A PIANC Standard of Practice for Managing Environmental Risks of Navigation Infrastructure Projects

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PIANC Overview

The World Association for Waterborne Transport Infrastructure

- Established in 1885
- Non-political and non-profit
- Convene best international experts, both public and private, on technical, economic and environmental issues pertaining to waterborne transport infrastructure
- High-quality Technical Reports and Briefs
- International Commissions and Working Groups
  - Maritime Navigation Commission
  - Inland Navigation Commission
  - Environmental Commission
  - Permanent Task Group on Climate Change

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EnviCom Overview

PIANC Environmental Commission

- Formed in 1994 to demonstrate PIANC's commitment to the environment and sustainable development principles
- Addresses broad as well as specific navigation sustainability and environmental risk issues that cross cut PIANC areas & partners
  - Develop and provide environmental guidance for sustainable waterborne transport infrastructure
  - Network/communicate with international organizations and associations (e.g., IADC) addressing sustainability and environmental risk, including Countries in Transition
  - 30 members from 11 nations and 7 partner organizations
  - Active Working Groups (e.g., ERM, WwN, Climate Change Adaptation)

PIANC Working Groups

The work carried out by the Association on subjects of interest is accomplished through its technical Working Groups, composed of experts of high standing from different countries. Participation in the international Working Groups results in worthwhile contact with experts studying technical and managerial matters of current importance.

A Practical Guide to Environmental Risk Management (ERM) for Navigation Infrastructure Projects

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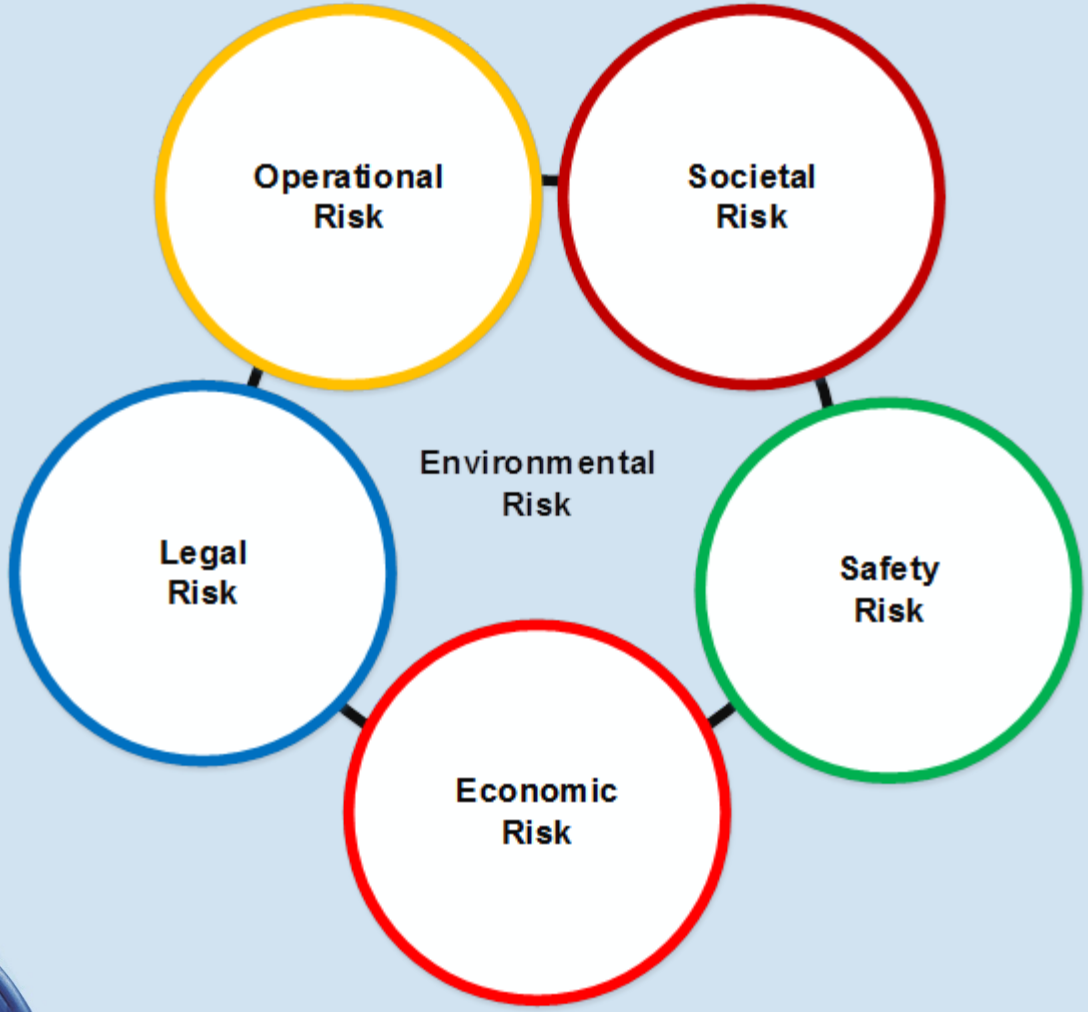
PIANC WG 175 Members

- Burton Suedel (US): Research Biologist
- Kevin Kane (AU): Senior Manager, Environment
- David Moore (US): Biologist and Principal
- Rebecca Gardner (NO; Representing CEDA): Principle Engineer
- John Lally (US): Coastal Engineer
- Captain Kevin Allen (IE): Belfast Harbor Master
- Miran Vanwonterghem (BE): Project Engineer
- Amy Parry (UK) (YP): Marine Scientist

Objectives

- Provide technical information to decision makers regarding the risk management process for waterborne infrastructure
- Provide a methodology to inform risk management decisions for the comprehensive range of environmental risks pertinent to waterborne infrastructure
- Provide a practical approach for managing effects of project components in the context of natural change in time and space, and the ability of environmental resources to recover from or compensate for damage
- Provide recent case studies
- Incorporate PIANC's Working with Nature philosophy

Risk Components



Approach

- Project formulation
- Identify and analyze environmental risks
- Prioritize and develop management strategies
- Initiate project and implement management strategies
- Monitor project risks
- Reporting and feedback

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Working With Nature

- Promotes an integrated planning and design process
- Seeks to utilize the hydrodynamics of the ecosystem to produce desired effects
- Focuses on environmental aspects of the system to support project goals

California sea lion at Port of Los Angeles, CA

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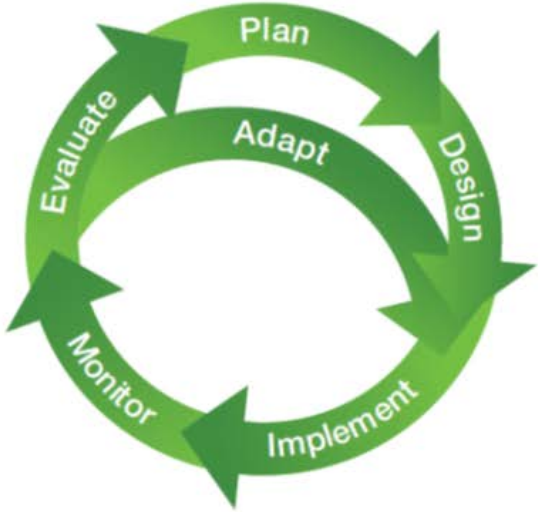
Adaptive Management

- AM enables a project with uncertainties relating to environmental impacts to proceed with a pre-negotiated monitoring and management plan to evaluate and mitigate actual effects on receptors, rather than design of a project with strict environmental thresholds



1. **Plan**: Defining the desired goals and objectives, evaluating alternative actions and selecting a preferred strategy with recognition of sources of uncertainty;
2. **Design**: Identifying or designing a flexible management action to address the challenge;
3. **Implement**: Implementing the selected action according to its design;
4. **Monitor**: Monitoring the results or outcomes of the management action;
5. **Evaluate**: Evaluating the system response in relation to specified goals and objectives; and
6. **Adapt**: Adapting (adjusting upward or downward) the action if necessary to achieve the stated goals and objectives.

CEDA 2015

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Stakeholders

When managing environmental risks adaptively, engaging stakeholders early in the risk management process is crucial to achieving a common understanding of project uncertainties and opportunities, so that adjustments to project operating processes can be developed

Port of Long Beach, CA

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Case Studies

Description of case studies communicating risk management principles and best practices addressing, for example resuspended sediments, the Working with Nature concept, climate change, and beneficial use of dredged material

- Dalrymple Bay Coal Terminal (DBCT), Queensland, Australia 'Environmental Risk Management Measures'
- Port of Brisbane 'Environmental Design for Land Reclamation Project Promoting Seagrass Growth'

DBCT, Queensland, AUS

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Current & Future WG 175 Activities

- Kick-off Meeting: Brussels, February 2015
- Webinar: 21 January 2016
- EnviCom Meeting: Brussels, February 2016
- Focused Web Meetings: 16 & 24 Feb 2016
- Joint Meetings & Site Visits: Ports of LA/Long Beach, Seattle/Tacoma, WwN Site Tours SF Bay, March 2016 - Fact finding mission with WG176
- EnviCom Meeting: Antwerp, May 2016
- Future Meetings: Ireland, Sept 2016
- Completion anticipated 2017

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External Communications

WODCON XXI

June 2016, Miami, FL USA

ECO Magazine

June 2016

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QUESTIONS?

Port of Oakland, CA