PIANC LAUNCHES TECHNICAL GUIDANCE ON CLIMATE CHANGE ADAPTATION PLANNING FOR PORTS AND INLAND WATERWAYS

Ports and waterways around the world are experiencing air and water temperature increases, rising sea levels, and changes in parameters such as seasonal precipitation, wind and wave conditions. Many are also seeing more frequent and severe extreme events including storms, heatwaves and droughts.

Climate change represents a significant risk to business, operations, safety and infrastructure – and hence to local, national and global economies. Waterborne transport infrastructure will be adversely affected. Port and waterway operators need to take urgent action to strengthen resilience and adapt.

The guidance, which has been prepared by the international experts on PIANC’s Working Group 178, provides an introduction to the potential consequences of climate change and some of the challenges to be addressed if ports and waterways are to adapt effectively.

It then introduces a four-stage methodological framework to help port and waterway owners and operators plan for improved resilience:

- Stage 1 facilitates understanding of how assets, operations and systems could be impacted and who should be involved in identifying climate change adaptation requirements
- Stage 2 identifies the type of climate-related information needed to prepare an adaptation strategy, and explains how reference to climate change ‘scenarios’ can assist in understanding the range of possible future changes
- Stage 3 describes how the vulnerability of waterborne transport infrastructure assets, operations and systems can be assessed and a risk analysis undertaken
- Stage 4 presents a ‘portfolio’ of potential measures (structural, operational and institutional) to be considered when developing an adaptation pathway.

Sixteen international good practice case studies are appended to the guidance, along with various templates to be used for data collection and record keeping.

This guidance also

- provides methodological support to the recent PIANC Declaration on Climate Change[2], enabling PIANC’s members and the wider navigation infrastructure community to take timely action to strengthen resilience, and adapt port and waterway infrastructure and operations to the effects of climate change, and
Notes for Editors

[1] PIANC is a global, non-political and non-profit organisation that brings together international experts on technical, economic and environmental issues relevant to the design, development and maintenance of ports, harbours, waterways, marinas and coastal areas. PIANC’s mission is to provide expert guidance, recommendations and technical advice, so as to keep the international waterborne transport community connected and informed. In particular, the association is renowned for its high-quality technical reports on ports and waterborne transport infrastructure. More information at http://www.pianc.org.

[2] The PIANC Declaration on Climate Change, launched by PIANC’s President on 10 December 2019, during the Round Table on Resilience at COP25 in Madrid, Spain, can be found at http://www.pianc.org/working-with-nature

[3] Navigating a Changing Climate is a PIANC-led Global Climate Action initiative, set up under the Marrakech Partnership in the lead-up to COP21 in Paris, where the Paris Climate Change Agreement was signed. The objective of the initiative is to provide support to the owners and operators of waterborne transport infrastructure as they respond to the climate change challenge by: raising awareness; reducing greenhouse gas emissions; strengthening resilience and adapting infrastructure and operations; and seeking integrated solutions including Working with Nature. The following eight international associations with interests in waterborne transport infrastructure are partners in the Navigating a Changing Climate initiative:

- International Association of Ports and Harbors (IAPH)
- International Harbour Masters’ Association (IHMA)
- International Maritime Pilots’ Association (IMPA)
- Smart Freight Centre (SFC)
- European Dredging Association (EuDA)
- European Sea Ports Organisation (ESPO)
- Institute of Marine Engineering, Science & Technology (IMarEST)
- Inland Waterways International (IWI)

In addition, more than 50 other organisations have signed up as supporters of the initiative. More information at http://navclimate.pianc.org.

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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