

Port Environmental Management:

achievements and challenges for Hellenic ports

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Environment and ports today:

- ❑ **Environmental aspects vary from port to port, as each one is unique, in terms of location, geography, cargo handling, local urban development, etc.**
- ❑ **Ports need to progress, adapt and reinvent themselves as they face tougher environmental legislation and competition.**
- ❑ **Local communities, port users and stakeholders see sustainable development as a necessity for the acceptance of a port by the local society.**

Environment and ports today:

- ❑ **Many activities, projects and port own initiatives tackle issues of port sustainability leading, in certain cases, to large environmental improvements locally.**
- ❑ **ESPO and ECOPORTS network drive so far the response of the port industry to environmental challenges.**

Environmental issues in ports (1/1)

☐ Air quality

☐ Cargo Spillage (handling)

☐ Contaminated land

☐ Dust

☐ Habitat/Ecosystem loss (water)

☐ Industrial effluent to water

☐ Noise

☐ Port development (land related)

☐ Ship discharge (ballast)

☐ Ship exhaust emissions

☐ Rain water treatment

☐ Water quality

☐ Antifouling paints

☐ Climate change

☐ Dredging: operations

☐ Energy Consumption

☐ Habitat/Ecosystem loss (land)

☐ Industrial emissions to air

☐ Odours

☐ Port development (water related)

☐ Ship discharge (bilge)

☐ Ship waste

☐ Relationship with local community

☐ Bunkering

☐ Conservation areas

☐ Dredging: disposal

☐ Garbage/ Port waste

☐ Hazardous cargo (handling/storage)

☐ Light pollution

☐ Pollution from rivers

☐ Sediment contamination (marine)

☐ Ship discharge (sewage)

☐ Soil contamination (land)

☐ Vehicle exhaust emissions (including cargo handling)

- ❑ **Over 1250 ports**
- ❑ **12 Port Organizations**
- ❑ **23 National Port Funds**
- ❑ **66 Municipal Port Funds**
- ❑ **Marinas and private port installations**
- ❑ **Insularity**
- ❑ **Large number of small / local ports**

Ports:

- May affect both natural (water, air, land) and man-made (social, cultural, economic) environment.
- **Servicing of shipping, tourists, fishing and leisure activities.**
- **Vital for the social and economic life of their surroundings.**
- **Need to respond to market evolutions and ensure financial resources capacity (financial viability).**
- **Need to comply with environmental legislation and trends (environmental protection).**
- **Need to meet local communities, ports users and stakeholders perspectives (sustainability).**

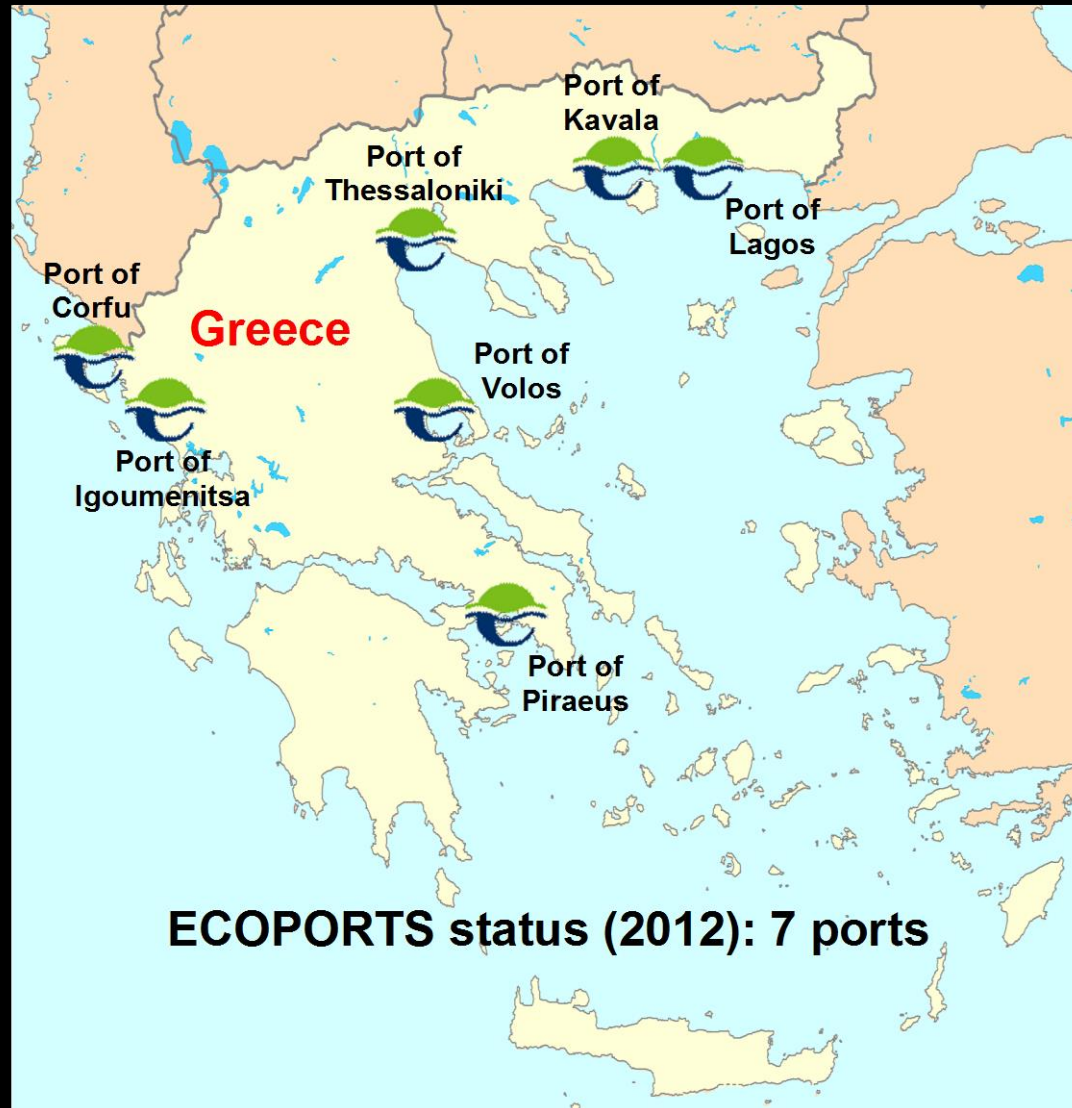
Challenges requiring responses:

- **Lack of resources and financial capacity.**
- **Lack of personnel and expertise.**
- **Lack of guidelines and tools at national level.**
- **Lack of possibilities to exchange good practice experience/training in a regular or structural way.**
- **Lack of cooperation with stakeholders and local authorities.**

Milestones of Hellenic experience (1/4)

- ⇒ **2003:** The port of Thessaloniki becomes the 1st Mediterranean port and the 5th in Europe certified according to PERS standard (*medium size port*).
- ⇒ **2004:** The port of Piraeus achieves PERS certification (*large size port*).
- ⇒ **2012:** The ports of Volos and Corfu achieve ISO 14001 certification fro the whole port area.
- ⇒ **2013:** The ports of Volos, Kavala, Lagos and Corfu achieve PERS certification (*small size ports*).
- ⇒ **2013:** The port of Piraeus achieves ISO 14001 for cruise and car terminals.
- ⇒ **2014:** The port of Thessaloniki achieves ISO 14001 for the whole port area.

Milestones of Hellenic experience (2/4)



Milestones of Hellenic experience (3/4)

October 2003:

**The CEO of the Port of Thessaloniki
receives the PERS Certificate**



November 2004:

**The CEO of the Port of Piraeus receives
the PERS Certificate**



Milestones of Hellenic experience (4/4)

**February 2013:
The Ports of Volos, Lagos, Corfu and
Kavala receive the PERS Certificate.**

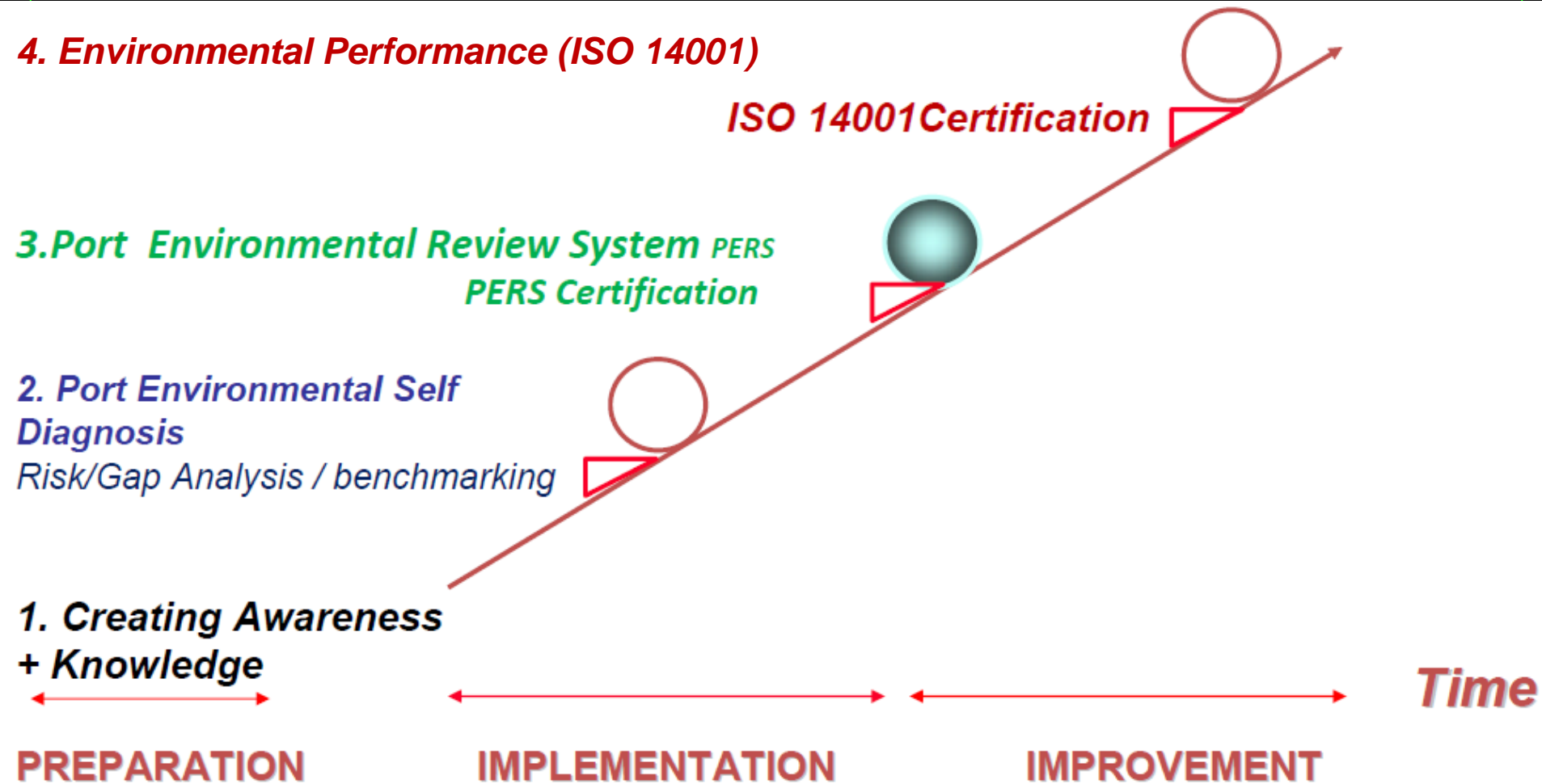


Milestones:

- **2002/03 Research Project GREENPORTh**
 - ***ESOPORTS & PERS preparation***
 - ***Ships waste management plan + fees on ships***
 - ***Oil and hazardous substances contingency plans***
 - ***Energy audit***
- **7/2003 Join in ECOPORTS network**
- **10/2003 PERS certification**
- **2005/06 Research Project GREENPORTh II**
- **6/2007 Award of environmental performance**
- **2/2008 PERS re-certification**
- **3/2011 PERS re-certification**
- **12/2012 Approval of operational environmental terms
(ΑΕΠΟ)**
- **9/2015 ISO 14001 certification**

A selected good example: port of Thessaloniki (2/2)

The process followed for permanent improvement



Benefits of the followed process

- ☐ **Small preparatory and application cost**
- ☐ **Gradual cost allocation according to the port's capacity and priorities**
- ☐ **Simple organizational requirements**
- ☐ **Gradual familiarization of staff, users friendliness**
- ☐ **Vast experience gathered together in Hellenic level**
- ☐ **The ISO 14001 came as a natural consequence**
- ☐ **Significant benefits for the port**

6 ports certified according to PERS with the help of AUTH

Benefits gained so far

- ☐ identification of actual environmental situation
- ☐ **enhancement of legislative compliance**
- ☐ reduction of risks from managing significant environmental impacts and aspects
- ☐ **efficient distribution of cost**
- ☐ cost benefits through improved environmental performance (e.g. energy consumption optimization, fees to ships for waste handling)
- ☐ **positive internal and public image**

Conclusions (1/3)

- ✓ **Ports are seeking cost-effective and practicable methods to comply with legislation and respond to stakeholders pressures.**
- ✓ **Lack of expertise, guidelines, information and resources seem to restrict ports from sustainability.**
- ✓ **Application of appropriate tools can assist small ports to ensure a sustainable investment of resources to the environment.**
- ✓ **Local ports can exploit the relevant experience gained so far by larger ports.**

The country should invest and promote:

- **Development of a national environmental port policy.**
- **Incorporation of all ports in the ECOPORTS network.**
- **PERS certification.**
- **Establishment of an “Observatory” for port environmental issues.**

Special assistance of small ports on central level:

- **Production of appropriate manuals.**
- **Database of relevant legislation.**
- **Provision of training.**
- **Establishment of a “help desk”.**