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**Facing the challenge:**

**Global requirements & market responses**

***Med Ports Forum 2019***

***Session 1 Objectives and  
constraints of the energy  
transition in maritime transport***

**Marseille, 26 juin 2019**

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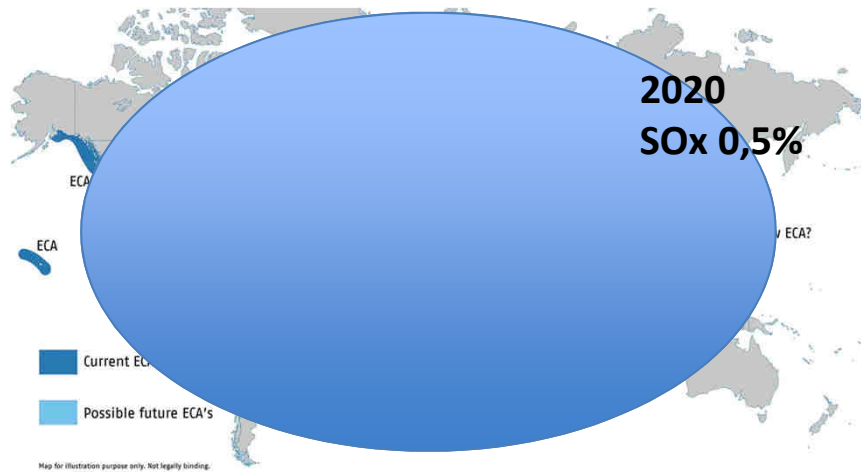


**ISEMAR**

## **Five declinaisons of environmental challenges for Med ports**

- 1. Climate change and maritime reduction of greenhouse gas emissions**
- 2. Cities population question about pollution and public heath**
- 3. The trend of Med shipping companies innovation**
- 4. Port reponses of green shipping challenges**
- 5. European ports competition**

## 1. Climat change and maritime reduction of greenhouse gas emissions

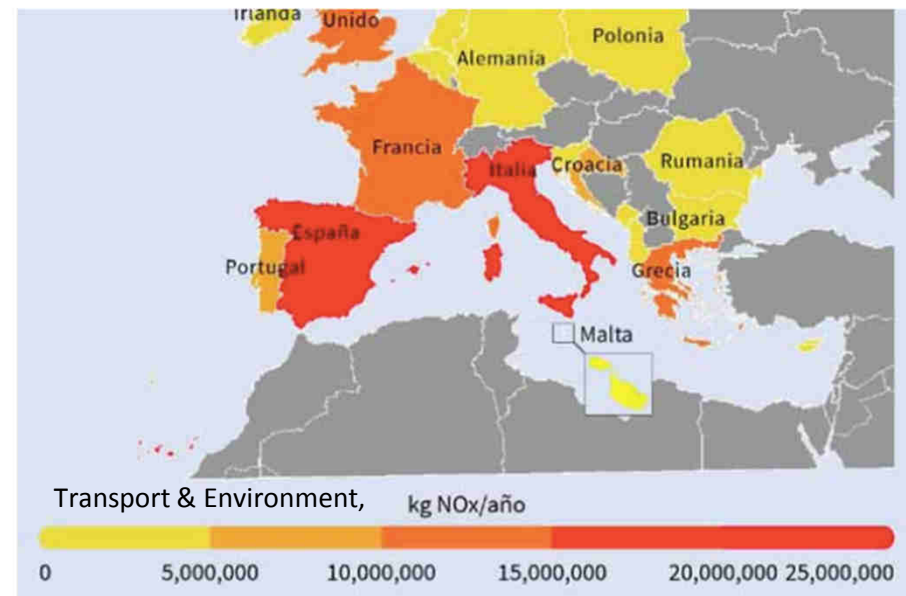
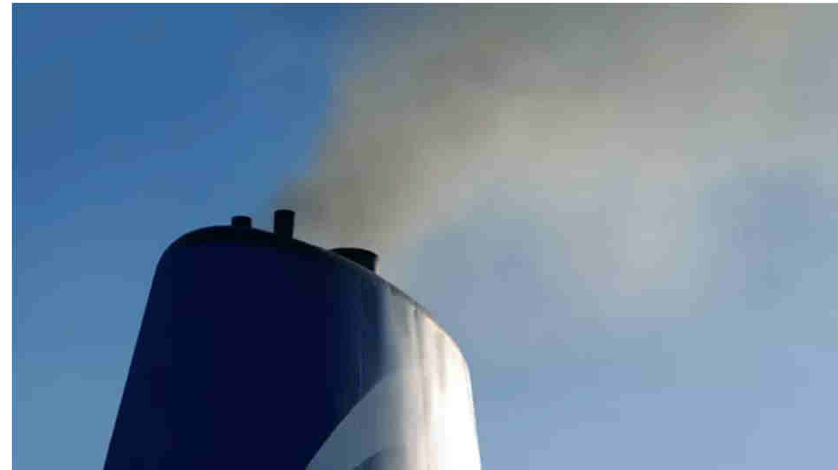


- Sulfur cap 2020 by IMO
- SECA Med proposal by Med Europe countries.
- Evocation of speed limit for several categories of ships.
- OMI Goal for 2050 50% less of CO2 emission.
- We don't forget the energy saving process.



## 2. Cities population questions about pollution and public health

- Mediatic effect of marine engines funcionamiento (impressive smokes in restart).
- Obligatory reduction of particulate matter (PM10) for public health.
- High pressure from NGO et local associations.



### 3. The trend of Med shipping companies innovation

- Several companies with innovation ambitious are located in the Med area:
  - ✓ Containers (CMA CGM)
  - ✓ roro & ferry (Mérídonale, Corsica Linea, Balearia, Grimaldi)
  - ✓ Cruise (Costa, MSC Cruise)
- The innovation is in progress with LNG fuel or other hybrid solutions.



## 4. Port reponses of green shipping challenges

- Environmental solutions for ship: cold ironing (on shore electricity for ship), scrubber water management.
- New bunkering: LNG, methanol, hydrogen.

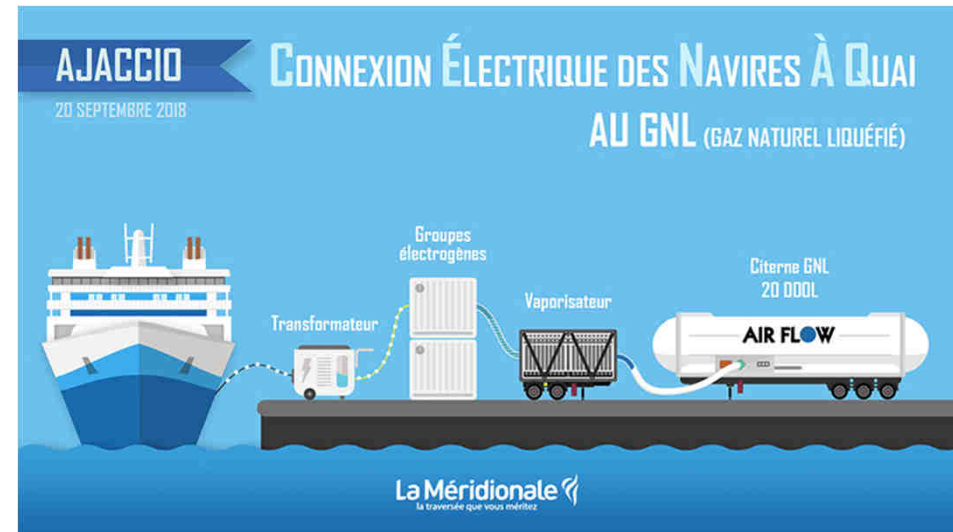
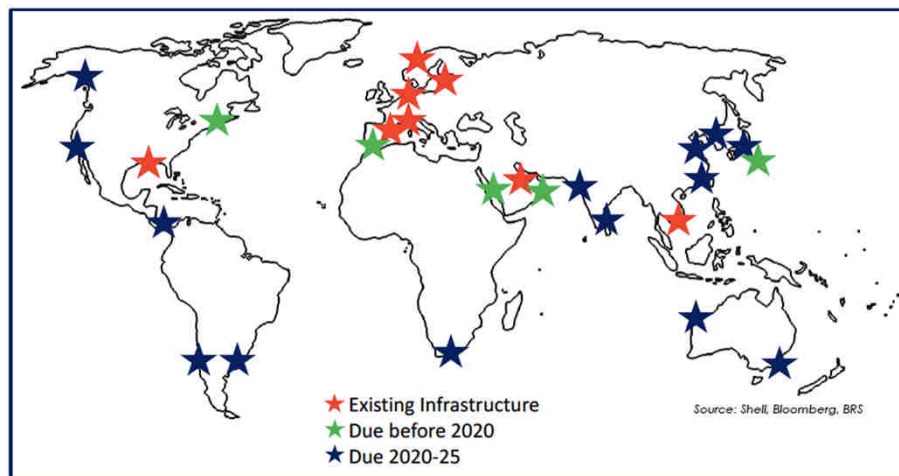


Figure 6.4 Locations of Current and Future LNG Bunkering Infrastructure



## 5. European ports competition

- Med ports ambitions for European hinterlands.
- Build more intermodal capacities (containers, trailers) in Med area.
- "CO2 emission transport" compatibility for sea and land itineraries in the futur.
- Intra Med trade need green shipping too.

