

Blue Growth

Scenarios and Drivers for Sustainable Growth from the Oceans, Seas and Coasts

Maritime Sub-Function Profile Report
Cruise tourism (4.3)

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The research for this profile report was carried out in the period April – August 2011. This report has served as an input to the main study findings and these have been validated by an Expert meeting held on 9/10th November 2011 in Brussels. The current report serves as a background to the Final Report on Blue Growth.

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Summary description

The worldwide cruise industry shows a strong growth trend in demand. North America is traditionally the main market for cruises. In the 1970s this market was developed by companies like Carnival. A major impetus for the growth of the cruise market was the introduction of mega-cruise ships in the eighties. The new trend of building of mega cruise ships with more than 2000 passengers allowed cruise lines to expand on-board revenues.

Although North American cruise passenger numbers have increased over the years, the region's relative share of the world total has declined in favour of expansion of international cruise demand in Europe. The gap with North America is slowly being narrowed. Although conventional shipbuilding has been in decline in Europe since the late 70's Europe has been the world leader in cruise shipbuilding for 40 years. Cruise operations however are dominated by North American Companies with Carnival and Royal Caribbean covering 80% of the global cruise market.

Several factors are influencing the development of the cruise industry such as environmental legislation, changing patterns in tourism demand and (in the longer run) the limited capacity of port cities. A further growth in demand is widely expected of which Europe will likely take its share. Indicators for further growth potential are cruise new buildings and investments. Over the period from 2011 tot 2014 a total of 23 new cruise ships have been scheduled for delivery. According tot figures of ECC (2011) 9 of these ships are primarily meant for the European source market.

Because of the significant amount of capital needed for building a new cruise ship and the complexities surrounding their operation, an important company like Carnival expects long-term cruise industry supply growth to slow, while demand accelerates as global economies recover and emerging markets develop (Carnival Corporation & PLC, 2011).

1 State of Play

1.1 Description and value chain

The sub-function of Cruise including port cities is defined as all activities associated to cruise holidays, including the ships used and the facilitations at destination ports. Cruise tourism is a form of tourism where people travel (cruise) on a ship. This can be to a sunny destination such as the Mediterranean or the Caribbean, but also to Norway, Alaska or Antarctica. It is a relatively luxurious form of travel. Worldwide, as well as in Europe, in the last decade the cruise market has seen a rapid growth. The European shipbuilding industry is dominant in the construction of these types of ships.

For the value chain of cruise tourism it is necessary to make a distinction between the demand side and the suppliers of products and services necessary for cruise tourism. This supply side of the cruise tourism consists of:

- Shipbuilding and marine equipment
- Operation of ships
- Port services and logistics – operating cruise terminals, port management
- Other maritime services (bunkering, ship repair, pilotage, etc.)
- Maritime works – constructing ports, maintaining access channels

1.2 Description of the current structures

Economic performance

The cruise sector is a relatively small but fast growing sector of the tourism industry. Tourism as an industry has been growing since the middle of the twentieth century. The market for cruise ships is strongly driven by tourism market trends. Raising welfare levels have contributed to substantial growth in number of cruise tourists over the past decade. A major impetus for the growth of the cruise market was the introduction of mega-cruise ships in the nineteen eighties. The new trend of building mega cruise ships with more than 2,000 passengers allowed cruise lines to expand on-board revenues, introducing a whole new series of on-board activities. Examples include Casino & games, entertainment, wide range of restaurants (from moderate to exclusive), gift shops, spa services, etc.

The cruise industry in Europe generates currently direct turnover of € 15 billion and 150,000 direct jobs.¹ These were derived from four major sources:

- The construction of new cruise ships and maintenance (€ 3.8 billion),
- Cruise lines purchases in support of their cruise operations (€ 6.4 billion)
- Spending of cruise passengers and crew in destination ports/regions (€ 3.4 billion)
- Expenditures on wages and salaries (€ 1.3 billion)

Total industry output (including indirect and induced impacts) rises to € 36.7 billion and 315,500 jobs.

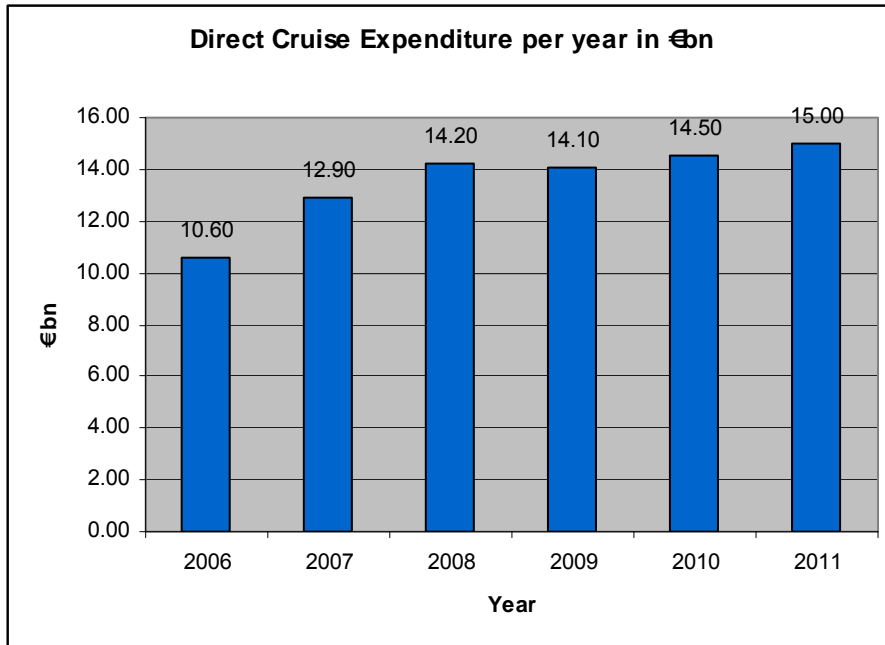
Over the past 10 years, the demand for cruising worldwide roughly doubled. The number of passengers embarking in Europe has increased to 5.2 million passengers in 2010. Of these over 4 million were European nationals and about 1.2 million came from outside Europe. Given the growth

¹ (European Cruise Council (2012), Page 6

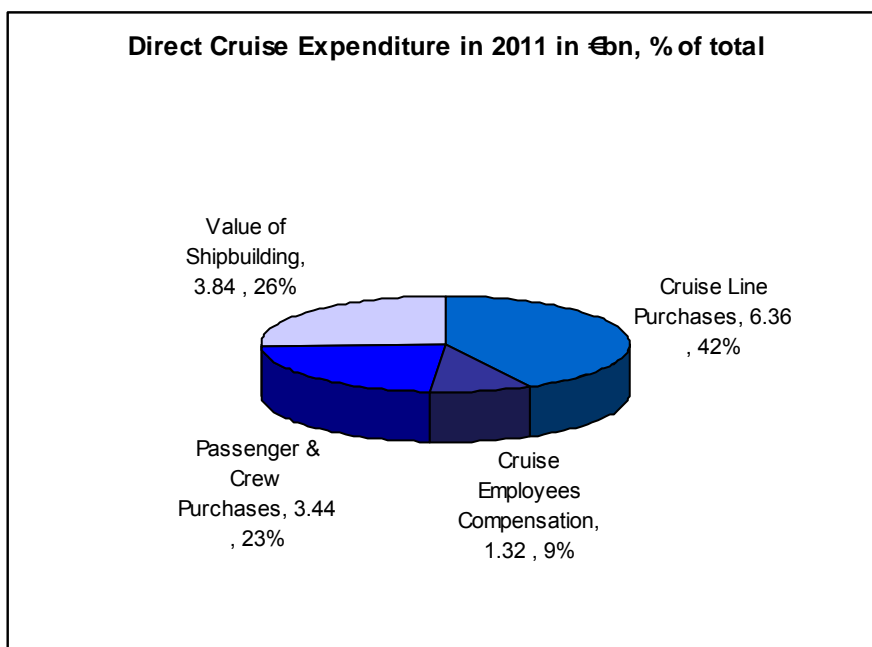
in number of passengers, direct expenditures have steadily increased on a year-over-year basis. These expenditures are visible through the turnover of the various cruise operators.

Since 2006 the direct expenditures of the cruise industry grew from € 10.6 billion in 2006 to € 15 billion in 2011 (European Cruise Council (2011), which equals a compound annual growth rate of 8.3%. Over this period only the recession year of 2009 saw a slight decline in expenditures.

Figure 1.1 Direct Cruise Industry Expenditures in Europe (2005-2010) in €bn



Source: European Cruise Council (2012) Page 9



Source: European Cruise Council (2012) Page 10

The industry has proved resilient in the face of economic uncertainty, with European cruising playing an important role in delivering growth in Europe. In 2011 some 6 million Europeans booked a cruise, an increase of 9% on 2010 and a more than doubling over the past decade. Some 5.6

million passengers embarked on their cruise from a European port last year.² Each of these passengers spent an average of almost €100 when visiting a port, with a total of some 25mn passenger port visits in Europe per year, representing 2.5 billion euros in spending.

The Costa Concordia accident early 2012 has affected the growth of the sector: numbers of bookings went down and large cruise liners had to revise financial projections for 2012.^{3,4} This may however remain to be a short term decline.

European cruise industry in a global perspective

North America is traditionally the main source market for cruises. In the 1970s this market was developed by companies like Carnival. Even today, North America is the world's main source market for cruise tourists. Of all cruise passengers in 2011 (20.6 million world wide) about 55% originates from this continent. The European market share amounts to 30% in 2010. The remainder (15%) is generated by other markets in the rest of the world. Although North American cruise passenger numbers have increased over the years, the region's relative share of the world total has declined in favour of expansion of international cruise demand in Europe.

Table 1.1 International demand for cruises in 2000 -2011 (market share by region and annual number of passengers)

	2000	2005	2006	2007	2008	2009	2010	2011
North America	71%	70%	69%	66%	64%	59%	59%	55%
Europe	21%	22%	23%	26%	28%	28%	29%	30%
Rest of the world	8%	8%	9%	9%	9%	12%	12%	14%
Total (%)	100%	100%	100%	100%	100%	100%	100%	100%
<i>Number of passengers (million)</i>	9,7	14,3	15,1	15,9	16,2	17,6	18,8	20,6

Source: European Cruise Council (2012) Page 12, slightly modified by Ecorys

In the United States, penetration rate (share of population that makes a cruise) is approximately 3.5%. This high percentage has, among other things to do with the early development of the cruise industry in this part of the world. Infrastructure around the sector is therefore much better developed. Cruising in Europe is much newer and a percentage of 3.5% is not in all submarkets achieved. In significant markets like France or Germany this percentage is less than 1%.

Europe has been world leader in the cruise building industry for 40 years. All the ocean going cruise ships currently under construction are built at European yards.

In 2011, over 6m European tourists booked a cruise, of which 5.6 mln also embarked in a European port.⁵ Total European embarkations were 5.2 mln, thus receiving 1.0 mln passengers from non-European origin. Easy and affordable air access to embarkation ports is of key importance to the choice of these ports and the possibilities to grow.

In terms of cruise operations, European companies operated 120 cruise ships in 2011 with a capacity of around 143,000 lower berths owned by 41 companies. In addition there were 25 lines from outside Europe (predominately North American) participating in the European cruise market.

² European Cruise Council (2012), The Cruise Industry – Contribution of Cruise Tourism to the Economies of Europe 2012 Edition. Page 10

³ Lloyd's List 9/3/12 The Costa Concordia disaster has hit Carnival's first-quarter results. AP

⁴ Lloyd's List 2/2/12 New 2012 bookings are significantly down in Europe, RCCL says.

⁵ European Cruise Council (2012), The Cruise Industry – Contribution of Cruise Tourism to the Economies of Europe 2012 Edition. Page 9

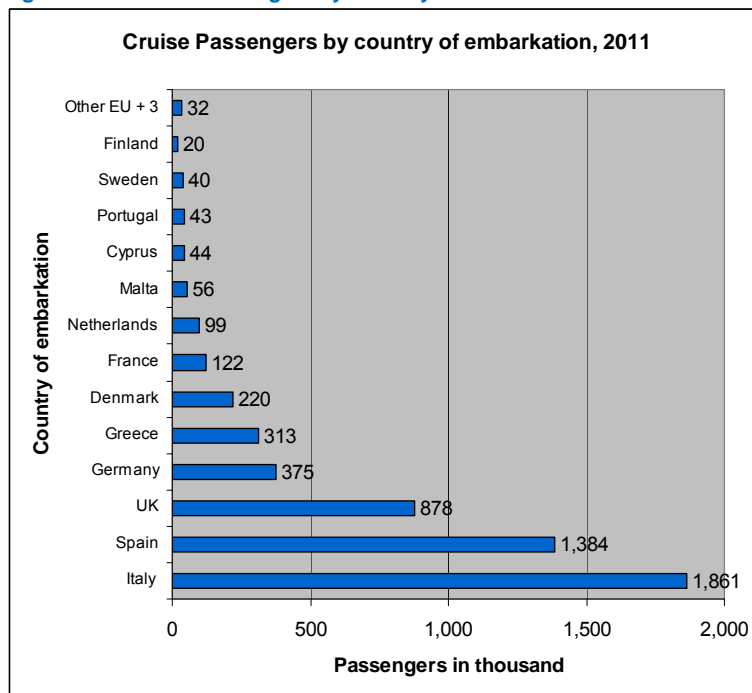
These lines domiciled outside Europe deployed 66 cruise ships with a total capacity of 97,000 lower berths in the region (Source ECC 2011).

European cruise industry by country

Within Europe, the cruise market is largely concentrated in a few countries in terms of tourist activity. The most important country in the cruise market is Italy which generated nearly 1.9 million passenger embarkations in 2011. Most important cruise ports in Italy are Venice, Savona, Genoa and Civitavecchia (Rome). Spain was in second position with over 1.3 million passenger embarkations followed by the UK (878,000) and Germany (375,000). The four countries together accounted for nearly 80% of all European embarkations. In terms of tourist origin however UK and Germany are leading, with 1.7 mln and 1.38 mln passengers originating from these countries.⁶ When looking at ports of call, Italy, Spain and Greece are the three most important destination countries.

In terms of economic importance, not only origin and destination of tourists is relevant, but also locations of service providers, yards and operating companies as well as origin of crew. In this respect, Italy is most important in terms of direct expenditure, followed by the UK and Germany.

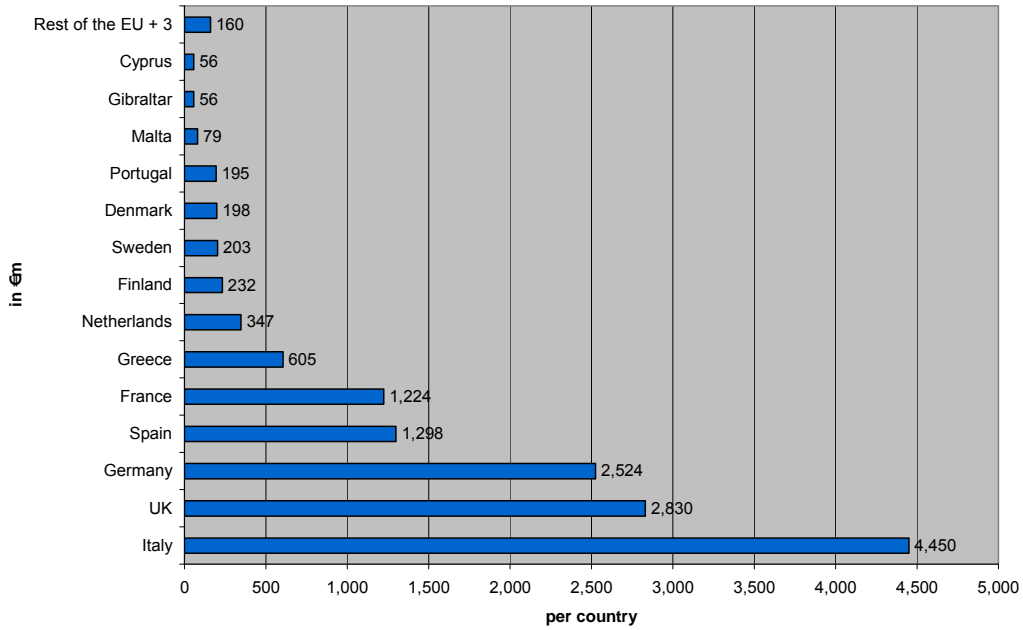
Figure 1.2a Cruise Passengers by Country of Embarkation



Source: European Cruise Council (2012)

⁶ European Cruise Council (2012), The Cruise Industry – Contribution of Cruise Tourism to the Economies of Europe 2012 Edition. Page 16

Direct Cruise Industry Expenditures by Country (2011)



Source: European Cruise Council (2012)

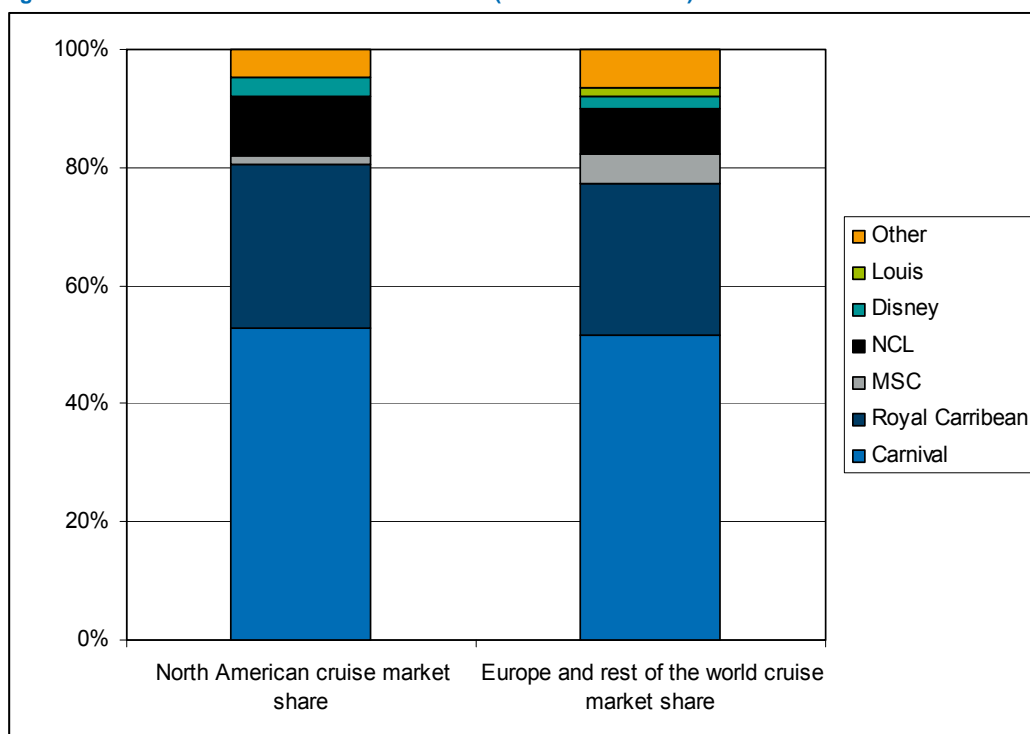
In total 28.1 mln passenger visits from cruise vessel port calls were realised in Europe in 2011. Cruise lines visited about 250 port cities in Europe. The two main cruise areas Mediterranean and Baltic have market shares of roughly one third and two thirds of this.

1.3 Main companies in the cruise industry:

1.3.1 Cruise lines

Characteristic of both North America and Europe and the rest of the world is the market dominance of a limited number of cruise lines. Market leader in North America and in Europe and the rest of the world dominate a limited number of cruise lines. The cruise market is dominated by a handful of operators such as Carnival, Royal Caribbean and MSC. Overall market leader is Carnival who has a fleet of 100 cruise ships with a total passenger capacity of 192,000 passenger berths by the end of 2010 (see figure and box below). Number two in the market is Royal Caribbean International. The cruise ship "Oasis of the Seas" belongs to the fleet of Royal Caribbean and set in 2009 a new record of carrying over 6,000 passengers.

Figure 1.3 Global cruise liners and market share (based on turnover)



Source: <http://www.cruisemarketwatch.com>

Despite the strong concentration in a few (very large) cruise companies, the market is more differentiated because the large cruise companies operate on the market through various cruise brands. The table below shows the different brands of Carnival (worldwide the largest cruise company) and the market in which these brands are mainly active. Carnival's Costa Cruises is the leading cruise brand in Europe with a fleet of 14 cruise ships (all flying the Italian flag) and a passenger capacity of approximately 29,200 passengers.

Table 1.2 Brands owned by Carnival Corporation & PLC

Cruise brands		Passenger capacity	Number of cruise ships	Primary markets
North America		117,104	59	
	<i>Carnival Cruise Lines</i>	54,480	22	<i>North America</i>
	<i>Princess Cruises</i>	37,608	17	<i>North America</i>
	<i>Holland America Line</i>	23,492	15	<i>North America</i>
	<i>Seabourn</i>	1,524	5	<i>North America</i>
Europe, Australia & Asia		74,360	39	
	<i>Costa Cruises</i>	29,202	14	<i>Italy, France and Germany</i>
	<i>P&O Cruises (UK)</i>	15,098	7	<i>United Kingdom</i>
	<i>Aida Cruises</i>	12,054	7	<i>Germany</i>
	<i>Cunard</i>	6,676	3	<i>UK and North America</i>
	<i>P&O Cruises (Australia)</i>	6,322	4	<i>Australia</i>
	<i>Ibero Cruises</i>	5,008	4	<i>Spain and South America</i>
Total		191,464	98	

Source: Carnival Corporation & PLC, 2010 Annual Report

Carnival Corporation: largest cruise company in the World

The company began operation in 1972 with a converted ocean liner. Since then Carnival Corporation has grown exponentially and has become the largest cruise company in the World of today. The portfolio of cruise brands of the company are comprised of Carnival Cruise Lines, Holland America Line, Princess Cruises, Aida Cruises, Costa Cruises, Cunard, Ibero Cruises, P&O Cruises (UK, Australia). The company has a total fleet of 100 cruise ships with a total passenger capacity of 192.000 passengers by the end of 2010. The cruise ships of Carnival Corporation transported in 2010 approximately 9.2 million passengers, while revenues reach 14,5 billion dollar in 2010. In 2010, the company employs about 90.000 employees.

To the fleet of Carnival Corporation belongs the Queen Mary 2 which at the time of construction (2003) was the largest passenger ship ever built with a gross tonnage (GT) of 150.000 tons and a guest capacity of 2,620 passengers. At this time the Queen Mary 2 no longer holds this distinction after the construction of Oasis of the Seas in October 2009. This cruise ship belongs to the fleet of Royal Caribbean International (number two in the market) and set now a new record of carrying over 6,000 passengers.

Source: Carnival Corporation & PLC, 2010 Annual Report and <http://www.royalcaribbean.com>

In the short run, the cruise industry is expected to grow steadily because of the ageing of people and cruises becoming more affordable. In the long run however, the market is expected to stabilize or even to decline. According to our interviewees, Asia, being an engine for economic growth in other (maritime) economic sectors is currently considered to offer a limited potential growth market, due to the limited.

In general, the operators often purchase the ships new and commission refurbishments in a cycle of 6-8 years. When ships are getting technologically outdated and newer models are launched, the older ones are usually transferred to lower cost segments of the market.

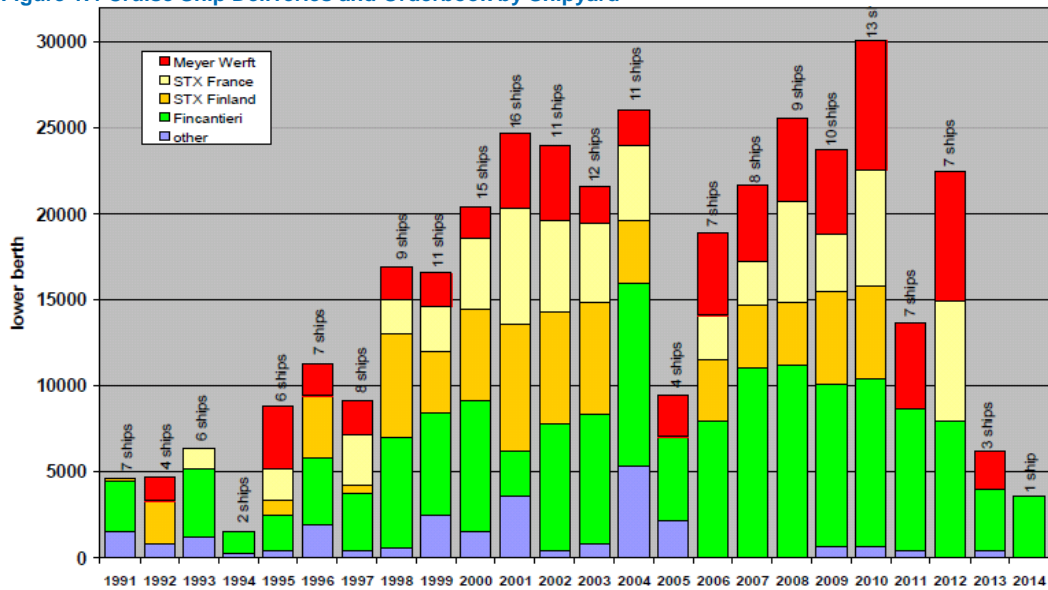
1.3.2 Cruise shipyards⁷

At the production side there is also a handful of yards able to build these high value ships (€ 300-700 mln is common), including Fincantieri (Italy), Meyer Werft (Germany) and STX Europe (Korean ownership, passenger shipyards in Finland and France). In the field of passenger ferries these companies are also important players, while for smaller sized ferries also companies like Damen (the Netherlands) are important contributors.

Generally speaking, the main European cruise yards have a capacity of typically 3 ships per year. However, some of the cruise liners have indicated that they will halve their usual yearly orders, as fleets have been strongly modernised over the past decade and no major growth is foreseen in the cruise demand. The effects are shown in figure 1.4 where the cruise ships deliveries and orderbooks for the main players are depicted.

⁷ Information partly based on ongoing research by Ecorys on "Green growth opportunities for the European shipbuilding industry", requested by EC DG Enterprise (2011).

Figure 1.4 Cruise Ship Deliveries and Orderbook by Shipyard



Source: Meyer Werft. In: CESA shipbuilding market monitoring no 20

Europe has been world leader in the cruise building industry for nearly 40 years with close to 100% market share. The abundance of specialist skills and sophisticated technology in areas such as navigation and outfitting are part of their strength⁸. Although other yards may have the capacity and technology to build cruise ships, many believe they do not have the project management ability, aptitude or the desired balance of labour and skills required to deliver a cost effective result within a required budget in the contracted delivery time.⁹

Recently however, the Japanese yard Mitsubishi has signed a contract with cruise operator Carnival Corporation (US) for manufacturing two new cruise vessels for AIDA (daughter company of Carnival). The vessels ordered will be the largest cruise ships ever built, due to their lower berth capacity for 3,250 passengers, to serve the expanding German cruise market.¹⁰ Their delivery is expected in 2015 and 2016.¹¹ The practice of ADIA to not consider EU manufacturers has raised criticism from the European industry, notably Fincantieri and STX Finland, both only now managing to receive substantial new orders. It is stated, that the cost per berth of the Japanese offer are too low to remain competitive. The recent announcement by Samsung Heavy Industries in Korea to construct a cruise ship in Korea is another step to introduce competition from outside Europe.¹²

⁸ Source: Contributions of cruise tourism to the Economics of Europe 2010

⁹ European Cruise Council (2010). The cruise industry: a €34 Billion Partner in Europe's Economic Growth

¹⁰ <http://www.latecruiseneews.com/2011/10/03/new-aida-cruise-ship-order-goes-to-japan-%E2%80%93-other-cruise-news-paul-gauguin-cruises-expands-%E2%80%93-st-kitts-sees-cruise-boom-%E2%80%93-cruise-surveys/>

¹¹ <http://www.cruiseindustrynews.com/cruise-news/5946-mitsubishi-to-build-two-125000-ton-aida-ships.html>

¹² Source: Ecorys (2012), Green growth opportunities in the EU shipbuilding sector

Meyer Werft

The Meyer Werft company in Papenburg (Germany) is a family owned business aged more than 200 years. While the other major players STX (Finland/France) and Fincantieri (Italy) are also active in other fields (offshore, naval), Meyer Werft is relatively strongly focused, and therefore depending, on the building of cruise ships. Although cruise ships are complex products, the competitive position is mainly defined by the production process, in which efficient organisation, timely delivery of goods and services and low failure rates are key to deliver successfully and cost-efficient. This is seen as a main reason why other yards have not been able to enter this market yet. Furthermore dependency on suppliers is ensured by working frequently with local/regional companies and by spreading the supplier risk.

R&D largely takes place in house, partly because of the risk of knowledge leakage. The company however does actively involve in EU funded R&D projects (FP6/7) for areas where investment costs are high or when it concerns general technologies also relevant for other ship types.

Source: qualitative interview conducted in 2011

1.3.3 Cruise ports

Important links in the value chain of the cruise industry are the cruise ports. Many of these ports are regarded as “must see” destinations. Examples are Barcelona or Venice in the Mediterranean or Stockholm in Northern Europe. Other ports are important because of their strategic location and perform a particular function as departure and arrival port. An overview of the leading ports in the Mediterranean and Northern Europe is included in the table below in respect of the embarkations, disembarkations and port-of call visits.

Table 1.3 Leading cruise ports in 2011 (x 1.000 passengers)

Port	Port	Embarking	Disembarking	Port Call	Total
Mediterranean	Barcelona	750	780	1,158	2,657
	Citavecchia	460	460	1,480	2,400
	Venice	722	726	338	1,786
	Palma Majorca	294	294	841	1,429
	Piraeus	280	280	1,000	1,560
Northern Europe	Southampton	717	717	11	1,445
	Copenhagen	220	219	380	819
	Lisbon	25	25	453	503
	St. Petersburg	0	0	455	455
	Stockholm	40	40	372	452

Source: European Cruise Council (2012)

Ports and port facilities tend to adopt different strategies to finance and manage port facilities. For example in the Mediterranean and in Northern Europe of the 60 main ports or terminals, 40 are state managed, 4 are directly operated by cruise lines (Savona, Barcelona, Civitavecchia and Naples) and 3 are partially operated by cruise lines (Genova, Kusadasi and Tunis). The other 13 are operated through private company concessionaires (Gui, L. & A.P. Rosso, 2011).

Generally, volumes of cruise calls/passenger visits are concentrated in attractive cities with cultural heritage, as the above table indicates. Climate conditions also play a role, with higher numbers in the Mediterranean than in the northern European waters. Besides these, a specific segment concerns the cruise trips focused on natural scenery. Examples are cruises along the Norwegian fjords, the Arctic, Scotland and Iceland. These seaways are usually characterised by a sparsely populated and rough countryside. Alongside with its often abundant opportunities to spot wildlife

(e.g. whales, polar bears), the latter provide a good niche market comprised cruise operators at the higher end of price. This underlines that, among other aspects, it's also the eco-systems in place which are creating market value for the cruise industry.

1.4 Regulatory environment

For maritime shipping, including cruise shipping, international regulations are to be followed, as defined by IMO. The main task of IMO has been to develop and maintain a comprehensive regulatory framework for shipping including safety, environmental concerns like Nox emissions, legal matters, technical co-operation, maritime security and the efficiency of shipping. The two key regulatory frameworks are MARPOL and SOLAS. Of specific relevance is MARPOL Annex VI setting limits to emissions. This annex allows for Emission Control Areas to set stricter rules. In Europe the Baltic Sea Area and the North Sea were adopted as SOx Emission Control Area (SECA) in July 2005. Cruise ships operating in these basins thus have to meet stricter requirements. In the near future other ECA areas are also foreseen. In March 2010, specific portions of the U.S., Canadian and French waters (outer boundary of 200 nautical miles from the territorial sea baseline) were designated as an ECA with respect to both SOx and NOx emissions.

Furthermore Port State Control regulations apply, requiring ships to meet international safety, security and environmental standards and involving inspections in ports of call. The rules are approved through the Paris MoU on Port State Control.

In addition to these, the most relevant European regulations regarding cruise shipping are listed below:

- EC Directive 2000/59 on port reception facilities, with the aim of substantially reducing discharges of ship-generated waste and cargo residues into the sea.
- The Council Directive 90/314/EEC on package travel, package holidays and package tours, designed to protect consumers who contract package travel in the EU.
- New EU legislation that came into effect on 1 January 2010 pertains to the EU Sulphur Directive 2005/33/EC, which defines limits on the sulphur content of marine fuels.
- Regulation (EC) No 725/2004 on enhancing ship and port facility security and Directive 2005/65/EC which complements the security measures introduced by Regulation (EC) No 725/2004.

Events such as the Costa Concordia accident may trigger reconsideration of safety regulations and contribute to technology development and setting new standards with regard to e.g. vessel stability.

1.5 Strengths and weaknesses of the sub-function

Strengths in a global perspective

- Strong domestic market. Broad mix of visitor profiles and relatively high spending power potential in Europe.
- Europe is widely acknowledged as a safe and stable tourist destination
- Presence of excellent cruise port facilities in combination with high developed infrastructure
- Diversity of destinations with a dense supply of cultural and historical heritage
- Leading shipyards located in Europe.

Weaknesses in a global perspective

- Leading cruise operators are non-European, although some daughter companies are EU based.
- Building a new cruise ship requires a considerable amount of capital especially when cruise ships become bigger and more and more luxurious. Therefore the risk increases and it becomes harder to attract foreign capital.
- Because of their scale and scope, cruise ships are a burden on the environment. From this perspective, it is important to invest in image and public opinion. Cruise lines are also very well aware of this.
- The costs of port infrastructure are high and port authorities cannot always recover these costs from the cruise lines because of market power of the cruise companies. The realization of the necessary port facilities, like port entry features, customs and immigration handling, anchorage facilities, etc., therefore often requires a contribution from the (local or regional) government needed to port facilities to achieve.
- Access to labour: in the mechanical industry, including shipbuilding, a lack of skilled workers is faced, and this problem is expected to increase.
- The high visibility causes negative events to have a wide impact, as can be seen from the massive news attention for the Costa Concordia accident and the sharp decline of new cruise bookings.

Constraints

- Depth of the waters in ports of call set limits to the size of ships. Currently, for the world's largest cruise ships it is no longer possible to moor in all ports.
- Inland congestion in destination port sites. Usually a cruise ship visits a particular port only for a limited period of time and the massive inflow of visitors is providing congestion in destinations and town centres. Small old towns and heritage sites cannot simply be expanded to overcome this.

2 Research and Technology

2.1 Innovation Patterns in the shipbuilding sector

For the shipbuilding sector (cruise ships, mega-yachts), knowledge, R&D and innovation are of strategic importance for its competitive position. The only way to remain competitive is to continuously innovate and rapidly, so as to stay ahead of the game. Overall, R&D expenditures rose over recent years, reflecting the importance of innovation for the sector.

New green, environment-friendly shipboard technologies are being utilized, such as solar power, advanced water treatment systems, Alternative Maritime Power (AMP), fuel conservation and innovative hull treatment. On a worldwide level, regulations (e.g. on the use low-sulphur diesel fuels) are developed by the International Maritime Organisation (IMO).

In the shipbuilding domain, innovations target:

- Increased cost effectiveness, aiming either at lower construction costs or lower life cycle costs. Especially the latter is an upcoming trend, with a search for energy savings in the operational lifetime of a ship, at the expense of slightly higher investment costs. Some cruise operators look into this option, but not all, as their risk mainly lies with fluctuating energy prices not knowing the earn back time. An example is the improvement of air conditioning systems, requiring up to 30% of the fuel consumption when sailing in tropical areas.
- Environmental improvements, first of all to meet stricter regulations in ECA regions as well as for the sake of image. It concerns for instance waste water and exhaust gas treatment equipment. European manufacturers are considered well positioned in these segments, although Asian competitors also enter these areas.

2.2 Research & Technology mining patterns

No Research & Technology mining patterns have been identified for this subfunction.

However, a number of observations regarding R&D could be made:

- A number of R&D projects, of which some funded under EU R&D programs (FP6, FP7) cover technologies also relevant for cruise ships. Examples are BESST, GasPax, BunGas and FLAGSHIP. Although they do not specifically target the cruise market, European cruise yards do actively participate in several of these projects. Other projects relate to safety and stability, such as for instance the GOALDS project (GOAL Based Damage Stability).
- In the field of shipbuilding, patenting is generally not seen as very effective, as enforcement is weak. Strategies mainly aim at staying ahead of others by continuing innovation and by minimising the knowledge leakage risk.

2.3 Further market developments

In the area of cruise port development, several initiatives are taken, of which the Interreg IVB project Cruise gateway is an example. A number of North Sea cruise ports have joined forces aiming at increasing their maritime accessibility and developing the North Sea as a cruise destination.

Over the years cruise ships have become larger and larger and add more and more amenities. Vacation on a cruise ship was therefore accessible to more and more holidaymakers. This enabled the cruise market to grow explosively. Within the cruise industry a relatively new development however is the divergence between further scaling versus those catering to customers who want a more intimate experience. Seabourn Cruise Line for example operate small luxury cruise ships that sail tot exotic locations in Asia and South America while other cruise lines are specialized in Antarctica cruises as well as cruises to the Arctic.

3 Future developments

3.1 External drivers affecting the performance of the cluster

3.1.1 External drivers

Welfare development

Like other segments of the tourism industry, the cruise industry is to an important extent, influenced by the welfare development. The level of global economic growth highly correlates with the level of tourist activity and the level of turnover and employment in the tourism industry.

The industry is also sensitive to the global economic crisis, as shown by the reduced expenditures in 2009. In 2010 however it continued to show steady growth. Rise of average incomes will further enlarge the market.

Demographic change: ageing population reshaping the internal demand

In 2020 around 20% of the EU's population will be older than 65 (EC, 2008). The older population will often have considerable purchasing power and have more free time in which they can travel, as well as a demand for convenience, safety and luxury. This general trend has a positive impact on the cruise industry.

Changing consumer preferences in tourism

Generally speaking, consumers have developed their preferences, and this also affects the cruise tourism segment. One must realise that cruise tourism competes with other forms of tourism, e.g. all inclusive resorts, fly-drives, city trips. The coming up of low cost airlines have added to this. Also the Internet has lowered the threshold for self organisation of holiday trips reducing the demand for package deals such as offered by cruise lines.

On the other hand with the rise of this so-called experience economy, the demand for a 'total experience' will increase, and cruise can offer this as a special holiday type compared to 'just' visiting a site. Think in this case, for example, to the emergence of a variety of specific cruises. Cruise passengers are increasingly experienced. They seek new experiences leading to the emergence of new destinations, among which is the EU. Meanwhile, for almost every target group currently a separate cruise is offered. Examples of special theme cruises include ecotourism, golf, deep sea fishing or wellness.

Environmental awareness

Environmental policies and consumer concerns about sustainable development increases causing pressure for greening ships (e.g. use of solar panels, wind turbines) and for more sustainable tourist services (e.g. eco-excursions). To respond to this development, cruise lines are taking various environmental measures to reduce emissions and lowering fuel costs. Most cruise lines have on-board recycling programs and are increasingly using LED lighting, solar panels and high efficiency appliances. Many cruise companies also have an environmental officer on board of the cruise ships to monitor compliance. Still however the sector has a way to go with today's average cruise holiday emitting around 4.5 times as much CO₂ per day as an average hotel holiday¹³.

¹³ Traveling large in 2010 – The carbon footprint of Dutch holiday makers in 2010 and the development since 2002, Centre for Sustainable Tourism and Transport, NHTV Breda University of Applied Sciences, 2012

Fuel prices

In addition to capital expenses and maintenance of the cruise ships spending to fuel is also a major cost item. The increasing oil prices and the energy consumption of the ships is a driver for some of the cruise liners to implement more fuel efficient technologies, as the fuel bill is the biggest part of their operations. This is however not easy from a design perspective. Another strategy to save fuel is limiting the distances between ports during a voyage. This allows the cruising speed be reduced which can affect the fuel consumption. Cruise travel destinations with a peripheral location, such as Helsinki, are influenced by this strategy. Also it may affect the development of services in central regions, e.g. close to population concentration, thereby saving on the need of air travel to embarkation ports.

Safety and security

The Costa Concordia accident triggers the search for improved safety and stability design which will probably lead to revision of regulations in this regard. The process of such will over time change designs and may affect costs of ships. Global attention for security and the potential vulnerability of cruise ships as high value high exposure targets has already led to studies into their risk potential and possible measures to alleviate this.

3.1.2 Key factors

Increased competition: cruise market more and more mature

Although the cruise industry shows steady growth figures over the past decade, the cruise market is increasingly becoming a mature market. As markets mature, customers can be more demanding and competition become more intense. Price competition drives ship size growth: The principle is that if the vessel size is increased, operational costs increase at a significantly lower rate than the carrying capacity, resulting in higher net revenue per unit. However, in addition to scaling there is also a reverse reaction towards niche markets and exceptional destinations such as the Arctic or a cruise to the Galapagos Islands.

Cruise companies are increasingly segmenting the market. There is a vast trend towards more family booking. With the number of on-board leisure facilities increasing there is potential for further growth of the family market for cruising (ECC, 2011). Associated to this is the operators' aim for increased on-board spending instead of disembarking in destination ports.

Impact of financial crisis

For the cruise industry and shipyards the financing of ships is a big challenge at the moment. For example shipyard Meyer Werft advance payments received usually are 20-30% and banks are willing to fund max approx. 60%. The remainder has to come from own cash flow of the yard. In Germany, for instance, only one bank (KfW) is providing financing for this, albeit to a limited extend due to strict funding requirements (exporting conditionality). With the financial crisis and stricter rules (Basel III) this has become more difficult (higher own capital is demanded). This is the same in other EU countries, although in France and Italy the state already invested and in Italy the state owns Fincantieri shares. At the time that the financial markets have recovered, funding will likely again is a little easier. The time of recovery, however, is difficult to predict.

3.2 Assessment of response capacity and commercialisation potential

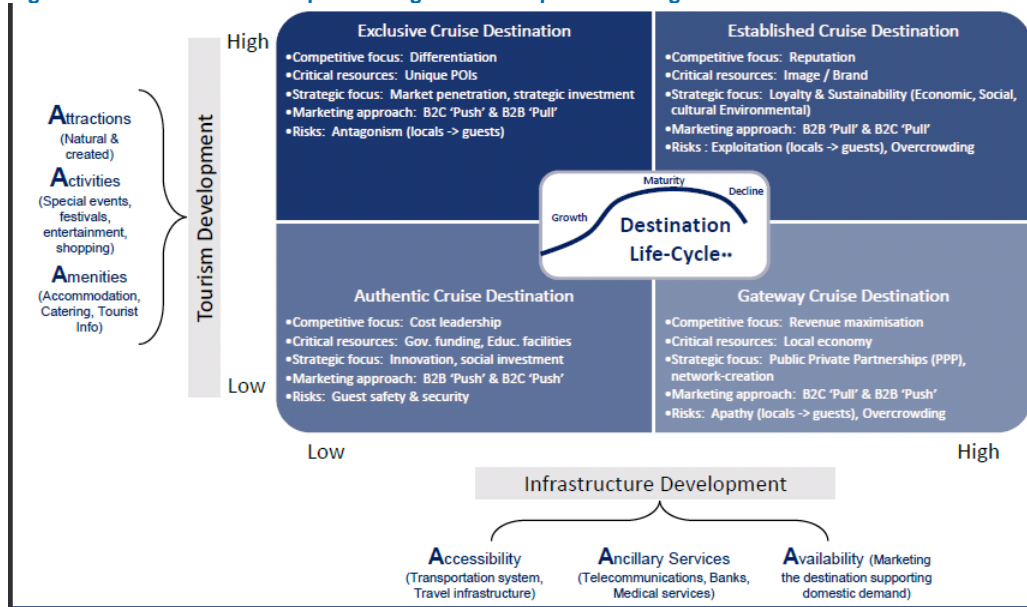
The cruise industry has responded to the above drivers in various ways:

- Cruise companies are increasingly segmenting the market. There is a vast trend towards more family booking. With the number of on-board leisure facilities increasing there is potential for growing the family market for cruising further (ECC, 2011). Vessels have also been adapted to meet requirements these requirements.

- Reduction in fleet expansion: the number of new orders has declined slowing down the growth of the fleet, with current fleets sufficiently modern not to require replacement newbuilding on the short term.
- Shipyards have invested heavily in R&D for modernisation, and intend to continue doing so. One aim is to bring overall cost price down by increased construction efficiency, while another is to improve life cycle costs of these ships. The high fuel bill and the large cost level of facilities (heating/cooling, fresh water supply) are main contributors to this.
- Port authorities as well as (regional/local) governments across Europe are increasingly investigating their options for entering the cruise market, e.g. by constructing facilities or redesigning parts of their port.
- In the service part of the cruise segment, jobs are partly low skill/low wage and staff is being recruited from low wage countries (including non-EU). This personnel is paid very low wages and there is a risk of exploitation of the generally weak position of these workers¹⁴. In high skill segments (shipbuilding / engineering), the industry tries to solve the gap through cooperation with universities

Papathanassis (2011) has defined four market segments of cruise based of the axes of tourism development and infrastructure development (see figure below).

Figure 3.1 Cruise destination positioning and development strategies



Source: Papathanassis (2011).

3.3 Most likely future developments

The number of global cruise passengers continues to rise steadily, despite the Costa Concordia accident. This accident has influenced 2012 bookings, however Carnival Corp. (the owner of Costa Cruises) does not expect any significant long term impact to their business¹⁵. Based on figures from CLIA (2010) the average growth rate in the number of passengers worldwide between 1990 and 2009 was annually 7.2%. At present the total employment in Europe has increased from nearly 200,000 jobs in 2005 to more than 300,000 jobs in 2010 (European Cruise Council 2011). Although the cruise industry like other sectors suffers from the economic crisis, growth expectations for the

¹⁴ P&O cruise ship staff paid basic salary of 75p an hour – The Guardian, 29 April 2012

¹⁵ New 2012 bookings are significantly down in Europe, RCCL says - Lloyd's List 2 February 2012

next few to ten years are favourable, mainly due to welfare growth of European citizens, and because of an increased penetration rate. The growth in other world regions (Caribbean) will also benefit the European shipbuilding and supply industry.

Europe as cruise destination will continuously increase its attractiveness (e.g.. through improved berthing situations in attractive destination ports).The growing market in Europe provides opportunities for extending the cruise season (e.g. Mediterranean).

High fuel prices may also contribute to a growth of the industry, especially in regions where destination ports are located close to each other (North Sea, Baltic).¹⁶

Indicators for further growth potential are cruise new buildings and investments. Over the period from 2012 to 2016 a total of 24 new cruise ships (with a total capacity of roughly 67,000 passengers) have been scheduled for delivery. According to figures of ECC (2012) 13 of these ships are primarily meant for the European source market. For the longer term, such information is (until yet) not available. Because of the significant amount of capital for building a new cruise ship and the complexities surrounding their operation an important company like Carnival expects long-term cruise industry supply growth to slow, while demand accelerates as global economies recover and emerging markets develop (Carnival Corporation & PLC, 2011).

The Costa Concordia accident is likely to result in a greater attention to safety, both from cruise line operators as from authorities. Such attention existed before the accident; see the box on the FP7 GOALDS project; however the Costa Concordia accident will certainly renew the attention to safety. This may affect a number of fields, such as design of cruise ships in order to improve stability and/or to prevent power blackouts during incidents (as happened on the Costa Concordia), regulations for lifeboat provision and, safety training. This increased attention to safety may increase the costs of cruise line operators as the necessary measures may require investments.

<p style="text-align: center;">GOALDS <i>GOAL Based Damage Stability</i> 2009-2012</p> <p>Funding programme: FP7 - Transport Project Duration: 36 months Total Project Value: EUR 4 644 685 EU Grant-Aid: EUR 2 951 883</p> <p>Website: http://cordis.europa.eu/projects/index.cfm?fuseaction=app_details&TXT=cruise&FRM=1&STP=10&SIC=&PGA=FP7-TRANSPORT&CCY=&PCY=&SRC=&LNG=en&REF=93147</p> <p>Coordinator: NATIONAL TECHNICAL UNIVERSITY OF ATHENS (Greece)</p> <p>Partners: STX FRANCE CRUISE SA (FRANCE); CARNIVAL PLC (UNITED KINGDOM); SØFARTSSTYRELSEN (DANMARK); GERMANISCHER LLOYD AG (DEUTSCHLAND); SAFETY AT SEA LIMITED (UNITED KINGDOM); SCHIFFBAUTECHNISCHE VERSUCHSANSTALT IN WIEN GMBH (ÖSTERREICH); MEYER WERFT GMBH (DEUTSCHLAND); UNIVERSITA DEGLI STUDI DI TRIESTE</p>

¹⁶ www.cruisegateway.eu

(ITALIA); LLOYD'S REGISTER EMEA (UNITED KINGDOM); STX FINLAND CRUISE OY (SUOMI/FINLAND); FINCANTIERI - CANTIERI NAVALI ITALIANI SPA (ITALIA); COLOR LINE MARINE AS (NORGE); HAMBURGISCHE SCHIFFBAU-VERSUCHSANSTALT GMBH (DEUTSCHLAND); MARITIME AND COASTGUARD AGENCY (UNITED KINGDOM); DET NORSKE VERITAS AS (NORGE); ROYAL CARIBBEAN CRUISE LINE (UNITED KINGDOM); UNIVERSITY OF STRATHCLYDE (UNITED KINGDOM)

Project Description: The new probabilistic damage stability regulations for dry cargo and passenger ships (SOLAS 2009), which entered into force on January 1, 2009, represent a major step forward in achieving an improved safety standard through the rationalization and harmonization of damage stability requirements.

There are, however, serious concerns regarding the adopted formulation for the calculation of the survival probability of ROPAX and mega cruise vessels; thus ultimately of the Attained and Required Subdivision Indices for passenger ships. Furthermore, present damage stability regulations account only for collision damages, despite the fact that accidents statistics, particularly of passenger ships, indicate the profound importance of grounding accidents.

The proposed research project addresses the above issues by:

- Improving and extending the formulation introduced by MSC 216 (82) for the assessment of the probability of survival of ROPAX and mega cruise ships in damaged condition, based on extensive use of numerical simulations.
- Performing comprehensive model testing to investigate the process of ship stability deterioration in damaged condition and to provide the required basis for the validation of the numerical simulation results.
- Elaborating damage statistics and probability functions for the damage location, length, breadth and penetration in case of a collision / grounding accident, based on a thorough review of available information regarding these accidents over the past 30-60 years worldwide.
- Formulating a new probabilistic damage stability concept for ROPAX and cruise ships, incorporating collision and grounding damages, along with an improved method for calculation of the survival probability.
- Establishing new risk-based damage stability requirements of ROPAX and cruise vessels based on a cost/benefit analysis to establish the highest level for the required subdivision index.
- Investigating the impact of the new formulation for the probabilistic damage stability evaluation of passenger ships on the design and operational characteristics of a typical set of ROPAX and cruise vessel designs (case studies).
- Preparing and submitting a summary of results and recommendations to IMO for consideration (end of project, year 2012).

3.4 Impacts, synergies and tensions

Table 3.1 Impact matrix of the medium-term and longer-term developments

Function	Indicators	Bal- tic	North Sea	Medi- terr.	Black Sea	Atlan- tic	Arc- tic	Outer most
1. Economic impacts	market size cruise industry	+	+	++	0	0	0/+	0
	market size shipyards and supply	0/-	0/-	0/-	0	0/-	0	0

Function	Indicators	Bal- tic	North Sea	Medi- terr.	Black Sea	Atlan- tic	Arc- tic	Outer most
	industry							
2. Employment impacts	Fte employment	+	++	++	0	0	0/+	0
3. Environmental impacts	Natural habitats	0	0	0	0	0	0	0
	Energy consumption	+	0	+	0	0	0	0
	Aquatic life	0	0	0	0	0	0	0

Use the following symbols:

++ = Strong positive impact expected

+ = Considerable positive impact expected

0 = Negligible impact expected

- = Considerable negative impact expected

-- = Strong negative impact expected

The most important synergies and tensions are:

- Maritime transport and shipbuilding: Cruise ships sometimes use the same port facilities as regular shipping. This can provide synergies (e.g. access channel already deepened), but also cause conflicts. Synergies with the maritime transport cluster are also related to shipbuilding, where the supplier industry located in Europe can serve a wider market of ship types.
- Food, nutrition, health and ecosystem services: relevant is marine litter affecting ecosystem services;
- Energy and raw materials:
 - synergy relationship as sustainability and transition to self sufficient units is affecting demand for renewable energy sources, the implementation of cold ironing, and re-use of water;
- Leisure, working and living:
 - Cruise tourism is an important source of income for local communities. Cruise tourists are spending in ports of destination. This also created many jobs
 - Pollution and negative impact from infrastructure development on natural and living environment (also tension with Natura2000);

Horizontally, the growth of cruise trips to pristine areas poses a tension to the natural environment in these locations. In particular in Arctic regions, cruise tourism represents a source of disturbance and pollution. The biggest single threat caused by ship-based activities – which thus also holds for cruise ships – comes from the risk of a major oil spill. Other environmental impacts include degradation of regularly-visited sites, air pollution, discharges of sewage and waste water and introduction of non-indigenous species.

4 Role of policy

4.1 Policy and political relevance

- Shipbuilding companies complain that while the preparation of regulatory changes usually is a lengthy process, the final result often comes into force very quickly, leaving little time for them to adapt.
- The application of regional regulations instead of global rules, such as the regional ECA initiatives, makes it more complex for operators to meet requirements, or it reduces their flexibility with regard to the deployment of ships elsewhere. The solution of meeting the highest standards causes cost increases.
- Environmental policy initiatives in the maritime shipping area, such as ECA's, EEDI or ETS, may be a useful incentive for improving the environmental footprint of shipping. However while maritime transport competes with road or rail transport (with a leakage risk), cruise shipping competes with totally different segments like hotels, fun parks or beach resorts as alternative holiday destinations, for which different environmental rules apply. As an example cruise ships have to comply with high standards concerning waste water processing, while land based hotels can dispose waste water in municipal water treatment facilities which are large scale and therefore operate at much lower cost. Therefore the impacts of such measures may affect the industry in a different way and other regulation design or supporting measures may be needed. In areas hosting vulnerable eco-systems, specific regional measures may be adding to this.
- At the land side, cruise ports have an important function as a tourist destination but also in respect of the embarkations and disembarkations of passengers. Due to the rapid growth of the cruise industry and the number of passengers and calls, port facilities are not everywhere sufficient. Port infrastructure therefore becomes more and more a constraint. The European Cruise Council for example called the lack of operational consistency between cruise ports as one of the main problems (ECC 2011): "unlike airports – where many of the check-in, security and boarding procedures are standardised internationally – at ports nothing is standardised".

4.2 Domains for EU policy

- Within the cruise industry there is a strong degree of concentration. Only a limited number of cruise lines dominate the market and therefore have much market power. Opposite of the cruise lines are the ports. In order to provide more counterweight for cruise lines EU policy can play a role, for example as focal point or bringing together and facilitating the various parties
- At the moment there is no level playing field for port destinations in Europe (among other customs clearance). Like airports, EU policy may contribute to the harmonization of rules and the pursuit of operational consistency.
- Aspects in the field of environment and safety fall under the responsibility of IMO. The role of EU policy is limited in this area, but as a major player and partner in the discussion groups (EU and/or member states), the EU can put more pressure to accelerate the introduction and improvement of measures on safety and environment. Increased attention to safety may be expected following the Costa Concordia accident.

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Annex 2: Stakeholder catalogue

Interviewee	Organisation	City/country	Specific theme	Interviewer	Status
Mr. Antonis Michail (policy advisor)/ Mrs Martina Fontanet (policy advisor)	European Sea Ports Organisation	Brussels - BE	(Cruise) ports (general)	Eric van Drunen	Interview held
Mr. Lorenzo Gui (Professor)	Venice International University	Venice/ Italy	Science	Michel Briene	interview held
Mr. Thomas Weigend, Mr. Christian Wolken, Mr. Hermann-Josef Mammes	Meyer Werft	Papenburg, Germany	Cruise shipbuilding	Johan Gille	interview held
Mr Mario Habig (Division Head)	TUI AG	Hamburg, Germany	Tour operator	Michel Briene	interview held
Mr Mannes Boelen (Commercial manager)	Port of Amsterdam	Amsterdam, NL	Cruise Port	Michel Briene	interview held
Mr. Rob Ashdown (Director of Technical, Environmental and Operational matters)	European Cruise Council	Brussels, BE	Cruise operators, lobby	Michel Briene	Interview held
Mr. Dick de Graaff Commercieel Manager	Passenger Terminal Amsterdam, Atlantic Alliance, Cruise Europe	Amsterdam, NL	Cruise Port, lobby	Michel Briene	Interview held

Annex 3 Case studies

Cruise industry in Malta

Malta is a popular cruise destination in the Mediterranean and has seen increases in passenger numbers from 147,000 pax in 1998 to 556,000 pax in 2008. After a dip of 439,000 pax in 2009, figures in 2010 were up again to 491,000. All cruise vessels visit the Grand Harbour, which offers direct access to the World Heritage site of the capital Valletta. In 2004, a dedicated cruise terminal was completed with 3 berths and a waterfront which hosts restaurants, bars and shops in restored warehouses. The cruise terminal is operated by Viset PLC under a long term lease contract.

It is a seasonal market, with 95% of all calls in Malta taking place in the months April to November. Moreover, vessel arrivals are not equally spread over the week; peak days can see up to 4 or 5 cruise ships on a single day. On these days cruise vessels are berthed at cargo quays as an intermediate solution, which depending on the location of the alternative causes the cruise operator to make additional costs for coaches or tender vessels to transport passengers to the Valletta side of the port.

The cruise market in the Mediterranean has seen an enormous increase of vessel size, in search of economies of scale. This also marks the transition of cruising from upmarket to a more mass market holiday character. In 2001, the average number of passengers per vessel call was 760 pax; in 2009 this had grown to 1688 pax per call. This is putting pressure on the Grand Harbour cruise terminal: it has only one berth available for vessels over 250m in length, whereas in 2009 50% of the vessels were over 250m. Port authority Transport Malta is therefore now looking to invest in new cruise quays that can accommodate vessels over 250m in length.

The cruise market is very much dictated by the cruise liners. They can easily transfer their vessels to markets where demand is highest, or decide to include or exclude ports from their itineraries. The itineraries are selected based on distances that can be covered within a single night. The cost of fuel can influence this distance, as cruise liners may seek shorter overnight distances so they can reduce speed and save on fuel. Another element is the attractiveness of a port to passengers. Some ports have a relatively strong position, such as Civitavecchia (the cruise port for Rome), which hardly can be omitted from the itineraries. Malta is in a different position; it is not that well known, especially not amongst the lower income groups that are increasingly targeted by the cruise industry.

A specific aspect is that it is considered a safe destination. While that is good news for the Maltese tourism industry, it is bad news for the cruise liners. Passengers will tend to make their own arrangements for visits while in Malta, whereas the cruise liners make most of their profits out of the organised tours they offer. This means Malta might become less attractive as a port of call for cruise liners as they have less opportunity to make a profit in Malta than in other locations. Compare this to for example Civitavecchia, which is located far enough from Rome to persuade most passengers into taking an organised tour into the city.

Since its entrance into the EU in 2004 Malta has also become less attractive from the perspective of tax free shopping opportunities. Cruise liners in the Mediterranean generally try to include at least one non-EU port in their itineraries for this reason. Societal disturbances in northern African countries recently however hampered this which may be at the short term benefit of Malta.

Relatively new to Malta is the home porting business, which is actively being developed by several cruise stakeholders. Home porting refers to cruise ships using the island as their base where they start and end their itineraries. From an economic point of view this is more lucrative to the island's economy than being a cruise port of call, as passengers will fly to Malta and perhaps stay a few nights before or after their cruise. As a consequence, this generates higher passenger spending than the spending of port of call passengers that only visit during a day.

Sources:

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Amsterdam Cruise Port

The Passenger Terminal in Amsterdam in 2009 welcomed 103 sea cruise vessels delivering approximately 200,000 passengers. Besides receiving sea cruise vessels Amsterdam is also important as a harbour for cruise ferry ships (in 2009 Amsterdam welcomed 351 cruise ferry ships) and for river cruise ships (almost 1,000 in 2009). Over the last 10 years the total number of cruise calls as well as the number of passengers has been steadily growing. In 2000 there were only 100,000 passengers. Since then, passenger numbers roughly doubled. Besides the location of the terminal in an attractive historic city, it's also important that the city has optimal connections by air, train and road. Schiphol for example is an important international airport connecting with many European airports linking large population centres such as London, Frankfurt and Paris, amongst others.

The Passenger Terminal Amsterdam is located in the centre of the town near the central station from where visitors can easily walk to the city centre. Passengers can also travel to the centre of Amsterdam very easy by foot, public transport or touring boat. The terminal has a large reception hall, extensive catering and shopping facilities and tourist information office. The terminal also hosts international events and exhibitions. Such events and exhibitions provide for 50% of the revenues of the terminal, while cruise ships are responsible for the remaining 50%.

Although there is sufficient demand potential for Amsterdam as an attractive cruise destination, it has proved difficult at the moment to obtain financing for the construction of a second terminal. Without a second terminal, it is difficult to substantially increase the number of port calls in Amsterdam in the long term. At this moment an alternative terminal facility is available for the locks of IJmuiden on the side of the North Sea. This terminal however is less attractive for cruise lines because of its eccentric location.

Another major bottleneck at present is the capacity of the already mentioned sea locks in IJmuiden. Expansion of the locks is needed to make the port of Amsterdam accessible to larger (cruise) ships. The current complex in IJmuiden consists of four locks. Through the largest of these, the Noordersluis, more than 80 percent of all cargo is transported to the port of Amsterdam. The current sea lock dates from 1929 and within 15 to 20 years needs to be replaced. The lock is then technically depreciated. Plans have been made but until now public funding limitations has been a major barrier for implementation.

Sources:

Interview PTA

Freeport of RIGA

Riga is the capital of the republic of Latvia, which joined the EU on 1 May 2004. The cruise season in this Baltic city peaks in the summer months from May to September and cruise passengers are visiting Riga in growing numbers. During the cruise ship season of 2010, Riga registered 63 port calls. The cruises arriving at Riga carried 55,000 tourists from 65 different countries. Most of the cruise visitors to Riga were from Germany and Sweden, but Finland, USA, France and Austria were also well represented.

The development program for Riga Freeport 2009-2018 underlines the great potential of Riga with regards to passenger traffic development, involving cruise ships sailing in the Baltic Sea as well as new ferry lines. In 2007, the Board of FRA adopted a resolution to foster the development of passenger traffic at the Freeport of Riga, applying rebates for cruise operators, provided their ships call at the port more than five times during a calendar year.

The only specialized sea bound passenger terminal at the moment is in Andrejosta, located on the right bank of the River Daugava, close to the city centre. The terminal accommodates passenger ferries and cruise ships of medium size. The use of this terminal has risen sharply in recent years mainly due to a sharp increase in the number of regular ferry passengers. Since 2006 the link Riga–Stockholm has been served and liners from Riga to Stockholm leave the port every day.

Although there are good prospects for further development of the cruise market there is a risk of failure to develop more attractive conditions for cruise lines and passengers. This may in the longer run result in a drop of tourists and cruise passengers.

For the further development of the port there are plans for the development of a new RoPax and Cruise Terminal in the harbour area (timeline until 2017). The estimated cost of the terminal amounts 50 mln euro (FRA 2008). An additional terminal is considered necessary for future growth to accommodate cruise ships and other passenger travel. With support from the European Union a feasibility study and technical design has conducted by the end of 2009 for the new terminal. Assuming the feasibility study (<http://www.rop.lv>). the best selected alternative foresees the development of RoPax and cruise ship terminal in two locations – RoPax terminal in Eksportosta (Pīļmuiža) and cruise terminal in Kīpsala.

Sources:

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Annex 4 Table of cross-links and synergies

Table 0.1 Cruise tourism: Synergies and tensions

Subfunction	Affected	Remarks
Maritime transport and shipbuilding	- ++	<ul style="list-style-type: none"> Cruise ships sometimes use the same port facilities as regular shipping. This can cause conflicts Growth market positively affecting shipbuilding sector
Food, nutrition, health and ecosystem services	- +	<ul style="list-style-type: none"> Marine litter affecting eco-system services contribution of angling to monitoring natural protected areas (npa's)
Energy and raw materials	-/ +	<ul style="list-style-type: none"> sustainability affecting demand for renewable energy sources and re-use of water (self sufficient units)
Leisure, working and living	++ 0/- --	<ul style="list-style-type: none"> cruise tourism is an important source of income for local communities In common cases, there is congestion on land side. Unlike travel destinations in the Caribbean the capacity of most cruise cities in Europe is however enough. pollution and negative impact from development on natural and living environment (tension with Natura 2000)
Coastal protection	0	
Maritime monitoring and surveillance	0	

Explanation:

++ = Strong positive impact on other sub-functions/sea basins expected

+ = Considerable positive impact on other sub-functions expected

0 = Negligible impact on other sub-functions/sea basins expected

- = Considerable negative impact on other sub-functions expected

-- = Strong negative impact on other sub-functions expected

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