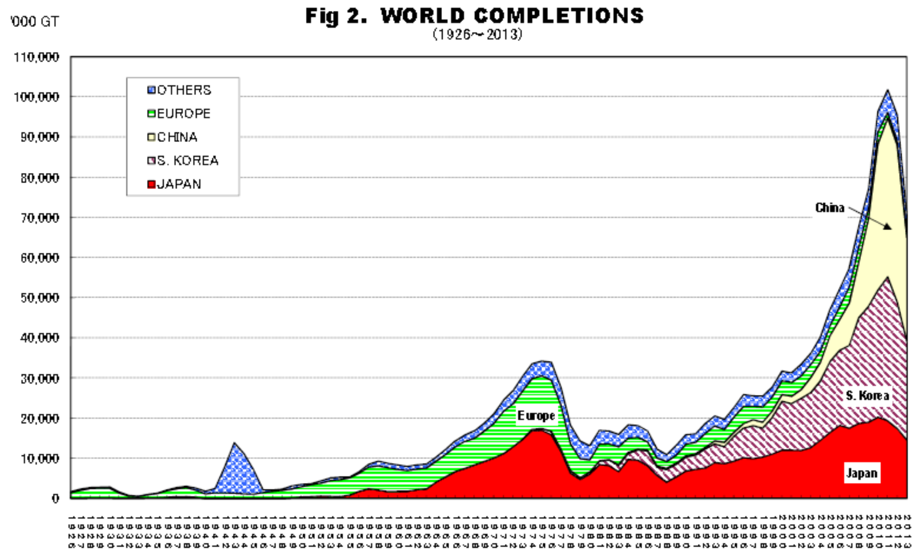
This analysis includes some insights gained from the earlier Ecorys study. Their study provided some useful pointers to sources of data. However, nearly all the quantitative numbers have been recalculated because in the meantime newer data have become available and more appropriate methods ways found for determining the size of the maritime economy

4. The Atlantic Economy

The economic activity of the blue economy in the Atlantic mirrors broad economic and social trends. Shipbuilding, like much of manufacturing in the EU, is declining. The fishing community, like agriculture, is ageing Young people are moving from rural communities to the cities. Tourism, as part of the service economy, is diversifying and growing.

Nevertheless, we can identify certain trends that are specific to the Atlantic and the marine economy.

4.1. Shipbuilding



(Note) 1. Data Source : IHS (Former Lloyd's Register). Until 1967, launched base. After 1968, delivered base.
2. Ship Size Coverage : 100 GT and over.

Figure 1

In terms of tonnage, European shipbuilding is negligible on a global scale but in certain specialist areas, it is competitive.

Shipbuilding in the Atlantic is dominated by the needs of these countries' navies. Because defence industries are largely exempt from EU public procurement rules, navies are equipped from a country's own shipyards. 71% of UK shipbuilding revenue comes from the military sector. The latest French statistics from Ifremer do not distinguish between civil and military shipbuilding but between 2001 and 2009 the average military proportion was 63% of turnover, 82% of added value and 73% of employment. Exports accounted for 68% of civil production and 37% of military[1].

Three out of Europe's five major naval shipyards are in the Atlantic. Portugal too has a large naval component although its industry is more than half the size of the Big Three (ES, FR, UK) relative to its population. Its labour productivity is also significantly lower. But a comparison with the US indicates that the EU naval sector has over-capacity. The EU has twelve major warship building companies versus two in the US, and US naval firms are on average 3.4 times larger than those of the EU. For EU companies this means fewer economies of scale and research and development costs over smaller production runs. According to the Commission's Communication "Towards a more competitive and efficient defence and security sector[2], the naval sector has not had the incentive to consolidate like the aerospace sector because it is not so research intensive. In is difficult to tell, without actually declaring war on the United States, whether their warships are technologically more advanced than European ones.

[1] Ifremer, French Marine Economic Data 2009

[2] SWD(2013) 279
IBIS World Shipbuilding Market Research Report | SIC C30.110 | Sep 2014

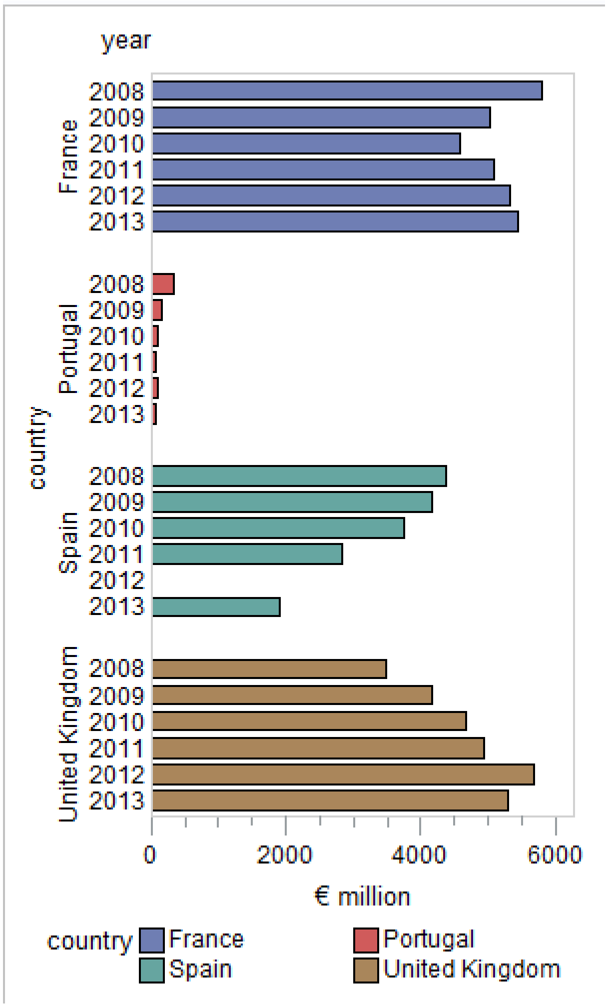


Figure 2 Building of ships and boats. Turnover

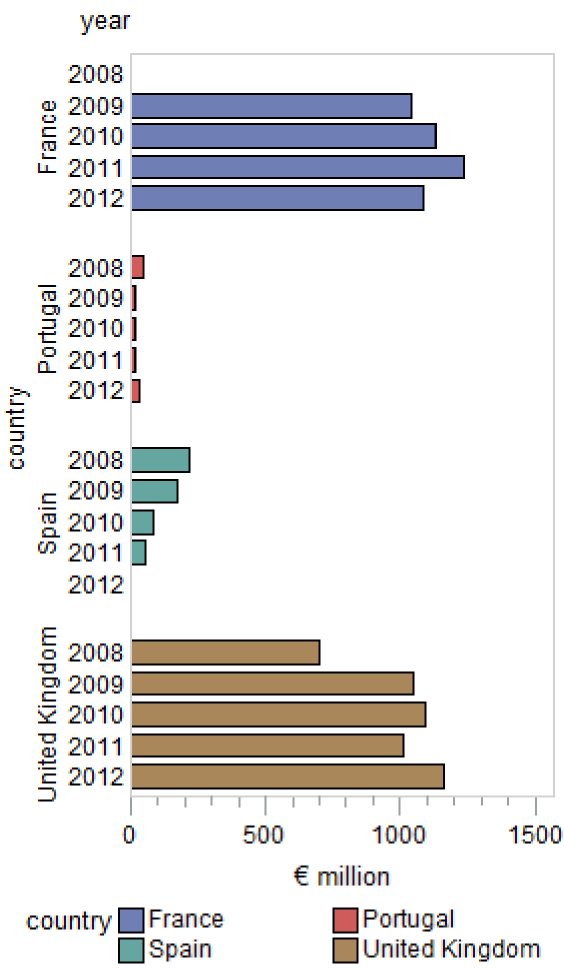


Figure 3 Building of pleasure and sporting boats. turnover

A 2008 survey[3] found that 60% of companies in the EU had difficulties in hiring staff with the requisite engineering skills – both blue and white collar. This survey was carried out before the economic crisis and before the ruling that state aid to Spanish yards was illegal so the shortages will in the meantime have reduced. But discussions with the industry indicate that they still exist. This shortage of engineering skills is innate to the EU's manufacturing sector but some studies suggest that it is more acute here because potential recruits see a declining industry.

Actions that could help are not particular to the maritime industry – facilitating the movement of labour from declining areas to areas of higher growth and removing restrictions on skilled labour from outside the EU – particularly those that have been educated here.

There is a continuing demand for leisure craft and the industry is very competitive. In France and Spain naval and leisure craft are built in the same region, but in the UK this is not the case. This suggests that the two sectors are not interdependent.

3 Comprehensive sectoral analysis of emerging competences and economic activities in the European Union. Building and Repairing of Ships and Boats Sector, January 2008.

4.2. Tourism

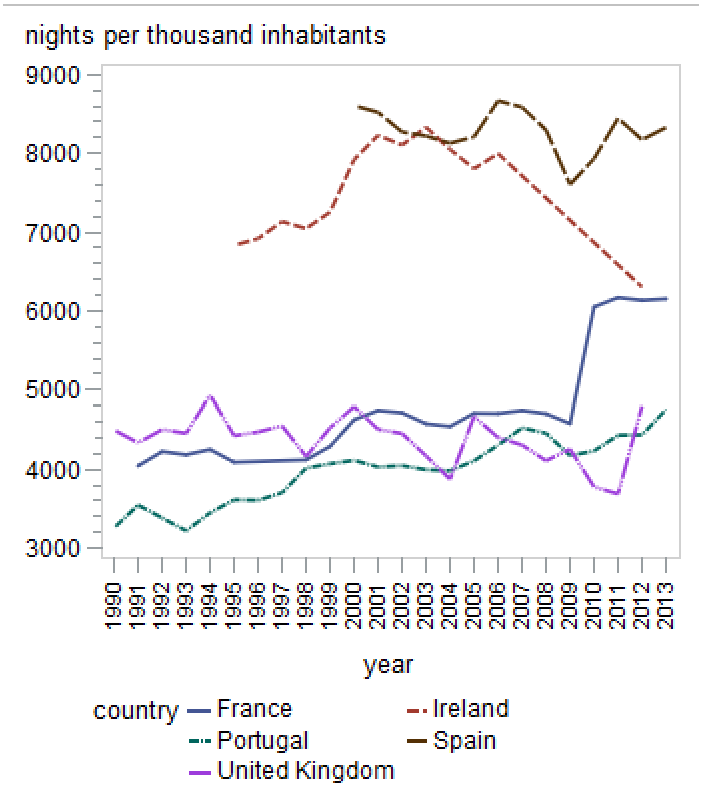


Figure 4 Nights spent in hotels, holiday and other short-stay accommodation; camping grounds, recreational vehicle parks and trailer parks. National figures (not only coastal). Spain figures before 2000 do not include short-stay accommodation so were discarded.

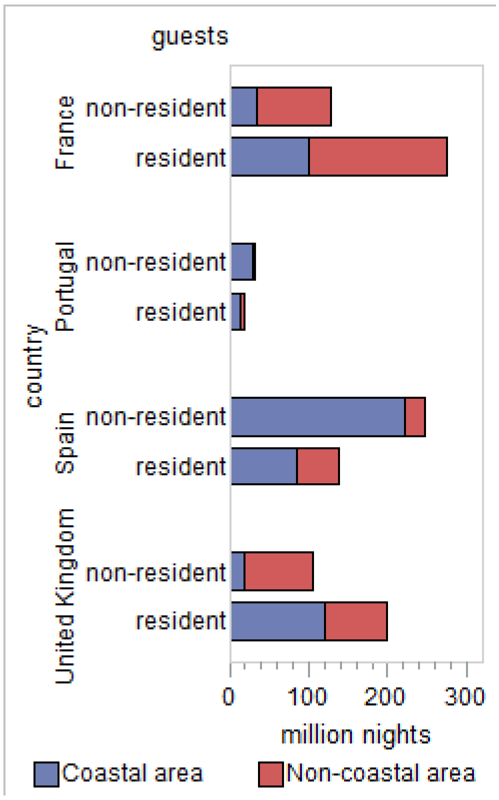


Figure 5 Average 2012-2013, nights spent in hotels, holiday and other short-stay accommodation; camping grounds, recreational vehicle parks and trailer parks

Coastal tourism is almost certainly the largest employer in the blue economy, particularly in Spain and Portugal. Residents and visitors to both these countries predominantly go to the coast as do most British residents and a large proportion of French ones who stay in their own country for vacations. On the other hand visitors to France and the UK are, on average, more likely to prefer inland attractions.

Spending, by each nation's residents on tourism as a whole, not necessarily coastal is broken down in Figure 6 and Figure 7. The surprising finding to emerge from this analysis is that spending on travel is of the same order as spending on accommodation. Spending on food services – restaurants, bars etc. – is still significant – but less. The large travel component indicates a predominance of short breaks although Eurostat statistics on the length of stay do not go back far enough for us to determine whether or not this trend is increasing.

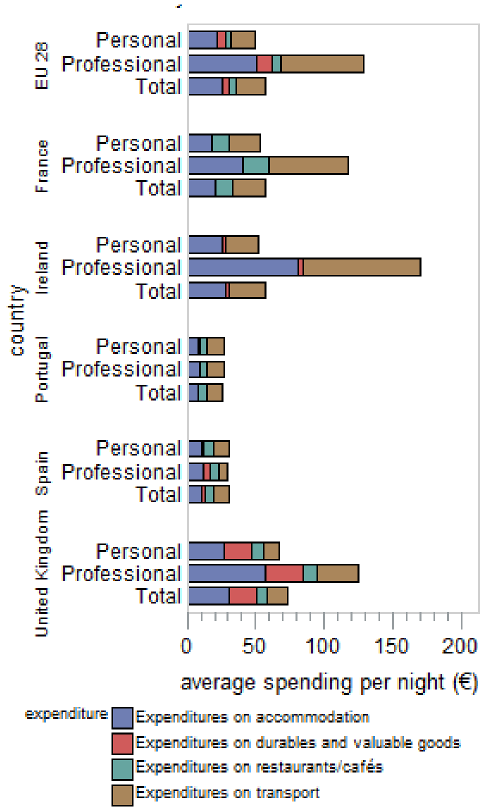


Figure 6 The average spending per night of tourists from five Atlantic countries and EU average –both personal and professional trips

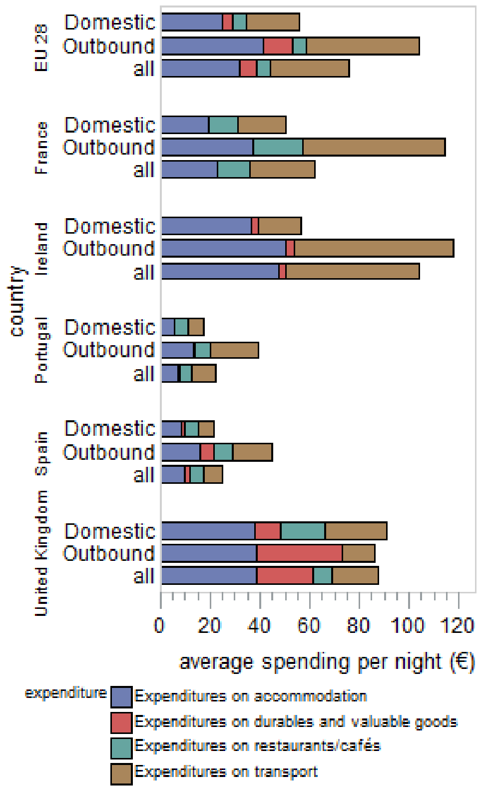


Figure 7 The average spending per night of tourists from five Atlantic countries and EU average – comparison between spending in their own countries and when they travel abroad.

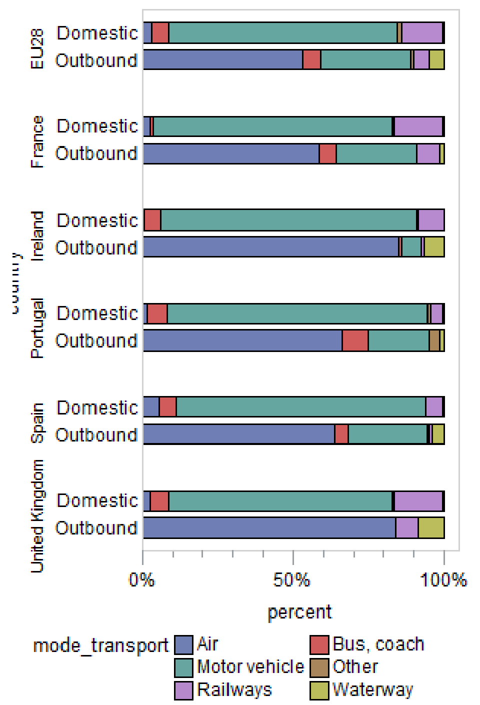


Figure 8 means of transport used for tourism expressed as percentage of number of trips.

As indicated by Eurostat[4], and shown in Figure 8, nearly all tourists travel by car to holiday destinations in their own country and a significant, although lower, number of tourists also use their car to travel abroad. However most travellers going abroad, and particularly those from the islands of Great Britain and Ireland, travel by airplane. Travel by train is insignificant.

This spending breakdown allows us to estimate the size of the coastal tourism economy. This is determined by multiplying the spending per night by the number of nights spent in all categories of coastal accommodation. For non-residents the EU average for outbound tourists was used. The numbers suggest a ball-park figure of €50 billion. A more sophisticated analysis might distinguish between business and personal spending but business travellers account for only about one eighth of EU trips so, given the other uncertainties, the conclusions would not change much,

Table 1 spending of tourists (€ millions) using average data for 2012 and 2013

		France	**Portugal**	**Spain**	**United Kingdom**	**All**
accommodation	**non-residents**	€1,403	€1,187	€9,263	€834	€12,687
	residents	€1,955	€76	€690	€4,536	€7,257
durables and valuable goods	**non-residents**	€386	€327	€2,547	€229	€3,489
	residents		€4	€115	€1,269	€1,388
restaurants/cafés	**non-residents**	€179	€151	€1,180	€106	€1,616
	residents	€1,194	€66	€479	€2,179	€3,917
transport	**non-residents**	€1,537	€1,301	€10,150	€914	€13,902
	residents	€1,908	€84	€535	€2,946	€5,473
All		€8,561	€3,195	€24,958	€13,015	€49,729

We can use this information to determine how many jobs depend on coastal tourism. Eurostat provide figures for turnover per person employed for the accommodation and restaurant industries. Transport is more difficult. The Economist reckon[5] that 70% of the costs of running a car are fixed and the remaining 30% are fuel. For determining fixed costs, the EU-average productivity in the car industry was used. The productivity for retail sales was used for the running costs. In fact productivity in both these sectors is between five and ten times that in the food and accommodation sectors, so the overall impact of car transport on employment is not very high.

For aviation a turnover of €68,000 per person employed was used which used direct turnover and employment figures for Europe from the Air Traffic Action Group[6]. For simplicity all domestic travel was assumed to be by car and all inbound travel by air.

4 http://ec.europa.eu/eurostat/statistics-explained/index.php/Tourism_statistics_-_characteristics_of_tourism_trips

5 The cost of driving Apr 4th 2013, 15:03 by Economist.com

6 Aviation benefits beyond borders, Air Traffic Action Group, April 2014

Table 2 Employment generated by coastal tourism in Atlantic countries

		France	Ireland	Portugal	Spain	United Kingdom	
accommodation	**non-residents**	12,332	.	27,447	141,548	15,103	196,430
	residents	17,187	.	1,750	10,548	82,121	111,606
durables and valuable goods	**non-residents**	3,857	.	3,265	25,472	2,294	34,889
	residents	0	.	38	1,148	12,695	13,882
restaurants/cafés	**non-residents**	2,313	.	4,916	27,577	2,612	37,418
	residents	15,459	.	2,135	11,185	53,555	82,333
transport	**non-residents**	22,429	.	18,987	148,120	13,341	202,876
	residents	3,615	.	159	1,013	5,580	10,367
All	**non-residents**	40,931	.	54,616	342,717	33,349	471,613
	residents	36,260	.	4,082	23,895	153,951	218,188

The sector is labour-intensive. It shows disproportionately high numbers of young people and women compared to the rest of the blue economy. One exception is accommodation in camping or short-stay-holiday accommodation where the workforce is decidedly older than that in the hotel industry and indeed in the blue economy as a whole- possibly because many are self-employed.

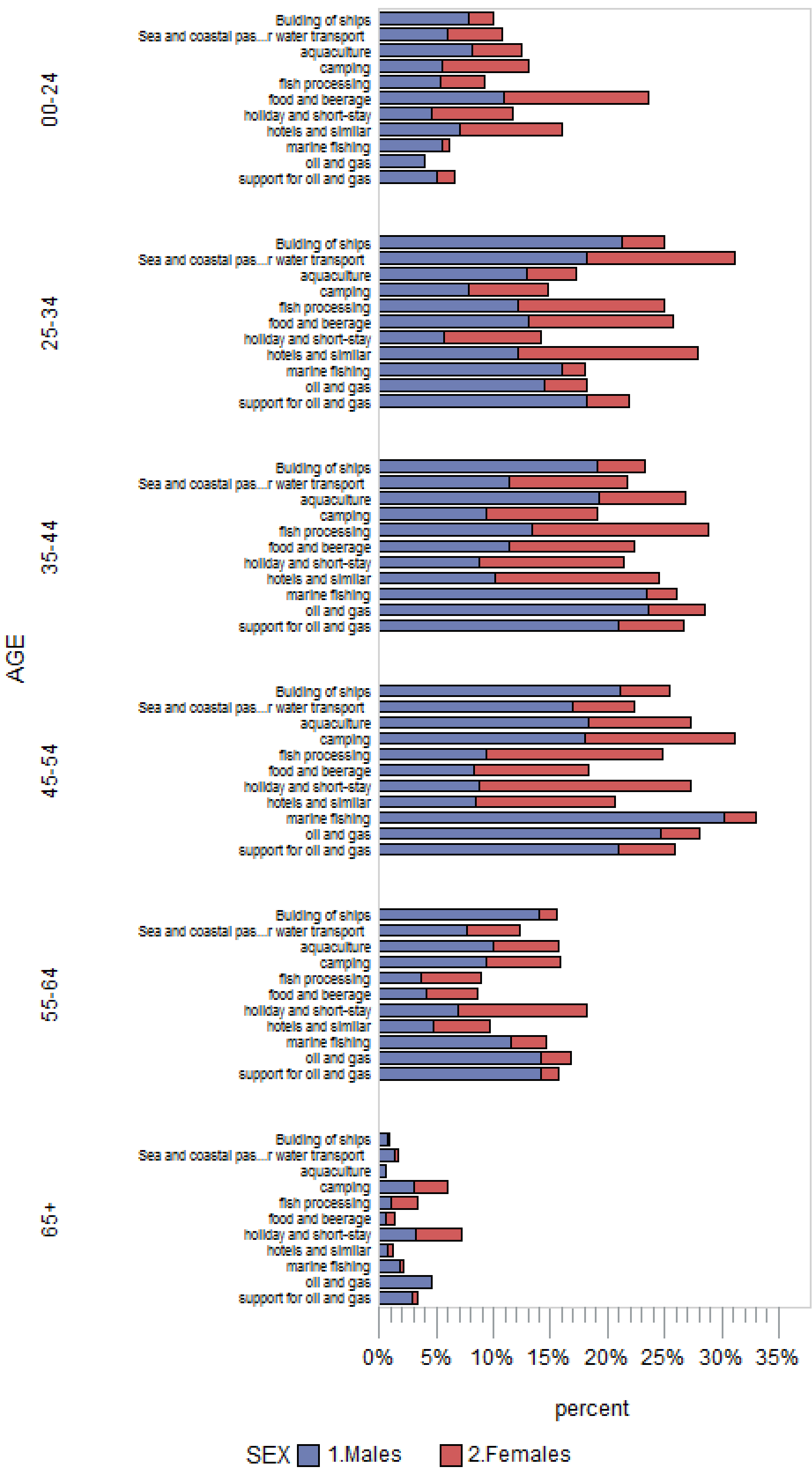


Figure 9 Age and sex structure of labour I blue economy

The yachting sector weathered the economic storm rather well. Although orders for new boats dropped, marinas maintained a steady workflow. On average a marina generates 7 to 8 permanent direct jobs and 84 to 108 jobs in supplying sectors in the value chain such as yacht trade, construction and maintenance, equipment supply and services (which include the hospitality sector). Applying these multipliers to the total estimated number of marinas along the Atlantic Arc the number of direct jobs along the Atlantic Arc can be estimated at 2,625 and the number of indirect jobs at around 31,500.

Ireland, Portugal and the United Kingdom have a third of the number of marinas per unit length of coastline that France and Spain do. This might mean potential for growth in these countries. Growth would also be enhanced if Member States could agree to common licence requirements for skippers.

The elderly have been less hit by the recession than other sectors of society so cruise tourism is booming and given the demographics of the western world, will continue to do so.

4.3. Fish and shellfish

The five Atlantic countries account for about half the landings of fish into the EU and fisheries remains a significant employer with 60,000 full time equivalents in the period 2008-2011. 38% are employed in the small scale coastal fleet although this segment's share of gross added value is much less (18%).

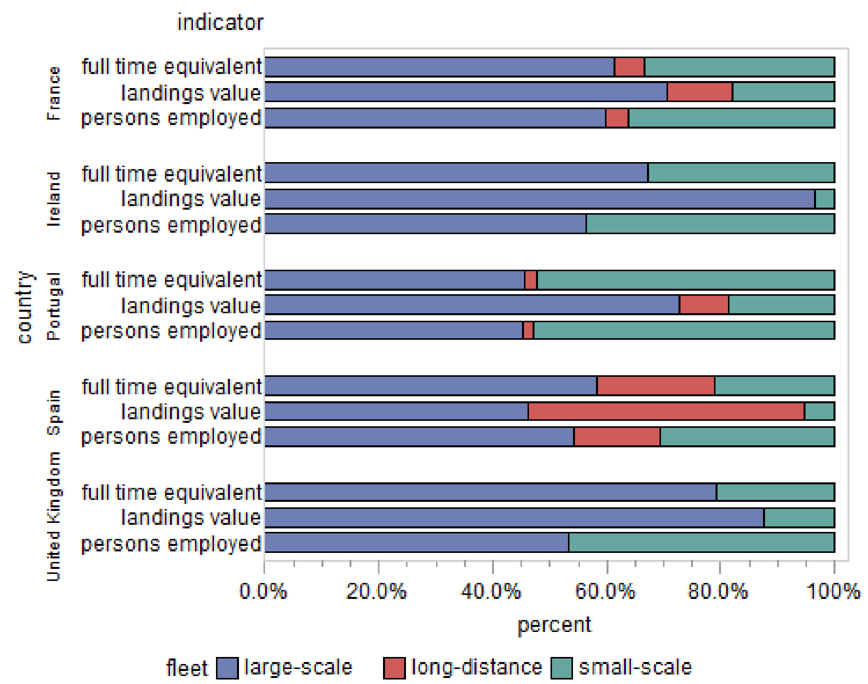


Figure 10 structure of fishing industry in Atlantic countries (includes all vessels including those not fishing in Atlantic) from Annual Economic Report 2014

It is not known how many of these fishermen are non-EU nationals although the number is significant in the large scale and long-distance fleets – Filipinos, Latvians and Poles in the UK fleet, South Americans, Senegalese and Moroccans in the Spanish fleet and Portuguese sailors on French vessels.

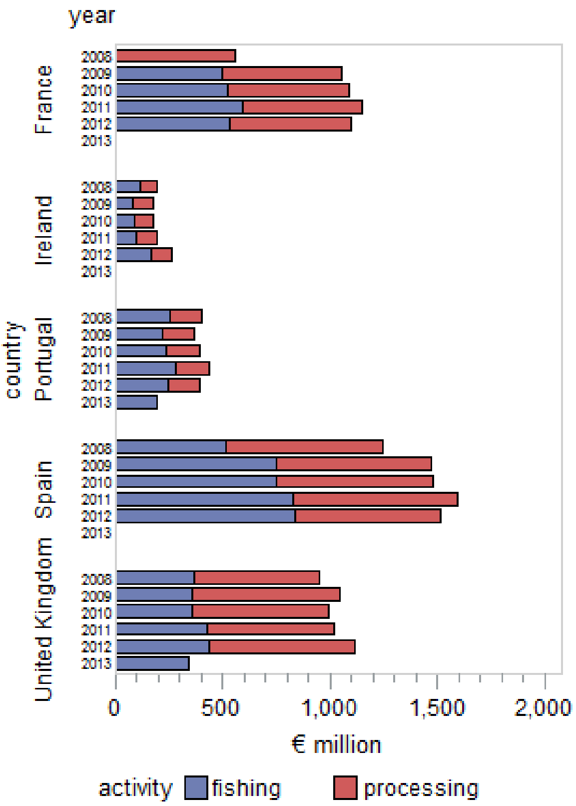


Figure 11 gross value added in catching and processing sector

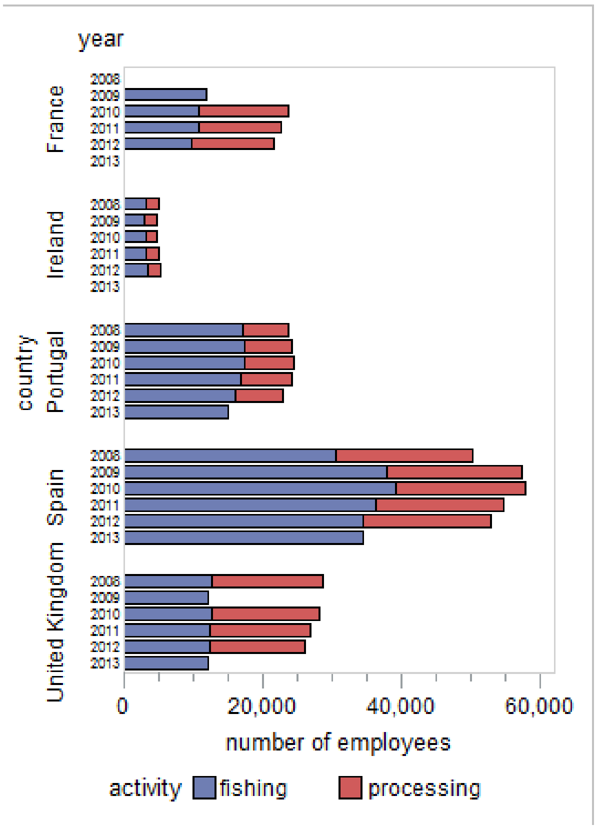


Figure 12 number of employees in catching and processing sectors

The size of the fish processing sector is of the same order as that of the fishing sector although it shows large differences in nature. In Spain most of the processing is from its own fleet whereas in the UK most is imported. Over the period 2008-2012, there was some year to year variation in employment numbers, but neither in the catching nor the processing sector was there any significant upwards or downwards trend.

		France	Ireland	Portugal	Spain	United Kingdom	
employed	**fishing**	10,805	3,119	16,672	35,501	12,399	78,497
	processing	12,219	1,768	6,979	19,013	14,922	54,900
	All	23,024	4,887	23,651	54,514	27,321	133,397
full time equivalent	**fishing**	8,071	2,156	16,317	32,547	9,986	69,076
	processing	10,757	1,598	6,687	17,753	13,946	50,740
	All	18,828	3,753	23,005	50,299	23,931	119,816
Gross value added €1000s	**fishing**	537	112	242	736	382	2,008
	processing	561	88	151	725	634	2,159
	All	1,098	200	392	1,461	1,016	4,167
turnover €1000s	**fishing**	972	197	421	1,930	836	4,357
	EMFF	84	21	56	166	35	362
	processing	3,249	427	1,081	4,348	3,095	12,200
	All	4,305	645	1,558	6,444	3,966	16,918

Table 3 main products processed in Atlantic countries

product	origin	% EU fleet	% Total (value added)
tuna	capture	20%	17%
fresh fish fillets	capture	50%	13%
shrimps	prepared/preserved		10%
smoked salmon	aquaculture		10%
frozen fish	capture	50%	9%
fish fillets in batter or breadcrumbs	capture	10%	8%
shrimps	frozen		5%
other			28%
Total			100%

Over the period 2008-2011, there was some year to year variation in employment numbers, The average incomes of fishermen are below the national average except in France but the numbers[7] need more analysis. In any case for every country it is clear that the small scale fleets are much less productive and pay the fishermen less than the large scale ones. Shifting to a more productive larger scale fleet will raise income but reduce the number of jobs.

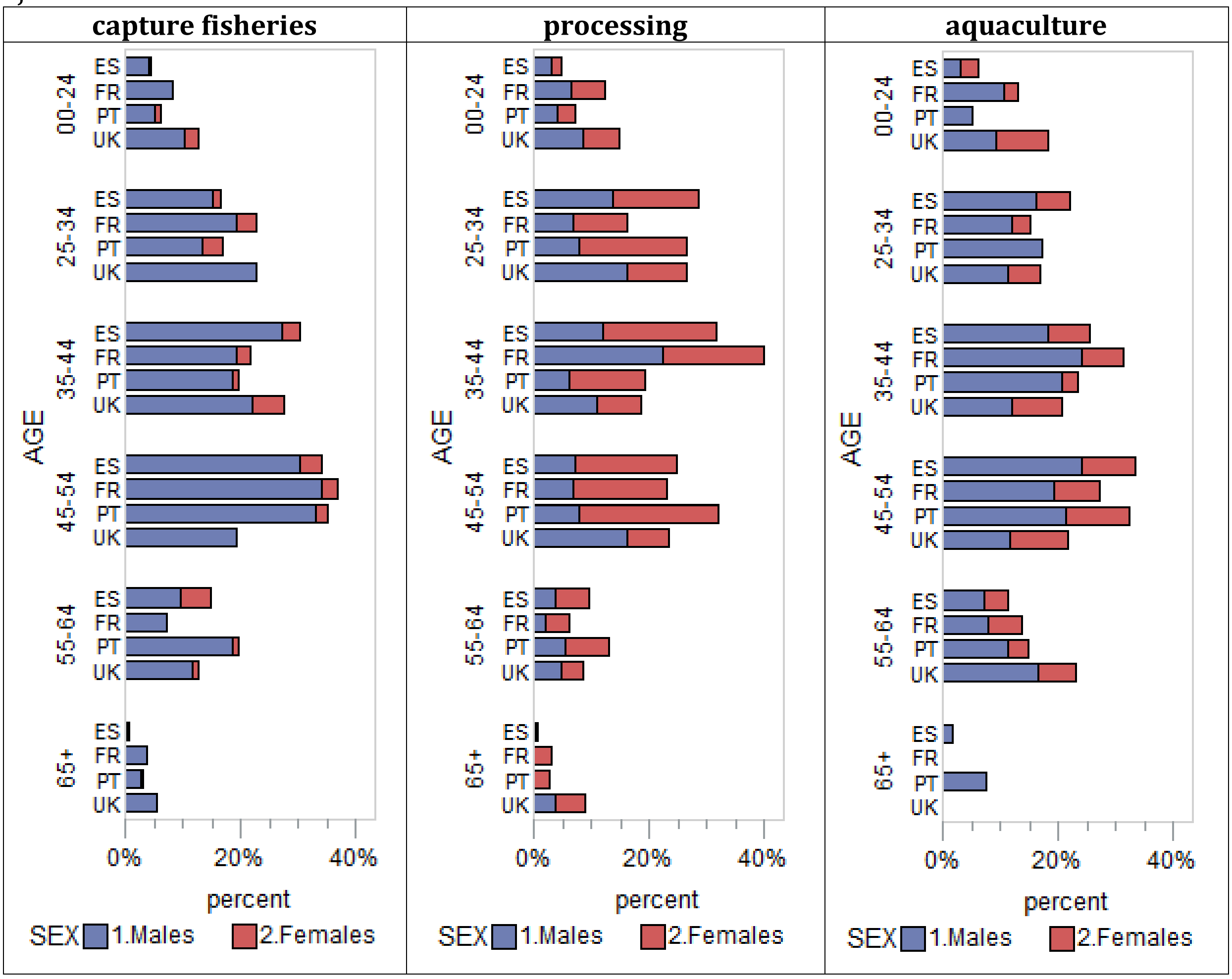


Figure 13 Age and sex distribution of employment in fisheries, aquaculture and processing

[7] From The 2013 Annual Economic Report on the EU Fishing Fleet (STECF 13-15). According to these figures the average French wage is more than twice that of other countries despite the ratio of landings value to number of employed being similar. The numbers do not add up.

Those working in fisheries are almost entirely male and, on average, older than those in the processing and aquaculture sectors where the balance of sexes is more balanced. In both sectors, more than half of the workforce leave the industry well before the age of 65, or even earlier in the case of the UK fishermen.

Aquaculture production is stagnant in the Atlantic but has good prospects if the right steps are taken. In the UK production is dominated by salmon but there is also significant production of shellfish - mostly mussels. Ireland also produces salmon and trout, but mussels is the largest product by volume. Shellfish dominates in the other countries – with oysters in France, grooved carpet shell in Portugal and mussels in Spain. All countries have strong research and which can tackle issues such as limits on antibiotic use and infection of sea-lice in salmon, but also good training facilities on net handling or aquaculture. But the main barriers to growth require interventions from outside the industry – cleaner water in the estuaries where shellfish are cultured and incentives for wind farm developers to allow aquaculture to share their platforms: at present they are inclined to refuse requests. There is a general consensus that growth will come when aquaculture has the technology and permission to move further offshore.

4.4. Shipping

Short-sea shipping is the maritime transport of goods between ports on the Atlantic seaboard and other ports in geographical Europe, on the Mediterranean and on the Black Seas. The absolute tonnage shipped since 2008 has declined. Liquid bulk accounts for 36% of tonnage, dry bulk 22%, containers 13% and Roll-on-Roll-off 21%.The sector employs about 27,000 people on the Atlantic – mostly in the UK and France. A number of ports of UK and Ireland are privately-managed with flexible hiring arrangements whereas the others are largely subject to specific labour laws which results in significantly lower productivity.

In the years 2004-2011 the volume of goods handled in the Atlantic basin's ports decreased more than in other basins

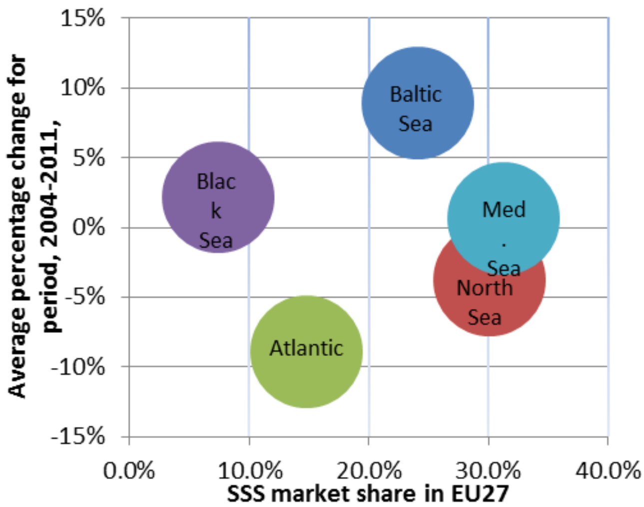
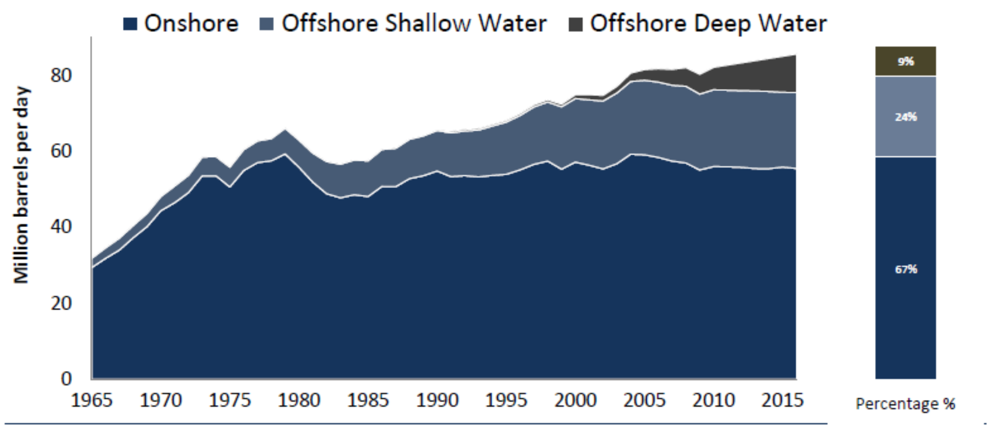


Figure 14 changes in short sea shipping traffic 2004-2011 (volume of goods) and share of EU traffic

Le Havre is the busiest port in the Atlantic seaboard. Its volume of trade makes it eleventh in the EU but it is still a quarter of that of Rotterdam. The Atlantic countries have three ports in the top ten for container traffic – Valencia, Algeciras and Felixtowe. None of these are on the Atlantic coast although . The Economist[8] suggests that Portugal in particular, given its strategic position and good rail connections, could attract significantly more trade if the ports were further deregulated.

[8] Ports in the storm, 24 May 2012

4.5. Energy



[8] *Sources: Infield Systems, BP*

The sea is already an important source of energy. 30% of oil is now extracted from offshore wells with an increasing number of these in deep water. The proportion of wind farms deployed offshore is growing.

The petroleum industry is a significant employer in all the Atlantic countries, except possibly Portugal, although not all the reserves are in the Atlantic. The UK primarily exploits oil and gas from the North Sea and France from overseas operations. The UK statistical office reckon that although the industry employs 32,000 directly, 207,000 work in the supply chain and another 100,000 live off the spending of these employees. It provides over €5 billion a year to the British exchequer in tax revenues and about half the gas supply. More than 90% of the services provided by the French offshore oil and gas service and supply are exported. It is, along with the UK and Norway, the second largest exporter of offshore extraction support services[9], The French Maritime Cluster estimate the that the turnover of €17.55 billion euros supports 32,000 jobs in France.

Whilst North Sea oil has peaked, production is still significant and there are good prospects for other areas. Oil companies estimate that deposits in a series of oilfields off the Canaries amount to 500 million barrels of crude. A recent report by Deloitte[10] estimates that the oil industry could create 250,000 jobs in Spain and constitute 4.3% of GDP by 2065. Exploration activities in Ireland have been extensive but discoveries of commercially-extractable oil limited. Activities in Portugal are still at an early stage.

A recent analysis[11] indicates that production costs of electricity from wind are reducing by 5% each year and in Europe the proportion offshore is increasing in order to take advantage of the higher winds and reduced local resistance. The UK has over 1000 offshore turbines which is more than the rest of the world put together. Ireland has one wind farm with seven turbines and a further five farms are planned. None of the other Atlantic States have any operational although France aims to reduce its present heavy dependence on nuclear energy and permission has been granted to construct four wind farms with a total capacity of 2000MW offshore.

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9 Cluster Maritime Français 2014 -2015

10 Análisis del impacto del desarrollo de la exploración y producción de hidrocarburos en la economía española, Deloitte, Februaro 2014

11 Nature, Vol 507, 20 March 2014

The main barrier for France, Spain and Portugal is the relatively deep water so floating farms are being studied. Principle Power's WindFloat is being tested in 45 metres of water off Aguçadoura, Portugal.

5. Discussion Points

This survey of the maritime economy in the Atlantic poses almost as many questions as it answers. Each sector exhibits peculiarities and it can be dangerous to draw conclusions based on limited knowledge of these specificities. Nevertheless, we can identify a number of issues that merit further investigation.

(1) The Atlantic fishing fleet consists of a rather efficient large scale and long-distance fleet employing few EU nationals and an inefficient small-scale fleet with ageing crews. EU subsidises the first sector, for instance through Fisheries Partnership Agreements and the second through the European Maritime and Fisheries Fund. It is difficult to see how profitability, wages and employment can simultaneously be maintained without continuation of these subsidies.

(2) Public subsidies for renewable energy have led to significant cost reductions and a promising EU industry. They need to be maintained.

(3) There has been considerable public support for naval shipbuilding but there may be more prospects for growth in the leisure-boat industry.

(4) Aquaculture can only expand if permits are granted and for the future it will be necessary for it to move further offshore. Wind turbine platforms offer suitable sites for shellfish but presently operators have no incentive to host them.