Stavros Hatzakos,
Chairman, ESPO Cruise and Ferry Port Network

Green cruise Ports

10 October 2017

Port of Amsterdam

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Cruise Industry

There is no industry like the cruise industry”
Cruise ships are moving communities on the water that need to meet navigational, operational, environmental and safety regulations, whilst meeting passenger recreational needs.
Cruise is a tourist sector, as well as a global industry, which has to deal with a complex legal framework.

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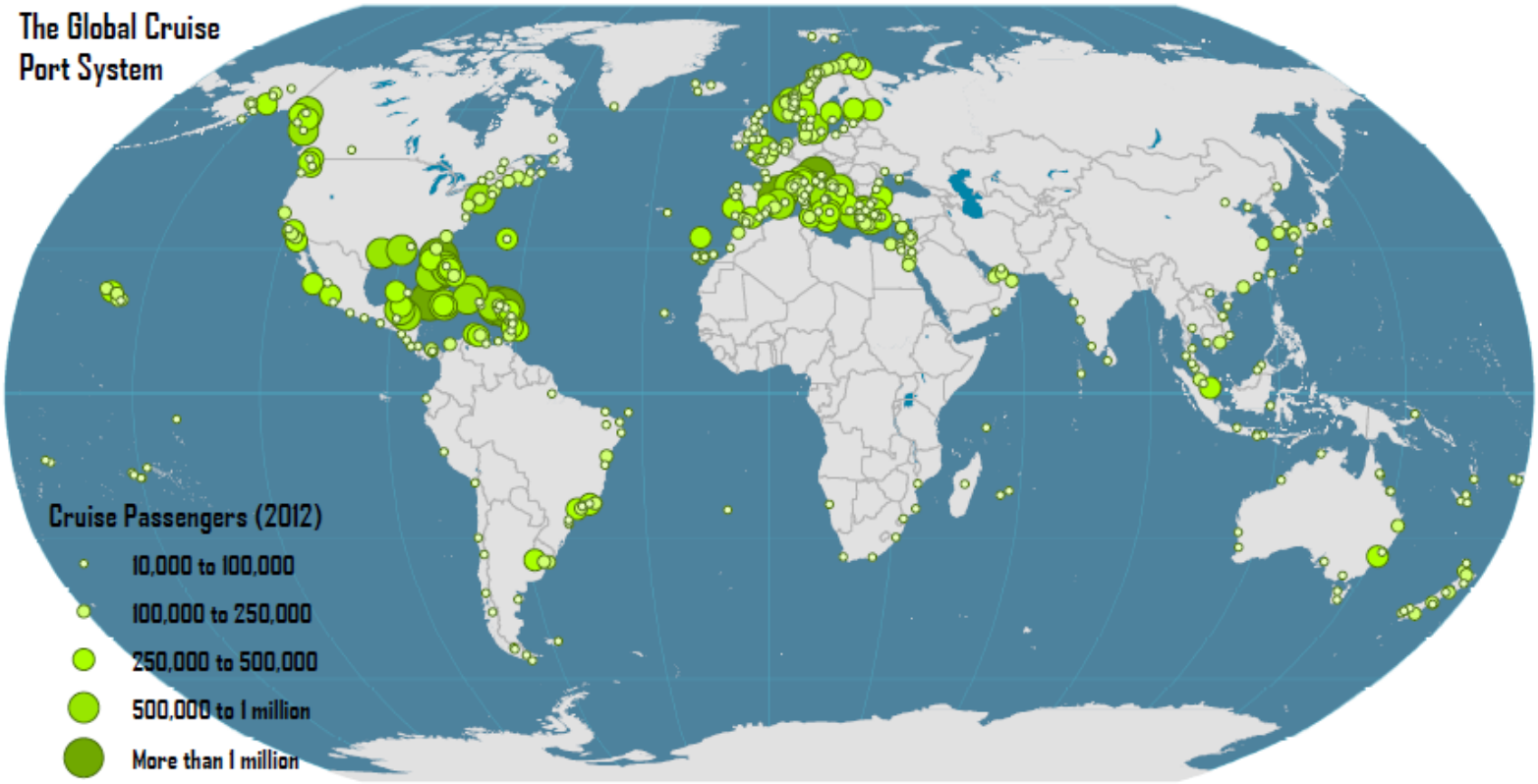
Global cruise areas



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- Cruise ships are moving communities on the water, which aim at meeting passenger recreational needs.
- As they become bigger and bigger, they have continuously increased needs
- They transport passengers to historical places.
- Most historical places are small and they face issues with increased volumes of visitors.
- Increased volumes of passengers need to co-exist with locals in the visiting areas.
- Pressure is addressed to the cruise industry by the communities

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- The pressure is high and that’s why the cruise industry is often seen as leading when it comes to implementing new technology and applying innovative solutions.
- While operating in different areas of the world, standards are equally high, competition is getting stronger and new regulations come up.
- When ships enter a SECA, their fuel oil is only allowed to contain a maximum of 0.1% Sulphur (as of 1 January 2015).

SECAs areas:

Designated under Regulation 14 of MARPOL Annex VI (SOx and particulate matter emission control). The Baltic Sea area, The North Sea, The North American, The Unites States Caribbean sea area

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New Global Sulphur Limit

- IMO (MEPC 70, Oct 2016) has set a global limit for sulphur in fuel oil used on board ships of 0.50% m/m (mass by mass) from 1 January 2020. (implementation of the 0.50% global sulphur limit). This will significantly reduce the amount of sulphur oxide emanating from ships.
- The current global limit for sulphur content of ships' fuel oil is 3.50% m/m (mass by mass). The new global limit will be 0.50% m/m will apply on and after 1 January 2020.

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How can ships meet lower Sulphur emission standards

- 1. Ships can meet the requirement by using low-sulphur compliant fuel oil.
- 2. An increasing number of ships are also using gas (LNG) as a fuel as when ignited it leads to negligible sulphur oxide emissions.
- 3. Another alternative fuel is methanol which is being used on some short sea services.
- 4. Ships may also meet the SOx emission requirements by using approved equivalent methods, such as exhaust gas cleaning systems or “scrubbers”, which “clean” the emissions before they are released into the atmosphere.

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Climate Change

- Climate Change increases pressure
- Paris Agreement climate goals (on climate change)
- Although emissions of international shipping have not been included in Nationally Determined Contribution (NDCs) to limit the global average temperature increase → since the Paris Agreement aims to reduce global emissions, emissions included in NDCs and shipping emissions are interrelated.

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IMO Initial GHG Strategy

- MEPC 70/Oct 2016 -> Approved a Roadmap (2017-2023) for developing an IMO Strategy on reduction of GHG emissions from ships:

  - Initial IMO GHG Strategy (2018)

  - Revised IMO GHG Strategy (2023)

- In process the adoption of an initial IMO Strategy on the reduction of GHG emissions from ships in 2018. -> Upcoming intersessional meeting of the IMO Working Group on Reduction of GHG Emissions (London, 23 - 27 October 2017) to draft the text of the Initial IMO Strategy.

- MEPC 72 (April 2018) is expected to approve the final Initial IMO GHG Strategy.

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LNG is an option

- LNG technology is a way to meet existing and upcoming requirements for the main types of emissions (SOx, NOx, PM, CO2).
- So since the cruise industry is directly linked to the port industry and In order the cruise ship to be able to provide quality to its passengers, it expects quality services from the ports as well. Accordingly, from the environmental perspective, the cruise industry expects environmental rules being implemented at the ports of call and requests for facilities such LNG bunkering

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LNG Cruise Ships

- Cruise ships fueled by LNG are at the pipeline.
- 11 of the 75 cruise ships on order will have LNG engines

(Seatrade Whitepaper on The Future of Cruise Ships, July 2017)

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Cruise Ports & Ships

- The cruise ports located in this area have to provide environmental friendly solutions for the hosted ships.
- A sufficient network of LNG bunkering stations is needed.

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PPA SA

- PPA SA a loyal supporter of EcoPorts since 2004.
- PERS (the Port Environmental Review System) certified since 2004.
- Ecoports since 2011.
- ISO 14001:2008 certified since 2013 (Cruise Terminal, now in expansion process, to apply at all port activities)

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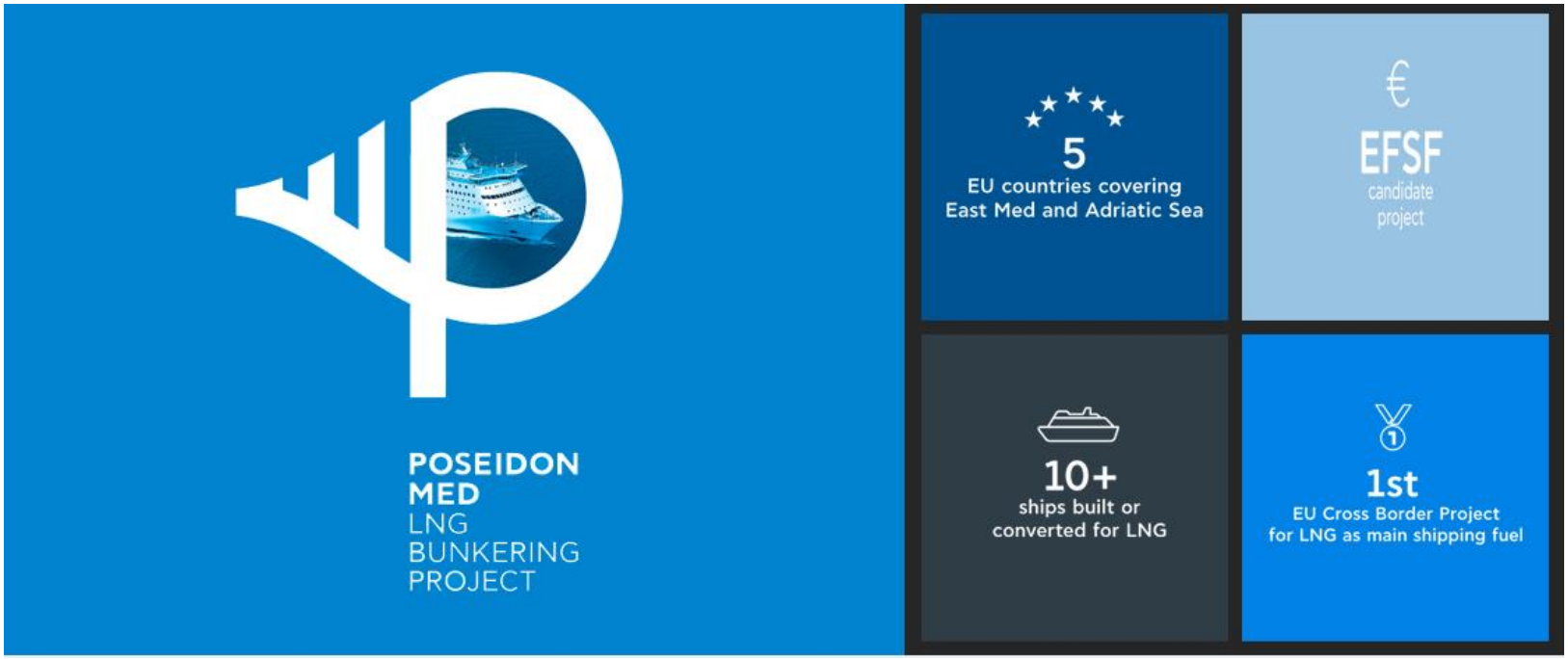
PPA SA at POSEIDON MED II



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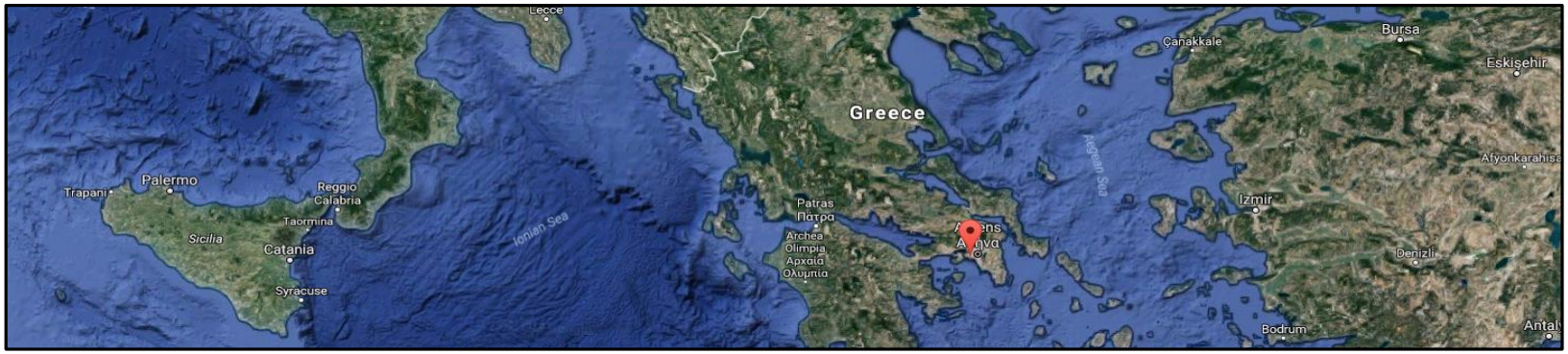
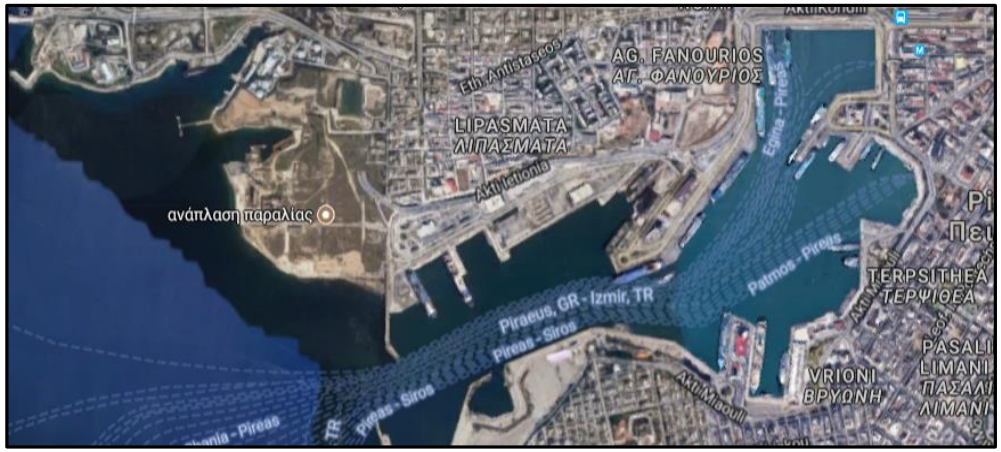
PPA SA at POSEIDON MED II





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Goals and Partners of POSEIDON MED II

Energy	Ports	Shipping	Technical & Financial
DEPA (GR) (Project Manager & Coordinator) DESFA (GR) (Technical Coordinator)	Piraeus (GR) Heraklion (GR) Patras (GR) Igoumenitsa (GR) Limassol (CY) Venice (IT)	Minoan Lines (GR) Blue Star (GR) Attica Ferries (GR) ANEK (GR) Neptune (GR) Hellenic Seaways (GR) Arista (GR) Lavar (CY) HSSA-EENMA (GR) SEEN (GR)	Hellenic Lloyd's (GR) OceanFinance (GR) CERTH-EKETA (GR) EPE (GR) NAP (GR) Rogan (GR) R.R. Panfido (IT) Bunkernet (CY)

- PM II is the roadmap for the adoption of LNG as maritime fuel
- Aims to compliance with regulation on maritime emissions
- Creates development potential for side industries such as shipyards

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PPA SA at POSEIDON MED II

- POSEIDON-MED II is designing a LNG transportation, distribution, supply (including bunkering) network and infrastructure for its use as marine fuel in Eastern Mediterranean (Greece, Cyprus, Italy, Slovenia, Croatia) and is defining the framework for a well-functioning and sustainable relative market (vessels) for its demand.

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PPA SA at POSEIDON MED II

- The main scope of the project is to create an LNG Bunkering in East Med with Piraeus as a Hub, to support the distribution of LNG Cargoes to Satellite Ports and LNG Import Terminals, to enable the increase of security of Supply & Diversification of Sources and Routes, and the exploration of synergies with TEN-T Urban & Transport Network & Energy Production.

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