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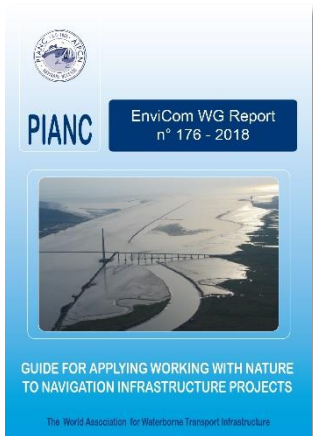
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NEW PIANC PUBLICATION AVAILABLE



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The World Association for Waterborne
Transport Infrastructure



Title: Guide for Applying Working with Nature to Navigation Infrastructure Projects

Authors: PIANC Working Group 176

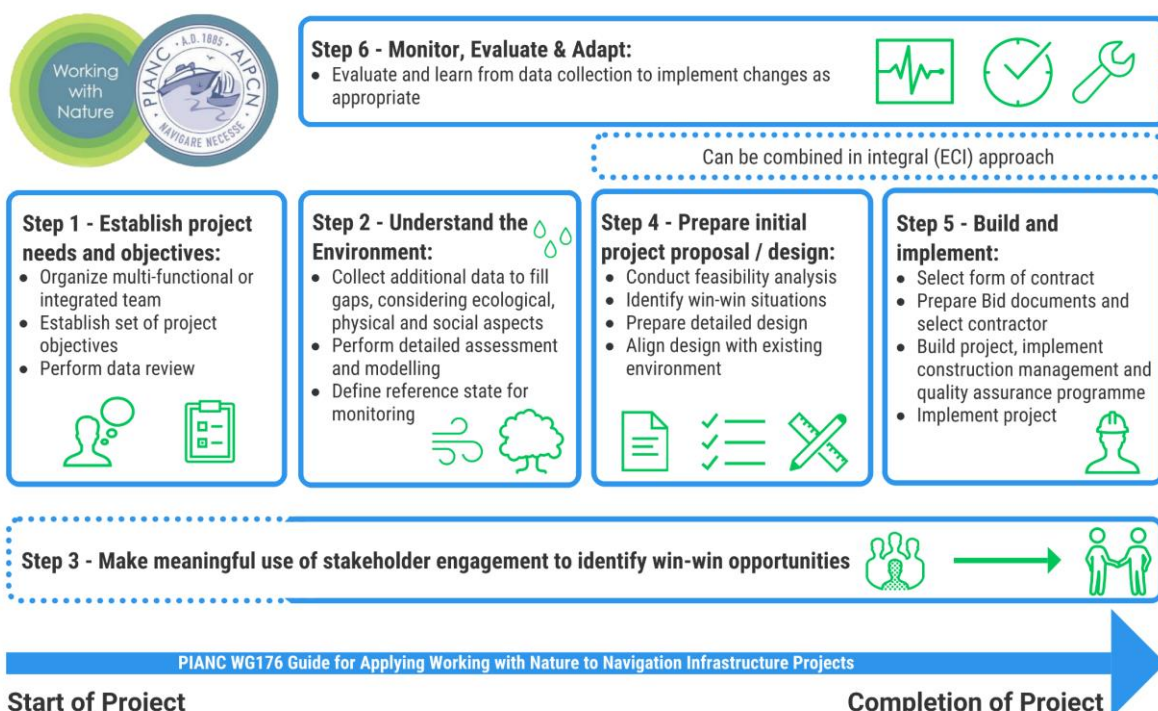
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PIANC's Working Group 176 (Guidance on Applying Working with Nature to Navigation Infrastructure Projects) was tasked with preparing guidance that raises awareness of natural ecosystems, inspires the navigation infrastructure community to embrace natural systems design and promotes expanded acceptance of the Working with Nature (WwN) approach by providing a selection of case studies to illustrate how WwN applies to navigation infrastructure projects and identifies associated tools, steps and practices.

WwN offers a framework to design new infrastructure or rehabilitate existing infrastructure in a way that works with natural processes. This approach serves to enhance ecosystem viability and resilience and minimise negative anthropogenic impacts to the environment. The basic steps of WwN are illustrated below.

THE WORKING WITH NATURE FRAMEWORK





CONTENT OF WG176 GUIDE ON WwN

Chapter 1 – Introduction

Introduces the WwN vision and identifies the intended audience of the report. Provides considerations for economies in transition and developing countries.

Chapter 2 – Background

Provides background information on the WwN approach. The overall framework is introduced, along with beneficiaries of the WwN approach and potential challenges that project owners may face when implementing WwN – by recognising opportunities and challenges, the hope is that project owners can proactively pursue WwN opportunities for their projects.

Chapter 3 – Context

Describes the context of when and where WwN may be implemented for port and navigation projects. Ports, waterways and shoreline developments have traditionally relied on conventional infrastructure methods using dredging, steel, concrete or stone for armouring and shoreline protection. WwN recognises the opportunity to proactively integrate nature into large infrastructure projects to protect or improve natural habitat.

Chapter 4 – WwN Framework

Describes the WwN framework, outlining six steps identified in the WwN process, from understanding the environment and developing WwN approaches to public engagement and design, implementation and monitoring. Each step is explained in the context of WwN, and how WwN can and should influence project visions and project management approaches.

Chapter 5 – WwN Case Studies

Provides 12 independent case studies that provide examples of WwN. Each case study is outlined and presented in accordance with the six-step WwN process defined in the figure on the front page. The case studies are an integral component of this guide and illustrate the variety of ways that WwN can be integrated into infrastructure projects to protect and enhance nature. Examples include:

- Creation of wetlands and new habitat as part of large infrastructure projects
- Strategic dredged sediment in-water placement to create a variety of new in-water habitats
- Stabilisation and upland placement as fill to create land for port expansion
- In-river placement of sediment to promote the formation of islands that promote natural and targeted sediment accumulation, create new island habitats, and reduce sedimentation in the navigation channel by increasing river velocities
- Leveraging new infrastructure development (e.g. tunnel construction across a waterway) to develop new habitat and recreation areas, including wetlands, beaches and parks

Each example reflects the cooperation among project owners, governmental organisations, nature-based NGOs and the public to promote sustainable alternatives that restore or create beneficial ecological habitat, improve dredge management alternatives (particularly through beneficial sediment use), reduce energy consumption and improve stakeholder engagement.

INTEGRATION INTO CURRENT PRACTICE

While it is possible to implement WwN at virtually all project phases, incorporating WwN during conception, design, and early implementation provides the most promising opportunities to affect positive outcomes for the environment. Greater effort is generally needed to introduce WwN concepts later in the design process. A holistic understanding of ecosystem structures and processes makes it possible to minimise ecosystem degradation and enhance ecosystem functions on a local, regional or watershed scale.

NOTE: The objective of this guidance 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.