Port Authority of Santa Cruz of Tenerife, Canary Islands, ES

CO2 emissions from port operations: how to measure them and concrete ways to reduce them

FOLLOW-UP NOTE

POLICY LEARNING PLATFORM MATCHMAKING SESSION

DATE: Thursday 28 October 2021 – 10:30-12:30

BENEFICIARY: Port Authority of Santa Cruz of Tenerife, Canary Islands, Spain

TOPICS: PORTS, ENERGY, MOBILITY, INNOVATION, CO2, NOISE AND PM EMISSIONS, MEASUREMENT METHODOLOGIES, MITIGATION MEASURES, LOGISTICS

PARTICIPANTS

Host organisation and interested stakeholders

- Santiago Yanes, Port Authority of Santa Cruz of Tenerife, Canary Islands, Spain
- Jaime Ruiz Martí, Port Authority of Santa Cruz of Tenerife, Canary Islands, Spain
- Almudena Hernández Cabrera, Port Authority of Santa Cruz of Tenerife, Canary Islands, Spain
- Javier I. Mora Quintero Port Authority of Santa Cruz of Tenerife, Canary Islands, Spain
- Pere Fullana, ESCI-UPF School of International Studies
- Lela Melon, ESCI-UPF School of International Studies
- Alba Bala, ESCI-UPF School of International Studies
- Sergi Arfelis, ESCI-UPF School of International Studies
- Nagham Salman, ESCI-UPF School of International Studies
- Ricardo Luis Guerrero Lemus, University of La Laguna
- Elvira Carles, Fundacion Empresa y Clima

Peers

- Katrin Witthoff, Free and Hanseatic City of Hamburg, Ministry of Economy and Innovation; Coordinator of SmoothPorts project
- Wiebke Pohlmeier, Free and Hanseatic City of Hamburg, Ministry of Economy and Innovation
- Jan Mathar, Free and Hanseatic City of Hamburg, Ministry of Economy and Innovation
- Ivano Toni, Port Authority Network Northern Tyrrhenian Sea, Livorno, Italy
- Christophe Leclerc, Port of Nantes Saint Nazaire Authority, France

Other members of the SmoothPorts consortium

- Constanze Benzel, Planco GmbH
- Svilen Mitov, Regional Administration of Varna
- Nicolas Riemann, Foreign Trade Division, Free and Hanseatic City of Hamburg, Ministry of Economy and Innovation

Interreg Europe Policy Learning Platform

- Katharina Krell, Thematic Expert Low Carbon Economy
- Anne Chabot, Event Manager
- Marjona Campmajo, Communication Assistant

Interreg Europe Joint Secretariat

Charo Camacho, Policy Officer Low Carbon Economy

OBJECTIVES OF THE MEETING

To learn with Interreg Europe peers what other port authorities are doing to measure their emissions and what measures have been implemented to reduce emissions in order to get inspiration and insight into proven ways to tackle these questions. To get access to peers with similar challenges for future collaboration.

SOME KEY TAKEAWAYS

- Ports have multiple emissions, the most problematic for nearby cities being noise and pollution, whereas CO2 emissions are a global problem.
- CO2 emissions are not traditionally monitored in ports, and only few have so far implemented CO2 measurement systems. Yet, knowing the status quo of CO2 emissions is key to be able to plan CO2 reduction measures and to be able to present their expected impact, which is going to be expected of future EU funding schemes that are all being aligned with the decarbonisation objectives.
- Measurement methodologies, as tested and implemented in Livorno, started with a mapping of areas that was a prerequisite for the precise positioning of sensors. Acustic sensors were placed as portable units on a pole with a PV panel for auto-consumption. Thus, they can be placed at a different site at no extra cost, if needed. Sensors to measure PM, NOx, SOx and CO2 need more Energy and must be connected to an electricity outlet.
- Own measurements can be intregrated with meteorological and other available data to form a comprehensive picture. Each vessel can be classified into a category and allocated typical emissions data. Environmental data of relevance for the public should be made available publicly.
- Modal shift from road to rail or ship helps reduce emissions. ‘Maritime highways’ such as between France and Spain are road alternatives. Moving goods out of ports by rail as done for 50% of Hamburg’s freight is another good practice to reduce emissions in the hinterland.
- While most ships coming in don’t belong to the port authority, some like dredging and pilot vessels do, and as they operate frequently in the port area, reducing their emissions via motor retrofit and /or fuel swith (e.g. to LNG as in Nantes) is a good strategy.
- As most noise, pollutant and CO2 emissions occur while ships are mooring, onshore power supply, ideally powered by renewables, allows them to cut their engines.
- Ports own energy consumption can be reduced through energy efficiency measures such as smart and LED lighting that adapts light intensity to time of night as in Tenerife. Self-production and consumption of renewable energy through PV, wind and maybe in the future innovative wave energy coverters is another good practice widely implemented in the Canary Islands.

- Smoothing port Logistics often consist in changing practical arrangements. The optimal location of a border inspection post can save every day many truck kilometers. A great idea is also the virtual container storage where half of the trips can be saved for each rental operation. Pre-booking slots via an application for veterinary control can avoid traffic jams at the vet office in peak time with associated emissions and time loss.
- There is no silver bullet to bring down ports emissions. Improvement can however be achieved through a multitude of actions. Collaboration among all players involved is key, and this includes ideally the whole supply chains in and out of ports.
- There is no 'one fits all' solution for the assessment of SMEs investment projects and for determining their eligibility under energy and resource efficiency support schemes. Such an assessment needs to be carried out on a case-by-case basis by consulting bodies and banking institutions.
- While predetermined evaluation criteria are therefore of limited or no use, the relevant benchmark is to be found in the definition of 'process innovation' under GBER Article 2(97), which already provides an 'exclusion list' of what is not eligible for State aid for SMEs 'process innovation'.

SOME KEY PRACTICES IDENTIFIED

- Smooth Ports: Ports Carbon Footprint Assessment Methodology
- Smooth Ports: My box place virtual container depot management system
- Smooth Ports: One stop shop for border inspection

Several more relevant good practices on can also be found on the Interreg Europe SmoothPorts web pages here: https://www.interregeurope.eu/smoothports/good-practices/ .

ADDITIONAL ACTIONS

All participants exchange contact details for possible follow-up actions on bilateral basis.

Note circulation: All attendees.