

Work Package description

Work Package number	WP 4	Type of activity	Scenario Development
Work Package title	Scenario Development and Development of generalized solutions	Start month	7
Lead beneficiary number	22	End month	24

Aim/Object

- Strategy development
- Development of scenarios
- Basic designs of shore side electricity, gas from the pipeline to the ship, LNG supply to ships, waste and waste water reception and model differentiated port dues

Description of work package activities and role of partners

The task "Scenarios" is focused on describing the development changes that will establish a clean Baltic Sea shipping.

Task 4.1 comprises four activities:

- 1: Identifying scenarios and critical decision factors
- 2: Identifying key issues and driving forces of change
- 3: Describing a future scenario for Baltic Sea shipping
- 4: Assessing the optimal concept as a strategy for clean shipping development (P22)

4.2 Basic design for shore side electricity: a handbook will be developed, which shall be a planning tool for different port/ship/line power constellations and pilot installations. Shore side electricity reduces emissions and noise from ships in port. Electricity facilities have been developed and installed in a number of the partner ports. (P13, P23)

4.4 Basic design for ship supply of LNG: LNG reduces SOX, NOX and CO₂. Enables ships with gas powered / dual fuel engines to be connected to the municipality gas grid. A basic technical and financial scheme will be elaborated (P18).

4.5 Basic design Quayside sewage reception facilities: The aim is to get all ships to discharge their sewage in the ports. This requires water reception facilities, with reception interfaces between ships, ports and waste water treatment plants in the societies to be harmonised. Therefore a technical, financial and environmental scheme will be made (P1, P3, P4, P5).

4.6 Model market based economic instrument: incentives shall be set for ships producing low emissions, managing waste and ballast water, using environmentally friendly technologies and having high safety standards for the EU Baltic Sea action plan. The results will be different models of differentiated port dues (P3).

Scenario analysis will be made in milestones 3 - 5 and the development of basic designs in milestones 2 - 4

Partners
Lead P22, Scenarios P22, basic designs P1, P3, P4, P11, P13, P18, P23

Participant number	Participant name
1	Port of Trelleborg
2	Ports of Stockholm
3	Port of Stockholm
4	Port of Helsinki
5	Port of Turku
11	Port of Rostock
13	Stadtwerke Lübeck
18	Port of Klaipeda
22	Maritime Institute in Gdansk
23	Port of Oslo
SP 9	AIDA

List of deliverables				
Task no	Title	Partner no	Delivery date (MS)	Participants
4.1	Scenario	22	5	
4.2	Basic Design Shoreside electricity	13, 23	5	
4.4	BD Supply of liquefied natural gas	18	5	
4.5	BD Sewage reception	1, 4, 3, 5	4	
4.6	Model market economic instrument	Workgroup 1, Lead P3	5	

Coordination / information exchange
Innoship
Clean North Sea Shipping
Amber Coast Logistics
Northern European LNG infrastructure project
Scandria
TransBaltic