



Top environmental priorities of European Ports for 2013

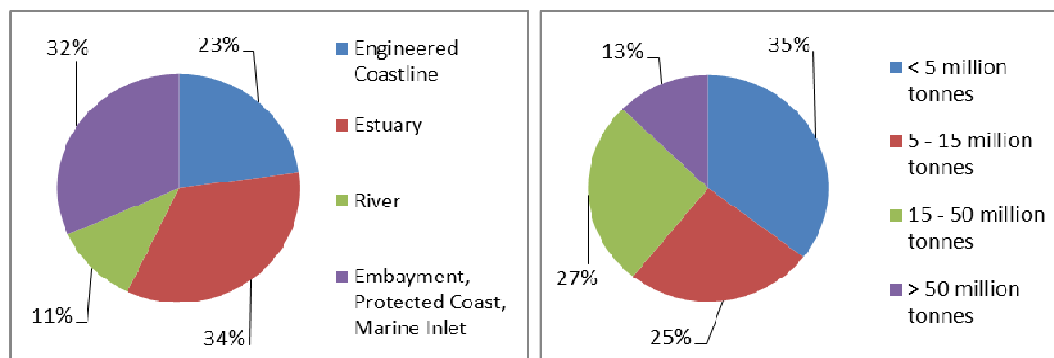
An analysis taking port size and geography into consideration

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Building on a long tradition that goes back to 1996, ESPO undertook in Spring 2013 the Port Environmental Review 2013. This was part of a broader exercise of data collection on port performance that resulted the publication of the Port Performance Dashboard 2013 (accessible through www.espo.be). A major part of the Environmental Review focused on redefining the environmental priorities of the European port sector. The current report presents the top-10 of environmental priorities for 2013 and provides further analysis by examining the influence of factors such as the port size and geography provides in the definition of environmental priorities.

Research sample

79 ports of 21 European Maritime States provided environmental data in a dedicated exercise through the EcoPorts website at www.ecoport.com. The Maritime States represented are: Albania(1¹), Belgium (2), Bulgaria (1), Croatia (2), Cyprus (1), Denmark (5), Estonia (1), Finland (3), France (11), Germany (4), Greece (8), Ireland (3), Italy (5), Latvia (1), Lithuania (1), Netherlands (6), Norway (1), Portugal (2), Spain (5), Sweden (4), and United Kingdom (12). The response rate and the diversity in ports' typology allow drawing a representative overview of the EU port sector.



The two graphs above demonstrate the characteristics of the sample of respondent ports in terms of geography and size (annual tonnage of commodities handled). It can

¹ The number in brackets indicates the number of ports from the specific country that provided data



be seen that the sample is quite balanced regarding those characteristics. Respondent ports demonstrate the range of port characteristics that comprise the ESPO membership and the fact that each port is unique in terms of its environmental setting and aspects.

The Top-10 environmental priorities of European Ports for 2013

ESPO and EcoPorts have been monitoring the top environmental priorities of the European port sector since back in 1996 through regular respective surveys. The table below demonstrates the changes in port environmental priorities from 1996 to 2013. Many of these reflect prevailing political drivers. Priority issues change their ranking with time but certain components retain their significance for the sector. Environmental issues that consistently appear over time are mapped with the same colour.

	1996	2004	2009	2013
1	Port Development (water)	Garbage / Port waste	Noise	Air quality
2	Water quality	Dredging: operations	Air quality	Garbage/ Port waste
3	Dredging disposal	Dredging disposal	Garbage / Port waste	Energy Consumption
4	Dredging: operations	Dust	Dredging: operations	Noise
5	Dust	Noise	Dredging: disposal	Ship waste
6	Port Development (land)	Air quality	Relationship with local community	Relationship with local community
7	Contaminated land	Hazardous cargo	Energy consumption	Dredging: operations
8	Habitat loss / degradation	Bunkering	Dust	Dust
9	Traffic volume	Port Development (land)	Port Development (water)	Port development (land)
10	Industrial effluent	Ship discharge (bilge)	Port Development (land)	Water quality

Table 1: Evolution of environmental priorities over time (1996-2013)

Air quality is pointed out as the current top environmental priority by the European port sector as a whole. This reflects the priority given to issues related to the health of people working or living around ports, and is in line with the European political agenda, through the ongoing review of the EU Air Quality policy but also the several ongoing initiatives that aim to control the exhaust emissions of air pollutants by vessels.

The management of garbage/ port waste remains high within the environmental priorities of the sector, while that ship waste enters the top-10 of priorities for the first time, probably as a result of the ongoing review of the port reception facilities



directive and the whole debate over the adequacy of port reception facilities to accommodate for new types of ship waste and increased volumes (e.g. scrubber generated waste). Energy consumption, that was a new entry in 2009, gains significance within the port priorities, while that noise management maintains a high ranking. Some environmental issues, namely dredging operations, dust and port development, appear consistently within the top 10 of priorities in Europe in the last 17-18 years. Finally, water quality appears again within the 2013 top-10.

Environmental priorities by port size

Ports of different sizes face different environmental challenges. The following table demonstrates the top environmental priorities of the ports in Europe according to their annual tonnage of cargo handled. The number of contributing ports for each category is indicated in brackets.

	< 5 million tonnes (28 ports)	5 – 15 million tonnes (20 ports)	15 – 50 million tonnes (21 ports)	> 50 million tonnes (10 ports)
1	Garbage/ Port waste	Air quality	Energy Consumption	Port Development (water)
2	Ship waste	Noise	Air quality	Dust
3	Air quality	Ship waste	Noise	Dredging: operations
4	Energy Consumption	Garbage/ Port waste	Garbage/ Port waste	Air quality
5	Relationship with local community	Port development (land)	Ship waste	Energy Consumption
6	Noise	Water quality	Climate change	Port development (land)
7	Dredging: operations	Energy Consumption	Dredging: disposal	Dredging: disposal
8	Dust	Port Development (water)	Port development (land)	Conservation areas
9	Water quality	Dredging: operations	Relationship with local community	Relationship with local community
10	Bunkering	Relationship with local community	Water quality	Climate change

Table 2: Top environmental priorities by size of ports

Some useful conclusions can be derived from the study of the table. Air quality is a top priority issue independently from the size of the port. Relationship with local community and energy consumption are also challenges shared by all sizes of ports. It is interesting to note that the two major priorities of small ports are related to waste, both from ships and from the port area. In fact, garbage/port waste, ship waste, water



quality and noise appear consistently within the environmental priorities of all ports handling less than 50 million tonnes of cargo annually.

In contrast, very large ports (>50 million tonnes) have concerns on port development issues, in both land and sea side, and on the operations and disposal of dredging. There are some issues that do not appear in the overall Top 10 of environmental priorities (see table 1), but they are important when analysing by port size. This is the case of bunkering, which is regarded as a significant issue exclusively in small ports. In addition, largest ports give high priority to issues such as conservation areas and climate change.

Environmental priorities by port geographical location

Environmental priorities are also dependant on the geographical characteristics of the port. Therefore, the port specific geography (estuary, engineered coastline, river, embayment) have a clear influence on environmental priorities as it can be demonstrated on the following table. Again, the number of contributing ports is indicated in brackets.

	Estuary (27 ports)	Engineered coastline (18 ports)	River (9 ports)	Embayment ² (25 ports)
1	Garbage/ Port waste	Air quality	Energy Consumption	Air quality
2	Dredging: operations	Noise	Climate change	Ship waste
3	Dredging: disposal	Energy Consumption	Air quality	Garbage/ Port waste
4	Energy Consumption	Ship waste	Relationship with local community	Noise
5	Air quality	Garbage/ Port waste	Noise	Dust
6	Noise	Relationship with local community	Dust	Dredging: operations
7	Port development (land)	Dust	Port development (land)	Relationship with local community
8	Conservation areas	Water quality	Water quality	Water quality
9	Climate change	Port development (land)	Port Development (water)	Energy Consumption
10	Sediment contamination (marine)	Port Development (water)	Odours	Bunkering

Table 3: Environmental priorities by port geography

² Under the category “embayment” also the ports that are located in “marine inlets” and “protected coast” are included



Regarding the influence of the port geography on environmental priorities, some observations can be made. The top environmental priorities that are common for all locations of ports appear to be noise, air quality and energy consumption. Ports located in estuaries tend to face challenges when it comes to dredging, in both the operations and in the disposal of sediments. However, these type of ports appear to face less challenges on dust, water quality and relationship with local community, in comparison to the ports in the other locations. Another common priority for all locations is port waste. Engineered coastlines and river ports have concerns in port development, in both land and water.

Again, some issues that are not present in the top 10 ranking (table 1) are relevant for ports situated in a specific location. It is interesting to note that climate change, although not appearing in the overall top 10, is indeed an environmental priority for ports located in estuaries and rivers. Conservation areas and sediment contamination are naturally within the top priorities of ports on estuaries. Bunkering receives attention in embayment ports, whereas odours appears within the top priorities of river ports.

ESPO available guidance on the top environmental priorities

ESPO guidance documents provide assistance to ports in tackling the identified environmental priorities of the sector. The “ESPO Green Guide; Towards excellence in port environmental management and sustainability” introduces an innovative framework for action under five “Es”, namely Exemplifying, Enabling, Encouraging, Engaging and Enforcing. This five Es framework is applied to five environmental priorities, air quality, energy conservation and climate change, noise, waste and water management, that are all included in the top-10 of the sector. Furthermore, the annex 1 of the ESPO Green Guide contains numerous good practice examples by ports in tackling those priorities. Both the Green Guide and the annex are publicly available through www.espo.be and www.ecoport.com.

The annual ESPO Award on Societal Integration is solely dedicated on how ports can improve the relationship with their local communities and it complements the ESPO Code of Practice on Societal Integration of 2010. Last but not least, the ESPO Code of Practice on the Birds and Habitats Directives (2007) provides practical assistance to ports on issues very much linked to port development and dredging.