



Recommendations for Sustainable Maritime Navigation

PIANC Working Group 136 (EnviCom)

Terms of Reference

1. Background

1.1 Context

Our oceans, seas and estuaries are under increasing pressure from a variety of human activities. Important natural habitats such as saltmarshes and mudflats, sand banks and reefs, along with dolphins and other marine mammals, fish, birds and invertebrates can be impacted by resource exploitation and other uses of the marine environment.

Whilst maritime navigation is not a consumptive use of marine resources, both shipping and development or maintenance of navigation-related infrastructure may influence the marine environment - whether as a result of discharges or emissions, noise, physical disturbance/modification or other activities especially new infrastructures building.

1.2 International organisations' involvement

Waterborne trade is vital to the economic well-being of maritime nations. The 'right of innocent passage' is enshrined in UNCLOS (the United Nations Convention of the Law of the Sea), enabling commercial vessels to transit between countries.

A variety of other international Conventions and regional initiatives (such as the EU Maritime Strategy) aim to improve the management of activities such as navigation in the marine environment, whilst national laws protect and regulate activities in territorial waters.

1.3 Needs for a comprehensive overview

Each of these various organisations has a specific purpose (eg. the International Convention for the Control and Management of Ballast Water aims to prevent the introduction of non-indigenous species, and MARPOL deals with various aspects of marine pollution).

However, it is sometimes difficult to see the 'overall picture' insofar as sustainable maritime navigation is concerned.

Considerations such as climate change and ecosystem-based management are further increasing the focus on delivering sustainable management of marine resources.

An important objective of this Working Group will therefore be to bring together, in an accessible and navigation-specific way, the concepts of integrated management, adaptability and sustainable use.

In that prospect, a specific attention will be paid to air emissions by the port and shipping industry, not only in coastal areas but also during all the maritime transportation of goods or passengers.

The major aim of this working group will be to provide all necessary data for the assessment of the environmental performance or eco-efficiency of maritime navigation

2 Subject fields

In a similar manner to the PIANC EnviCom Working Group 6 report on sustainable inland navigation, this Working Group will need to identify, assess and evaluate the role of navigation in the wider context of sustainability criteria.

Whilst it should acknowledge the relative benefits of waterborne transport when compared, for example, to road or air transport, it should highlight how navigation interacts with the various natural (physical and ecosystem) processes in the marine environment.

In exploring ways to deliver sustainable - but also safe and cost-effective - integrated navigation management (both operation and development) the group should *inter alia* consider the following:

- emissions to air (Ships and Ports Operation)
- discharges to water (Ships and Ports Operation)
- noise (Ships and Ports Operation)
- dangerous cargo handling and transportation
- ballast water exchange
- anti-fouling
- risk of collision/accidental spillages
- shipwrecking
- physical and ecological disturbance or modification including ship wash
- wetland disturbance (Port planning and works)
- hydromorphological modification

Having described the key functions/needs of maritime navigation and how these interact with the marine environment, alternatives and their associated impacts should also be explored.

Taking into account the existing requirements of the various relevant international instruments, the Working Group will need to consider how to apply the 'working with nature' philosophy to strategic plans, project-specific assessments, routine operations and management, whilst also taking proper account of socio-economic factors.

Associated costs including environmental costs should also be considered. The importance of appropriate specifically designed monitoring leading to adaptive management to provide continuous improvement should similarly be stressed.

A step-wise approach to decision making (similar to that developed for inland navigation in the WG6 report) might be developed. This could indicate what needs to be done to improve navigation sustainability, who might do it (ie. the respective roles of the various actors), and how.

Good practice case studies should also be presented insofar as these contribute to the objective of providing clear practical and accessible advice and guidance to practitioners in the ports, shipping and wider navigation sector.

3 Working Group membership

Working Group members will need to represent the interests of a wide range of stakeholders: vessel owners and operators port operators, regulators, engineers and environmental scientists, along with relevant international organisations (eg. IMO, OSPAR, London Convention, European Commission, ESPO (European Sea Ports Organisation), ECSA (European Community Shipowners' Associations), and IAPH.