



**EU DA SEMINAR ON
INNOVATIONS IMPROVING MARITIME SAFETY**
THURSDAY 5TH MARCH 2015, 10.00 – PORT OF ZEEBRUGGE

INTRODUCTION

At the initiative of the European Community Shipowners' Associations (ECSA), shipowners and shipping industry leaders have joined forces and organised the **first European Shipping Week (ESW) from 2nd to 6th March 2015**. Centred around a Flagship conference, Europe's main shipping organisations as well as the European Commission organised a series of high level events bringing together the major players in the shipping industry to promote the strengths and the importance of European and global shipping to legislators in Brussels such as the European Commission, European Parliament and the Council of Ministers.

As shipping is of strategic importance to the EU economy, so is its safety. Maritime safety policy and related legislations promote high-quality standards and aim at increasing the protection of both human lives (e.g. passengers and crews) and the environment (reduce risks of pollution).

As member of the ESW Steering Group, the European Dredging Association (EuDA) organised respectively its Board meeting (private event) on 3rd March 2015 and on 5th March 2015 a double event composed of a seminar on '*Innovations improving Maritime Safety*' followed by a technical visit illustrating some aspects of the technological solutions offered by the dredgers. Opened by a Welcome Address by **Mr Joachim Coens**, Managing Director of the Port Authority Bruges-Zeebrugge, and an Opening address by **Mr Markku Mylly**, EMSA Executive Director, the Maritime Safety aspect on which the seminar focused was the '*safe place of refuge*'.

Indeed, during the seminar, EuDA presented specifically designed artificial islands using hydraulic engineering or naval architecture, combining sand and rock or metal, which could be used, amongst other purposes, as innovative solutions for safe places of refuge for sea vessels in distress. The seminar briefly considered the opportunity of building a kind of safety belt around European Waters and then focused the discussions on the more tangible contribution to Blue Growth in and outside Europe (including exports to other parts of the world where fast growing economies are skirted with shallow waters, such as the Persian Gulf). **Ms Barbara Sellier**, Policy Officer and EMSA Liaison for the DG MOVE Unit in charge of Maritime Safety, concluded the seminar and gave the closing address.

EuDA members strongly believe that the growth potential for the dredging industry in Europe and worldwide lies in the design, construction and maintenance of sustainable multipurpose maritime infrastructures. When designed and built to use the forces (physical and biological) of nature instead of fighting them, these multipurpose maritime infrastructures will also provide services beneficial to the environment, the society and/or the economy.

In vulnerable coastal areas, the effects of Climate Change will create the need for increased protection from coastal erosion, from floods, from storms and from sea level rise. Renewable offshore energy from wind, from tidal forces or from waves, is also becoming an ever increasing market for the dredging industry.

The future of the dredging industry lies in the sea and at the interface between land and sea where the growing world population living on the coasts will have to integrate the sea even more into its daily life.



PROGRAMME OF THE DAY

10.15 Welcome Address

Mr Joachim Coens, Port of Zeebrugge Managing Director, welcomed the participants.

10.20 Opening Address

Mr Markku Mylly, EMSA Executive Director, set the scene by highlighting the role and objectives of the European Maritime Safety Agency (EMSA) with regards to safe, clean and economically viable seas (and shipping).

10.30 Programme Overview

1. Introduction to Seminar

Seminar Moderator, Mr John B. Richardson, FIPRA International, introduced the discussions by reflecting on the services 'natural' islands are providing to the

2. Multipurpose artificial reclaimed islands

Mr Bernard Malherbe, JDN, Project Manager of Flanders Bays 2100, explained the general approach implemented in Flanders Bays 2100, essentially inspired by history and nature.

Mr Frank Verschraegen, DEME, Project Leader of iLand, presented the concept of energy islands with the examples of SARB and iLand.

3. Multipurpose artificial floating islands

Mr Francois Duthoit, DCNS Innovation Director and Chairman of the Waterborne WG on Blue Growth, presented the concept of Multi-Purpose Offshore Platforms and the example of the quarantine floating island (Sea Imperium).

4. Possible sources of financing

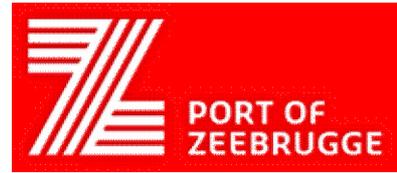
Mr Paris Sansoglou, EuDA Secretary General, developed the idea that multi-purpose infrastructures involved multiple stakeholders (broader acceptance base) and multiple sources of funding (from multi-layered public budget lines with possible private partners).

11.30 Open discussion & conclusions

12.10 Closing Address

Ms Barbara Sellier, European Commission Maritime Safety Unit, closed the discussions and took stock of the main findings. She outlined the main policy priorities of the Commission with regards to Maritime Safety, the importance of building on the Community acquis and the growing need of suitable facilities to accommodate bigger and bigger ships (for which multipurpose islands could broaden the range of possibilities).

The Seminar was followed by a networking lunch, a Tour of Port of Zeebrugge and a Technical Visit of a Dredger in Operation.



SEMINAR KEY MESSAGES

Natural Islands' Economic, Logistics and Coastal Management Functions

From the lively discussions initiated at the Seminar, it arose that despite being separated from the shore, **islands** nevertheless provide essential services to the main land, such as additional space for

- Ports (including safe place of anchorage/refuge, hubs and feeding);
- (other) Key Logistics Nodes;
- Residence;
- Agriculture, Fisheries – Aquaculture;
- Industrial and Manufacturing Activities;
- Tourism – Cultural and Recreational Activities;
- Nature (unique nature reserves, unique ecosystems);
- Military Activities – Security related Activities.

Moreover, islands often also provide

- Coastal protection services (e.g. reducing coastal erosion);
- Mineral and Energy Resources.

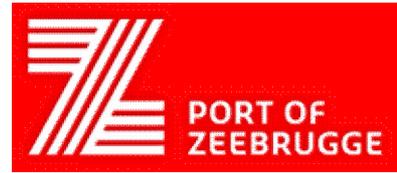
Besides the logistical challenges, typically linked to their insularity, islands face **challenges** from

- Sea Level Rise;
- Increased Frequency of Extreme Events (e.g. storms and floods);
- Volcanic Activity;
- High Population Density (in some cases, such as in Malta).

Artificial Islands' Added Value

While facing the same challenges, **artificial islands** can match all the services provided by natural islands in a more customised way and can additionally offer opportunities of

- New land creation in densely populated coastal areas where there is a space shortage onshore;
- Renewable Energy production and storage (e.g. using pumped water basins);
- Offshore supply bases;
- Ship repair – Offshore maintenance;
- Harbours for ships (copying natural specific harbour islands);
- Accommodating Mega-Vessels for which infrastructure is lacking worldwide;
- Floating “quarantine” island;
- Customised refuge facilities for ships in distress with provision for the containment of pollution;
- Creation of valuable new ecosystems to compensate for areas lost onshore;



Integrated Multipurpose Maritime Infrastructures

Multipurpose infrastructure can be *the same infrastructure used for different purposes at different times or an integrated system of infrastructures used for a cluster of compatible/complementary purposes*. With today's complex environmental legislations and permitting procedures, multipurpose maritime infrastructures are often the most efficient and effective way forward for new investments. They can even be used as Blue Growth catalysts, developing maritime clusters and maritime poles of competitiveness, while harmoniously implementing Maritime Spatial Planning (Integrated Coastal Management).

Demand Triggers

Demand for multipurpose maritime infrastructures is triggered by the growing needs for space and additional land due to the increasing coastal population. This situation is not limited to Europe and on the contrary, is experienced by more and more places around the world where the large coastal population is at the source of the land scarcity where it is more and more needed. In those places, the increasing value of real estate and land, by far above the actual cost of land reclamation, has been the trigger for the construction of artificial reclaimed islands.

Artificial Islands and Innovation

The modularity of multipurpose maritime infrastructures makes them ideal breeding grounds for innovation. Today's artificial islands have to be multipurpose and the most successful business model requires them to replicate, adapt and combine the best (natural) features of existing islands in order to provide tailor-made services and functions where and how they are needed.

Maritime Safety Islands and Blue Growth

'Maritime Safety Islands' are *islands built for the purpose of harbouring, isolating, dry-docking and repairing ships in distress*. They can attract public investors if they are designed as multipurpose maritime infrastructures, serving multiple (existing or new) purposes, and implemented as part of an integrated system of commercial or non-commercial infrastructures with compatible purposes. This also fits the general approach and principles of the Maritime Spatial Planning and the Integrated Coastal Management.

Successful Blue Growth innovations often emanate from technical knowledge adapted from other on- or off- shore sectors. But to materialise, these innovations need initial investment.