

# PRESS RELEASE

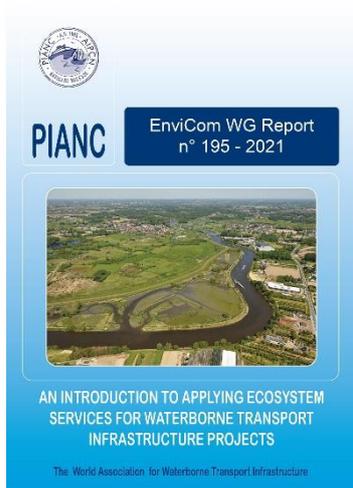


## PIANC

The World Association for Waterborne  
Transport Infrastructure

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NEW PIANC PUBLICATION AVAILABLE



**Title:** 'An Introduction to Applying Ecosystem Services for Waterborne Transport Infrastructure Projects'

**Author's:** EnviCom WG 195

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**Available at:** <https://www.pianc.org/publications/envicom/wg195>

### Introduction:

We manage the environment to obtain water, land, and food. Ecosystem services (ES) are defined as the benefits people obtain from ecosystems. The ES concept provides a framework for evaluating the costs and benefits of natural resource management. It can be used to evaluate, justify, or optimise decisions on how land- and waterscapes are managed, for a range of sectors, including the waterborne transport infrastructure (WTI) sector. However, although some promising project examples exist, PIANC (2016) concluded that there were a number of aspects of the ES concept which needed to be tailored to the WTI sector, and that practical guidance was required. To this end, EnviCom Working Group 195 – 'An Introduction to Applying Ecosystem Services for Waterborne Transport Infrastructure Projects' was formed.

This report is a basic introduction into the understanding and the application of the ES concept in WTI projects, illustrating how the application of ES concepts may benefit the day-to-day work of WTI designers, planners, operators, and managers. The report is not a practical guidance on the application of ES in the WTI sector.

Chapter 1 sets the scene, defining the report's aim and scope, target audience, and relationship with other PIANC and related global efforts.

Chapter 2 is an introduction to ES concepts, in general, and in the context of WTI projects. It introduces the ES cascade, linking biophysical structure and function to ES, human benefits and values, and ecosystem use in decision making. It introduces an ES classification, emphasising the need to consider not only ES provided by living systems but also abiotic services essential to WTI. It defines the role of ES concepts within various types of decision making.

Chapter 3 expands on the role of ES-based assessments (ESA) in WTI project planning and decision making. It introduces the WTI project cycle, which starts with the initial project concept, moves through conceptual and technical design and approval, continues through project construction and operation, and then, after monitoring and evaluation, can move towards decommissioning (if at the end of life), or can start another adaptive project cycle (if requirements change). Generic framework and classification for ESA are introduced, and then their roles within the WTI project cycle are described. Within this context, basic steps to WTI ESA are described, with examples from case studies.

Chapter 4 delves into 8 case studies, describing their context and features in terms of the frameworks and classifications introduced in the previous chapter. Case studies are evaluated in terms of their position within WTI project cycle, the decision context, ES considered, analytical approaches, focus, and key lessons learned. Although no case study was found in which all aspects of the ES framework described here are applied, each illustrated some key features, practices and lessons which are essential to ES application in WTI decision making.

Chapter 5 concludes with key lessons, and recommendations for a path forward. Key conclusions are: 1) The ES concept is applicable to both large and small WTI projects, independent of the development stage of a country; 2) Most benefits can be expected when ESA is included right from the beginning, but it can provide utility at any time of a project's lifecycle; 3) ES framing helps to evaluate the WTI project in a broader context; identifying opportunities and avoiding undesirable impacts; and 4) ES concepts provide a transparent basis for communication to a diverse range of stakeholders. To solidify the application of the ES concept in WTI decision making, there is a need for more demonstration projects in the WTI sector. Further tools, evaluation and guidance will also facilitate the application of ESA in WTI.

**NOTE:** The objective of this report is to provide information and recommendations on good practice. Conformity is not obligatory and engineering judgement should be used in its application, especially in special circumstances. This report should be seen as an expert guidance and state of the art on this particular subject. PIANC disclaims all responsibility in case this report should be presented as an official standard.

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