

Cruise ports and ship emissions Comparing North America and Europe

Olaf Merk

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Annual
Summit

Ministerial meeting,
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Think Tank

Evidence-based policy
analysis and research,
statistics

Intergovernmental
Organisation

54 member countries on
four continents, global
transport policy agenda



Cruise shipping and urban development

- On-going ITF/OECD Project
 - How to extract local value for port/city?
 - Thematic report, policy recommendations
 - In-depth studies of 4-6 cruise ports (Med, N-Europe, N-America, Caribbean, Asia)
 - **10 April 2015**: ITF Network Ports and Shipping, Paris, France
 - **27-29 May 2015**: ITF Annual Summit: “Transport, Trade and Tourism”, Leipzig, Germany
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Cruise ports and ship emissions (outline)

1. Why is it relevant?
2. What can ports do to reduce cruise emissions?
3. How is North America different from Europe?
4. How can this be explained?
5. Green examples in European cruise ports:
 - a) Green port tariffs
 - b) LNG Hybrid barge in Hamburg
 - c) Big ship ban in Venice

1. Why is it relevant?

- Shipping emissions in ports can represent up to 50% of local emissions
- Cruise shipping a relatively large emitter, due to large hoteling load
- Cruise terminals often close to city centers, so big exposure of population



2. What can ports do to reduce emissions?

| Type | Instrument |
|----------------|---|
| Information | Cruise emissions inventory |
| Incentives | Vessel speed Fuel switch Green ships |
| Infrastructure | Onshore power supply LNG bunkering facilities |
| Regulation | Fuel content (SO _x , NO _x) Onshore power supply |



3. Differences North America and Europe

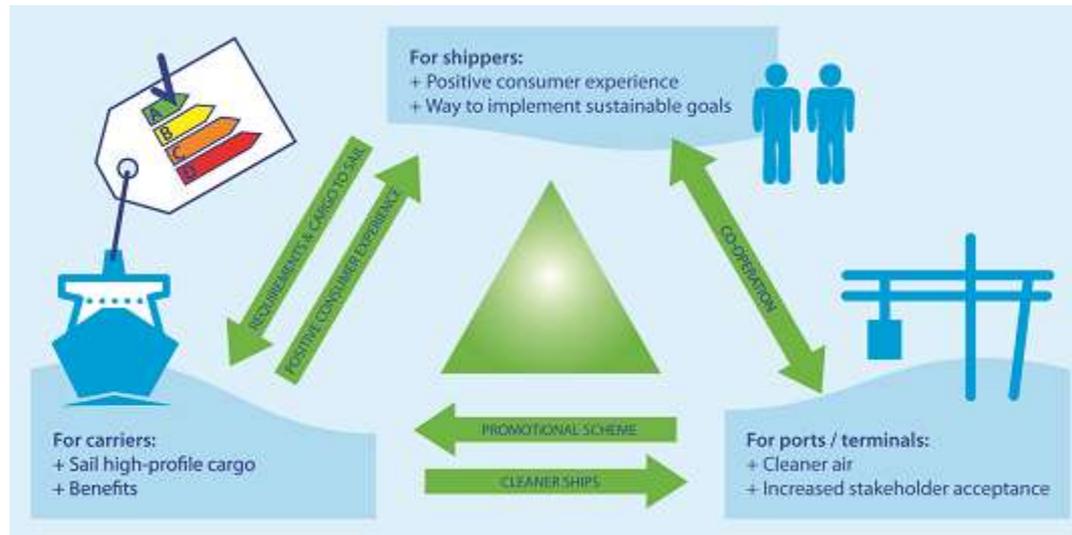
| Instrument | North America | Europe |
|--------------------------|---|---|
| 1. Information | | |
| Inventories | LA/LB, Seattle, NY/NJ | Venice, Barcelona |
| 2. Incentives | | |
| Vessel speed | LA/LB, San Diego | - |
| Fuel switch | Seattle, Vancouver, NY/NJ, Houston | Gothenburg |
| Green ships | Vancouver (ESI) | 10 EU ports (ESI), tariffs (Sweden) |
| 3. Infrastructure | | |
| OPS | LA, Seattle, Vancouver, Juneau, San Francisco, San Diego, Halifax | - |
| LNG bunkering | - | Antwerp, Rotterdam, Amsterdam, Zeebrugge, Stockholm, Norway |
| 4. Regulation | | |
| Fuel content | ECAs, California | ECAs, EU Sulphur Directive |
| OPS | California | EU from 2025 |

4. Explanation of differences

Main difference: OPS. Related to:

- Maturity of cruise markets
 - Seasonality of cruise markets
 - Frequency mismatch (50/60Hz)
 - Size of port-cities in Europe
 - Distances between ports and competition
 - State legislation/incentives for OPS
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5. Example 1: Green port tariffs



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- Environmental Ship Index (ESI): 17 cruise ships have an ESI score; 75 calls at 11 ports participating in ESI (10 are EU)
 - Incentive can be substantial: e.g. up to 40% discount of port tariff in Oslo.
 - Larger question: are external costs from cruise shipping internalized in port tariffs?
Cross-subsidization between ship types?
-

5. Example 2: LNG Hybrid Barge in Hamburg



5. Example 2: LNG Hybrid Barge in Hamburg

- LNG barge providing power to AIDA ships (summer) and industrial plant (winter)
- Operational from Spring 2015
- Advantages over OPS: more mobile, cleaner, less fixed investment in grid
- Challenges: safety concerns of LNG close to cruise ship; not self-propelled



5. Example 3: Big cruise ship ban in Venice



5. Example 3: Big cruise ship ban in Venice

- No more than 5 ships > 40,000 GT per day in the Giudecca Canal
- No ships > 96,000GT in St. Mark's Bassin and Giudecca Canal
- Multiple motivations for the cruise ban
- Difficulties in implementation
- Cruise liners have anticipated implementations and limited number of big ships to Venice



Conclusion

- Cruise ports have instruments for emission reductions, different in N-America and Europe, in particular on OPS.
- Reasons could be maturity and seasonality of the market, frequency differences and legislation.
- Examples of emission policies in EU cruise ports reflect developments in cruise (and ferry) ship design, including LNG fuelled ships.
- Practices might converge (more OPS roll-out in EU cruise ports), but the co-existence of an alternative European model seems at least as likely.



Thank you

olaf.merk@oecd.org

www.internationaltransportforum.org

www.oecd.org/regional/portcities

Twitter: @o_merk