



# PIANC And The Environment

International Navigation Association

Environmental Commission - EnviCom

**Working WITH Nature**

AGA, 26. May 2008, Beijing, China

# PIANC - EnviCom

## Mission

PIANC is “The global organisation providing guidance for **sustainable** waterborne transport, ports and waterways”.

Assurance of an **environmentally balanced approach** to navigation infrastructure development and maintenance.

The **environmental vision** is one of sustainable development, protection, and enhancement of global biodiversity.

## Initiative

PIANC position paper „**Working WITH Nature (WWN)**“

Draft from EnviCom (April 2008)

# Working WITH Nature - WWN

## What do we mean? (1)

- Maximising opportunities,
- reducing frustrations, delays and costs.

WWN is an integrated process which involves identifying and exploiting **win-win solutions** which are acceptable to both project designers and environmental stakeholders early in a project when flexibility is still possible.

By adopting a determined and **proactive approach** from pre-design through to project completion, opportunities can be maximised and - importantly - frustrations, delays and associated extra costs can be reduced.

# Working WITH Nature - WWN

## What do we mean? (2)

- **A different process considering environmental impacts:**
- **Fully integrated approach before initial design.**

Requirement to consider the environmental impacts of proposed projects is well-established. But if the the concept for a project in place before environmental issues are considered, environmental impact assessment necessarily becomes an exercise in mitigation or damage limitation, potentially resulting in sub-optimal solutions and missed opportunities.

WWN encourages consideration of how the project objectives can be achieved given the particular, site-specific characteristics of the ecosystem.

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## What do we mean? (3)

- **Doing things in a different order.**
  1. establish project objectives
  2. understand the environment
  3. engage stakeholders to identify possible win-win opportunities
  4. prepare initial project design to benefit navigation *and* nature

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## What do we mean? (4)

- **A new way of thinking.**

Requires a subtle - but important - evolution in the way we approach project development:

- achieving the project objectives in an **ecosystem context** rather than assessing the consequences of a predefined project design;
- **identify win-win solutions** rather than simply minimise ecological harm.

Working with Nature considers the project objectives **firstly from the perspective of the natural system** rather than from the perspective of technical design.

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## But can we do it ? (1)

Significant **challenge** in gaining acceptance and in ensuring having sufficient knowledge and understanding.

**Yes**, significant progress over the past two decades, e.g.:

- major advances in technology, science and understanding, in modelling/prediction, design as well as in ecosystem functioning;
- progress beyond documenting the natural state to understanding and predicting system dynamics;
- better equipped to recognise/deal with uncertainty;
- ability to adapt the technology to the natural system;
- understand the importance of balancing economic, social, technical and environmental parameters;
- we recognise the value of effective stakeholder engagement in contributing to a truly sustainable outcome.

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## But can we do it ? (2)

PIANC acknowledges that

- a **concerted effort** will be required to raise awareness of the concept and the benefits it offers.
- **all parties potentially involved** will need to be engaged in the transition: port or navigation authorities, governments and regulators, local communities, and environmental stakeholders.
- some will undoubtedly find it difficult to accept or will be reluctant to accept the new way of thinking.  
**Perseverance and patience will be vital.**

But PIANC is convinced that **WWN is essential to future**, sustainable, port and navigation development.

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## What else is needed? (1)

WWN requires an understanding of dynamic natural ecosystems.

- **Data must be collected;**
- **predictive tools need further development.**

Gaps should not be used as an excuse to defer attempts to put WWN into practice.

We will never have all answers!

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## What else is needed? (2)

Many recent projects have been delayed as a result of administrative procedures. Environmental regulations are not typically designed to stimulate development and innovation. **It is important to look to the intention of the legislation** rather than taking a prescriptive approach to its implementation.

**A transition from a philosophy of 'control' to one of 'management' is needed** and the cultural differences between ecologists, civil engineers, planners and politicians similarly need to be addressed.

These are not insurmountable problems.

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## And why does it matter? (1)

- **significant contribution of aquatic ecosystems** to human economic well-being: e.g. water resources, nutrient cycling, food production, flood defence, recreation and tourism.
- due to the increasing world population, its increasing needs and the challenges of climate change the natural **environment is under ever-increasing pressure**.
- current approach to assessing environmental impacts - no matter how well it is applied - typically results in an **environmental loss**. The approach is not, therefore, sustainable.
- **global increase in trade** and the associated need for improved waterborne transport infrastructure continues.

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## And why does it matter? (2)

Increasing demands from legislation, higher expectations in plan approval procedures. It is time to act – other organisations have already started to communicate their concepts (e.g. Building with Nature)

We therefore need to use our improved knowledge and experience to begin to look at things differently

- to facilitate the delivery of improved environmental protection and/or enhancement alongside economic development;
- to reduce delays and frustrations; and
- to explore opportunities to provide local communities with much-needed amenity areas, recreational resources and improved landscapes.

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## And why does it matter? (3)

Working With - rather than against - natural process can make for cheaper and more sustainable solutions.

Using nature rather than machines to maintain structures can be a cost-effective long-term solution – e.g.

- retaining dredged sediment within the estuarine system helps to sustain mudflats and saltmarshes, and thus reduces the cost of flood defence maintenance.
- Exploring opportunities to use dredged material for beach nourishment is another well-established ‘win-win’ management option

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## Conclusion

**Working with Nature** does not mean we no longer achieve our development objectives: rather that we seek to achieve these objectives in a mutually beneficial way.

Developing and delivering some such win-win initiatives will take more innovation and imagination than others, but

EnviCom believes that the rewards of **Working WITH Nature** potentially extend far beyond the natural environment.

PIANC should adopt, communicate and promote this view through the position paper on WWN.

# Working WITH Nature

On behalf of PIANC EnviCom

Thank you for your attention

Harald Köthe  
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