Cruises and Recreational Boating in the Mediterranean

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Final Draft

Plan Bleu
UNEP/MAP Regional Activity Centre

Sophia Antipolis
March 2011

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This study is the fruit of work carried out by a team within the IIC over the second semester of 2010, under the scientific oversight of Alberto Cappato, Secretary General of the IIC.

The following work in particular can be attributed to:

Alberto Cappato, paragraphs: 1.1, 1.2, 1.3, 1.4, 1.7, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7 (with the support of Lorenzo Pollicardo) 2.8, 2.9, 2.13 as well as sections 3 and 4.

Sara Canevello, paragraphs: 1.5, 1.6, 2.10, 2.11 and 2.12.

Bianca Baggiani, paragraphs: 2.11 and 2.13.

Reading committee

Fabio Capocaccia, President of the IIC, former president of Med Cruise and Secretary General of the Genoa Port Authority.

Lorenzo Pollicardo, international expert in the recreational boating industry.

Alexandra Bracco, IIC collaborator.

Acknowledgements

Bianca Baggiani and Sara Canevello for drafting the graphs and editing the tables; European Odyssea Group for information on the Odyssea project.

Union of Marinas – Provence Alpes Côte d'Azur (UPACA - Union des Ports de Plaisance de Provence-Alpes-Côte d'Azur) for information on the "Clean Ports" initiative.

Realization

Layout: Sandra Dulbecco

The study is financed under the FEMIP Trust Fund. This Fund, which was established in 2004 and has been financed - to date - by 15 EU member States and the European Commission, is intended to support the development of the private sector via the financing of studies and technical assistance measures and the provision of private equity.

This study also benefited from the support of:

The analysis and conclusion expressed in this report do not necessarily reflect the view of the European Investment Bank the l'Agencia Española de Cooperación para el Desarrollo or the Agence Française de Développement

Contents

List of acronyms

APER - *Association pour la Plaisance Eco-Responsable* – Association for eco-responsible recreational boating

CENSIS - *Centro Studi Investimenti Sociali* – Italian social research centre

CLIA - Cruise Line International Association

CNI - Camper & Nicolson Super Yachting Index – Camper Nicolson International

ECC - European Cruise Council

EPA - Environmental Protection Agency (EPA) - USEPA (United States Environmental Protection Agency)

ICOMIA - International Council of Marine Industry Association

IMF - International Monetary Fund

IMO - International Maritime Organisation

ISPS Code - International Ship and Port Facilities Security Code

MARPOL - MARitime POLlution

MIA - Marine Industry Associations

MSC (Cruises) - Mediterranean Shipping Company Cruises MSC

PSA - Passenger Shipping Association

UNFPA - United Nations Population Fund

UNWTO - United Nations World Tourism Organization / WTO

I. The cruise market

1. Context on a global level

The cruise industry has been growing steadily worldwide for nearly 30 years. Over the last fifteen years, the pace has been particularly sustained from strong demand in North America for cruises to Central America (mainly the Caribbean). More recently, there has been a strong increase in the number of European cruise passengers, with numbers growing five-fold between 1995 and 2009. At the same time, other markets have been developed by cruise lines in an attempt to extend the cruise season, explore new markets, or transfer ships that have become unsuitable for the more developed markets. For instance, China and South America are among the most popular new destinations.

In 2008, the financial crisis had a significant impact on the number of passengers and particularly those from North America. This drop in performance was offset in 2009 with numbers reaching almost the same as those in 2007. Cruising therefore still attracts North American clients who increasingly prefer cruises over other types of traditional tourism.

Just like with other geopolitical events[1], the cruise market was very responsive and recorded 8% growth between 2008 and 2009 (compared to +2.07 % in 2007 - 2008). However, European passenger numbers have yet to be affected by the crisis as annual growth has been estimated at approximately 10% since 2005 (+12.1% from 2008 to 2009).

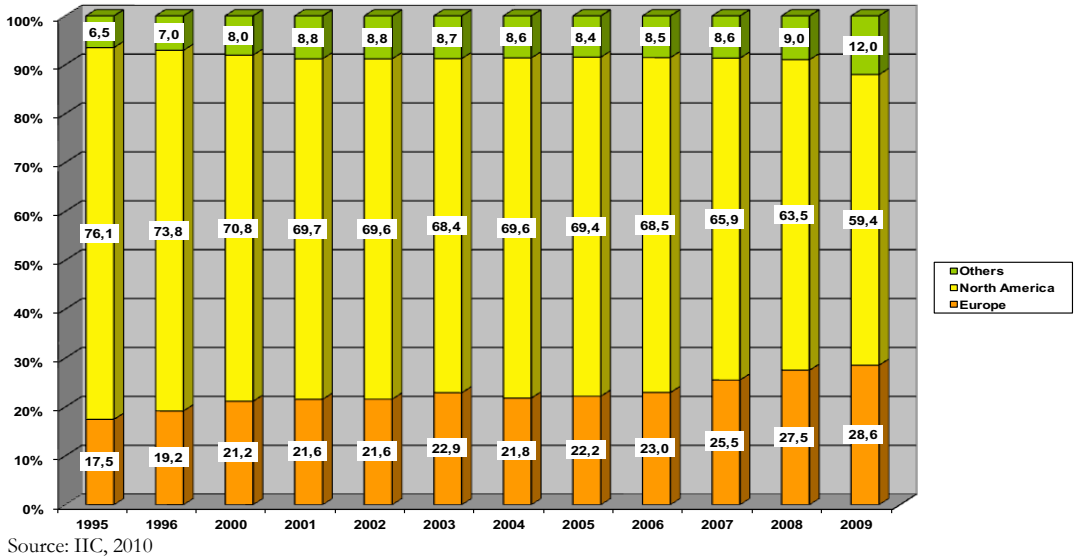
Table 1 – Change in the number of cruise passengers in millions

Region	1995	1996	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
North America	4.35	4.61	6.88	6.91	7.70	8.23	9.14	9.96	10.38	10.45	10.29	10.40
Europe	1.00	1.20	2.06	2.14	2.39	2.76	2.87	3.19	3.48	4.05	4.46	5.0
Other	0.37	0.44	0.78	0.87	0.97	1.05	1.13	1.21	1.29	1.37	1.45	2.1
TOTAL	5.72	6.25	9.72	9.92	11.06	12.04	13.14	14.36	15.15	15.87	16.20	17.51
% Europe	17.5	19.0	21.0	21.5	21.5	23.0	22.0	22.2	23.0	22.8	27.5	28.6

Source: G.P. Wild & ECC; 2006-2010

Growth for the European market has remained steady since 1995 along with the market for "other" regions of the globe, which has practically doubled over the same period.

Figure 1 – Geographical distribution of cruise passengers (%)

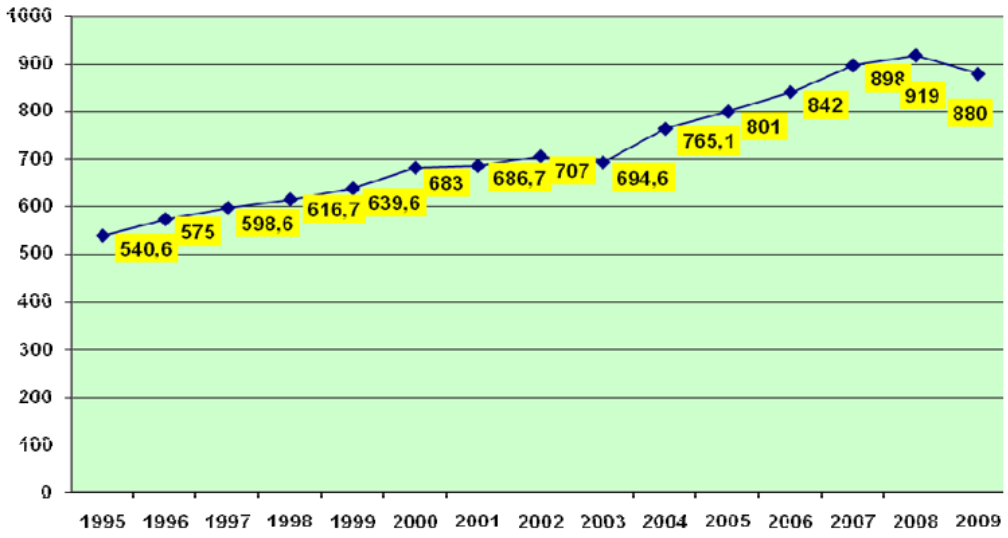


Source: IIC, 2010

[1] Terrorist attacks of 11 September 2001.

The impacts of the financial crisis seem to have reached their peak in North America in 2008, with results for 2010 being quite positive. However, a global analysis of data for the tourism market worldwide shows that the effects of the crisis were more pronounced in 2009. The numbers speak for themselves: the industry recorded a more than 4% drop for the 2008-2009 period.

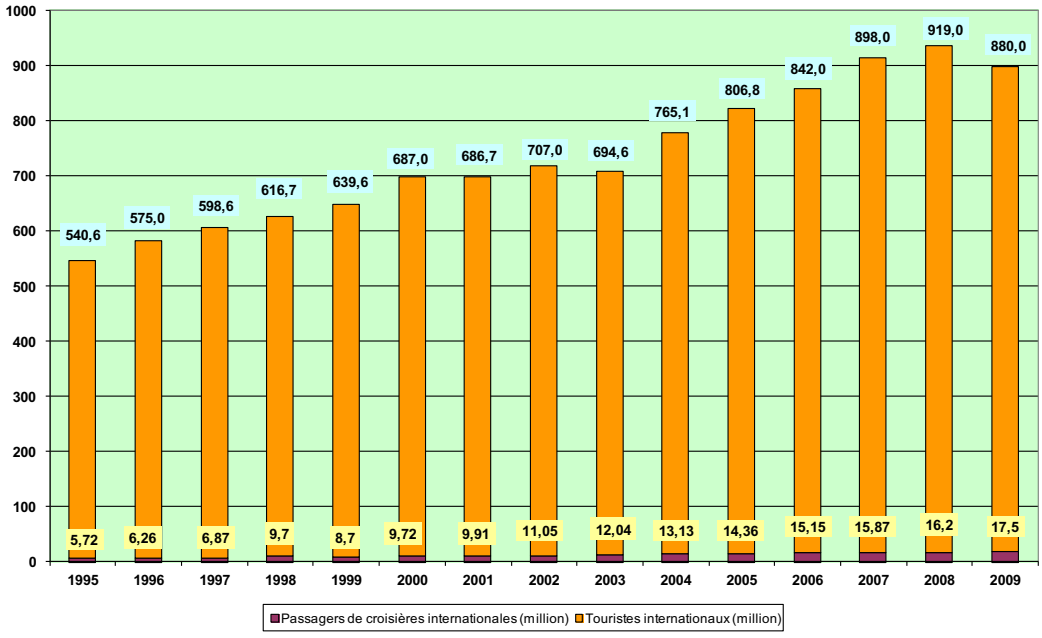
Figure 2 – Change in world tourism for 1995-2009 period (tourism in general in millions)



Source: Based on WTO data; IIC, 2010

Although the cruise industry still only represents 2 to 4% of the total tourism market, it has shown that even in difficult times, its specific characteristics have enabled steady growth since 1995 and potential for further development. This occurs to the detriment of other forms of traditional tourism, though still to a moderate degree. This also underlines the distinctive character of this type of tourism and its new appeal for a client base that now also includes, among others, families with children.

Figure 3 – Weight of cruise tourism on overall world tourism



Source: Based on WTO data; IIC, 2010

Even though the effects of the crisis did not have a major impact on the cruise industry, it did affect the supply. This impact was especially measured in 2009 with a drop or delay in investments in the shipbuilding

sector. This has affected shipyards having to cope with the negative effects on the economies of ship producing countries (mainly Italy, Germany, Norway and France) and jobs in the sector.

Several reasons can explain the continued demand for cruise tourism:

- Cruise lines commissioned increasingly large ships to create greater economies of scale, combined with aggressive pricing policies that compete strongly with other tourism products and holidays;
- It has been a winning concept for years from a commercial and marketing standpoint with all-inclusive (or almost all-inclusive) packages and destinations with strong appeal;
- With a simple package, passengers can spend on average between six and ten days on a cruise ship that changes destination each night and allows them to visit 5 to 8 destinations, often in different countries with rich histories and cultures (particularly in the Mediterranean).

Up until and including in 2010, the offer for cruising increased by number of nights by extending the cruise season, which now covers almost the entire year in the Mediterranean, along with the steady increase in the number of ships in service. In 2010, twelve new cruise ships were commissioned, which increased supply by 13.5% from the previous year. With the cruise market being driven up until now by supply, the CLIA (Cruise Line International Association) anticipated 18 million cruise passengers worldwide in 2010, i.e. 2.8% more than in 2009. The outlook for the industry should see the same growth until at least 2012/2013.

Though the market is driven by supply, ship constructions already underway should result in an increase in the number of potential passengers worldwide. It may be difficult to come up with reliable forecasts, but it should be noted that order books are not as full as they used to be and it will stay that way until 2014. During periods of crisis, especially financial crisis, cruise lines are very vigilant and cautious, meaning that new construction projects are put on hold or cancelled.

The main sub-sector affected by economic instability therefore appears to be the shipbuilding sector. Orders have been placed for the construction of eight new ships for 2011, seven for 2012, two for 2013 and one for 2014. This major decline will certainly have repercussions on the growth rate of passenger numbers but most importantly, it will have considerable and serious repercussions on employment and the economies of ship-producing countries. Some shipyards are already announcing difficulties and are reducing their direct and indirect staff (the latter making up the majority), and changing their purchasing strategies on the construction market[2].

The order books up to 2014 also reveal that the demand for huge ships is still a trend, although a larger segment of the market is beginning to evolve with a return to construction of smaller ships. This can be explained by the fact that cruising has become a mass trend and wealthier passengers seek more exclusive and unique products in terms of itineraries and services aboard. Another factor is the still limited ability of ports to accommodate large ships.

In any case, the industry remains very concentrated with just a few major groups commanding 80% of the market (Carnival Corporation, Royal Caribbean, Genting Hong Kong[3]).

The table below details the order books up to 2014, indicating the cruise line, tonnage, number of passengers, delivery date, construction costs and shipyards (note that the last two ships delivered in 2010 are not included).

The largest cruise ship ever built was delivered in 2010 to the Royal Caribbean International cruise line. It is 362 metres long, 72 metres high, with 9.4 metre draught, 225,282 gross tonnage, 5,400 passengers and 2,700 cabins (+2,165 crew members), and sister ship of "Oasis of the Sea", which has been in service since 2009.

[2] Quite recently, a large Italian shipyard gave up the purchase option to participate in the control of a large German shipyard.
[3] Star Princess Cruises, which changed names in November 2009.

Table 2 – Orders placed by major cruise lines

Year	Cruise line	Name	Tonnage/Maximum passenger capacity	Delivery	Price (Million)	Shipyard
2011						
	Oceania	Marina	65,000/1,260	1/2011	$530	Fincantieri - Sestri Ponente, Genoa, Italy
	Disney Cruise	Disney Dream	124,000/4,000	1/2011	$850	Meyer Werft, Papenbourg, Germany
	AIDA	AIDAsol	71,000/2,644	4/2011	€ 380	Meyer Werft, Papenbourg, Germany
	Ponant Cruises	L'Austral	10,500/ 268	5/2011	€ 150	Fincantieri, Italy
	Carnival	Carnival Magic	130,000/4,631	5/2011	€ 565	Fincantieri - Monfalcone (Trieste) - Italy
	Seabourn	Seabourn Quest	32,000/450	5/2011	€ 200	T. Mariotti, Genoa, Italy
	Costa	Costa Favolosa	114,200/3,780	10/2011	€ 510	Fincantieri - Marghera (Venice) - Italy
	Celebrity	Celebrity Silhouette	122,000/3,150	10/2011	$698	Meyer Werft, Papenbourg, Germany
2012						
	AIDA	to be determined	71,000/2,644	4/2012	€ 385	Meyer Werft, Papenbourg, Germany
	Oceania	Riviera	65,000/1,260	5/2012	$530	Fincantieri - Monfalcone (Trieste) - Italy
	Disney Cruise	Disney Fantasy	124,000/4,000	5/2012	$850	Meyer Werft, Papenbourg, Germany
	Costa	Costa Fascinosa	114,200/3,780	5/2012	€ 510	Fincantieri - Marghera (Venice) - Italy
	Carnival	Carnival Breeze	130,000/4,631	6/2012	$738	Fincantieri - Monfalcone (Trieste) - Italy
	MSC	MSC Fantastica	140,000/4,087	6/2012	to be determined	STX France de Saint-Nazaire, France
	Celebrity	Reflection	122,000/3,150	10/2012	$698	Meyer Werft, Papenbourg, Germany
2013						
	Princess	to be determined	139,000/3,600	4/2013	€ 558	Fincantieri, Italy
	AIDA	to be determined	71,000/2,644	4/2013	€ 330	Meyer Werft, Papenbourg, Germany
2014						
	Princess	to be determined	139,000/3,600	4/2013	€ 558	Fincantieri, Italy

Source: ECC and IIC research, 2010

2. The European market

In late 2009[4], there were 45 cruise lines (44 in 2006 and 42 in 2008)and 124 ships in service in Europe (compared to 118 in 2006 and 129 in 2008) with a capacity of 127,000 lower beds (102,000 in 2006 and 116,000 in 2008). Furthermore, in 2009 again, 64 ships owned by non-European cruise lines sailed in the Mediterranean (as opposed to 47 in 2006 and 63 in 2008) with a capacity of 76,600 lower beds (compared to 51,300 in 2006 and 71,300 in 2008).

The Mediterranean market continues to see strong growth, confirming that the industry is still thriving and as mentioned above, seems only to have been affected by the financial crisis in terms of new ship constructions.

The ability of cruise lines to move their ships wherever they want to respond to market demand is a crucial advantage that makes the market unique and much more responsive compared to other tourist products that make substantial non-transferable investments.

Furthermore, the aggressive sales policies implemented by cruise lines over the last three to four years, along with major investments in advertising through all forms of media (television, Internet, social networks, etc.) have enabled the cruise industry to capture market shares from other segments of the tourism market that suffered greatly from the effects of the crisis.

The growth margin of the cruise industry on the tourism market thus maintains potential for growth, especially in the Mediterranean, which has suffered the least from the effects of the current economic and financial crisis.

[4] The most recent data for this sector date back to 2009.

3. Industry performance

In 2009, more than 4.9 million (4.4 million in 2008) European residents booked a cruise, i.e. an 11.3% increase from 2008. Europeans now account for approximately 30% of cruise passengers worldwide, practically doubling their numbers from fifteen years ago. 3.6 million Europeans select European cruises and 1.3 million choose cruise itineraries outside Europe.

4.8 million passengers chose European cruises (+3.2% from 2008), 75% of which were European residents.

1.2 million non-European cruise passengers opted for European cruises although the exact numbers by country of origin are not clear (the majority were North American from the United States and Canada, with a small yet increasing number of cruise passengers coming from Asia).

Europe and the Mediterranean (which recorded 23.8 million overnight stays on cruises in 2009) still attract the majority of cruise passengers. Performance figures are positive but remain limited due to the short cruising season, particularly in the Baltic Sea region, which covers 13% of the market.

The Mediterranean continues to grow as a cruise destination with 20 million overnight stays in 2009 (18.9 millions in 2008), up 5.8% from 2008.

Mediterranean ports with the highest performance are listed in the table below. Table 3 shows the main ports in terms of number of passengers (in thousands) for 2006, 2008 and 2009, and irrespective of whether they are home ports or ports of call[5].

Table 4 shows the change in the number of passengers (in absolute values) from 2004 to 2009 in the main home ports, most of which are in Spain and Italy.

Table 3 – Busiest ports by number of passengers

Ports	Number of passengers											
	Departures			*Arrivals*			*Ports of call*			Total		
	2009	*2008*	*2006*	*2009*	*2008*	*2006*	*2009*	*2008*	*2006*	*2009*	*2008*	*2006*
Barcelona	593	573	389	587	571	393	971	926	625	2,151	2,070	1407
Civitavecchia	353	500	258	367	500	258	1,082	819	684	1,802	1,819	1,200
Palma Majorca	n/a	300	240	n/a	300	240	n/a	531	525	n/a	1,131	1,005
Naples	65	72	50	70	72	59	1,130	1,093	862	1,265	1,237	972
Savona	282	309	299	293	306	299	138	157	1	713	772	599
Venice	581	530	362	589	530	363	251	205	161	1,421	1,265	886

Source: MedCruise, European Cruise Council, IIC, 2010

Barcelona maintains sustained growth with cruise passenger traffic more than doubling since 2004. Civitavecchia saw a few thousand less passengers than in 2008; however numbers have nearly tripled since 2004. Naples is growing, Savona has experienced a drop in numbers and Venice has seen a strong increase.

[5] It should be noted that passengers at home ports are generally counted twice: once at boarding and a second time at the end of the cruise.

Table 4 – Home ports

Home port	Country	2004	2005	2006	2007	2008	2009
Barcelona	Spain	1,024,851	1,228,561	1,402,643	1,765,838	2,069,651	2,151,465
Civitavecchia	Italy	659,277	983,171	1,268,477	1,586,101	1,818,616	1,802,938
Piraeus (Athens)	Greece	407,723	502,308	771,241	1,000,000	1,290,000	1,500,000
Venice	Italy	677,976	815,153	885,664	1,003,529	1,265,000	1,420,980
Palma Majorca	Spain	744,974	877,912	923,868	1,048,906	1,131,147	1,056,215
Savona	Italy	530,057	595,859	599,000	761,000	772,000	712,681
Genoa	Italy	310,000	362,000	475,134	520,197	547,905	671,468

Source: Based on data from ports, MedCruise and Cruise Europe; IIC, 2010

Table 4 underlines the fact that most ports with the highest performance are Italian. This can be explained by the location of Italian ports in the Mediterranean and their infrastructures. To be selected by cruise lines as home ports, they must guarantee specific characteristics that have been met more quickly by Italian ports.

Finally, Table 5 shows the change in the number of passengers in the main Mediterranean ports, whether they are home ports or ports of call.

Table 5 – Performance by number of cruise passengers

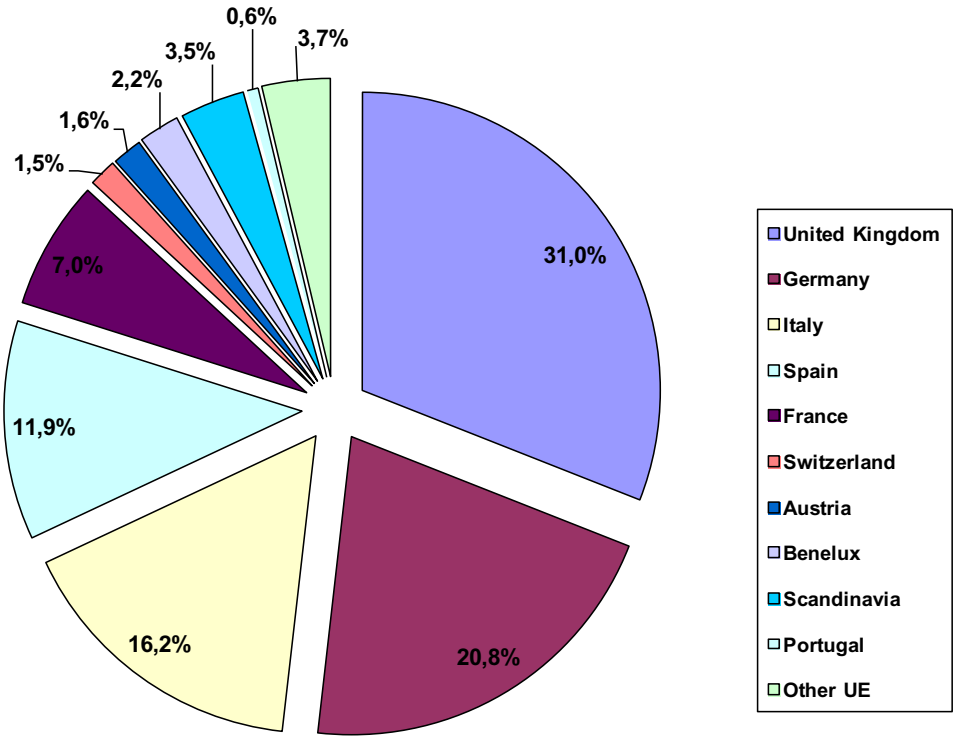
Ports	Country	2007	2008	2009	% var 07/09
Barcelona	Spain	1,765,838	2,069,651	2,151,465	21.8
Civitavecchia	Italy	1,586,101	1,818,616	1,802,938	13.7
Palma Majorca	Spain	1,048,906	1,131,147	1,056,215	0.7
Naples	Italy	1,151,345	1,237,078	1,265,000	9.9
Venice	Italy	1,003,529	1,215,088	1,420,980	41.6
Piraeus (Athens)	Greece	1,000,000	1,290,000	1,500,000	50.0
Savona	Italy	761,000	772,000	712,681	-6.3
Genoa	Italy	520,197	547,905	671,468	29.1
Livorno	Italy	713,144	849,050	795,313	11.5
Nice/Villefranche/Cannes	France	559,411	708,785	742,668	32.8
Limassol/Larnaka	Cyprus	427,408	376,296	320,467	-25.0
Marseille	France	434,087	540,000	622,300	43.4
Valetta	Malta	487,817	556,861	441,913	-9.4
Palermo	Italy	471,395	537,721	478,900	1.6
Bari	Italy	351,897	465,739	567,885	61.4
Messina	Italy	291,296	337,117	253,200	-13.1
Malaga	Spain	290,558	352,875	487,955	67.9
Monte Carlo	Monaco	184,117	231,639	35,904	28.1
Gibraltar	Gibraltar - UK	275,993	308,989	348,199	26.2
Ajaccio	France	191,548	197,571	229,882	20.0
Valencia	Spain	179,209	199,335	184,909	3.2

Source: Based on data from ports, MedCruise and Cruise Europe, 2010

The strong increases in Malaga, Bari, Marseille, Nice-Villefranche-Cannes and Genoa since 2007 are of note.

As for the nationality of passengers, British, German, Italian, Spanish and French passengers account for 86.9% of all passengers.

Figure 4 – Distribution of European nationalities



Source: ECC, 2010

British passengers make up 30% of the market and Germans 20.8%. Their destinations of choice are in the Mediterranean while Italian and Spanish passengers are increasingly attracted to Northern European and Baltic Sea itineraries. Saint Petersburg is also an extremely popular destination.

Table 6 – Passenger nationalities

Country	Number of passengers			% 2009
	2006	2008	2009	
United Kingdom	1,204,000	1,477,000	1,533,000	31.0 %
Germany	705,000	907,000	1,027,000	20.8 %
Italy	517,000	682,000	799,000	16.2 %
Spain	391,000	497,000	587,000	11.9 %
France	242,000	310,000	347,000	7.0 %
Switzerland	56,000	65,000	76,000	1.5 %
Austria	44,000	59,000	80,000	1.6 %
Benelux	62,900	92,000	110,000	2.2 %
Scandinavia	23,000	123,000	173,000	3.5 %
Portugal	-	28,000	30,000	0.6 %
Other EU	-	192,000	182,000	3.7 %
Total	3,475,000	4,432,000	4,944,000	100.0 %

Source: European Cruise Council, 2010

The number of British passengers has increased by 27.3% since 2006, Germans by more than 45%, Italians by 54.5%, Spanish passengers by 50% and the French by 43.3% over the same observation period.

The distribution of overnight stays per destination country shows that Mediterranean regions and Northern Europe are the most popular destinations.

Table 7 – Number of overnight stays per destination country

Country	Number of overnight stays 2009	Number of overnight stays 2008	% 2009	% 2008
Greece	4,973,000	4,269,000	20.9	19.6
Italy	4,956,000	4,993,000	20.9	23.0
Spain	4,118,000	3,600,000	17.3	16.6
France	1,851,000	1,787,000	7.8	8.2
Norway	1,672,000	1,460,000	7.0	6.7
Portugal	825,000	786,000	3.5	3.6
Denmark	524,000	338,000	2.2	1.6
Sweden	514,000	433,000	2.2	2.0
United Kingdom	454,000	406,000	1.9	1.9
Estonia	416,000	377,000	1.8	1.7
Malta	414,000	512,000	1.7	2.4
Gibraltar	348,000	308,000	1.5	1.4
Finland	329,000	325,000	1.4	1.5
Germany	328,000	196,000	1.4	0.9
Cyprus	225,000	227,000	1.0	1.1
Ireland	160,000	134,000	0.7	0.6
Poland	153,000	137,000	0.6	0.6
Iceland	144,000	112,000	0.6	0.5
Netherlands	113,000	79,000	0.5	0.4
Other EU	255,000	283,000	1.1	1.3
Other Europe*	984,000	966,000	4.1	4.4
Total	23,756,000	21,728,000	100	100

*including ports of call in Saint Petersburg and the Black Sea.
Source: G.P.Wild, 2010 and IIC, 2010

Compared to 2008, Greece and the Mediterranean coasts of Spain and France showed strong performance thanks to cruise lines opting for itineraries based on their sales policies, port conditions (in terms of infrastructures and costs) and alternatives with respect to shore excursions, a lucrative source of revenue for cruise lines. It should be noted that the cruise industry benefits from a high number of "repeaters", i.e. passengers who repeat their experience by choosing cruises based on two fundamental criteria: itineraries and ships[6].

[6] Some passengers choose their cruise based on the ship and not its itinerary. Some websites are even dedicated to specific ships or popular forums used by cruise passengers.

4. Economic impact of the industry

An evaluation of the economic impacts of the cruise industry is released each year by "The European Cruise Council", which represents the majority of cruise lines operating worldwide. In 2008, the cruise industry generated the following in terms of economic impact:

- 14.2 billion in direct revenue from cruise lines and passengers;
- 32.2 billion in economic returns to the total European economic system;
- 311,512 jobs, representing approximately € 10 billion in terms of salaries.

Initial assessments of the effects of the financial crisis for 2009 show a 1.2% drop in direct economic impact from the sector compared to 2008. Industry experts confirm that this is tied to two major factors: an 11.5% reduction in naval construction, and a 6% increase in costs (fuel, insurance, etc.).

Expected industry performance for 2009 was as follows:

- 14.1 billion in direct impact (down from 2008);
- 34.1 billion in economic returns to the economic system (a 6% jump from 2008);
- 296,288 jobs, i.e. a sharp drop from 2008 (approximately 5%).

Therefore each million in direct spending generates 2.42 million in total economic returns and roughly 21 jobs (with an average gross salary of € 30,000 per year).

If a detailed analysis is made of the direct impact of the cruise industry in Europe (14.1 billion compared to 10.6 in 2006, but 14.2 in 2008), the following can be observed:

- passengers (and crew) spent € 2.9 billion during their stays (compared to 2 billion in 2006 and 2.7 billion in 2008). This calculation also includes spending prior to and after cruises in home ports as well as all gift purchases, etc.);
- shipbuilding projects represented 4.6 billion (compared to 4.1 billion in 2006 and 5.2 billion in 2008), i.e. 11.5% less than in 2008;
- cruise lines spent 5.4 billion (compare to 3.5 billion in 2006 and 5.1 billion in 2008) in addition to nearly 1.2 billion in employee salaries (compared to 1 billion in 2006).

Cruise lines employ 4,500 staff in corporate and administrative offices, in addition to approximately 46,500 European crew members.

As for the expenses of cruise lines (5.4 billion):

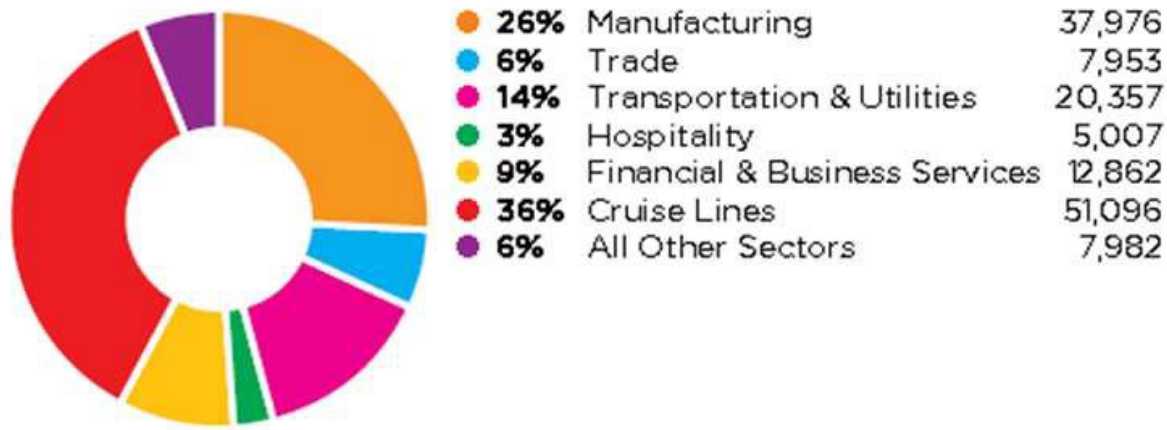
- 479 million (compared to 268 million in 2006 and 385 million in 2008) covered food and beverages;
- 646 million in fuel (compared to 327 million in 2006 and 578 million in 2008);
- 491 million was spent on equipment management (compared to 317 million in 2006 and 512 million in 2008);
- 825 million was paid in travel agency commissions (compared to 495 million in 2006 and 750 million in 2008);
- 1.2 billion for financial and commercial services like insurance, advertising, consulting, etc. (compared to 640 million in 2006 and 700 million in 2008).

As for passengers (2.9 billion):

- 1.3 billion was spent on airline tickets, port taxes, excursions (compared to 989 million in 2006);
- 1.45 billion was spent by cruise passengers (compared to 1 billion in 2006 and 1.4 billion in 2008);
- 150 million related to crew spending in ports.

According to ECC estimates, in 2009, 143,233 direct jobs were created by the industry (107,780 in 2006 and 150,369 in 2008), 108,975 jobs from indirect employment (116,888 in 2008) and 44,080 jobs in related sectors (44,255 in 2008).

Figure 5 – Direct jobs created by the cruise industry in Europe



Source: ECC, 2010

A sharp drop in terms of jobs was registered for the first time in 2009.

Table 8 – Distribution of direct jobs generated by the cruise industry

Industry	Direct Jobs 2008	Direct Jobs 2009	Growth from 2008 in %	Share of Total (2009) in %
Agriculture., Mining & Construction	107	100	-6.54	0.1
Manufacturing	50,528	37,976	-24.84	26.5
Food & Tobacco	1,528	2,188	43.19	1.5
Textiles & Apparel	1,050	1,476	40.57	1.0
Paper & Printing	691	1,025	48.34	0.7
Petroleum & Chemicals	855	820	-4.09	0.6
Stone, Clay & Glass	103	157	52.43	0.1
Metals	3,305	2,014	-39.06	1.4
Machinery	3,485	1,060	-69.58	0.7
Electrical Machinery	748	628	-16.04	0.4
Shipbuilding	36,922	25,938	-29.75	18.2
Other Manufacturing	1,841	2,670	45.03	1.9
Wholesale Trade & Retail Trade	7,226	7,953	10.06	5.6
Hospitality	4,723	5,007	6.01	3.5
Transportation & Utilities	18,799	20,258	7.76	14.1
Financial and Business services	11,173	12,862	15.12	8.9
Finance, Insurance & Real Estate	691	899	30.1	0.6
Business Services	10,482	11,963	14.13	8.3
Personal Services & Governmentt	3,072	7,981	159.8	5.6
Subtotal	95,628	92,137	-3.65	64.3
Cruise Line Employees*	54,741	51,096	-6.66	35.7
Grand Total	150,369	143,233	-4.75	100

*European Nationals
Source: G.P. Wild, 2010 and IIC, 2010

An analysis of Table 8 attests to a sharp decrease in jobs in the shipbuilding, equipment and metal sectors.

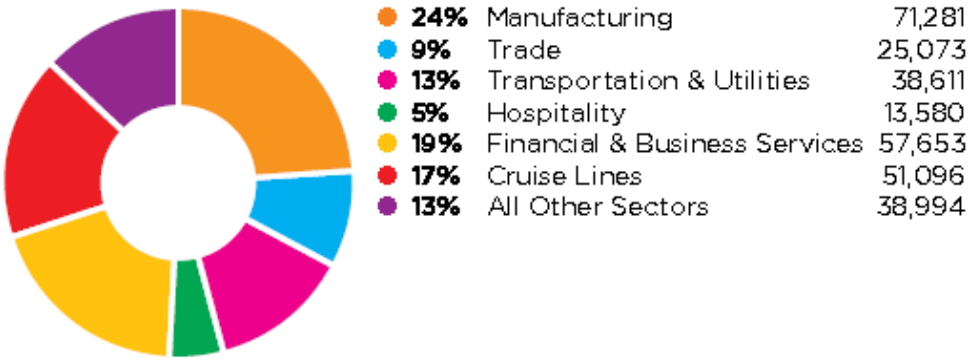
In total, 296,288 indirect jobs distributed among the sectors listed in Table 9 and Figure 6 were recorded in 2009 (compared to 311,512 in 2008 and 225,586 in 2006):

Table 9 – Distribution of indirect jobs generated by the cruise industry

Industry	Total Jobs 2008	Total Jobs 2009	Growth from 2008 in %	Share of Total 2009 in %
Agriculture, Mining & Construction	26 369	14 914	-43.44	5.0
Manufacturing	94 061	71 281	-24.22	24.1
Food & Tobacco	3 462	4 611	33.19	1.6
Textiles & Apparel	4 575	4 022	-12.09	1.4
Paper & Printing	3 648	3 551	-2.66	1.2
Petroleum & Chemicals	4 777	3 507	-26.59	1.3
Stone & Glass	1 314	1 303	-0.84	0.4
Metals	13 870	10 440	-24.73	3.4
Machinery	7 592	3 457	-54.47	1.2
Electrical Machinery	5 475	3 129	-42.85	1.1
Transportation Equipment7	44 244	30 679	-30.66	10.3
Other Manufacturing	5 104	6 582	-28.96	2.2
Wholesale Trade & Retail Trade	21 373	25 073	17.31	8.5
Hospitality	12 930	13 580	5.03	4.6
Transportation & Utilities	38 442	38 611	0.44	13.0
Air Transport	6 065	5 284	-12.88	1.8
Transport Services	18 968	19 325	1.88	6.6
Other Transport	6 587	8 881	34.83	3.0
Communications & Utilities	6 823	5 121	-24.95	1.7%
Financial & Business Services	48 697	57 653	18.39	19.5
Finance, Insurance & Real Estate	8 046	8 865	10.18	3.0
Business Services	40 651	48 788	20.02	16.5
Personal Services & Government	14 898	24 080	61.63	8.1
Subtotal	256 771	245 192	-4.51	82.8
Cruise Line Employees	54 741	51 096	-6.66	17.2
Grand Total	311 512	296 288	-4.89	100.0

Source: G.P. Wild, 2010 and IIC, 2010

Figure 6 – Indirect jobs generated by the cruise industry in Europe (2009)



Source: ECC, 2010

[7] "Transportation equipment" includes shipbuilding as well as the construction of transportation equipment such as cars, buses, trucks, airplanes, etc.

The distribution of jobs by country shows that nearly 62% of all jobs are concentrated in three European countries: Italy, the United Kingdom and Germany. Italy accounts for more than 32% of jobs with 96,076 jobs (employment related to the industry is maintained though there was a slight decrease from 2008 numbers). There was significant job contraction in Germany, France, Norway and especially Poland.

Table 10 – Employment distribution by country

Country	Total jobs 2008	Total jobs 2009	Growth from 2008	Share of Total 2009 in %	Share of Total 2008 in %
Italy	97,152	96,076	-1.11	32.4	31.2
United Kingdom	49,015	55,599	13.43	18.8	15.7
Germany	41,560	31,395	-24.46	10.6	13.3
Spain	22,397	24,248	8.26	8.2	7.2
Finland	14,268	13,658	-4.28	4.6	4.6
France	18,265	15,128	-17.17	5.1	5.9
Norway	13,974	10,897	-22.02	3.7	4.5
Greece	10,775	11,794	9.46	4.0	3.5
Portugal	7,048	7,296	3.52	2.4	2.3
Poland	7,903	2,411	-69.49	0.8	2.5
Top 10 (2008)	**282,357**	**268,502**	**-4.91**	**90.6**	**90.7**
Netherlands	4,079	4,753	16.52	1.6	1.3
Malta	1,666	2,531	51.92	0.8	0.5
Hungary	2,095	-	Nd	-	0.7
Sweden	1,993	2,036	2.16	0.7	0.6
Cyprus	1,355	1,052	-22.36	0.4	0.4
Denmark	2,013	1,931	-4.07	0.7	0.7
Rest of EU+3	15,954	15,483	-2.95	5.2	5.1
Total	**311,512**	**296,288**	**-4.89**	**100.0**	**100.0**

Source: G.P. Wild, 2009-2010 and IIC, 2010

Finally, there is a correlation between the number of jobs in each country and the direct economic impact for each country. In terms of economic impact, 2009 recorded positive performance in relation to 2008 in Italy, the United Kingdom, Spain, Greece and the Netherlands. However, this was not the case in Germany, France and Norway.

Table 11 – Distribution of general economic impact per country

Country	Direct economic impact 2008 (Millions of Euros)	Direct economic impact 2009 (Millions of Euros)	Share of total in % 2009	Share of total in % 2008
Italy	4,318	4,331	30.8	30.4
United Kingdom	2,263	2,408	17.1	15.9
Germany	2,351	1,918	13.7	16.5
France	1,399	1,158	8.2	9.8
Spain	1,078	1,119	8	7.6
Finland	902	906	6.4	6.3
Norway	477	417	3	3.4
Greece	471	598	4.3	3.3
Netherlands	204	290	2.1	1.4
Portugal	180	169	1.2	1.3
Denmark	156	203	1.4	1.1
Sweden	142	158	1.1	1.0
Malta	65	62	0.4	0.5
Cyprus	46	49	0.3	0.3
Austria	32	32	0.2	0.2
Other countries	132	233	1.8	0.9
Total	14,216	14,051	100	100

Source: G.P. Wild, 2009, 2010 and IIC, 2010

5. Mediterranean cruise itineraries

Cruise itineraries in the Mediterranean remain traditional with a growing number of stopovers in the Greek islands. In 2009 they became the leader in terms of overnight stays (see Table 7).

Spain, Italy and France combined account for approximately 47% of all overnight stays in the Western Mediterranean and Greece dominates the Eastern Mediterranean with more than 20% of the total. The average cruise length is 6 days.

One of the reasons for the success of the Mediterranean is the ability to diversify itineraries in comparison to the Caribbean, though it should be specified that a significant number of cruise passengers, even in the Mediterranean, do not disembark from the ship. Thus the varied offer of itineraries helps meet the demand catering mainly to two age brackets: American passengers of roughly 60 years of age on average; European passengers aged 35 to 50 travelling in families with children of all ages (it should be noted that cruise lines often sell packages where children up to 18 years of age travel for free).

The Mediterranean offers the ability to design cruise itineraries that are extremely varied and different depending of the period of the year. There are a wide number of ports of call that have been increasing considerably since the early 2000's.

The number of home ports (departure / destination ports) account for less than 16% of all ports of call, which total more than 150.

Home ports must provide services to ships and passengers that are not available everywhere. Figure 7 shows the distribution of the different categories of ports in the Mediterranean.

Figure 7 – Main cruise ports in the Mediterranean

Source: IIC, 2010

The main ports visited by Mediterranean cruise ships are listed below by type.

Table 12 – List of home ports for Mediterranean cruises

Port No.	Port	Country	Type of port
1	Ancona	Italy	port of call - home port
2	Barcelona	Spain	port of call - home port
3	Bari	Italy	port of call - home port
4	Capri	Italy	port of call - home port
5	Cartagena	Spain	port of call - home port
6	Catania	Italy	port of call - home port
7	Civitavecchia - Rome	Italy	port of call - home port
8	Genoa	Italy	port of call - home port
9	Larnaka	Cyprus	port of call - home port
10	Limassol	Cyprus	port of call - home port
11	Livorno	Italy	port of call - home port
12	Marseille	France	port of call - home port
13	Messina	Italy	port of call - home port
14	Monte-Carlo	Principality of Monaco	port of call - home port
15	Naples	Italy	port of call - home port
16	Palermo	Italy	port of call - home port
17	Piraeus	Greece	port of call - home port
18	Salerno	Italy	port of call - home port
19	Savona	Italy	port of call - home port
20	Sorrento	Italy	port of call - home port
21	Trieste	Italy	port of call - home port
22	Toulon	France	port of call - home port
23	Venice	Italy	port of call - home port
24	Villefranche - Nice	France	port of call - home port

Source: IIC, 2010

The 24 home ports listed are all on the Northern coast of the Mediterranean, with the exception of a few located on Cyprus. The home ports of the largest cruise lines are concentrated in 12 ports.

Table 13 lists the various ports of call for cruises in the Mediterranean or neighbouring regions where part of the itinerary is in the Mediterranean.

Table 13 – List of ports of call for Mediterranean cruises

Port No.	Port	Country	Type of port
1	Agadir	Morocco	port of call[8]
2	Aghios Nikolaos	Greece	port of call
3	Ajaccio	France - Corsica	port of call
4	Alanya - Antalya	Turkey	port of call
5	Alexandria	Egypt	port of call
6	Algiers	Algeria	port of call
7	Alghero	Italy – Sardinia	port of call
8	Alicante	Spain	port of call
9	Almería	Spain	port of call
10	Amalfi	Italy	port of call
11	Amorgos	Greece – Crete	port of call
12	Argostoli	Greece	port of call
13	Ashdod	Israel	port of call
14	Bastia	France - Corsica	port of call
15	Beirut	Lebanon	port of call
16	Bodrum	Turkey	port of call
17	Bonifacio	France - Corsica	port of call
18	Brac	Croatia	port of call
19	Brindisi	Italy	port of call

[8] The port of Agadir (Atlantic Ocean) is included in Mediterranean cruise itineraries.

Port No.	Port	Country	Type of port
20	Cagliari	Italy	port of call
21	Calvi	France - Corsica	port of call
22	Canakkale	Turkey	port of call
23	Cannes	France	port of call
24	Capodistria	Slovenia	port of call
25	Capri	Italy	port of call
26	Cartagena	Spain	port of call
27	Casablanca	Morocco	port of call[9]
28	Cassis	France	port of call
29	Castellon	Spain	port of call
30	Ceuta	Spain	port of call
31	Chania	Greece	port of call
32	Collioure (Port Vendres)	France	port of call
33	Corfu	Greece	port of call
34	Corinth	Greece	port of call
35	Crete	Greece	port of call
36	Cyprus	Cyprus	port of call
37	Delos	Greece	port of call
38	Dikili	Turkey	port of call
39	Dubrovnik	Croatia	port of call
40	Durres	Albania	port of call
41	Ephesus	Turkey	port of call
42	Fethiye	Turkey	port of call
43	Fiskardho	Greece – Cephalonia	port of call
44	Folegandros	Greece	port of call
45	Gabès	Tunisia	port of call
46	Giannutri	Italy	port of call
47	Gibraltar	United Kingdom	port of call
48	Gythion	Greece	port of call
49	Haïfa	Israel	port of call
50	Heraklion	Greece	port of call
51	Hvar	Croatia	port of call
52	Ibiza	Spain	port of call
53	Ilos	Greece	port of call
54	Istanbul	Turkey	port of call
55	Iskenderun	Turkey	port of call
56	Itea	Greece	port of call
57	Izmir -Smyrne	Turkey	port of call
58	Katakolon	Greece	port of call
59	Kavala	Greece	port of call
60	Khios	Greece	port of call
61	Koper	Slovenia	port of call
62	Korčula	Croatia	port of call
63	Kos	Greece	port of call
64	Kotor	Montenegro	port of call
65	Kuşadası	Turkey	port of call
66	La Goulette	Tunisia	port of call
67	La Rochelle	France	port of call
68	La Savina	Spain - Balearic Islands – Formentera	port of call
69	La Spezia	Italy	port of call
70	Valletta	Malta	port of call
71	Larnaka	Cyprus	port of call
72	Lattakia	Syria	port of call
73	Le Lavandou	France	port of call
74	Lemnos	Greece	port of call
75	Limassol	Cyprus	port of call
76	Lipari	Italy – Sicily	port of call
77	Livorno	Italy	port of call

[9] The port of Casablanca (Atlantic Ocean) is included in Mediterranean cruise itineraries.

Port No.	Port	Country	Type of port
78	Mahon	Spain	port of call
79	Malaga	Spain	port of call
80	Marmaris	Turkey	port of call
81	Mersin	Turkey	port of call
82	Milos	Greece	port of call
83	Minorca	Spain	port of call
84	Molyvos	Greece - Lesbos	port of call
85	Monemvasia	Greece	port of call
86	Monte-Carlo	Monaco	port of call
87	Motril	Spain	port of call
88	Mykonos	Greece	port of call
89	Mytilene Lesbos	Greece - Lesbos	port of call
90	Nafplio	Greece	port of call
91	Navplion	Greece	port of call
92	Naxos	Greece	port of call
93	Olbia	Italy	port of call
94	Olympia	Greece	port of call
95	Palamos	Spain	port of call
96	Palma de Majorca	Spain	port of call
97	Paphos	Cyprus	port of call
98	Paros	Greece	port of call
99	Patmos	Greece	port of call
100	Pescara	Italy	port of call
101	Ploce	Croatia	port of call
102	Pollensa	Spain - Balearic Islands – Majorca	port of call
103	Poltu Quatu	Italy – Sardinia	port of call
104	Ponza	Italy	port of call
105	Poros	Greece	port of call
106	Port Saïd	Egypt	port of call
107	Porto Azzurro	Italy – Elba	port of call
108	Porto Cervo	Italy – Sardinia	port of call
109	Porto Empedocle	Italy	port of call
110	Porto Venere	Italy	port of call
111	Portoferraio	Italy	port of call
112	Portofino	Italy	port of call
113	Propriano	France - Corsica	port of call
114	Pula	Croatia	port of call
115	Rapallo	Italy	port of call
116	Ravenna	Italy	port of call
117	Rethimnon	Greece – Crete	port of call
118	Rhodes	Greece	port of call
119	Rijeka	Croatia	port of call
120	Rovinj	Croatia	port of call
121	Safaga	Egypt	port of call[10]
122	Saint - Tropez	France	port of call
123	Saint Raphaël	France	port of call
124	Santa Margherita Ligure	Italy	port of call
125	Santorini	Greece	port of call
126	Sarande	Albania	port of call
127	Serifos	Greece	port of call
128	Sète	France	port of call
129	Šibenik	Croatia	port of call
130	Sorrento	Italy	port of call
131	Souda Bay	Greece	port of call
132	Spetses	Greece	port of call
133	Split	Croatia	port of call
134	Syracuse	Italy – Sicily	port of call
135	Tangier	Morocco	port of call[11]

[10] The port of Safaga (Red Sea) is included in Mediterranean cruise itineraries.
[11] The port of Tangier (Strait of Gibraltar) is included in Mediterranean cruise itineraries.

Port No.	Port	Country	Type of port
136	Taormina	Italy	port of call
137	Tarragona	Spain	port of call
138	Tartus	Syria	port of call
139	Taşucu	Turkey	port of call
140	Thessalonica	Greece	port of call
141	Toulon	France	port of call
142	Trapani	Italy	port of call
143	Trieste	Italy	port of call
144	Tripoli	Libya	port of call
145	Trogir	Croatia	port of call
146	Tunis	Tunisia	port of call
147	Valencia	Spain	port of call
148	Villefranche - Nice	France	port of call
149	Volos	Greece	port of call
150	Xlendi	Malta - Île de Gozo	port of call
151	Zadar	Croatia	port of call
152	Zakinthos	Greece	port of call

Source: IIC, 2010

The situation for ports of call is as follows: 75% are located in Italy, Spain, France, Greece, Croatia, Slovenia; 9% in Turkey and Cyprus and only 7% in North Africa. The large number of cruise ships in the Mediterranean Sea is causing more and more logistical and operational problems. This is attributed to the high concentration or even congestion of home ports. Few ports included in the list above are able to accommodate the largest cruise ships.

The growth of the industry over the last few years has not been accompanied by sufficient expansion or adaptation of ports. Only home ports have carried out or are in the process of carrying out major work to adapt quays (the latest Royal Caribbean ships in the "Oasis of the Sea" series are 360 metres long).

Few ports are currently able to sustainably handle ship and passenger traffic, whether from a management or environmental standpoint.

Some ports have launched feasibility studies to look into implementing cold ironing to supply ships directly with electrical power while at berth, enabling them to shut down engines or onboard generators to reduce noise and other pollution in ports and port towns/cities.

Port congestion is a reality that is especially true on cruise departure days. Many smaller ships seek to avoid as many busy ports of call as possible in favour of smaller and less congested ones. Similar to the same situation in the Caribbean, some Mediterranean destinations are now besieged by cruise passengers and are almost viewed in a negative light by local economic operators. These passengers often have limited purchasing power and the congestion that they generate risks making certain tourist destinations less attractive.

Several analyses show that a majority of passengers (70%) return to their ship for lunch since onboard meals are included in the cruise package, and on average, they spend very little at each port of call (less than €50 per person)[12].

Cruise lines have several tricks to optimise passenger spending. They make their greatest profits from onboard spending and land excursions that they organise directly. However the number of "free" passengers who disembark without taking part in an organised excursion is on the rise.

It should also be noted that the emergence of low-cost cruise lines for 2008 did not occur as originally expected.

[12] A recent IIC investigation for the Port of Genoa (Nov. 2010) found that on average, cruise passengers spent €26 per person with a modal value of €18. This can be explained by the fact that cruise ships dock in the Port of Genoa on Sundays, when shops and businesses are closed.

6. Port infrastructures

The infrastructures required for a port to accommodate cruise ships are as follows:

- Suitable quays (up to 360 metres for the largest ships currently in service) with a draught of at least 10 metres;
- Functional passenger terminals (especially in home ports), with gangways directly connected to ships that meet international safety standards;
- Long term affordable parking lots at home ports and parking lots for highway coaches used for excursions at ports of call and home ports;
- An efficient and well-organised luggage control and handling system (home ports) with high level security (ISPS code[13], X-ray, metal detectors);
- Efficient check-in procedures (ships accommodate a growing number of passengers);
- High performance cruise line logistics for provisions and supplies (home ports);
- Optimisation of land transfers with efficient connections to transportation networks (railway and airports).

As for services made available by ports, the following are essential:

- A good level of quality tourist service (tourist information and passenger assistance services);
- Easy access to public transportation systems;
- Staff safety systems;
- Information signs for tourists (cruise passengers in particular);
- Well-indicated pedestrian routes;
- Efficient public transportation systems;
- Flexible opening hours for shops and businesses;
- Local support for excursions organised by cruise lines.

The port reception of cruise passengers, especially free passengers who do not purchase excursions offered by the cruise, is becoming important as a growing number of local institutions begin to put inter-institutional coordination organisations in place to optimise the economic benefits of having this clientele in their area. Destination towns and cities must therefore be ready to handle a flow of tourists who are only ashore for a few hours, most often in a group (sometimes large groups that are therefore difficult to handle) and who have limited purchasing power.

Passenger terminals are a €10 to 20 million investment that cruise lines help directly finance if they are guaranteed exclusive use.

In addition to their operational prerogatives, terminals can also become profit centres for cruise lines if they rent out the terminal space for seminars, parties and other functions when ships are not at dock.

7. Differences between Northern and Southern Mediterranean ports

As shown in Table 12, the majority of home ports is located on the European coasts of the Mediterranean.

Table 14 outlines the infrastructures of the main Mediterranean ports. Ports that do not yet have a dedicated cruise passenger terminal are indicated with red shading; those able to accommodate the latest generation of large ships with green, and finally ports needing dredging capabilities to increase the depth of the port and thus accommodate deep draught ships are indicated with pink shading.

Analysis of Table 14 shows that the ports of La Goulette (Tunisia) and Alexandria (Egypt) are the only ones with infrastructures comparable to the ports on the Northern shores of the Mediterranean. Turkey and

[13] ISPS Code (International Ship and Port Facilities Security): for more information go to: http://www.trans- inst.org/defense-programs.html.

Cyprus are also capable of accommodating the latest generation of ships with respect to the length of quays or draught.

Table 14 - Infrastructures of the main Mediterranean ports

Ports	Dedicated quays	Passenger terminal	Quay length (min – max) (m)	Length >350m	Draught (min-max) (m)
Ancona	1	yes	206	no	8.5
Barcelona	7	yes	160 - 700	yes	7.70 - 12.00
Bari	6	yes	250 - 300	no	8 - 11.50
Cartagena	2	no	344	no	12
Catania	2	yes	290	no	8 - 9.50
Civitavecchia - Rome	6	yes	219 - 537	yes	8.71 - 18.00
Genoa	5	yes	90 - 350	yes	4.50 - 11.00
Larnaka	n/a	yes	250	no	11.4
Limassol	n/a	yes	300-480	yes	11-14
Livorno	6	yes	170 - 940	yes	6.50 - 12.00
Marseille	7	yes	220 - 250	no	14.5
Messina	5	no	98 - 295	no	7.00 - 11.00
Monte-Carlo	1	no	130	no	7
Naples	10	yes	120-493	yes	5.00 - 10.00
Palermo	2	yes	304-319	no	9.00 - 12.00
Piraeus	2	yes	79-201	no	n/a
Salerno	1	yes	380	yes	11.5
Savona	1	yes	450	yes	9
Trieste	2	yes	240 - 389	yes	8 - 11
Toulon	4	yes	176 - 345	no	7.5 - 9.5
Villefranche - Nice	0	yes	180	no	10-15
Venice	3	yes	294	no	8.55
La Goulette	3	yes	320	no	11-12.2
Alexandria	3	yes	200-500	yes	11
Istanbul	2	yes	527-627	yes	7 - 10
Bodrum	2	yes	220-240	no	9 - 22

Source: IIC, 2010

However, physical infrastructures are not enough to guarantee the development of the cruise industry. Parking lots, bus and taxi services must be available and the distance between the port, downtown and public transportation hub in home ports is key.

Table 15 – Infrastructures of the main Mediterranean ports

Port	Parking	Shuttle/bus service	Taxi service	Distance to downtown (km)	Distance to airport (km)	Distance to train station (km)
Ancona	yes	-	-	1.2	18	1.9
Barcelona	yes	yes	yes	4	7	9
Bari	yes	yes	yes	0.8	7	1
Capri	-	-	-	3.5	50	38
Cartagena	yes	upon request	yes	0.2	30	1
Catania	-	-	-	1.2	9.5	1.4
Civitavecchia - Rome	yes	-	-	1.2	65	0.5
Genoa	yes	upon request	yes	1	5	0.5
Larnaka	yes	no	yes	2	6	no
Limassol	yes	yes	yes	5	70	no
Livorno	yes	yes	yes	0.5	13 (Pisa)	3
Marseille	yes	-	-	2	25	2.5
Messina	yes	no	yes	located downtown	located downtown	located downtown
Monte-Carlo	no		yes	0.5	20	0.8
Naples	yes	upon request	yes	located downtown	10	6
Palermo	yes	-	yes	0.5	25	2
Piraeus	-	-	-	located downtown	8	8
Salerno	-	-	-	2	65 (Naples)	2.5
Savona	yes	-	-	1.5	42 (Genoa)	2
Sorrente	-	-	-	1	56 (Naples)	0.7
Trieste	yes	yes	yes	1.4	34	2
Toulon	no	yes	yes	0.3	24	1.2
Villefranche - Nice	yes	yes	yes	located downtown	14	6.5
Venice	yes	yes	yes	located downtown	16	11
La Goulette	-	yes	yes	8	18	n/a
Alexandria	-	yes	-	located downtown	40	n/a
Istanbul	-	yes	yes	20	20	n/a
Bodrum	-	yes	yes	located downtown	36	n/a

Source: IIC, 2010

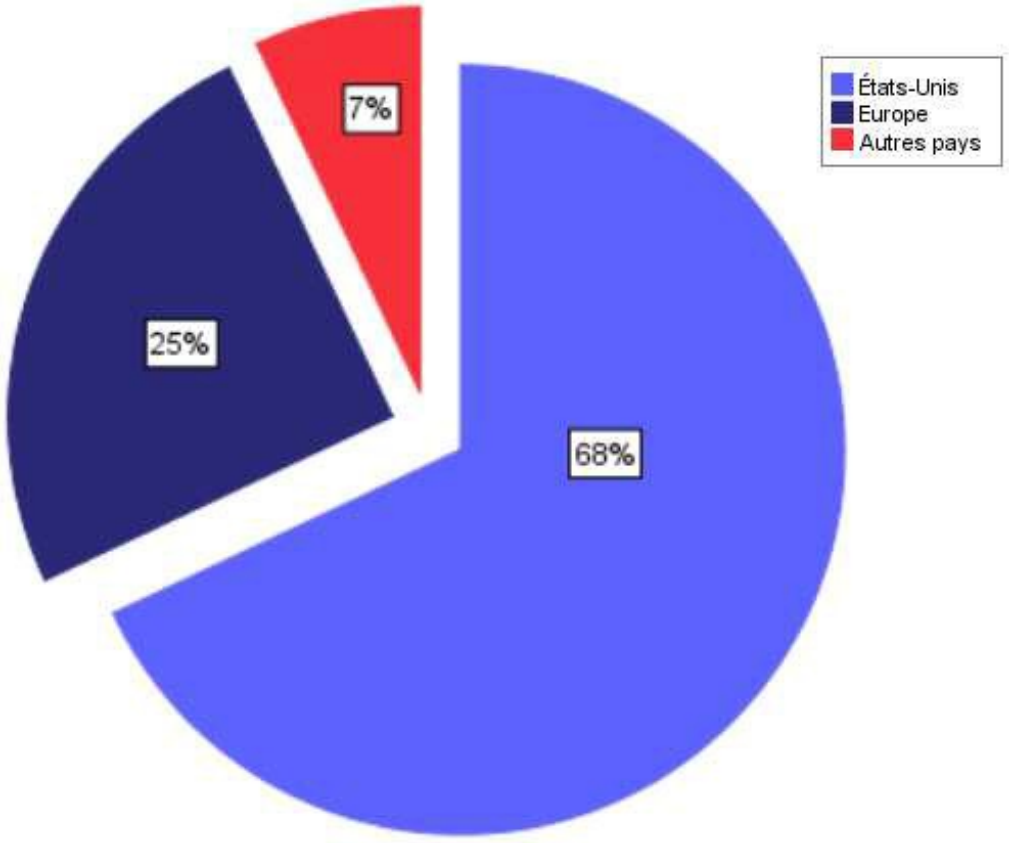
II. The recreational boating market

1. Context on a global level

The global boat fleet is assessed based on data provided each year by the various MIAs (Marine Industry Associations) of the ICOMIA (International Council of Maritime Industry Associations), which process the information they receive through their own internal statistics committee. Collecting data is often difficult and complex as it requires numerous adjustments depending on the different methods for collecting information, the different classifications of watercraft, and the varying degrees of reliability of the various sources used.

An initial segmentation by macro-region (ICOMIA, 2009) shows the predominance of the United States (68% of the global boat fleet), followed by Europe (25 %) and the rest of the world (7 %). Official statistics do not specifically target the Mediterranean; however a detailed analysis of various sources suggests that the Mediterranean represents approximately 20% of the global boat fleet. This distribution has been consistent for at least 10 years.

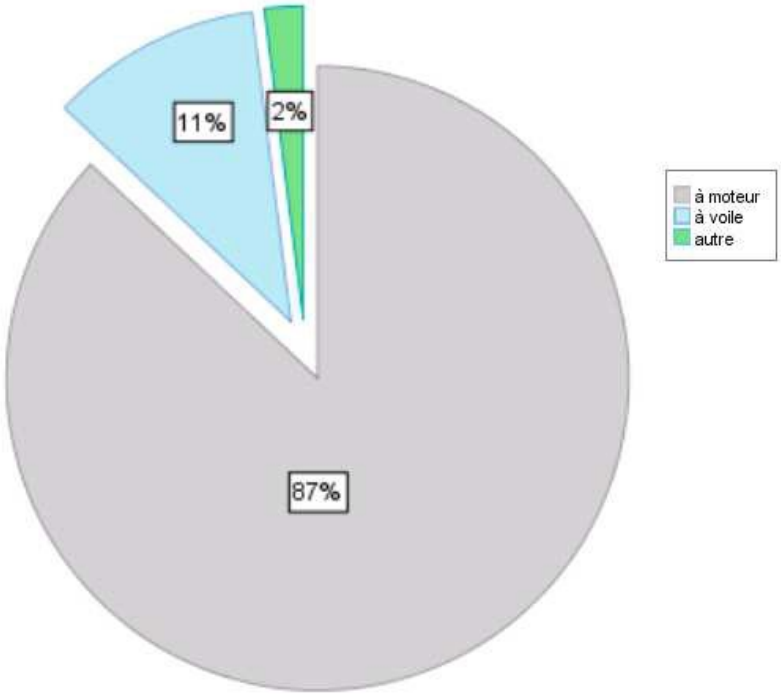
Figure 8 – Global boat fleet (2009) – (United States, Europe and Other countries)



Source: ICOMIA, 2010

A second interesting and useful approach to understanding this sector is the segmentation of the global boat fleet by type of boat. In 2009, motor boats represented 87% of all watercraft, compared to 11% for sail boats and 2% for other types (inflatable boats, canoes, etc.).

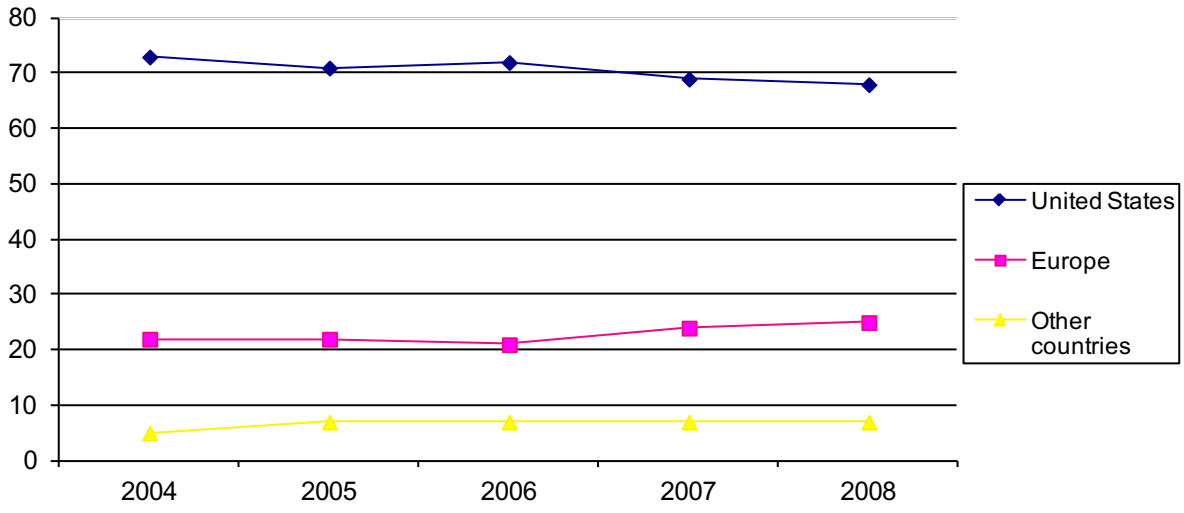
Figure 9 – Global boat fleet (segmentation by type: with motor, with sail or others) – 2009



Sources: ICOMIA, 2010

The current international economic crisis also affecting the recreational boating industry and its field (2008 data and therefore the beginning of the crisis) has caused changes, at least in part, to the distribution of the boat fleet between the United States and Europe, as shown in the graph below:

Figure 10 – Global boat fleet (change in % since 2004 by macro-region)



Source: based on ICOMIA data, 2010; IIC, 2010

Initial estimates made by specialised industry organisations and associations recorded an approximately 30% drop for the 2009-2010 period in terms of sales on the recreational boating market, and several cases of bankruptcy or extreme difficulty for certain boat manufacturers and throughout the sector in general. New boat manufacturing is the most affected, however the maintenance and repair sectors are seeing strong growth as it is currently cheaper for boat owners to upgrade their boats rather than purchase a new one.

Scandinavian countries once again have a high number of boats per 1,000 inhabitants compared to the other countries examined where data is reliable and up to date.

Table 16 – Global boat fleet – Detail by country, type of craft and number of units per 1,000 inhabitants

Nation	Population	Recreational craft per 1,000 inhabitants	Total boat fleet	Sailboats	Inboard motor boats	Outboard motor boats and other rigid boats	Inflatable boats >2.5 m and > 20 kg
Norway	4,770,000	167	850,000	58,000	270,000	412,000	110,000
Sweden	9,182,927	83	778,100	97,100	90,800	552,200	38,000
Finland	5,300,000	143	734,100	19,000	93,000	620,000	2,100
Italy	58,751,000	10	615,585	N/K	N/K	N/K	N/K
United Kingdom	60,587,300	9	541,560	212,305	94,805	155,850	78,600
Netherlands	16,000,000	32	518,000	169,000	198,000	151,000	N/K
France	63,743,000	8	491,651	141,847	97,763	146,636	105,405
Germany	82,438,000	5	441,530	120,475	88,932	232,123	N/K
Spain	44,110,000	4	185,300	16,315	133,595	N/K	35,390
Greece	10,723,000	13	136,450	8,200	12,500	103,020	12,730
Switzerland	7,514,220	13	99,322	32,375	60,119	6,828	N/K
Poland	37,000,000	2	68,000	64,000	N/K	N/K	N/K
Portugal	10,605,000	6	62,154	3,096	13,809	24,181	21,068
Ireland	4,156,000	6	26,900	N/K	N/K	N/K	N/K
EUROPE	414,880,447	13	5,548,652	941,713	1,153,323	2,403,838	403,293
Australia	21,000,000	37	780,000	N/K	N/K	N/K	N/K
New Zealand	4,200,000	111	462,000	42,160	20,260	374,980	24,600
Japan	127,771,000	2	258,000	12,000	232,000	N/K	14,000
Argentina	42,000,000	3	139,950	2,950	14,500	99,500	23,000
Turkey	76,000,000	0,4	32,250	7,500	21,000	1,500	2,250
South Africa	47,900,000	0,5	25,000	N/K	N/K	N/K	N/K
Other countries	318,871,000	5	1,697,200	64,610	287,760	475,980	63,850
United States	304,000,000	52	15,699,100	1,550,200	2,790,100	11,358,800	N/K
Total	1,037,751,447	22	22,944,952	2,556,523	1,441,083	14,238,618	467,143

Source: ICOMIA, 2010

2. Change in the global boat fleet

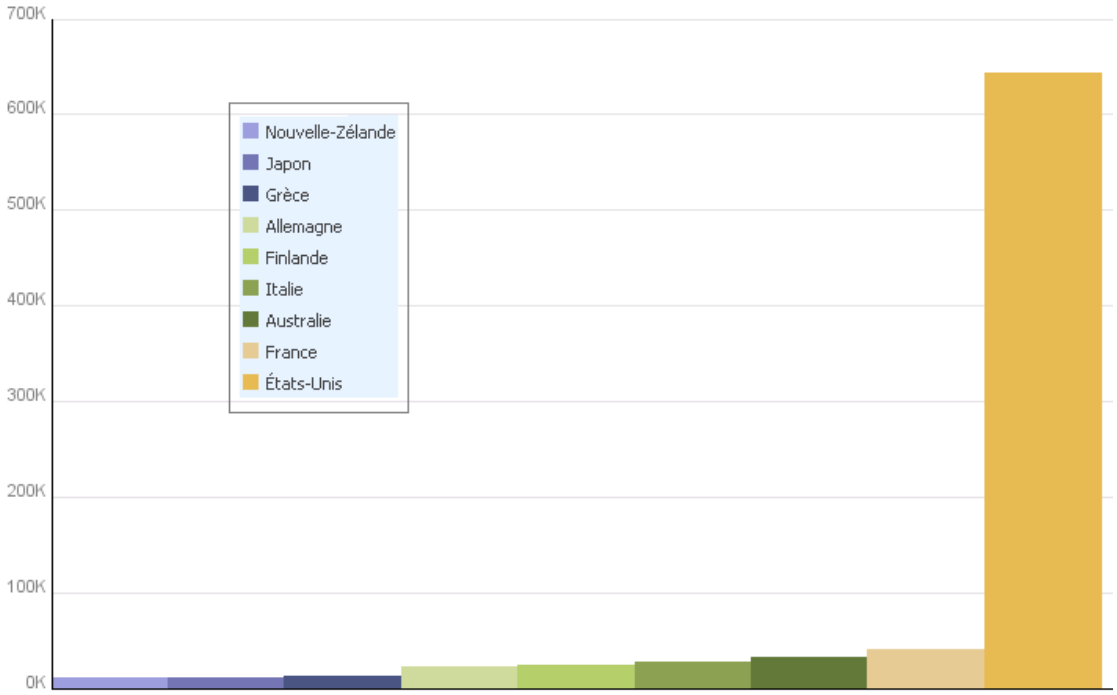
In terms of production, the United States remains the worldwide leader, producing a total of approximately 650,000 units per year (almost equal to the total boat fleet in Italy), i.e. 4% of the total national boat fleet. Italy, Australia, Germany and Japan all share the same annual production coefficient in relation to their national boat fleets. On the other hand, in 2008, France and Greece achieved a production rate of approximately 8% of their total boat fleets. This comes as a result of the implementation of supportive measures aimed at the overhaul of the fleet or industry growth. In the case of France, the strong growth seen in comparison to the average of other countries can be explained by the recent introduction of standards favouring scrapping and the purchase of new boats[14].

Finally, in New Zealand, the percentage of production is only 2% of the national fleet. It should be noted that New Zealand is one of the countries with the highest number of boats per 1,000 inhabitants.

The data presented underlines a certain degree of industry uniformity on a global level. There seems to be a kind of consistent annual demand that makes it possible to reliably predict the rate of renovation of the boat fleet.

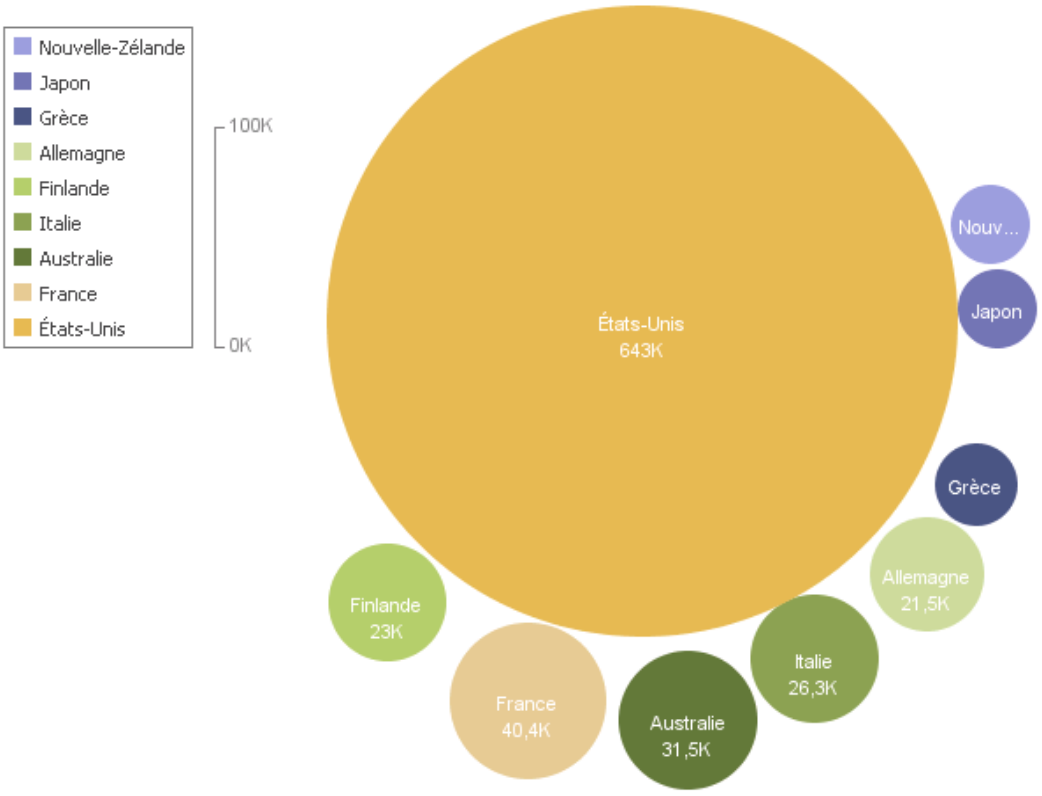
[14] Monitoring of boat dismantling procedures by an association for environmentally responsible recreational boating (*Association pour la Plaisance Eco-Responsable*), created in February 2009.

Figure 11 – Global boat fleet – Annual production per country (2008)



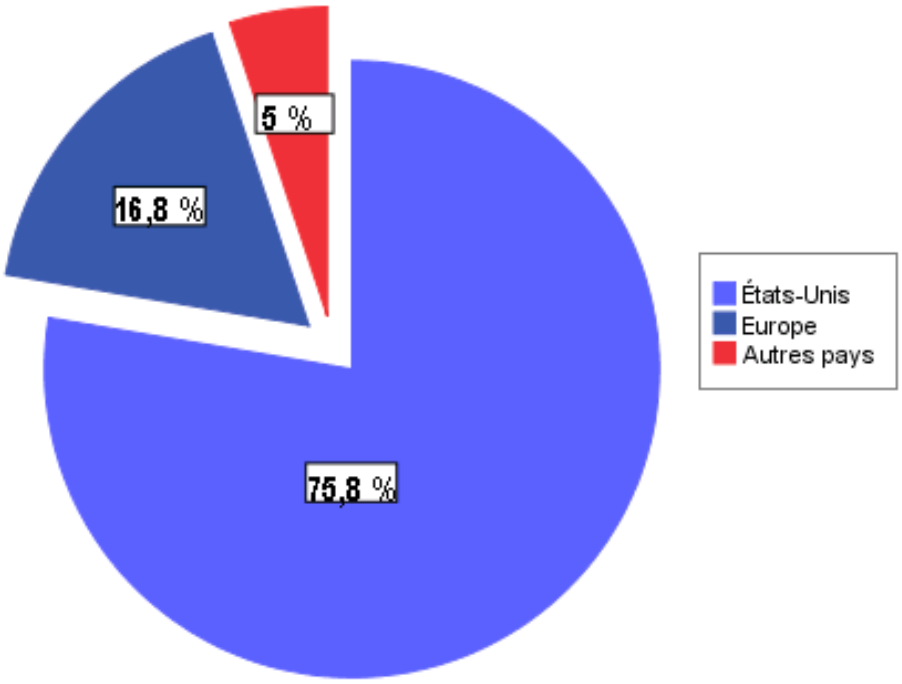
Source: based on ICOMIA data, 2010; IIC, 2010

Figure 12 - Global boat fleet – Annual production per country (2008)



Source: based on ICOMIA data, 2010; IIC, 2010

Figure 13 - Global boat fleet – Distribution of annual production by macro-region (United States, Europe and Other countries) in 2009 (%)



Source: based on ICOMIA data, 2010; IIC, 2010

The global distribution of all production in the industry (all types included) shows the modest performance of Europe compared to the American industry, which has been the world leader for decades.

3. Super yachts segment

International recreational marine operators specialised in large yachts began conducting a statistical analysis of their sector more than a decade ago. The large yacht segment is much easier to keep track of now that most countries issue license plates. International reports consider super yachts to be boats that are at least 24 metres long.

The Camper & Nicolson CNI Super Yachting Index estimates that there are 5,400 super yachts worldwide with 440 units produced in 2009, i.e. 8% of the global super yacht fleet, which is double the average in the recreational boating sector as a whole.

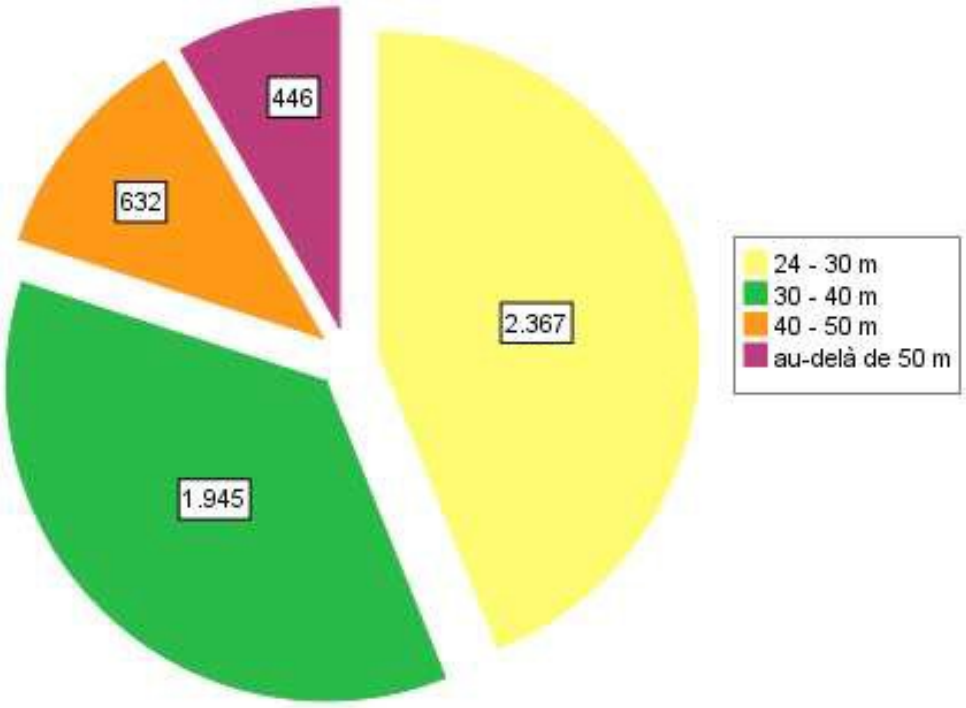
The ratio of motor yachts to sailboats (80/20) remains consistent, even for the months ahead (late 2010 – early 2011), both for orders and deliveries.

The average size of the fleet is approximately 34 metres. According to experts, this figure is on the rise considering that between 2007 and 2009, deliveries of 70 metre or more yachts increased by 57%. In 2009, 8 super yachts of more than 70 metres were delivered. The latest estimates of "The Yacht Report" predict that 25 new units of more than 70 metres will be delivered by 2012-2013.

Analysts in the industry confirm that upper segment of super yacht production suffered less from the economic crisis, at least until this report was written.

The following pie chart shows the distribution of the global super yacht fleet by size.

Figure 14 - Super yachts - Global fleet – distribution by size (June 2010)

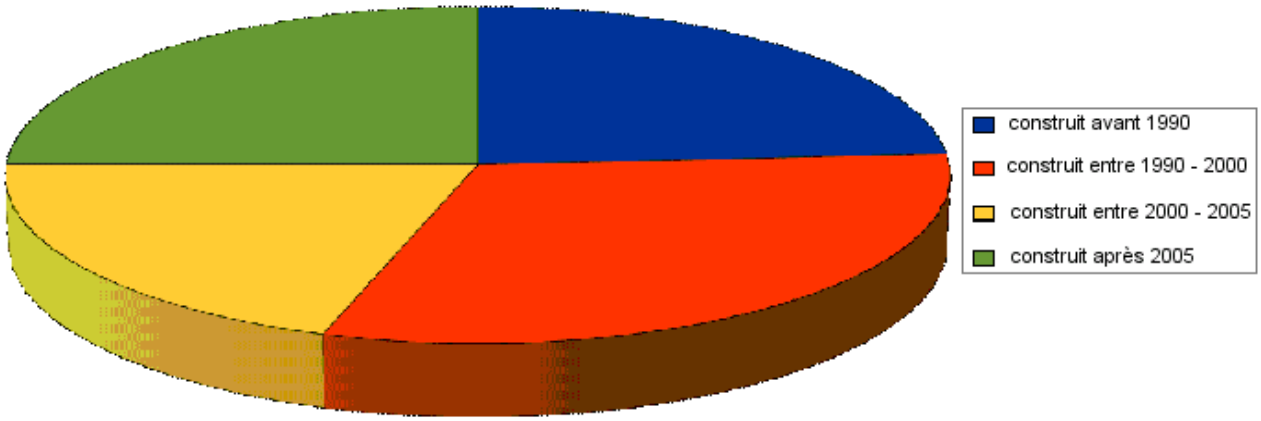


Source: Superyacht Intelligence, 2010

Interesting information can be drawn from an analysis of the age of the fleet. Approximately 55% of all super yachts of 24 metres or more were built after the year 2000. The fleet is therefore very modern. Only 24% of the fleet was built before 1990 and 31% was delivered between 1990 and 2000.

The fleet therefore more than doubled in numbers (+120%) between 1990 and 2000 and practically doubled again during the 2000-2010 period, even during a period of crisis.

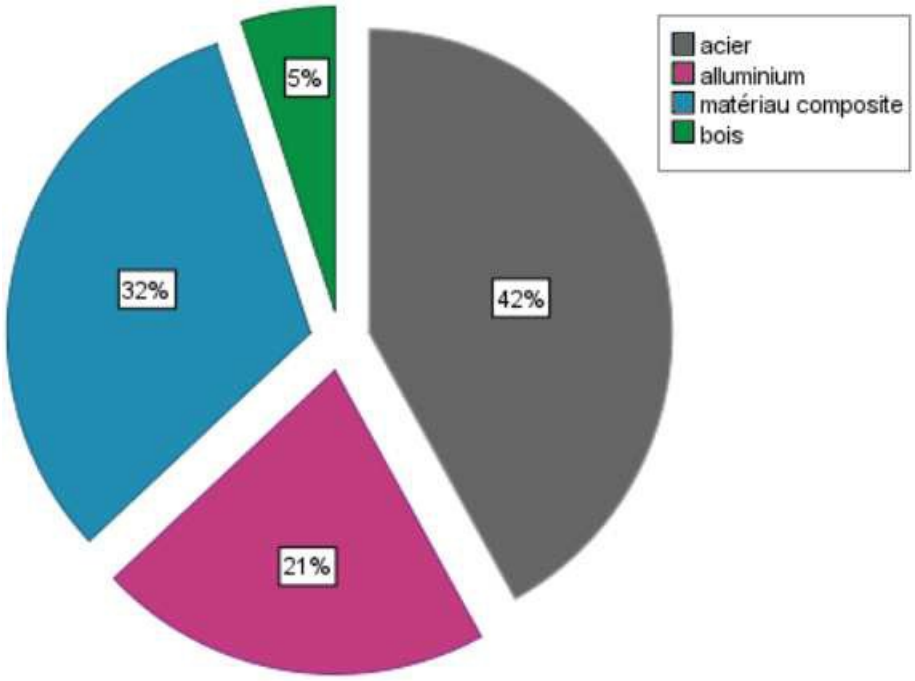
Figure 15 - Super yachts - Age of the global fleet



Source: Superyacht Intelligence, 2010

While it is relatively easy to characterise the global super yacht fleet using existing data, characterising the various construction materials is more complex. The following pie chart is derived from available data concerning the hulls of the global fleet.

Figure 16 - Super yachts – Breakdown of hull construction materials



Source: Superyacht Intelligence, 2010

Construction technologies have undergone significant changes. Up until the late 1950s, hulls were made of wood or steel. A wide range of materials is used today: steel (for the largest yachts), aluminium and composite materials, with the increasing use of carbon fibre, especially for the hulls of competition sailboats.

4. Super yacht manufacturing

There are roughly one hundred manufacturing facilities worldwide in Italy, the United States, the Netherlands and Germany. Commercial shipyards have recently begun to take an increasing interest in the super yacht sector for market reasons (a more thriving and profitable market) or for reasons related to the skills and infrastructures required for building.

The results shown in Table 17 are obtained if a total is made of the dimensions of boats manufactured in each country using the most recent data published by Superyacht Intelligence (2009). They clearly show the levels of know-how and the technical capabilities of each manufacturer on a global scale.

Table 17 – Total length of super yachts (worldwide)

Italy	46,879	32 %
USA	30,143	21 %
Netherlands	25,273	17 %
Germany	12,129	8 %
United Kingdom	9,302	6 %
Turkey	7,870	5 %
France	4,108	3 %
Australia	3,720	3 %
Canada	3,674	3 %
New Zealand	3,223	2 %

Source: Superyacht Intelligence, 2010

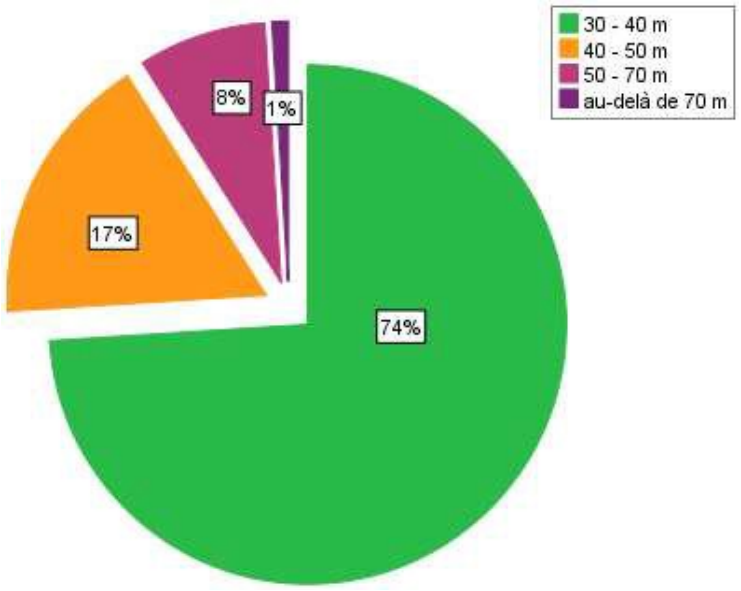
The total length of super yachts in service is more than 146.3 kilometres.

European countries (Turkey included) account for 71% of total global production. Italy is the undeniable leader on the market with an 11 point differential in relation to the second ranked country, the United States. While manufacturing is the prerogative of European countries, 50% of the total fleet navigates in the Mediterranean.

The Italian industry holds approximately 20.5% of the global super yacht manufacturing market. 1,105 yachts out of the 5,400 yachts in the global fleet were built in Italy. In November 2010, 168 yachts were under construction.

In terms of size, 74% of super yachts are between 30 and 40 metres long, 17% are 40 to 50 meters long, 8% are 50 to 70 metres long and 1% are 70 metres or more.

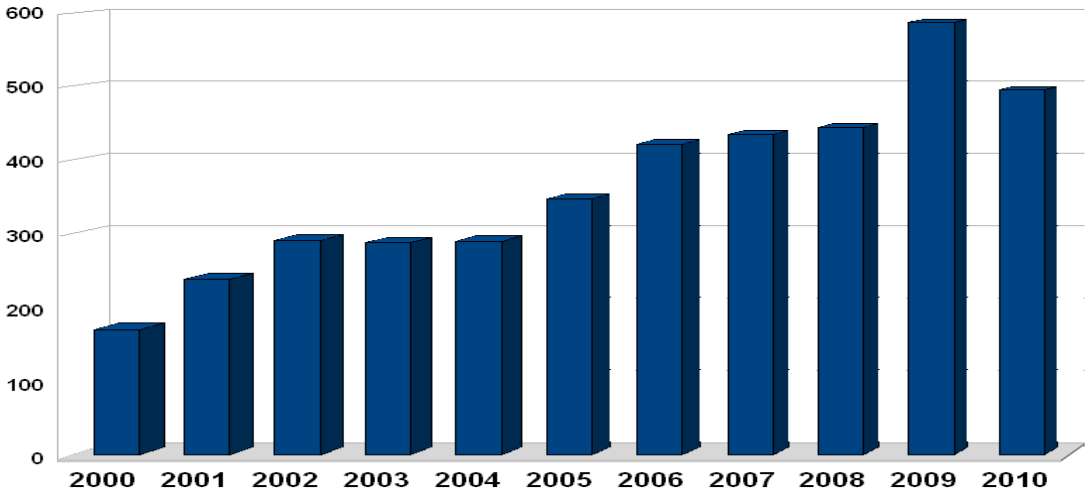
Figure 17 - Super yachts – Size of the global fleet



Source: Superyacht Intelligence, 2010

Over the last decade, there has been remarkable growth in yacht production (note that 2010 data was updated in July 2010).

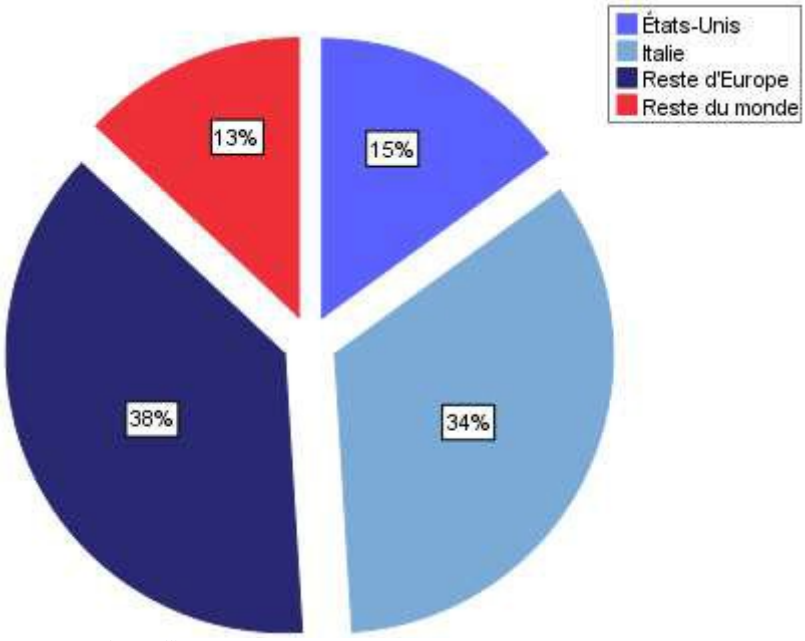
Figure 18 - Super yachts - Production in units since the year 2000



Source: Superyacht Intelligence, 2010

The geographical distribution of the total manufacturing portfolio (by number of projects) indicates 34 % for Italian manufacturers, 38 % for the other European countries (United Kingdom, Netherlands, Germany and France) and only 15% for the United States.

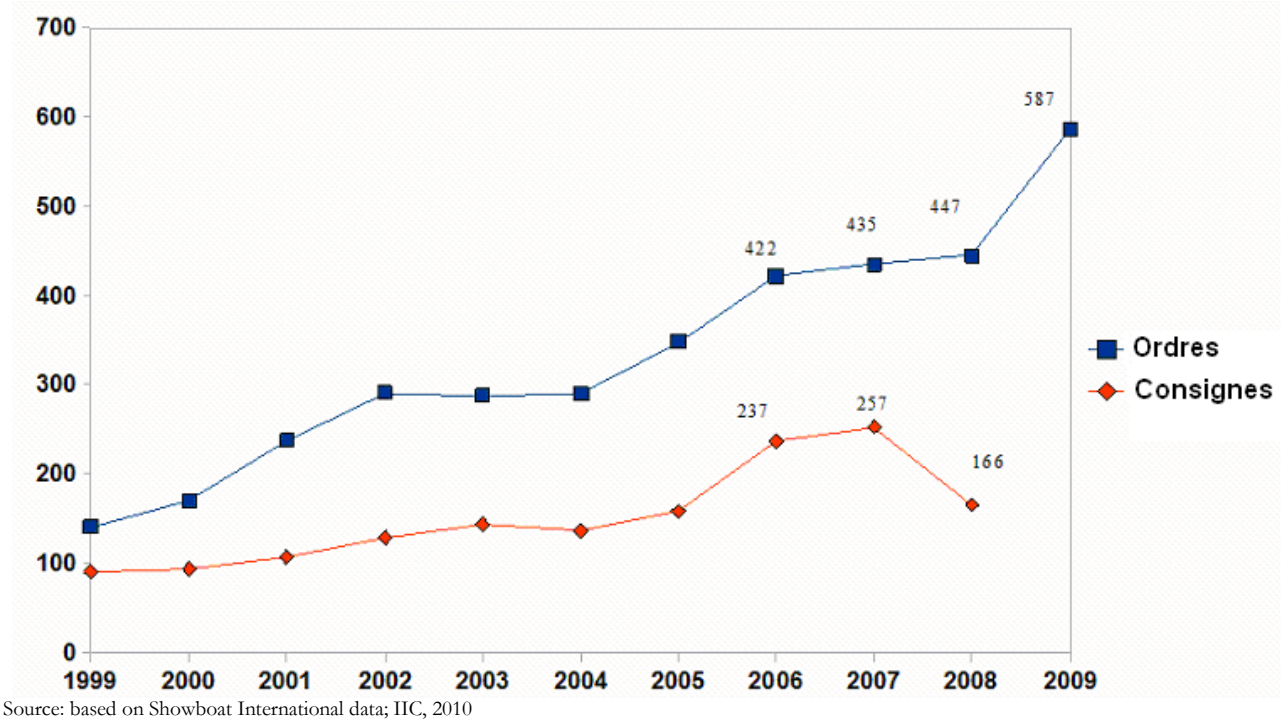
Figure 19 - Super yachts – Geographical distribution of the portfolio for new yachts (United States, Italy, rest of Europe, rest of the world)



Source: Superyacht Intelligence, 2010

Although the current economic crisis has not reduced the number of orders for new boats, it has strongly reduced deliveries; delivery times are longer.

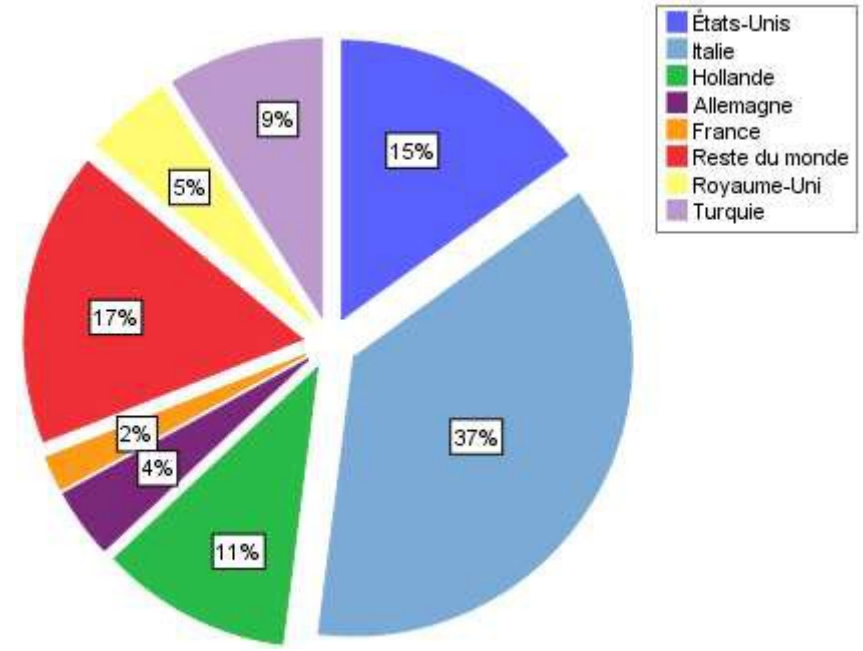
Figure 20 – Change in orders and deliveries of super yachts



Source: based on Showboat International data; IIC, 2010

In terms of the nationality of yacht owners, there is a strong showing of Europeans. Italy leads the way as a yacht manufacturing country as well as with owners of super yachts (Italian demand seems to be higher than the countries production capability).

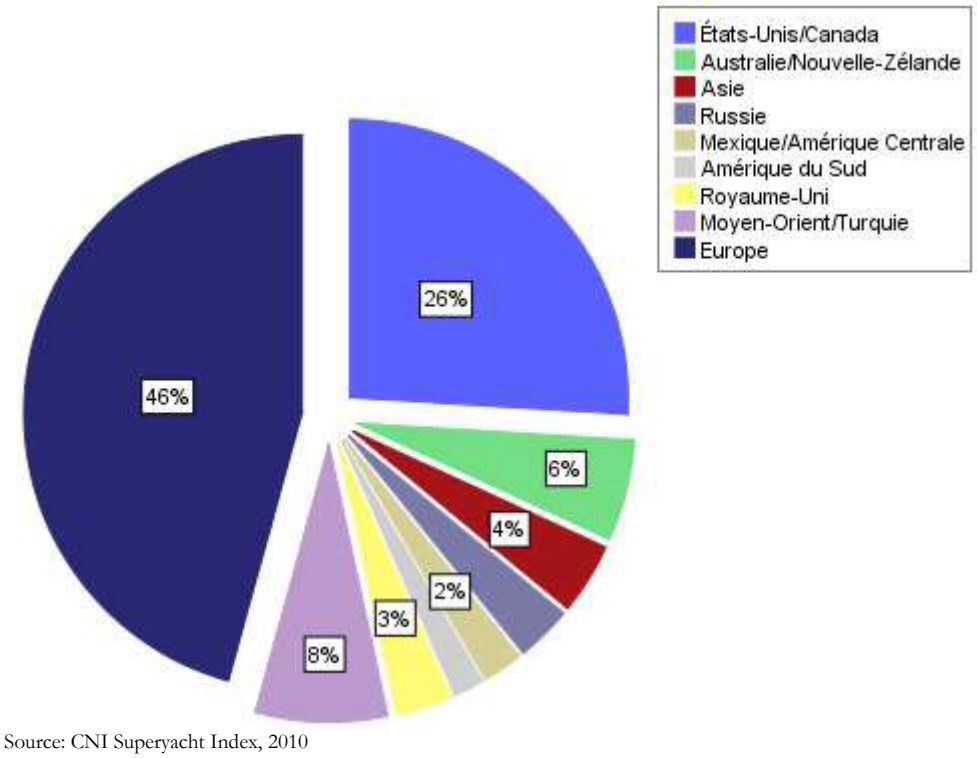
Figure 21 - Super yachts – Distribution of the portfolio for new orders 2010/2011 (by number of projects)



Source: Showboat International, 2010

This data explains why weather conditions are not the only reason the Mediterranean (Tyrrhenian Sea in particular) concentrates 50% of super yachts.

Figure 22 - Super yachts – nationality of yacht owners



Source: CNI Superyacht Index, 2010

5. Refit & repair: a booming sub-sector

The refit & repair sector has seen outstanding growth that should continue for at least the next ten years. Industry experts predict that 800 new super yachts of more than 24 metres should join the global fleet over the next three year (the economic crisis seems to have less impact on this rich niche market). In addition to the standard maintenance activity of the existing fleet, refitting and repair work will contribute significantly to the sector.

Classification societies (Lloy'd Register, American Bureau of Shipping, RINA, Bureau Veritas, Det Noske Veritas and others) include dry dock (therefore dry) inspections of the hull every five years in their regulations. In general, boats require hull cleaning treatment every 2 years.

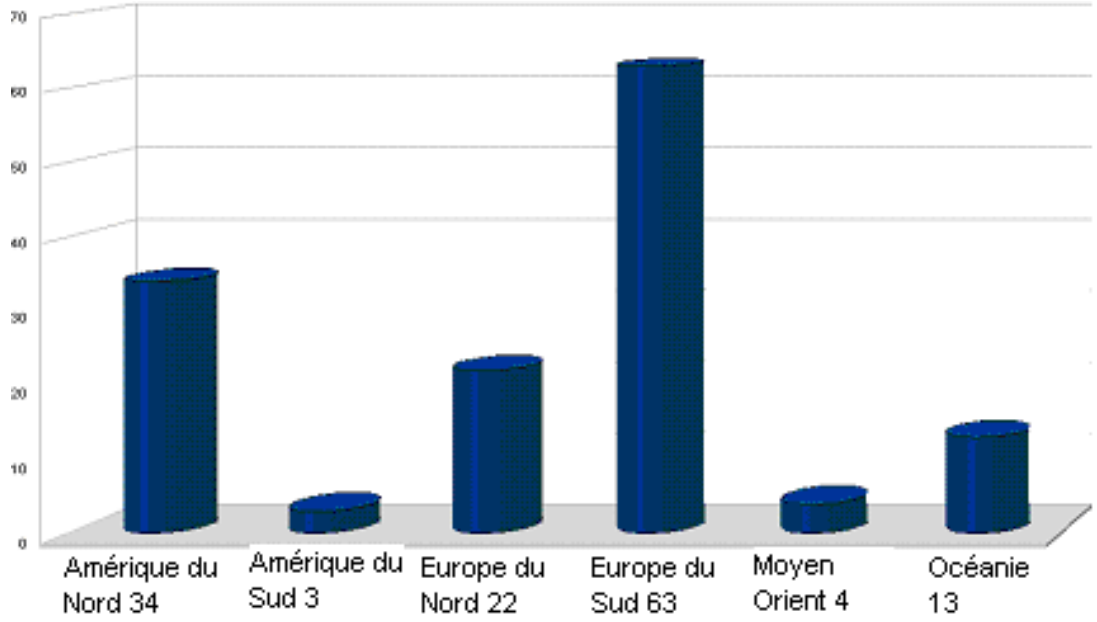
Ownership changes will also create jobs in shipyards as boats require technical and restyling work in most cases.

Camper & Nicolson International announced 315 changes in ownership in 2007, 25% of which were for yachts of more than 40 metres.

The current market situation should therefore push owners to invest in maintenance rather than the construction of new ships.

A large number of shipyards in Southern Europe work in the refit and repair industry. They alone represent 45% of shipyards of this type worldwide and 61% in Europe.

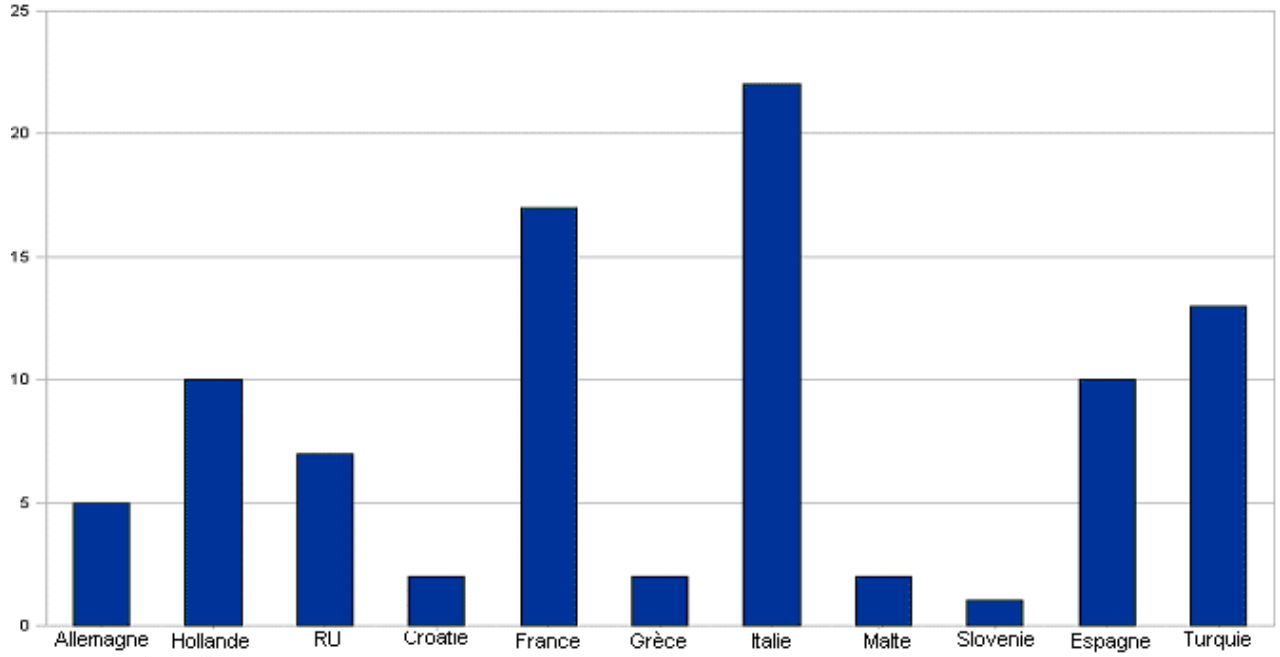
Figure 23 – Shipyards specialised in super yacht refitting and repair activities



Source: Superyacht Intelligence, 2010

Italy and France, followed by Turkey and Spain share the market. However a new phenomenon has emerged in the sector: some Italian shipyards, for instance, have purchased shipyards in other Mediterranean countries and even in France in order to meet demand.

Figure 24 - Super yachts – Operational shipyards in Southern European countries

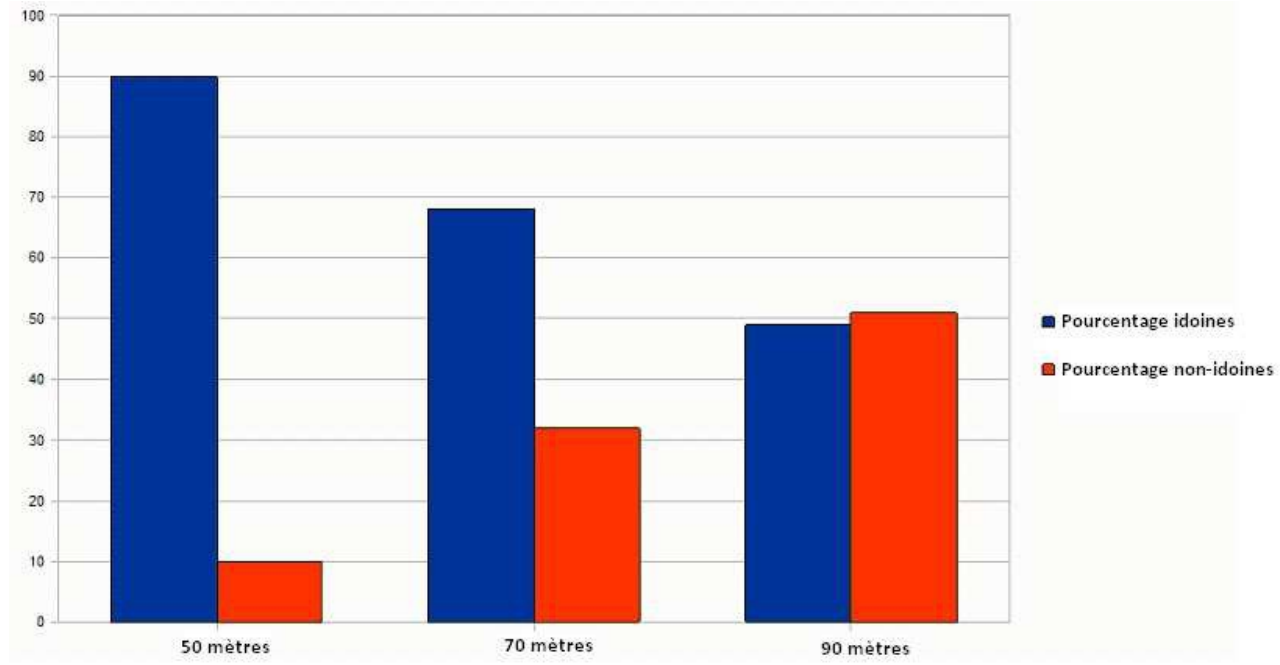


Source: Superyacht Intelligence, 2010

It is estimated that 57% of these businesses are boat manufacturers who also do maintenance. A significant portion of the sector (43% overall) is therefore dedicated exclusively to refit and repair activities.

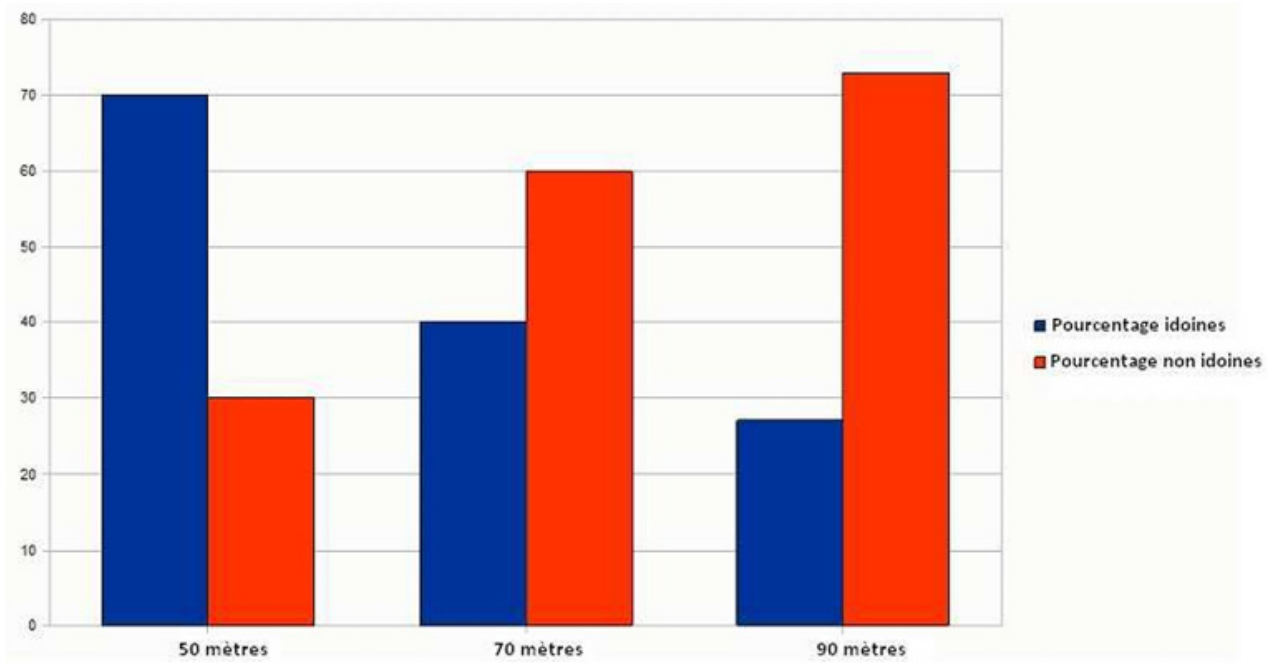
Nearly 91% of shipyards have all the logistical and technical characteristics required to work on super yachts of up to 50 metres (i.e. 85 % of the global fleet). For boats over 50 metres, waiting lists can be long due to issues of non-conformity at shipyards. Therefore the availability of suitable spaces, the capability of performing paint and finish work on large boats and the presence of covered spaces are essential aspects and deciding factors in terms of competitiveness.

Figure 25 – Number of shipyards capable of offering covered facilities for super yachts



Source: Superyacht Intelligence, 2010

Figure 26 – Number of shipyards able to apply paint/varnish according to boat dimensions



Source: Superyacht Intelligence, 2010

Super Yacht Intelligence expects that at least €100 million will be invested in infrastructures and logistics by the leading shipyards on the market (i.e. those located in Spain, France and Italy). Some activities are also planned for certain shipyards in Croatia, Montenegro and Turkey.

Sales in the Italian refit and repair market are estimated at nearly €400 million per year, for a European total of at least €2 billion.

6. Super yacht chartering

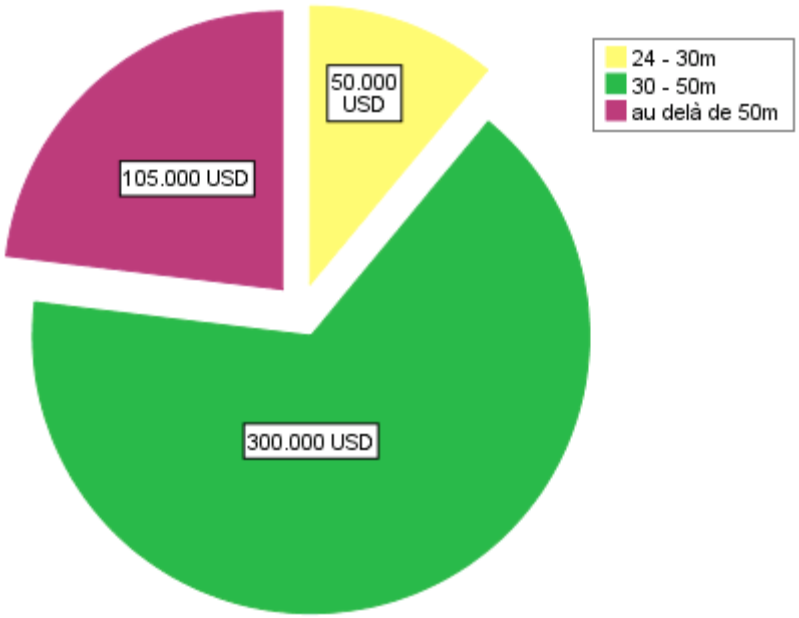
Almost all super yachts have privately owned status and 20% of the total fleet is used for chartering activities. The main reason owners charter their yachts is to reduce management costs and recover part of their investment.

It is estimated that approximately 1,000 of more than 24 metres are dedicated to chartering. These yachts are managed by roughly a hundred brokerage and chartering companies. Market concentration of the top 18 companies in the sector is approximately 70% for roughly a hundred companies sharing the market. 70% of the charter fleet are 24 to 50 metres in length with the average being 40 metres. One out of four boats are engine propelled and three out of four are sailboats.

Approximately 74% of contracts are in the Mediterranean, with 60% being in the Tyrrhenian Sea region. The combination of Caribbean/winter, Mediterranean/summer is still popular but is not as systematic as in the past (See paragraph "Economic and social impacts").

The average total cost per week was $125,000 in 2007. Sales from charter activities are estimated at approximately $1.5 billion per year.

Figure 27 - Super yachts – Average cost for one-week charter on a super yacht according to size



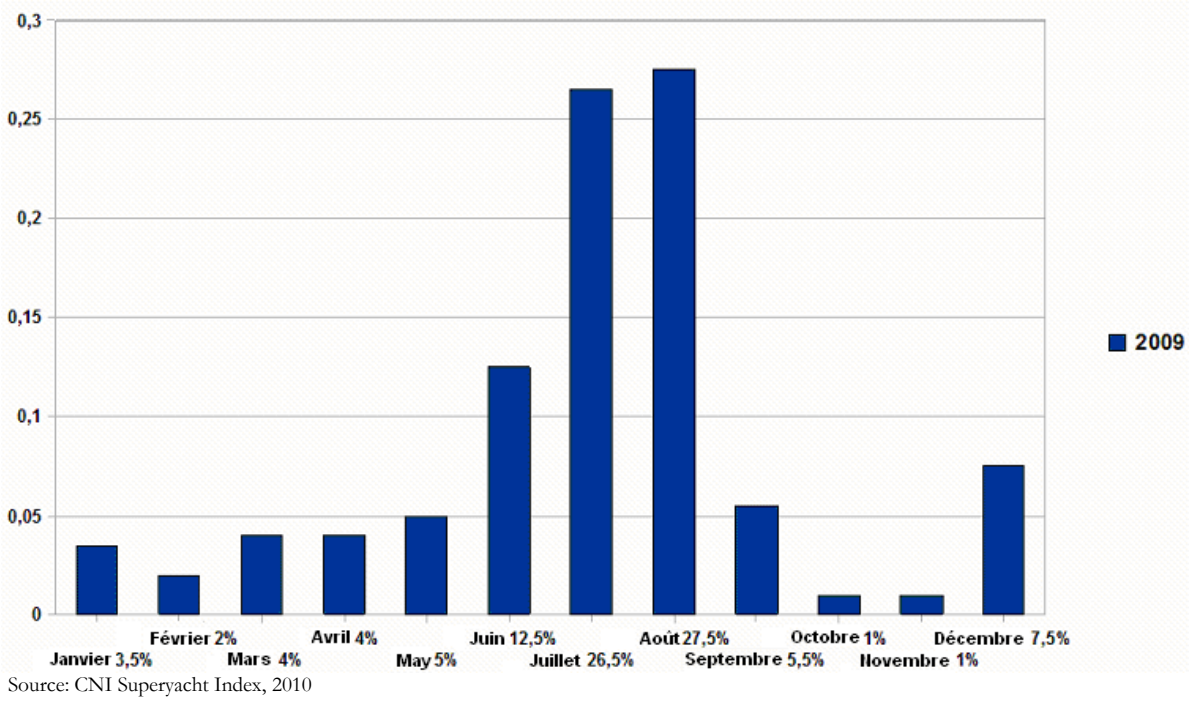
Source: CNI Superyacht Index, 2010

7. Charter destinations

70% of charter contracts worldwide are for the Mediterranean (56% for the Western Mediterranean).

On average, super yachts are available 30 weeks per year for charter activities. A yacht's profit objectives can be met by putting it on the market with the best international brokerage and charter operators for twelve weeks a year, even though demand remains highly concentrated in the summer months of July and August. This results in a supply shortage in the summer and a supply surplus during the rest of the year. Charter contracts are on average for a period of 9 days. For sailboats, this period is generally longer than 10 days.

Figure 28 – Annual distribution of the charter sector for super yachts

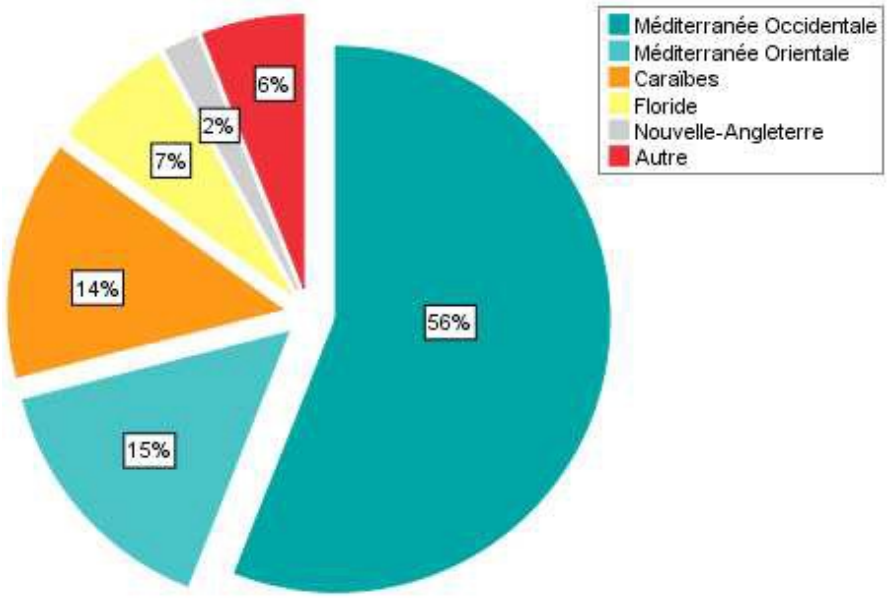


Source: CNI Superyacht Index, 2010

Attempts have been made to extend the season by combining chartering with cultural or commercial events such as the Cannes Film Festival, the Monaco Formula 1 Grand Prix, etc.

Several major Mediterranean cities (Valencia, Barcelona, Genoa) have equipped older sections of their old ports by converting them into marinas or technical docks to develop a new type of tourism based on discovering large cities when arriving by boat. Another example is the recent construction of a marina specifically for yachts located less than 500 metres from the Genoa airport. These actions create an important source of economic revenue for local economies.

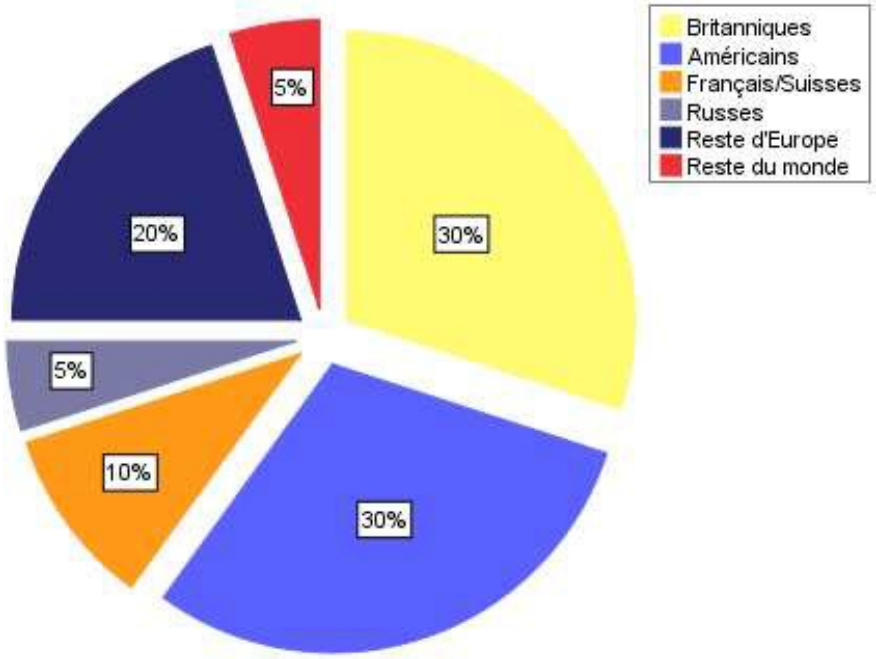
Figure 29 - Super yachts – Navigation areas of super yachts



Source: CNI Superyacht Index, 2010

The clientele is very international with a large number of American and British nationals.

Figure 30 - Super yacht – Nationalities of charter customers



Source: CNI Superyacht Index, 2010

8. The rest of the recreational boat fleet in the Mediterranean

The rest of the recreational boat fleet makes up the majority of the fleet. As opposed to the super yacht industry where exact numbers are known, it is difficult to obtain reliable and direct information. The IIC therefore launched an empirical evaluation of the number of boats at sea and at berth along the Mediterranean coast based on satellite observation (where possible) using satellite images from 2007. The order of magnitude is approximately 1.5 million boats.

Figure 31 – Subject of observation: the Mediterranean basin

Source: Google Earth

9. Economic and social impacts

Super yachts in the Mediterranean basin are important to local economies. Super Yacht Intelligence evaluations state that 50% of the global fleet spends 8 months out of 12 in Mediterranean waters. The same report also underlines that 76% of yachts tend to stay in Europe rather than be transferred to the Caribbean for the winter as a consequence of the current economic crisis. In addition to creating savings on fuel and avoiding crew costs when crossing the Atlantic, boats remain more easily available to the owner.

The super yacht market has various repercussions on the economies of countries bordering the Mediterranean[15].

Firstly, crews are an essential component, especially for charter yachts. While the weeks when boats are used are concentrated into a season, even though crews may change with the seasons or according to the demands of owners or customers, they remain in service year-round in order to maintain yachts and ensure that they are ready to sail on short notice if necessary.

The maintenance and repair sector has also consolidated and seen strong growth with super yachts. This phenomenon has allowed some private shipyards to remain in activity by converting their business to adapt to the super yacht niche. Although few shipyards are affected, the financial benefits are considerable given the size of contracts.

[15] For instance, super yachts sojourned in Italian ports for a total of 6,200 stopovers in 2009, staying 3 days on average.

Of the 5,400 super yachts in operation worldwide, roughly 4,100 remain in the Mediterranean for most of the year and generate roughly 4 billion per year in revenue. If the cost of a super yacht is evaluated at €10 million, SuperYacht Intelligence and UCINA data estimates revenue to be €1 million per year and per yacht (i.e. 10% of the cost of construction of each yacht). 20% corresponds to operational costs (insurance, light maintenance, fuel, crews and crew expenses), and 80% to revenue for local economies.

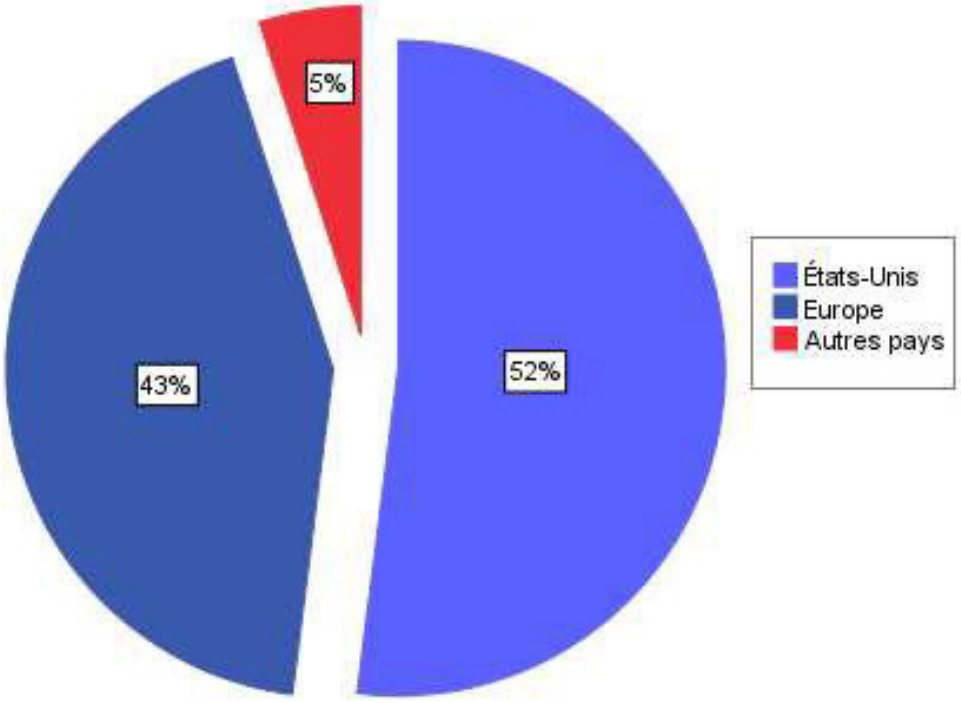
The super yacht industry in the Mediterranean therefore generates roughly €4 billion, including €800 million in operational costs and €3.2 billion in revenue for the economies of Mediterranean coastal countries (mainly Italy, France and Spain).

Finally, the recreational boating industry generally creates one job for every four berths used in ports (source: CENSIS report, Italy). Evaluating the impacts in terms of employment from recreational boating in the Mediterranean remains difficult and was not developed for this study. However, based on approximately 600,000 berths in Mediterranean ports, 150,000 jobs could be tied to the recreational boating industry in coastal countries.

10. Recreational boating infrastructures

On a worldwide level, Europe has the most marinas although the boat fleet is smaller than in other regions of the world. In the Mediterranean in particular, the study found 946 marinas in activity (up 6% from 890 marinas recorded in 2008) including 806 (755 in 2008) in Southern Europe and 140 (135 in 2008) on the coasts of North African Mediterranean countries, the Middle East and Turkey.

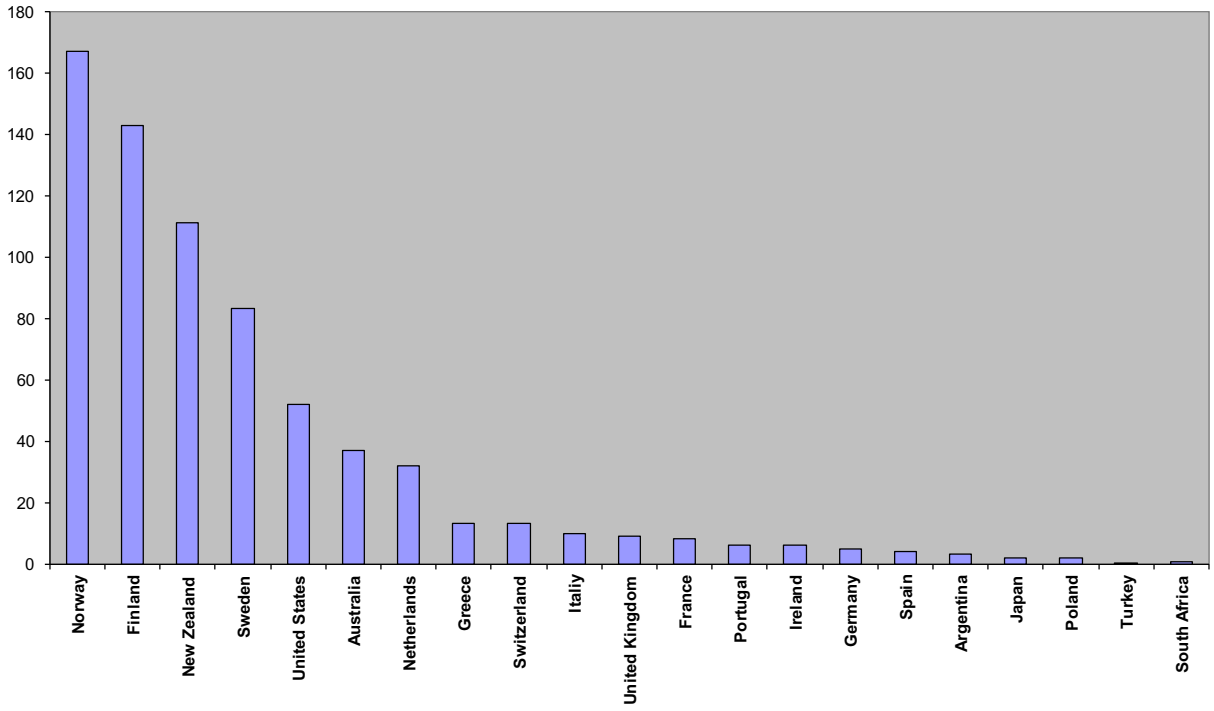
Figure 32 – Number of recreational boating infrastructures by macro-region (United States, Europe, Other countries)



Source: ICOMIA, 2010

If the density of boats per kilometre of coastline is taken into consideration, the United States has 79,000 boats on average per 100km of coastline, compared to 8,000 in Italy and 10,000 in France. Based on available data (2007), the number of recreational boats per 1,000 inhabitants is highest in Scandinavian countries, well ahead of the United States, Australia, the Netherlands, and Greece, which have a well-developed maritime tradition.

Figure 33 - Global boat fleet, recreational boats per 1,000 inhabitants by country, 2007

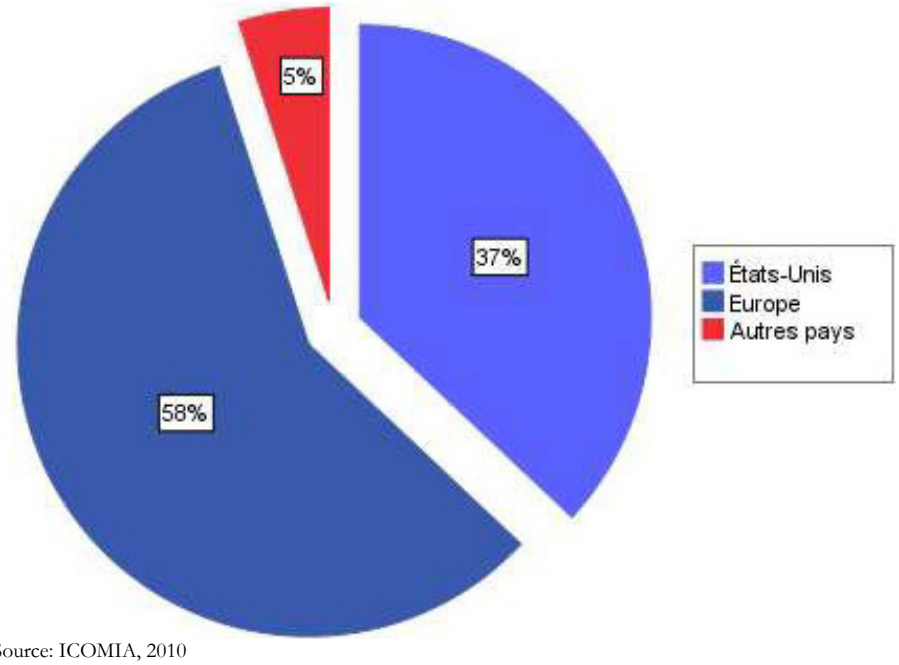


Source: ICOMIA, 2010

The United States has the greatest number of marinas (approximately 11,000) and roughly 800,000 berths. Europe has 9,000 marinas (including 946 in the Mediterranean) and more than 1.2 million berths.

Europe therefore accounts for 43% of infrastructures (52% in the United States) and 58% of berths (37% in the United States). The United States has fewer marinas and many more boats in dry storage and moored in canals, rivers and other unorganised mooring points.

Figure 34 – Number of boat slips by macro-region (United States, Europe and Other countries)

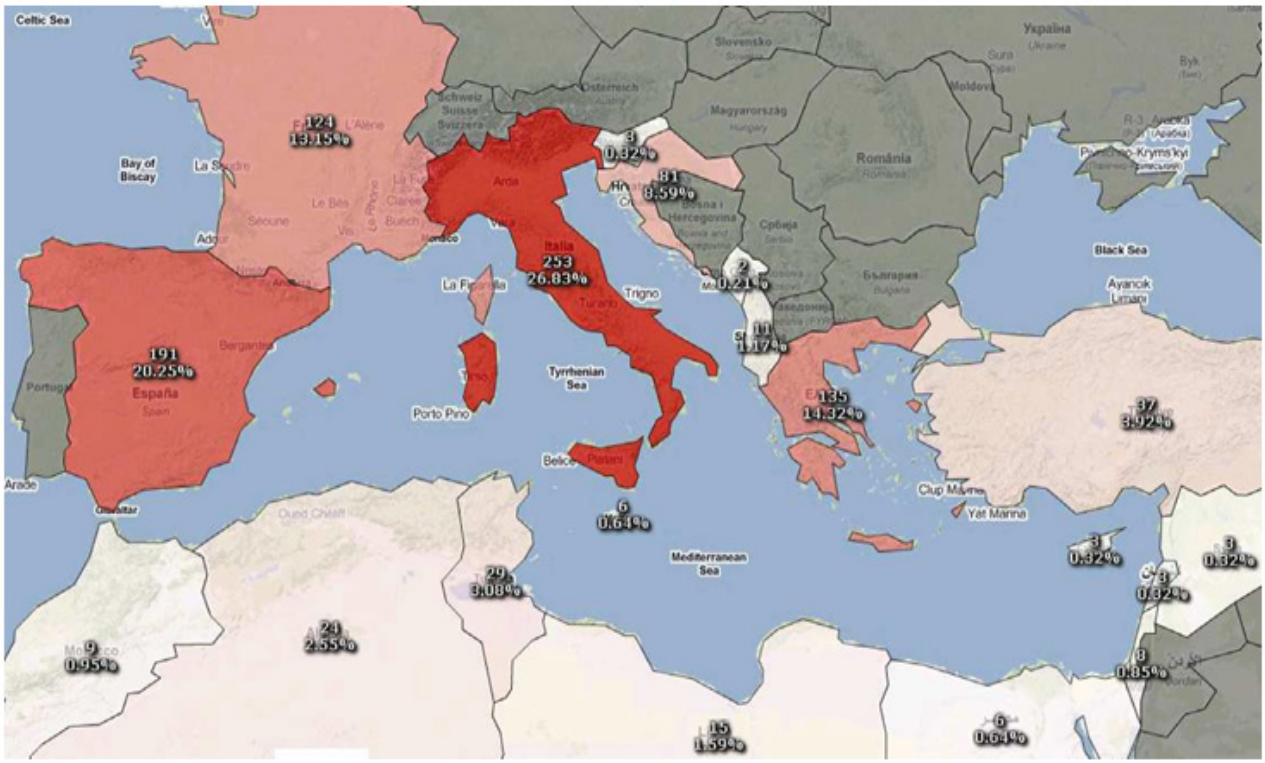


Source: ICOMIA, 2010

11. The situation of marinas in the Mediterranean (updated from IIC 2008 study)

This study uses the inventory already conducted by the IIC in 2008 of all marinas in the Mediterranean. In 2010, available data concerning marinas in the Mediterranean was analysed to identify 946 marinas in activity, geographically distributed as follows: 11 in Albania, 24 in Algeria, 3 on Cyprus, 81 in Croatia, 6 in Egypt, 191 in Spain (177 en 2008), 124 in France (117 in 2008), 3 in Gibraltar, 135 in Greece, 8 in Israel, 253 in Italy (233 in 2008), 3 in Lebanon, 15 in Libya, 6 on Malta, 9 in Morocco, 2 in Montenegro, 3 in Slovenia, 3 in Syria, 29 in Tunisia and 37 in Turkey (30 en 2008).

Figure 35 - Distribution of marinas in the Mediterranean



Source: IIC, 2010

Analysis shows that the services most often available at each marina include drinking water (90%) and electricity (76%), nearby bars and restaurants (75 %) and shopping centres (large or small, 70%). The tables below detail the full framework of results of the survey taken during the fourth quarter of 2010 by the IIC.

Waste, sewage/wastewater and ballast water collection services have not improved since the 2008 survey (see Table 18 and 19).

Table 18 - Services available in Mediterranean marinas

Country	Bank	Drinking water	Bar/Restaurant	WIFI	Electricity	Service station	Market	Wintering	Laundry facilities
	Data unavailable: 28 YES: 182 NO: 736	Data unavailable: 28 YES: 849 NO: 69	Data unavailable: 28 YES: 709 NO: 209	Data unavailable: 28 YES: 71 NO: 847	Data unavailable: 28 YES: 715 NO: 203	Data unavailable: 28 YES: 212 NO: 706	Data unavailable: 28 YES: 627 NO: 291	Data unavailable:28 YES: 52 NO: 866	Data unavailable: 28 YES: 203 NO: 715
	182; 19.2%	849; 89.74%	661; 74.95%	71; 7.50%	715; 75.58%	212; 22.41%	627; 69.27%	52; 5.49%	203; 21.46%
ALBANIA	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable
ALGERIA	0; 0%	2; 8.33%	3; 12.5%	0; 0%	0; 0%	0; 0%	3; 12.5%	0; 0%	0; 0%
CYPRUS todo	0; 0%	3; 100%	3; 100%	1; 33.33%	2; 66.66%	1; 33.33%	3; 100%	0; 0%	0; 0%
CROATIA	4; 4.93%	58; 71.60%	54; 66.66%	4; 4.94%	55; 67.90%	22; 27.16%	55; 67.90%	0; 0%	30; 37.03%
EGYPT	1; 16.6%	5; 83.33%	5; 83.33%	3; 50%	5; 83.33%	2; 33.33%	4; 66.66%	2;33.33%	2; 33.33%
SPAIN	55; 28.79%	188; 98.42%	161; 84.29%	19; 9.94%	184; 96.33%	61; 31.94%	126; 65.96%	13; 6.80%	71; 37.17%
FRANCE	10; 8.06%	123; 99%	106; 85.48%	12; 9.67%	119; 95.97%	33; 26.21%	91; 73.38%	3; 2.42%	20; 16.13%
GIBRALTAR	1; 33.33%	3; 100%	2; 66.66%	1; 33.33%	3; 100%	0; 0%	3; 100%	0; 0%	0;0%
GREECE	55; 40.74%	127; 94.07%	114; 84.44%	5; 3.70%	38; 28.14%	9; 6.66%	119; 88.15%	5; 3.70%	14; 10.37%
ISRAEL	1; 12.5%	8; 100%	4; 50%	1; 12.5%	6; 75%	1; 12.5%	6; 75%	0; 0%	1; 12.5%
ITALY	46; 18.18%	251; 99.2%	182; 71.93%	11; 4.38%	225; 88.93%	50; 19.76 %	153; 60.47%	19; 7.51%	55; 21.73%
LEBANON	0; 0%	2; 66.66%	3; 100%	0; 0%	2; 66.66%	0; 0%	2; 66.66%	0; 0%	0; 0%
LYBIA	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable
MALTA/Gozo	0; 0%	6; 100%	5; 83.33%	0; 0%	6; 100%	4; 66.66%	5; 83.33%	0; 0%	1; 16.66%
MOROCCO	0; 0%	5; 55.55%	4; 44.44%	0; 0%	5; 55.55%	2; 22.22%	2; 22.22%	2; 22.22%	0; 0%
MONTENEGRO	0; 0%	2; 100%	1. 50%	1; 50%	2; 100%	1; 50%	1. 50%	1. 50%	1. 50%
SLOVENIA	0; 0%	3; 100%	3; 100%	0; 0%	3; 100%	0; 0%	2; 66.66%	0; 0%	0; 0%
SYRIA	0; 0%	3; 100%	2; 66.66%	0; 0%	1; 33.33%	0; 0%	3; 100%	0; 0%	0; 0%
TUNISIA	3; 10.34%	26; 86.65%	23; 79.31%	0; 0%	25; 86.21%	17. 58.62%	21;72.41%	6. 20.69%	4; 13.79%
TURKEY	7; 18.91%	34; 91.89%	34; 91.89%	13; 35.13%	34; 91.89%	9; 24.32%	28; 75.67%	1; 2.70%	4; 10.81%

Source: IIC, 2010

Table 19 - Services available in Mediterranean marinas

Number of ports	Country	Medical service	Pharmacy	Wastewater collection	Bilge water collection	Residue collection	Workshop	Weather info.	Surveillance	Quality Certification
		Data unavailable:28 YES:110 NO:808	Data unavailable: 28 YES:49 NO:869	Data unavailable: 28 YES:97 NO:821	Data unavailable:28 YES: 122 NO:796	Data unavailable:28 YES:146 NO:772	Data unavailable: 28 YES:530 NO:388	Data unavailable:28 YES:324 NO:594	Data unavailable:28 YES: 223 NO:695	Data unavailable: 28 YES:41 NO:877
		110; 11.62%	49; 5.17%	97; 10.25%	112; 12.89%	146; 15.43%	530; 56.02%	324; 34.25%	223; 23.57%	41; 4.33%
11	ALBANIA	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable
24	ALGERIA	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%
3	CYPRUS todo	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	2; 66.66%	0; 0%	1; 33.33%	0; 0%
81	CROATIA	3; 3.70%	1; 1.23%	2; 2.47%	0; 0%	2; 2.47%	39; 48.15%	43; 53.00%	10; 12.34%	14; 17.28%
6	EGYPT	2; 33.33%	1; 16.66%	3; 50%	3; 50%	3; 50%	4; 66.66%	2; 33.33%	3; 50%	1; 16.66%
191	SPAIN	54; 28.27%	4; 2.09%	15; 7.85%	25; 13.08%	47; 24.60%	141; 73.82%	114; 59.68%	91; 47.64%	9; 4.71%
124	FRANCE	10; 8.06%	2; 1.61%	10; 8.06%	15; 12.09%	17; 13.70%	72; 58.06%	32; 25.80%	12; 9.67%	8; 6.45%
3	GIBRALTAR	2; 66.66%	0; 0%	0; 0%	0; 0%	0; 0%	1; 33.33%	0; 0%	0; 0%	0; 0%
135	GREECE	10; 7.40%	3; 2.22%	8; 5.92%	10; 7.40%	8; 5.92%	63; 46.66 %	18; 13.33%	12; 8.88%	1; 0.74%
8	ISRAEL	1; 12.5%	0; 0%	0; 0%	1; 12.5%	0; 0%	2; 25%	0; 0%	1; 12.5%	0; 0%
253	ITALY	18; 7.11%	37. 14.62%	56; 22.13%	61; 24.11%	66. 26.08%	158. 62.45%	106; 41.89%	80. 31.62%	7; 2.76%
3	LEBANON	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	1; 33.33%	1; 33.33%	0; 0%	0; 0%
15	LYBIA	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable
6	MALTA/Gozo	0; 0%	0; 0%	2. 33.33%	2. 33.33%	2. 33.33%	3. 50%	0; 0%	2. 33.33%	0; 0%
9	MOROCCO	0; 0%	0; 0%	1; 11.11%	1; 11.11%	1; 11.11%	2; 22.22%	1; 11.11%	2; 22.22%	1; 11.11%
2	MONTENEGRO	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	2; 100%	1. 50%	1. 50%	0; 0%
3	SLOVENIA	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	3; 100%	0; 0%	0; 0%	0; 0%
3	SYRIA	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	1; 33.33%	0; 0%	0; 0%	0; 0%
29	TUNISIA	3; 10.34%	1; 3.49%	0; 0%	1; 3.45%	0; 0%	19; 65.51%	2; 6.89%	0; 0%	0; 0%
37	TURKEY	7; 18.92%	0; 0%	0; 0%	3;8.11%	0; 0%	17; 45.94%	4; 10.81%	8; 21.62%	0; 0%

Source: IIC, 2010

Key for Tables 18 and 19

0% - 15%
16% - 30%
31% - 50%
51% - 70%
71% - 90%
91% - 100%

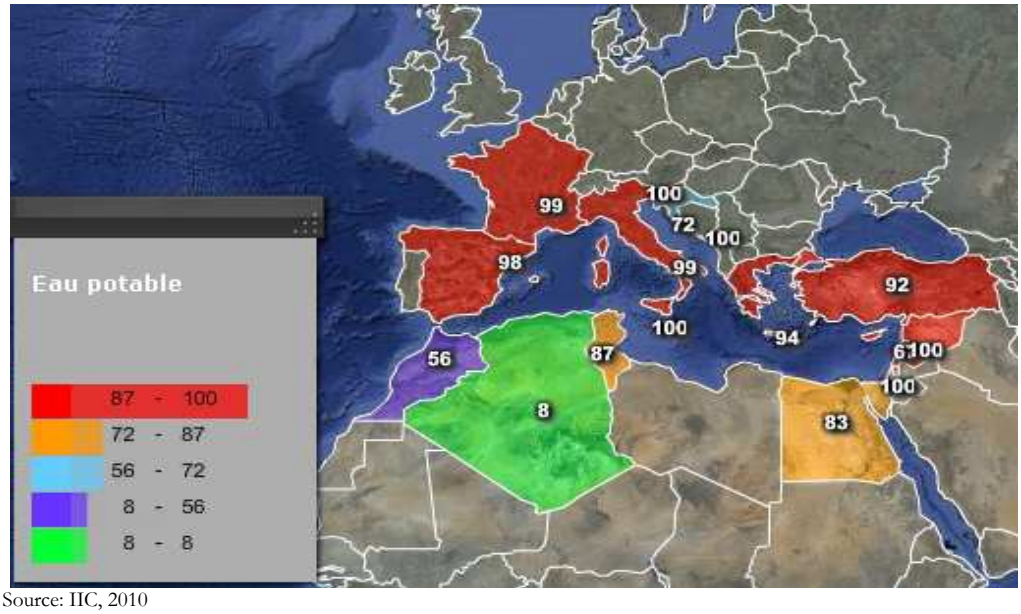
The different colours show the availability of each service identified in percent for the marinas in each coastal country (from light blue, corresponding to low availability, to orange, corresponding to a high level of availability).

12. Detail of services in Mediterranean marinas

Figure 36 - Presence of banks in Mediterranean marinas

Source: IIC, 2010

Figure 37 - Presence of drinking water in Mediterranean marinas

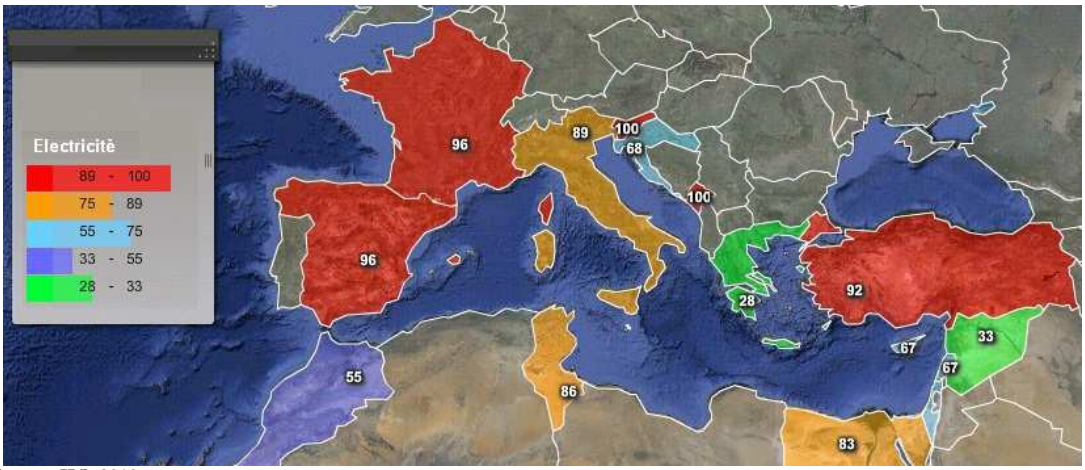


Source: IIC, 2010

Figure 38 - Presence of bars and/or restaurants in Mediterranean marinas

Source: IIC, 2010

Figure 39 – Presence of electricity in Mediterranean marinas

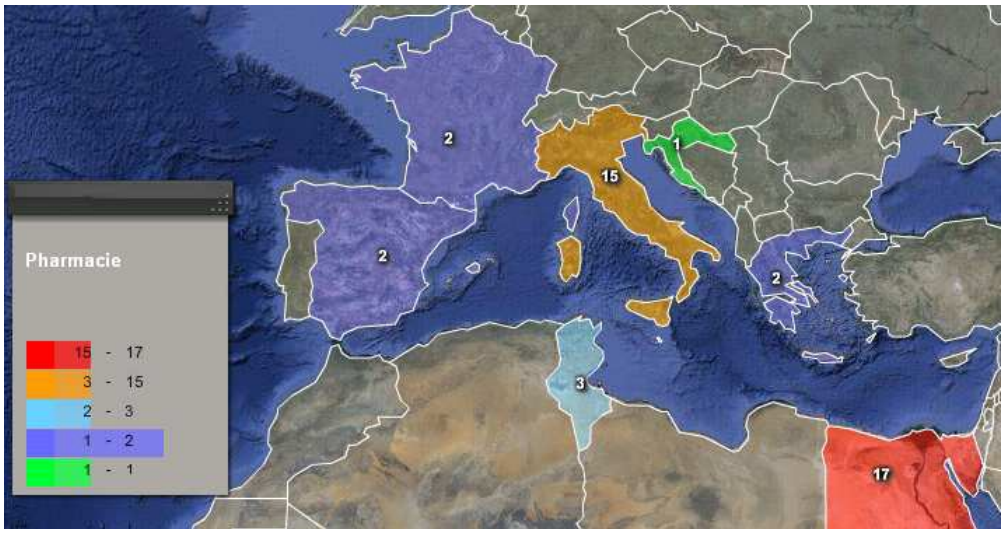


Source: IIC, 2010

Figure 40 – Presence of WIFI in Mediterranean marinas (provided by the marina)

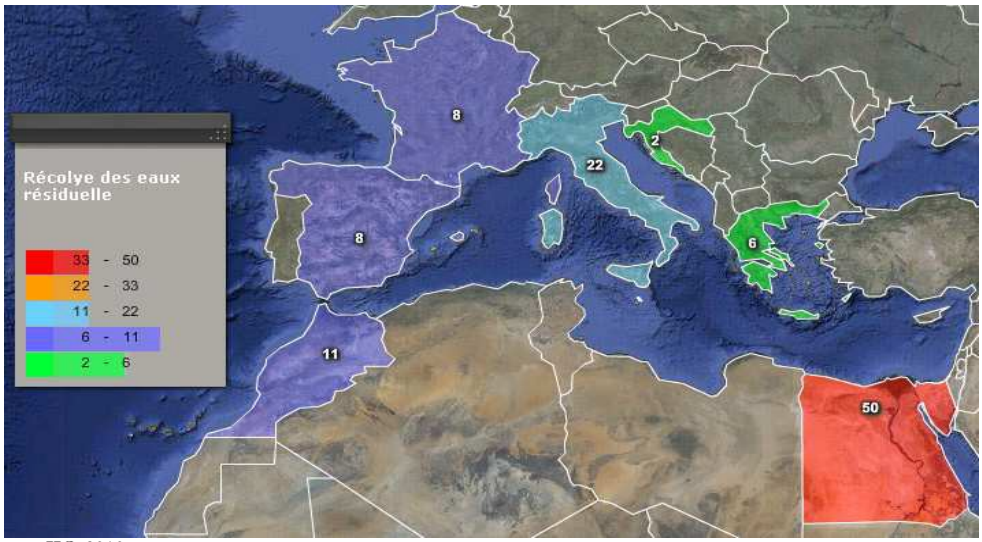
Source: IIC, 2010

Figure 41 – Presence of a pharmacy in Mediterranean marinas



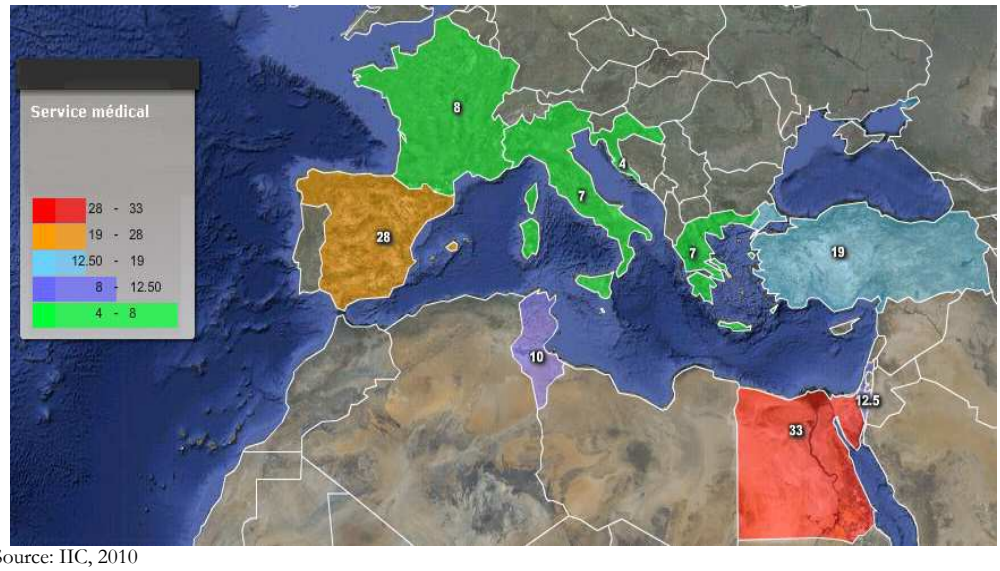
Source: IIC, 2010

Figure 42 – Presence of a sewage/wastewater collection service



Source: IIC, 2010

Figure 43 – Presence of medical service



Source: IIC, 2010

The following tables show the positive (in black) or negative change (in red) in availability of each service identified in Mediterranean marinas from the situation in 2008.

Table 20 – Changes in available services from 2008 to 2010

Country	Bank	Drinking water	Bar/Restaurant	WIFI	Electricity	Service station	Market	Wintering
ALBANIA	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable
ALGERIA	0; 0%	0%	0%	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%
CYPRUS	0; 0%	+25%	0%	-16.67%	-8.34%	+8.33%	+25%	0; 0%
CROATIA	+2.19%	-1%	-0.46%	-2.2%	-1.96%	-0.23%	-1.96%	0; 0%
EGYPT	+16.6%	-0.44%	+8.33%	+50%	+8.33%	+33.33%	+16.66%	+8.33%
SPAIN	-1.49%	-1%	-0.85%	-0.34%	-0.81%	-0.63%	-3.18%	+0.52%
FRANCE	-0.49%	-1%	-2.52%	+1.12%	+0.25%	+3.99%	-3.54%	+0.71%
GIBRALTAR	0%	0%	+33.33%	+33.33%	0%	-33.33%	+33.33%	0%
GREECE	+0.14%	-0.08%	+0.23%	-0.06%	+1.07%	+0.65%	+0.18%	+0.70%
ISRAEL	0%	0%	0%	0%	0%	0%	0%	0%
ITALY	-0.27%	+0.49%	+1.55%	+2.24%	+1.38%	+2.16%	-0.9%	+0.64%
LEBANON	0; 0%	0%	0%	0; 0%	0%	0; 0%	0%	0%
LYBIA	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable
MALTA/Gozo	0; 0%	0%	0%	0; 0%	0%	0%	0%	0%
MOROCCO	0; 0%	0%	0%	0; 0%	0%	0%	0%	0%
MONTENEGRO	0; 0%	0%	0%	0%	0%	0%	0%	0%
SLOVENIA	0; 0%	0%	0%	0; 0%	0%	0; 0%	0%	0%
SYRIA	0; 0%	0%	0%	0; 0%	0%	0; 0%	0%	0%
TUNISIA	0; 0%	0%	0%	0; 0%	0%	0%	+11.45%	+3.45%
TURKEY	-1.09%	-1.44%	-1.44%	+11.81%	+61.89%	+4.32%	-10.99%	+2.70%

Source: IIC, 2010

Table 21 - Changes in available services from 2008 to 2010

Country	Laundry facilities	Medical service	Pharmacy	Wastewater collection	Bilge water collection	Residue collection	Workshop	Weather info.	Surveillance	Quality Certif.
ALBANIA	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable
ALGERIA	0%	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%
CYPRUS	0%	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	+16.66%	0; 0%	+8.33%	0; 0%
CROATIA	+8.26%	-0.41%	+1.23%	0%	0; 0%	+2.47%	-5.27%	-1.79%	+1.39%	+0.84%
EGYPT	+33.33%	+8.33%	+16.66%	+25%	+25%	+25%	-8.34%	+8.33%	+25%	-8.34%
SPAIN	-1.69%	-0.3%	-0.19%	+0.42%	-0.06%	-0.54%	-3.32%	-0.32%	+0.21%	+0.14%
FRANCE	+0.75%	-0.49%	-0.1%	+1.22%	-1.84%	+4.3%	-2.62%	+3.58%	+1.12%	-0.39%
GIBRALTAR	-33.33%	0%	0; 0%	0; 0%	0; 0%	0; 0%	+33.33%	-33.33%	0; 0%	0; 0%
GREECE	+0.6%	+0.64%	-0.03%	+0.66%	+0.63%	+0.66%	+0.8%	+0.55%	+0.61%	-0.01%
ISRAEL	0%	0%	0; 0%	0; 0%	0%	0; 0%	0%	0; 0%	0%	0; 0%
ITALY	+1.99%	+1.11%	-1.68%	-0.62%	+1.36%	+0.76%	+37.13%	+0.26%	+2.44%	+0.62%
LEBANON	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	0%	0%	0; 0%	0; 0%
LYBIA	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable
MALTA/Gozo	0%	0; 0%	0; 0%	0%	0%	0%	0%	0; 0%	0%	0; 0%
MOROCCO	0; 0%	0; 0%	0; 0%	0%	0%	0%	0%	0%	0%	0%
MONTENEGRO	0%	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	0%	0%	0%	0; 0%
SLOVENIA	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	0%	0; 0%	0; 0%	0; 0%
SYRIA	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	0; 0%	0%	0; 0%	0; 0%	0; 0%
TUNISIA	0%	-3.45%	-3.4%	0; 0%	0%	0; 0%	+3.44%	0%	0; 0%	0; 0%
TURKEY	+10.81%	+2.26%	0; 0%	0; 0%	-1.89%	0; 0%	+5.94%	+10.81%	+11.62%	0; 0%

Source: IIC, 2010

The availability of services in Mediterranean marinas remained generally the same. Beyond a few significant percentage variations for countries with few ports, where an additional marina considerably modifies percentages (such as in Egypt and Gibraltar), the following can be observed: fewer restaurants in France (slight increase in Italy); an increase in WIFI service in France, Italy and Turkey; unfortunately no change in sewage and ballast water collection services.

Several French, Spanish and Italian marinas in particular are using EU funding for projects involving work to improve environmental aspects. It is still too early to tell whether this is due to real awareness of environmental issues or a response to funds being made available by local and EU institutions.

13. Dry storage facilities: carefully growing phenomenon in the Mediterranean

The dry storage phenomenon is a recent innovative trend used successfully in the United States. It is growing for several reasons.

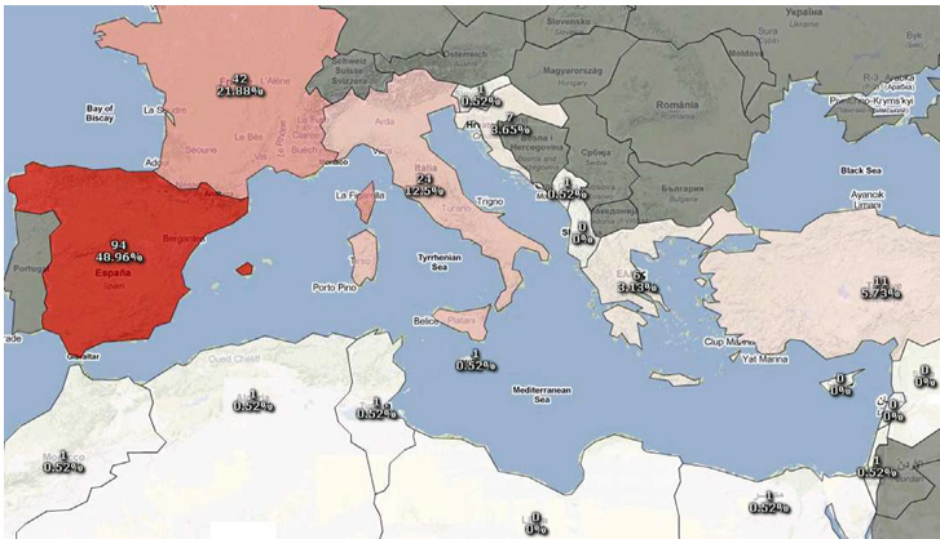
For instance, in terms of impacts, the efficient organisation of dry storage facilities reduces boat maintenance costs (as watercraft remain in contact with sea water for less time) and the amount of anti-fouling paint (boats require treatment less often).

Table 22 – Number of dry storage facilities in the Mediterranean (number and ratio of dry and wet storage facility surface areas)

Country	Number of marinas	% (vertical) of ports in the Mediterranean	Number of dry storage facilities	% (vertical) of dry storage facilities in the Mediterranean	Average ratio between dry and wet storage surface area
Morocco	9	1.0	1	0.5	0.2
Algeria	24	2.5	1	0.5	0.6
Tunisia	29	3.1	1	0.5	0.8
Libya	15	1.6	0	0.0	0
Egypt	6	0.6	1	0.5	1.7
Israel	8	0.8	1	0.5	0.2
Lebanon	3	0.3	0	0.0	0
Syria	3	0.3	0	0.0	0
Cyprus	3	0.3	0	0.0	0
Turkey	37	3.9	11	5.7	0.7
Greece	135	14.3	6	3.1	0.4
Montenegro	2	0.2	1	0.5	0.3
Croatia	81	8.6	7	3.6	0.6
Slovenia	3	0.3	1	0.5	0.3
Albania	11	1.2	0	0.0	0
Malta	6	0.6	1	0.5	0.4
Italy	253	26.7	24	12.5	0.3
France	124	13.1	42	21.9	0.4
Spain	191	20.2	94	49.0	0.2
Gibraltar	3	0.3	0	0.0	0
Total in the Mediterranean	946	100.0	192	100.0	0.4

Source: IIC survey, 2010

Figure 44 – Distribution of the number of dry storage facilities by country in the Mediterranean and percentage in relation to the total number of marinas in each country



Source: IIC, 2010

The IIC 2010 report identified the number of dry storage facilities on the Mediterranean coasts. Table 22 shows that Spain has the majority (in number) of dry storage spaces near marinas, followed by Italy and France.

In terms of the surface area of dry storage facilities, Egypt is the only coastal country with a greater availability of dry storage than wet storage.

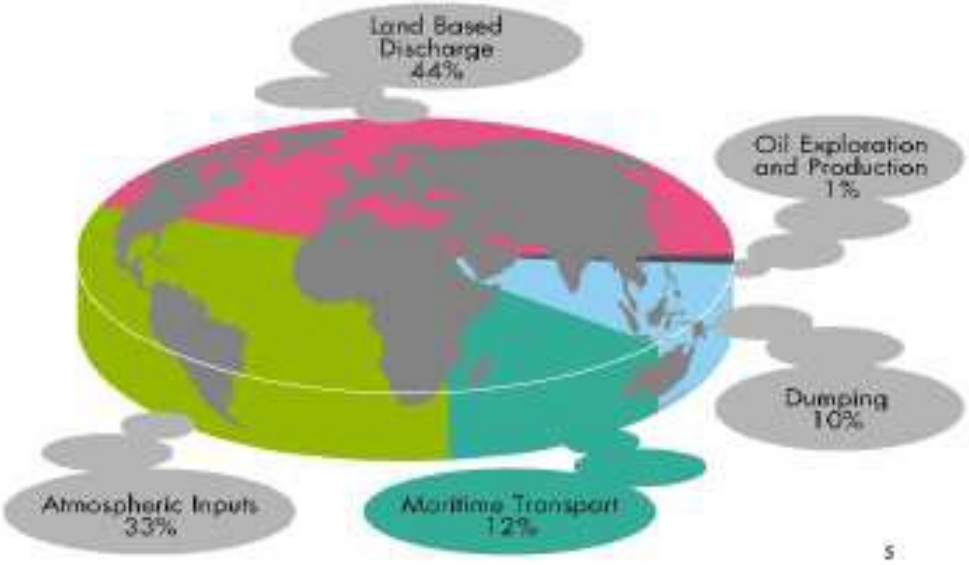
III. Environmental impacts

1. Sea and ocean waste

1.1. The European context

The world's seas and oceans are extremely polluted by millions of tonnes of waste littering the ocean floor and surface. The IFREMER estimates that there are 700 million tonnes of waste on European ocean and sea floors. The largest concentrations are in the Mediterranean, which has collected 500 million[16], the North Sea 150 million, the Bay of Biscay 50 million and the Adriatic Sea 40 million. This refuse can accumulate up to 2,000 metres deep.

Figure 45 – Total composition of marine pollution



Source: Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP), 2010

On a global scale, it should not be overlooked that a 3.5 million tonne mass of waste is floating in the Pacific Ocean. The two "garbage islands" span 3.5 million km², 5 times the surface of France, and are formed of waste from ships and the coast. These sheets of refuse are located between Hawaii and Japan, and Hawaii and California.

Approximately 80% of waste discharged into seas and oceans are land-based. The remaining 20% is marine-based and generally comprises:

- litter dropped by tourists on the coast and beaches (packaging, cigarette packs, leftovers from picnics);
- waste from boats: rubbish dumped by recreational, commercial and fishing boats;
- wastewater, sewage and other polluted water.

[16] Expedition Med 2010 Campaign. A recent report from Expedition MED 2010/2013, working together with several research organisations including the Universities of Nice and Genoa, the IFREMER and the Oceanological Observatory of Villefranche-sur-Mer, highlighted an alarming phenomenon concerning the presence of plastic micro-fragments in the Mediterranean. During the summer of 2010, water samples were taken off the French, Italian and Spanish coasts. 90% of them revealed the presence of these micro-fragments, some with alarming quantities. Because no micro-organisms are able to completely breakdown plastic, these materials accumulate and create a danger for marine wildlife, as well as humans. Plastic, just like plankton moves with currents. According to IFREMER researchers, approximately 250 billion bits of micro-waste are floating in the Mediterranean, corresponding to approximately 500 tonnes. The recorded average of 115,000 bits of micro-waste per km², represents an average concentration higher than that of ocean gyres (Atlantic and Pacific).

Marine species, fish, turtles, seals, marine birds, etc., often ingest this waste, or get caught in abandoned fishing nets and die[17].

Although the most well-known type of pollution is certainly oil spills (which is also the most visible and most covered by the media), macro-waste discharge from maritime traffic and recreational boating is a much more deceptive type of ocean pollution.

The majority of macro-waste is made of plastic[18], containing mainly the following:

- packaging (plastic bags, bottles, various packaging),
- glass objects (bottles, flasks), metal objects (beverage cans, etc.), fabric materials,
- leather or rubber objects.

Waste collected at sea and on shores is not always dumped at the site and come from various sources:

- left on the shore by tourists,
- discharge in ports (wastewater, oil, etc.),
- illegal dumping,
- domestic, agricultural and industrial activities,
- passing ships and recreational boats,
- fishing material waste (nets and fishing lines, etc.),
- natural sources (algae, wood, etc.).

Some waste takes a long time to biodegrade. For example:

- paper tissues: 2 months,
- cigarette butts: 6 months,
- waste oil: 5 to 10 years,
- aluminium cans: 100 years,
- plastic bags and bottles: 100 to 500 years.

1.2. Location of macro-waste

Macro-waste is concentrated at the mouths of river estuaries, along the coastline and at sea. Strong waves and weather conditions cause waste to wash up on beaches.

However it is not just a coastal phenomenon. Waste is carried by ocean currents and ends its journey in areas where it accumulates basically into underwater dumps that have been identified up to 2000 m deep[19].

In addition to the risks for ecosystems already mentioned, for humans, pollution is especially visual and aesthetic along shores and harms the image of sites. However, waste can also cause injuries (shards of glass, syringes, metal scraps). Organic waste causes unpleasant odours and the proliferation of insect pests when it decomposes.

The regulations concerning waste disposal at sea are mandatory for all ships and are summarised in Table 23.

[17] According to Greenpeace, 267 marine species are threatened by waste in seas and oceans.
[18] 60 to 95% according to sites analysed by the campaigns of environmental associations and scientific organisations.
[19] In situ observations made by manned submersibles, Cyana and Nautile - CYATOX, OBSERVHAL, CYLICE / IFREMER campaigns.

Table 23 – Regulations for garbage disposal at sea

Garbage type	Outside special areas	In special areas
Plastics, including synthetic ropes and fishing nets and plastic garbage bags	Disposal is prohibited	Disposal is prohibited
Floating dunnage, lining and packing materials	More than 25 nautical miles from nearest land	Disposal is prohibited
Paper, rags, glass, metal, bottles, crockery and similar refuse	More than 12 nautical miles from nearest land	Disposal is prohibited
All other garbage comminuted or ground	More than 3 nautical miles from nearest land	Disposal is prohibited
Food waste not comminuted or ground	More than 12 nautical miles from nearest land	More than 12 nautical miles from nearest land
Food waste comminuted or ground no larger than 25mm	More than 3 nautical miles from nearest land	More than 12 nautical miles from nearest land
Mixed refuse types	When garbage is mixed with other harmful substances having different disposal or discharge requirements, the more stringent disposal requirements shall apply	When garbage is mixed with other harmful substances having different disposal or discharge requirements, the more stringent disposal requirements shall apply

Source: Based on MARPOL data, 2010; IIC, 2010

1.3. Focus on the cruise industry

The idea of recycling and intelligent waste management has become a major focus over the last three years. The largest cruise lines declare that they recycle at least 60% in their environmental reports[20]. This comes with an increasing demand by cruise lines for suppliers to reduce packaging and plastics as much as possible in their supplies.

According the Environmental Protection Agency (USA), passengers onboard an average size cruise ship (2,125 passengers) generate the following waste each day:

- 83,250 litres of sewage (approximately 40 litres per passenger),
- 1 tonne of garbage[21] (approximately 500 grams per passenger), plus 4 plastic bottles per passenger,
- 621,150 litres of grey water from sinks, showers, laundry facilities (nearly 300 litres per person),
- More than 11 kg of batteries, fluorescent light bulbs, medical waste, etc.,
- Plus 23,000 litres of bilge water from engines.

Cruise ships incinerate between 75% and 85% of waste into ash[22], which contributes considerably to smog ashore or at sea, knowing that it is legal to discharge wastewater three nautical miles from land[23]. According to a report by WashPIRG (Washington, USA), pollution generated daily by a 3,000 passenger cruise ship is equivalent to the amount of pollution from 12,000 cars in the same day.

The following results can be drawn from an estimate of the annual amount of waste produced aboard all cruise ships in the Mediterranean:

- Number of overnight stays in the Mediterranean: 20 million (2009);
- 10 million tonnes of waste (without including the aforementioned plastic bottles) 75% of which is incinerated;
- 800 million litres of wastewater than can be discharged at sea without treatment (at certain distances from land).

[20] Over the last two to three years, in addition to the standard economic/financial reports, some cruise lines have been publishing social responsibility reports in which environmental issues are addressed.
[21] Waste can be distinguished into two macro categories: garbage (Marpol Convention): paper, cardboard, plastics, food, ash from incineration, metal, glass) and hazardous or non-hazardous "non-Marpol or Special" waste. All waste is usually sorted aboard and then disposed of separately ashore in ports equipped for various waste treatment.
[22] According to EPA study, 2008.
[23] Some cruise lines affirm that they discharge wastewater more than 12 nautical miles from land. For instance, Costa Cruises only discharges treated wastewater at sea at more than 12 nautical miles from land at a speed of 6 knots. As for bilge water, Costa prohibits its ships from discharging within the Cetacean Sanctuary, a 100,000 km^2 area between Toulon, Cape Falcone, Cape Fer and Fosso Chiarone).

1.4. Focus on the recreational boating industry

Recreational boating generates significant ecological impacts:

- construction of marinas and boats,
- daily problems of wastewater and rubbish,
- polluting materials,
- dismantling of out of service ships,
- other impacts (generation of waves, noise, etc.).

Marine industries are aware of these problems and are exploring ways of building boats with environmentally safe materials and other alternatives such as electric boats, gas engines, photovoltaic cell systems, and even the dismantling and recycling of inoperable pleasure boats[24]). However, a fundamental issue remains, and that is the individual behaviour of boaters. That is why it is important to promote eco-friendly behaviours that are essential to preserving the marine environment and making recreational boating ecologically responsible (refer to Appendix 1 on the clean ports initiative and Appendix 2 concerning a proposal for eco-friendly actions for recreational boaters).

Areas where recreational boating is developed suffer from significant pollution tied mainly to port activities (dredging, fuel distribution, sewage), boats (paint, sewage, bilge pumps, engines), boaters and infrastructures (wastewater treatment plants, urban activities).

Pollution is mainly organic, bacterial and chemical and is added to plastic waste, packaging and food waste that surpass limits supported by ecosystems during peak seasons.

Spurred on by these findings, some marinas and local governments are taking initiatives that focus on prevention. These include waste collection services with boats moored off the busiest ports and bays, as well as the distribution of guidebooks on eco-friendly behaviours.

It should be noted that in numerous marinas and ports, the same bins are used for all waste, without any recycling bins, even though ships sort waste aboard for recycling to comply with government legislation.

On average, recreational boats (average of 3.5 people) produce 2 kg of waste per day, with water consumption depending on the type and size of boats (for super yachts the order of magnitude is similar to cruises).

Inoperable pleasure boats are a source of various types of waste[25], some of which can be hazardous (oils, batteries). Until now, end-of-life boats abandoned, burned, or sunk at sea have created biological and visual pollution, as well as a risk for marine flora and fauna. Quite recently, interesting initiatives have been taken to ensure the certified and ecologically responsible dismantling of end-of-life boats. In February 2009, France created an association with the mission of developing and organising the French field of inoperable pleasure boat dismantling and recycling. In Italy, a Senate bill proposes a VAT reduction on new boats (of less than 14 metres) provided proof is given that the old boat was dismantled.

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[24]. In February 2009, France created an association for environmentally responsible recreational boating (*Association pour la Plaisance Eco- Responsable*) with the main mission of developing and organising the French field of inoperable pleasure boat dismantling and recycling. The association has 27 centres throughout France. Over the course of this study, no other similar actions were found in other Mediterranean countries.

[25] The following types of waste can be identified: special waste (oils, used solvents, oil filters, brake and cooling fluid, batteries), toxic waste (drums/containers containing toxic products, rags soaked in toxic materials), other waste (tires, bumpers, windshields, palettes, packaging).

2. Legislative aspects and other environmental impacts

The impact of the maritime transport industry as a whole on the global carbon footprint of human activities varies from 1.4%[26] to 1.8%[27] of greenhouse gases, compared to 14% generated by the agricultural industry.

Table 24 – World fleet in 2008

Ship type category	No.	Dwt	GT	Age
Bulk dry	6,306	394,968,275	216,749,258	15
Crude oil tanker	2,105	303,734,893	163,691,586	10
Container	4,641	161,921,733	139,563,042	10
General cargo	17,002	80,417,587	56,433,536	24
Chemical	4,212	68,891,467	42,900,705	12
Oil products tanker	4,954	52,908,628	31,667,027	23
LNG tanker	301	22,269,871	29,047,680	10
RO-RO cargo	2,489	18,459,423	41,634,505	17
LPG tanker	1,154	14,071,706	11,996,216	16
Other bulk dry	1,165	11,744,287	8,947,465	22
Refrigerated cargo	1,210	6,454,779	5,989,059	23
Self-discharging bulk dry	175	6,415,716	3,808,636	32
Passenger/RO -RO cargo	2,868	4,408,950	16,794,304	24
Bulk dry/Oil	98	4,149,162	2,458,800	23
Other dry cargo	226	3,120,984	2,881,528	26
Passenger (cruise)	506	1,740,055	14,405,871	22
Passenger ship	3,035	598,334	1,498,967	24
Passenger/General cargo	335	274,324	536,112	33
Other liquids	162	121,972	82,404	32
Total cargo carrying	52,944	1,156,672,146	791,086,601	21

Source: Lloyd's Register/Fairplay World fleet statistics, 2008

Table 24 shows the weight of cruise ships and super yachts on the total global fleet (for recreational boats, only those 34 metres or more were taken into account). The cruise industry represents 1% of the number and 2% of the tonnage while yachts represent 5.7% of the number but only 0.2% of the tonnage.

Since 1990, the maritime sector has undergone significant changes (more than half of the global fleet has been replaced) that have taken the environment into account. For instance, more efficient engines are being installed and boat hulls are being coated with paints that reduce friction and increase fuel economies. An evaluation of the compromise between reducing the pollution generated by fuel economies and the pollution generated by chemical products used to reduce friction favours the latter. Thanks to developments in research and the use of nanotechnologies, these products seem to have the potential for interesting applications down the road. However, it must not be overlooked that anti-fouling products all contain very high percentages of heavy metals and especially copper.

In order to comply with international standards, cruise lines are putting more and more ships in service with equipment used to reduce pollution emissions. In certain ports or protected areas of the planet (SECA[28]), such as the Baltic Sea, ships are under obligation to only use low-sulphur content fuels or electric engines. Quite recently, scrubbers (pollution control systems using salt water to remove gas from exhaust) have begun to be used on cruise ships to decrease nitrogen oxide emissions (No_x): with a € 1 million investment (the cost of construction of a cruise ship being € 500 million), NO_x emissions are reduced by 90%.

Another method used by cruise lines to reduce their emissions is to optimise cruise itineraries in order to operate at more efficient speeds. However, it must be recalled that cruise ships are not just ships; they are

[26] According to PSA (Passenger Shipping Association).
[27] According to "Study on Greenhouse Gas Emissions from Ships", IMO 2000.
[28] Sulphur Emission Control Areas (SECAs): SECAs will soon be introduced even into the Mediterranean.

hotels that are able to accommodate up to 6,000 people aboard (passengers and crew combined). They are floating villages that have little in common with cargo ships, for instance.

As for the recreational boating industry, a recent IIC study found that pleasure boats have a low frequency of use that does not exceed 3 or 4 weeks per year or 30 to 35 days of use[29]. Super yachts, on the other hand, are often chartered through management companies with every interest in making yachts sail as much as possible.

A cruise ship produces approximately 1,069 kg of CO_2 emissions per nautical mile (nm), 0.1 kg of methane, 19.3 kg of nitrogen oxide, and 20.4 kg of sulphur oxides (SO_x). It also consumes approximately 356 kg of fuel per nautical mile travelled.

The largest source of pollution from recreational boats is the NO_x generated by engines. It should be underlined that a European Directive (2003/44/EC) has now banned two-stroke engines though they are still used on many recreational craft.

Estimates of the quantities of oil derivatives (according to the 73/78 MARPOL Convention Appendix I) released into the sea by boats and other marine activities are shown in Table 25 (source: GESAMP study).

Table 25 - Distribution of sea pollution (2007)

	Tonnes/year
Ships	457,000
Offshore exploration and production	20,000
Ships plus offshore	477,000
Coastal facilities	115,000
Ships plus offshore plus coastal facilities	592,000
Small craft activity	53,000
Natural seeps	600,000
Unknown (unidentified sources)	200
Grand total	1,245,200

Source: GESAMP(IMO/FAO/UNESCOIOC/UNIDO/WMO/IAEA/UN/UNEP, Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection) 2007

Small watercraft therefore account for 4.2% of marine pollution (53,000 tonnes/year). Note that more than half comes from natural causes.

2.1. Air pollution

In comparison to the land transport and energy production industries, the maritime industry contributes little to air emissions. Improvements in the design of ship hulls and increases in cargo capacities have contributed to reducing emissions by up to 20% since 2000 by improving engine efficiency.

CO_2 and SO_x emissions have also reduced by 15 % over the same period. There is a more critical problem, however, with NO_x emissions. International regulations are beginning to change to become more stringent (maximum of 1% sulphur). This area is regulated by Appendix VI of the MARPOL Convention (2005). In October 2008, the Marine Environment Protection Committee amended Appendix VI. The new rules came into effect on 1 July 2010. The main goal is to gradually reduce sulphur oxides produced by ships (from 4.5% currently, to 3.5% starting in January 2012), to reach 0.5% by January 2020.

In SECAs, emissions will be reduced to 1% as from 1 July 2010 (compared to 1.5% before) to reach 0.1% by January 2015.

[29] The abovementioned IIC research (summer 2008) highlighted the growing surprising trend of using boats as temporary residences while they are not at sea. It is a trend that is similar to camping trailers being parked in camp grounds to become a type of permanent holiday residence.

2.2. Assessment of greenhouse gas emissions

An IMO study in 2000 found that the maritime industry is responsible for 1.8% of climate change. Another study was published in 2009 indicating that the maritime industry was responsible for 2.7% of all CO_2 emissions with an estimated 870 million tonnes. CO_2 is the most significant greenhouse gas, in terms of both quantity and the potential impact on global warming. Other greenhouse gases are negligible in the maritime industry. Medium term scenarios that do not include the implementation of new regulations predict a 200-300% increase between 2007 and 2050. Without any changes to greenhouse gas regulations, the maritime industry will account for 12 to 18% of all global CO_2 emissions.

The recreational boating and cruise industries can be estimated to generate 0.0006% of global greenhouse gas emissions, which corresponds to 522,000 tonnes.

2.3. Ballast water

The maritime industry transfers approximately 3 to 5 billion tonnes of ballast water each year. Ballast water is used by all large ships to enhance stability when at sea. Only the cruise industry is concerned by this issue. The IMO has developed and adopted the "International Convention for the Control and Management of Ships' Ballast Water and Sediments" which, once in effect, will require all ships to follow standard procedures that will comply with environment preservation conditions.

2.4. Anti-fouling paint

The IMO "International Convention on the Control of Harmful Anti-fouling Systems on Ships" (AFS Convention) prohibits the use of certain toxic substances in the maritime industry, such as paints containing tributyltin.

At the European level, the VOC Directive 1999/13/EC (concerning solvents emissions, amended through Article 13 of the Paints Directive 2004/42/EC) provides for the strict control of solvents and anti-fouling paints used in shipyards. The Directive is currently complied with to varying degrees in member states.

The IIC estimated the quantity of anti-fouling paint used each year on super yachts. Based on the current fleet, it is estimated that half a litre is applied to each metre of hull lengthwise, with 73 tonnes of paint per year used on super yachts in the Mediterranean alone.

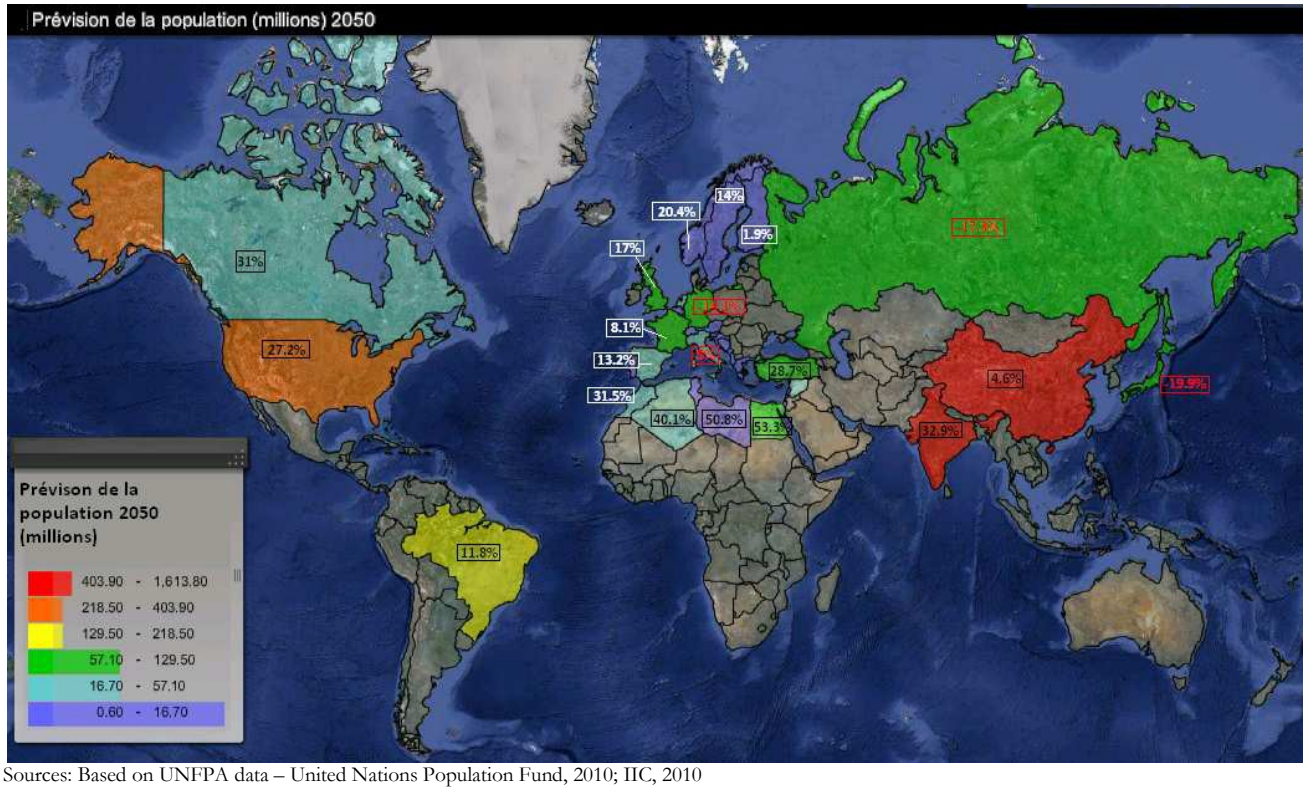
IV. The cruise market in 2050, possible scenarios

According to global population growth forecasts for 2050, the majority of countries should see two-digit percentage growth in relation to 2010 data. Among the countries examined, only Japan (-20%), Russia (-17%), Germany (-14%) and Italy (-5%) are likely to record a decrease in population for 2050.

This situation, combined with available forecasts for trends on GNP per capita make it possible to make hypotheses on the change in the number of cruise passengers by 2050 according to three scenarios:

- A normal business-as-usual scenario;
- A strong growth scenario with cruise passengers coming from emerging countries experiencing strong economic growth, and a population turning towards cruises rather than other tourist markets;
- A market saturation scenario with stabilisation of supply.

Figure 46 – Forecast of the population change in 2050 from 2010



Sources: Based on UNFPA data – United Nations Population Fund, 2010; IIC, 2010

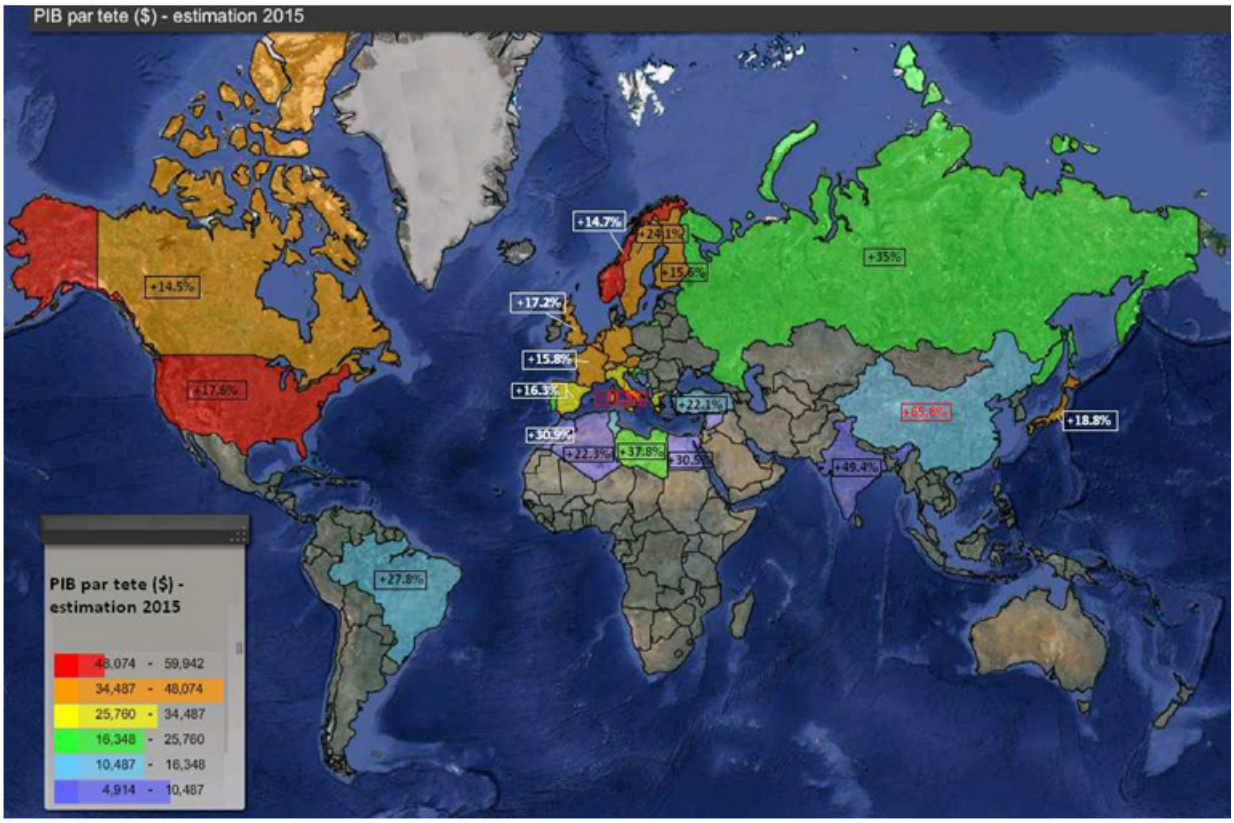
1. Basic considerations

Countries generating the largest number of cruise passengers include the United States, Canada, the United Kingdom (where populations are expected to grow), Italy and Germany (where population is expected to decrease by 2050).

By taking into account GNP estimates for these countries, the hypothesis can be made of a 3% increase in the number of cruise passengers per year, suggesting double the number of cruise passengers by 2050 (i.e. 38 million passengers worldwide). In this scenario, there would be 50 million overnight stays per year in the Mediterranean in 2050 or approximately 7 to 12 million cruise passengers per year compared to 4.5 million recorded in 2010.

In addition, the manufacturing sector producing new cruise ships is currently experiencing a downturn that will likely continue for at least two or three years.

Figure 47 – Forecast of changes in GNP per capita 2010/2015



Sources: Based on IMF data – International Monetary Fund, 2010; IIC, 2010

2. The three scenarios

1) Normal business-as-usual scenario

This scenario points to constant growth of supply and demand. The temporary reduction in supply (the postponing of new constructions) would have an effect on the 2015-2020 period, followed by resumed steady growth. In 2050, coastal countries should therefore be visited by almost three times as many cruise passengers as in 2010.

Table 26 – Forecast of the number of cruise passengers in the Mediterranean (business-as-usual scenario)

Year	Number of cruise passengers in the Mediterranean (in millions)	Variation (%)
2010	4.5	-
2015	5.1	15%
2020	5.6	10%
2030	7.3	30%
2040	9.5	30%
2050	12.3	30%

Source: IIC – Plan Bleu, 2011

2) Strong growth scenario

This scenario points to a potential increase in cruise passengers in the Mediterranean with a growing number of visitors from the following countries: Russia in particular, Brazil and China (with an expected small contribution). In this scenario, the hypothesis of a significant increase in supply is put forward, combined with the transfer of ships from other areas of the world to the Mediterranean in order to compensate for the temporary reduction of new constructions between 2015 and 2020. In this case, the

number of overnight stays could reach 100 million, with over 16 million cruise passengers in the Mediterranean by 2050.

Table 27 - Forecast of the number of cruise passengers in the Mediterranean (Growth scenario)

Year	Number of cruise passengers in the Mediterranean (in millions)	Variation (%)
2010	4.5	-
2015	5.1	15%
2020	6	18%
2030	8.4	40%
2040	11.7	40%
2050	16.3	40%

Source: IIC – Plan Bleu, 2011

3) Market saturation scenario

This scenario stems from a stabilised market hypothesis. The increase is explained by the commissioning of two or three large ships of 360 metres or more with considerable passenger capacities.

Table 28 – Forecast of the number of cruise passengers in the Mediterranean (Stabilisation scenario)

Year	Number of cruise passengers in the Mediterranean (in millions)	Variation (%)
2010	4.5	-
2015	4.9	10%
2020	5	2%
2030	5.3	5%
2040	5.5	5%
2050	5.8	5%

Source: IIC – Plan Bleu, 2011

The three scenarios all result in an increase in the number of cruise passengers. It is estimated that the number of passengers in the Mediterranean will increase from 4.5 million in 2010 to 5.8 million in the stabilisation scenario, 12.3 million in the intermediate scenario and up to 16.3 million in the strong growth scenario by 2050.

The number of Mediterranean cruise passengers could thus multiply by four (3.62) with a high number of overnight stays in coastal countries.

If the distribution (in per cent) of overnight stays spent by cruise passengers in each country in 2009 is used as a reference parameter, Greece and Italy would have to manage 21 million passengers, Spain 17 million, and France 8 million in just one year!

These numbers mean that extensive planning and reflection needs to take place with respect to the ability of countries, coastal towns and cities, ports and dedicated terminals to receive passengers.

3. Opportunities and threats

The cruise industry does not seem to be experiencing any real obstacles in its race towards growth. Even events external to the industry (11 September 2001, SARS, etc.) that could have had negative effects on the industry were absorbed quite quickly. The economic crisis of 2008-2011 will have effects on supply, however demand is not expected to wane.

The growth margin for demand remains strong due to the cruise industry's ability to capture market share from other tourist products.

There is a threat that should not be overlooked and that is the highly vulnerable nature of the sector to terrorist threats (such as in October 1985 aboard the *Achillle* Lauro) or the consequences of accidents.

Conclusions

The change forecasts presented in this chapter are conservative with respect to the strong growth of the industry over the last fifteen years.

As already experienced in the past, the cruise industry should continue to draw from other types of tourism.

This has been reinforced by the lower average age of cruise passengers over the past few years as a result of the change in cruise products, from luxury products catering to a rich clientele in a higher age bracket to a mass market product catering to a clientele made up mostly of families.

The forecasts made in this report are conservative and do not take into account the potential rekindling of the low-cost phenomenon, which could rebound in the future after its initial disappointing experiences.

V. Appendices

1. Clean Ports

Definition of Clean Ports: initiative aimed at encouraging all operations that contribute to improving the environmental quality of marinas and fishing harbours through nation-wide awareness and integration of the issue of managing liquid and solid waste in marinas.

Origin: The concept of "Clean Ports" (*Ports Propres*) came about in Brittany, France in 1984. It was successfully developed in the Languedoc Roussillon until 2005. It has been active in the Provence Alpes Côte d'Azur (PACA) region since 2001, thanks to technical support and funding from the PACA Regional Council, the regional environment department (DIREN), the French Environment and Energy Management Agency (ADEME) and Rhone-Mediterranean and Corsica Water Agency.

1.1. Summary description

The Clean Ports process has four distinct yet essential phases in order to enable port managers to access environmental management in optimum conditions:

Phase one

An assessment of the sources of pollution and waste that exist or transit through the marina.

This phase is an essential prerequisite to the implementation of the other phases and involves the following:

- coming up with the geographic, administrative and legal presentation of the marina and its surrounding environment;
- giving precise information on the sources, nature and impact of detected environmental nuisances;
- an exhaustive description of solutions, port facilities and equipment, and the management of existing waste;
- defining desired quality objectives for the marine area, sediments and land facilities;
- establishing the investment and action plan required to meet these objectives.

Phase two

The fight against chronic pollution.

After determining the sources of pollution within the marina, this phase involves putting in place equipment to be used for the following:

- collecting and recycling solid and liquid waste from boats and port activity: creation of a waste disposal point ("*point propre*"), a collection and treatment system;
- bilge water, used oil, etc.;
- effluents treatment: collection and treatment of rain water, careening waste water, installation or repair of the refuelling and service station.

Phase three

Fight against accidental pollution.

This phase will enable harbour and marina managers to carry out actions, including the following:

- preparing accidental pollution action plans;
- equipping marinas with intervention kits (oil booms) in the event of accidental fuel or oil pollution.

Phase four

Activities, awareness and training for users, marina staff and managers.

The purpose of this phase is to reinforce all the actions carried out within the framework of "Clean Ports" operations.

It will be used for the following:

- improving port staff awareness of environmental problems;
- informing boat users through signage available from the French Federation of Marinas (*Fédération Française des Ports de Plaisance* - FFPP).

1.2. National recognition of "Clean Ports"

3 major events:

- Signing of the "Clean Ports" agreement: Though the concept was widely known and diffused, it was not officially recognised nationally until the December 2007 boat show with the signing of the "Clean Ports" agreement by all Regional Marina Unions making up the FFPP at the FFPP stand.
- AFNOR "harbour environmental management" certification: The Provence Alpes Côte d'Azur Regional Council funded the creation of a national AFNOR agreement for marinas and harbours wishing to obtain certification for their environmental management.
- "Harbour Environmental Management" training for harbour and marina staff has become a module of the French professional qualification certificate (*Certificat de Qualification Professionnelle* - CQP).

2. Proposal for eco-friendly actions for recreational boaters (owners and renters)

In the harbour

- Control water consumption through the use of aerators on faucets and toilet tank water savers to make considerable water savings;
- Consider installing a rainwater collection system to be used to rinse equipment or wash boats (water purifiers can be used to purify recycled sea and rainwater.

At sea

- Be careful of light objects that the wind could blow overboard (plastic bottles);
- Use an ashtray; cigarette butts take a long time to decompose and can be swallowed by birds and fish;
- Avoid washing dishes aboard and if so, wash with freshwater without soap;
- Avoid using toilets at sea, especially near shores or swimming areas, equip watercraft with black water holding tanks;
- Choose biodegradable products to clean lavatories.

Waste

- Do not throw any litter overboard and pick up plastic bags floating in the water; separate organic materials and packaging to be recycled and designate a place for storing it out of the wind;
- In the harbour, throw waste in designated bins, comply with recycling instructions and encourage others to do the same;
- Only empty waste water tanks in designated places.

Boat maintenance

- Use an LPG, electric or four-stroke engine rather than a two-stroke engine; maintain the engine with eco-friendly lubricants and have it serviced every year;
- Be careful when filling jerricans: use a manual pump and a funnel that is large enough to avoid spilling fuel in the harbour water; favour mechanical cleaning of boat hulls. Because anti-fouling paint is harmful to marine flora, use a paint containing the least amount of lead and pesticides possible and apply it carefully;
- For small watercraft, only paint the useful surface, up to the floatation line;
- Carry out careening in areas of the marina set up to recover and treat residue and runoff water.

Even more

- Participate in a nautical sport that does not consume fuel (sailing, kayaking, windsurfing); lower your speed near shore as waves can cause shore erosion and disturb fauna;
- Use environmentally safe products: No biocides, phosphate detergents or toxic wax.

3. Odyssea

ODYSSEA®
RESEAU EUROPEEN DES VILLES PORTUAIRES ET TERROIRS CULTURELS

ODYSSEA EUROPEAN COOPERATION GROUP

"UNION FOR THE MEDITERRANEAN" ODYSSEA CONTRIBUTION

"For a strategic partnership project in the heart of the Mediterranean"

EXEMPLARY NETWORKING OF INTEGRATED TERRITORIAL AREAS OF EXCELLENCE: REGIONS / SEA / PORTS / PORT TOWNS AND CITIES / RURAL LAND OF THE 22 COUNTRIES OF THE MEDITERRANEAN

Espagne, Royaume-Uni (Gibraltar), France, Monaco, Italie, Malte,
Slovénie, Croatie, Bosnie-Herzégovine, Monténégro, Albanie, Grèce,
Turquie, Chypre, Syrie, Liban, Israël, Égypte, Libye, Tunisie,
Algérie, Maroc

3.1. Perpignan Declaration of 26 February 2010

We, the partners of the ODYSSEA European Cooperation Group, in our efforts to support the policies defended by the UfM and gathered as an assembly in Perpignan (France), on 26 February 2010:

"Determined to promote joint cooperation and unity between both shores of the Mediterranean to form a partnership in addressing all areas of sustainable tourism according to the sustainable development territorial concept, ODYSSEA: Sea, Port, port city, rural land";

In reference to the framework of the Union for the Mediterranean ODYSSEA contribution

"One year ago, the heads of state and government of 43 countries gathered together at a summit held in Paris on 13 July at the invitation of the presidents of France and Egypt and created a strengthened partnership around the Mediterranean. The aim of the union is to relaunch the failed Euro-Mediterranean partnership initiated in Barcelona in 1995 by promoting concrete projects targeting various fields (environment, transportation, energy, culture, education, etc.).

National, regional and European port and harbour Federations, the regions of Languedoc Roussillon, PACA, Corsica and Midi Pyrénées, Baleares, Andalusia, Sardinia, Tuscany, Liguria, Sicily, Malta, etc. are currently experimenting with the ODYSSEA model in pilot municipalities within the framework of

European territorial cooperation policies and through regional networks of marinas, port cities and rural municipalities. This cooperation now benefits from a tool placed at the disposal of the network: the ODYSSEA European Cooperation Group. All the proposals of this contribution will be presented to the heads of state and government as part of projects to be developed and "certified" by the UfM in June 2010.

The aim of this recognition is to enable the ODYSSEA European Cooperation Group to make the MED network of regions, port cities and cultural sites of the Mediterranean a reality. It is also to help it benefit from new development and promotional capacities, equipment and innovative tools that the partners of the ODYSSEA network will develop during the pilot phase."

In reference to the Tunis Declaration at the First Summit of the Heads of State and Government of the Countries of the Western Mediterranean, held in Tunis on 5th and 6th December 2003, calling for "the promotion of tourism flows, the facilitation of exchanges, the protection of the environment";

In reference to the Conclusions of the Euro-Mediterranean Ministerial Conference on Tourism in Fez on 2nd and 3rd April 2008;

Reiterating the desire to make the Mediterranean a forum for reflection, dialogue, proposed actions, and open and mutually beneficial exchange;

Convinced of the importance of cultural tourism and the development of marine, cultural and agritourism activities as vehicles for economic and social development in the Mediterranean basin;

As an extension of the general principles and recommendations of the various agreements, initiatives, conventions, work and research on the development of sustainable tourism in the Mediterranean such as the Barcelona Convention, the Mediterranean Action Plan, the Blue Plan, the Euro-Mediterranean partnership, the Mediterranean Sustainable Development Strategy, the policies of the Ministers of Tourism of the 5 + 5 group, etc.;

Strengthening the "Barcelona Process: Union for the Mediterranean" to further its ambitions, to strengthen existing instruments, improve synergy and work, especially towards sustainability and fair trade in tourism in Mediterranean regions;

Confident in the belief that tourism is a mechanism for fostering closer ties, understanding, tolerance and peace between peoples; a driving factor that will engage future generations in the European process and give them a sense of belonging to a shared culture;

Convinced of the importance of promoting joint investments in the tourism industry, the development of partnerships concerning the sea, harbours, cities and rural sites, and the central role of harbours, the private sector, particularly SMEs and the artisan sector in tourism;

While taking into account quantitative and qualitative changes and evolutions to supply and demand;

Persuaded of the interest in creating a common international standard and the joint commercialisation of tourism offers and products between Mediterranean regions;

Convinced that professional training and service quality must remain essential pillars in the tourism industry, with the ultimate goal of harmonising international standards and criteria;

Conscious of the fact that poorly controlled development of tourism can contribute to harming the environment;

Deeply convinced that by adhering to sustainable development principles, the development of tourist activities will ultimately ensure economic viability;

State the following:

Our desire to consolidate the tourism vocation within the framework of the Union for the Mediterranean as a means of creating closer ties and understanding between peoples, and a driving force for social economic and cultural development by way of the sea, waterways and harbours;

Our desire to use the ODYSSEA territorial concept for sustainable development and this forum for dialogue to encourage all players to develop tourism products and make structural investments through suitable funding;

Our determination to continue cooperation with all international, national and regional institutions responsible for supporting the development of tourism in the regions and within the UfM in collaboration with the World Tourism Organisation;

Our desire to pursue a concerted policy and create a sustainable development network for tourism within the framework of the agreements and principles to which we adhere, particularly through the following:

- Recognition of the importance of cultural tourism as a tool to promote territories along with prestigious physical and intangible heritages that are symbols of a common, specific and universal history, with the gradual development of common tourist products through Land & Sea itineraries organised around uniting themes, such as those developed by the Council of Europe with cultural itineraries: The Phoenicians' Route, the Routes of the Olive Tree, the Iter Vitis Route, the UNESCO Navigation of Knowledge, etc.;
- Strong and dynamic management of combined and packaged products in order to meet the demand of distant clienteles;
- Mixed task forces bringing together public administrations and professionals (port authorities, tourism offices, and tourist agencies, travellers, cruise passengers, tour operators, promoters, etc.);
- The creation of suitable responses to funding the essential pillars of ODYSSEA in order to facilitate the project's development: pooled guarantee funds, thematic investment funds to be used particularly to economically promote remarkable heritages, investment funds set aside for public-private partnerships to create major infrastructures, microcredits for small and medium scale tourist or artisanal projects;
- Attention to people flow associated with sea – harbour – rural tourism activities to enable co-development of the Mediterranean region;
- Social consideration, particularly in terms of training, job creation and gender equality;

Our intention to build a concrete partnership through:

The priority areas of action of ODYSSEA:

- The creation of a joint quality and sustainable territorial development model, a set of joint management references: ODYSSEA MED. A collective quality and benchmarking brand (Clean Ports, environmental awareness, heritage, hospitality, service quality, etc.);
- Use of the growing marine and cruise-based tourism industries as an important gateway to Mediterranean countries;
- The collecting of cultural data to be put online, the creation of a tourist guide, a reference "Pass'port" containing cultural information, and research into the creation of an interactive map to be used by tourism professionals;
- The development of waterways and roads in the Mediterranean / cruises, coastal sailing, ports of call, stopovers… along Mediterranean towns, cities and sites;
- The Mediterranean "Pass'Port", a nautical guide for navigation, exploring and a network of offers, products and services offered by harbours, towns and cities and cultural sites;
- The promotion of the cultural heritage of historic maritime routes (Council of Europe Label), via research with universities, institutions, associations…and in cooperation with existing Council of Europe itineraries;
- The implementation of an ODYSSEA tourist portal for the Mediterranean, a single gateway to a wide range of information, tourist products, services, reservations, sales that stimulates the sharing of experience between public and private players;
- Innovations in new technologies that promote sea, heritage, and maritime and rural landscape tourism development;
- The development of excellent offers and services for the marine tourism, cultural tourism and municipal economies;
- The networking of MED port capitals and pilot municipalities through the benchmarking of innovative – structural equipment, international standards, joint events, etc.

- The networking of information on harbours and marine tourism sites, the creation of guides to good practices for marine tourism projects and collaboration in terms of training, qualifications and employment in the sector;
- The creation of Regional Unions in each country in order to create a network between marinas, fishing harbours and marine tourism professionals;
- The certification of marine products and services in order to standardise quality and jointly promote them;
- *The integration of safety issues in developing marine tourism in order to better preserve human lives and prevent pollution risks in the Mediterranean.*

Executed in Perpignan on 26 February 2010

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VII. Table of illustrations