









# 13th meeting **PORT OF THE FUTURE**

Innovation Hub

by **Cerema** 



### **MEDITERRANEAN DAYS**

by **AIPCN** 

## The meeting for the port community



25, 26 and 27 october 2023





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08h00 - 09h00 Welcome coffee

09h00 – 10h00 **Opening** 

10h00 – 11h15 Round table n°1: The port area, land of virtuous reindustrialization

- Ports are increasingly called upon to accommodate various industrial sectors in the public maritime domain. Among the many requests for establishment, do they promote job-creating projects, those that generate wealth and new tonnages while taking into account the low environmental impact? What are the priority activities? How are port land needs reflected in the development of local urban plans?
- The hinterland along the river axes and in the commercial ports plays a role strategic in the development of port land (logistics, industry, MRE) driven by collective work in favor of industrial attractiveness (State, Ports, Communities, territorial attractiveness, agencies, etc.).

11h15 – 11h20 Decarbonization and digitalization: innovating steel sheet piles for port infrastructure of tomorrow – Shilton Rica, ArcelorMittal

11h20 – 11h45 Break

11h45 – 12h45 Round table n°2: Port logistics strategy, how to combine performance and sustainability?

How to build a logistics approach that is both efficient and sustainable? A real challenge for ports to take up, the fluidity of port passage being a key element of performance. New initiatives are being developed on the quays in favor of reducing the carbon footprint: new means of handling and storing goods on land, intelligent management of terminals, increasing recourse to the massification of flows on the rail and the river but also generalization of solar panels on the roof to provide electrical energy. What are the new technologies that promote the competitiveness of port passage while reducing the environmental footprint? Spotlight on AI and digital twins, eco calculators, CO2 index measurement.

12h45 – 14h00 Lunch break
 14h00 – 15h30 Innovation Trophies session – Presentations of candidates
 15h30 – 15h35 Short speech from BOUYGUES Construction
 15h30 – 16h00 Break
 16h00 – 17h15 Round table n°3: AIS, strategic data for ports

Since 2007, the Solas convention has required merchant ships to be equipped with an automatic identification system, known as AIS. This ship positioning data has been truly usable since 2015, since satellite constellations coupled with a network of terrestrial radars provide consolidated information on circulation on a global scale. If AIS is first and foremost a tool for securing flows, it opens up numerous perspectives on the analysis of maritime transport, and numerous scientific works have therefore been undertaken to better understand the reality, whether from the point of view from the point of view of understanding networks, modeling the environmental impacts of shipping, understanding risks... Initially confined to dynamic analyzes of maritime traffic, AIS has for some time found applications in spaces ports, where this positioning data allows for further reflections in terms of optimizing traffic flows, the environmental quality of ports or even the implementation of services to ships. Is AIS data, initially maritime, about to become strategic port data?

18h30 – 20h30 **Networking Cocktail (Innovation Trophies Award)** 



08h00 - 09h00 W

Welcome coffee

09h00 - 10h00

Introduction by PIANC and the port of Sète

### **Opening Sequence**

- The national port strategy of Morocco
- Intervention of the national federation of marinas

10h00 - 11h00

Auditorium	Room Francis Poulenc
Round table n°4: Preservation of biodiversity, what port strategy to face this challenge?	PIANC parallel session - Digital and energy transition (10h00-11h15)
<ul> <li>The preservation and restoration of nature is at the heart of the environmental management of ports. The development plans fully integrate the preservation of biodiversity. Ports have made great progress in terms of acquiring knowledge and controlling impacts. However, questions arise to respond to current issues such as compensation or net wero artificialization. Direct or delegated space management? Between sanctuarization of plots and land pressure. How can biodiversity and energy sovereignty, industrial ambition and food issues coexist?</li> <li>How to reconcile these objectives and ensure consistency in the implementation of public policies? What interface is there with territorial planning? Who finances actions to preserve biodiversity? Do public contracts include biodiversity preservation clauses?</li> </ul>	- Seabim : le jumeau numérique appliqué à la construction et à la gestion patrimoniale de digue à talus – Steven Le Bars, France  - Port Digital Twin for Smart Cities, Stakeholders and Citizens: the case study of the Port of Ravenna – Saimon Conti, Italy  - The Way of Digitization and the integration of Intermodal Services in Ports – José-Luis Monsó de Prat, Spain  - Climate change minimization in port developments located in sensitive and complex areas – Elena Valentino, Italy  - Cold ironing facilities in the general interest – Jorge Martin Jimenez, Spain

11h00 – 11h05	BRLi, Engineering for a sustainable world – Nicolas Fraysse, BRLi
11h05 – 11h30	Break
11h30 – 12h00	PIANC session – Keynote speech: New perspectives for the planning of port cities in Italy – Francesco Messineo, Italy
12h00 – 12h30	PIANC session – Dredging and port planning - Dredging for sustainable infrastructure - Ayya Shahhat, The Netherlands
12h30 – 12h35	Take small steps today for a safer tomorrow - Hugo Bernal, TRELLEBORG
12h30 – 14h00	Lunch break



14h00 - 15h00

# Round table n°5: The new collaborative approaches of ports in favor of the ecological transition

Risk management, ecological and energy transition, foresight: New collaborative approaches intended to build the ports of the future are emerging to promote acceptability. Energy and ecological challenges require ports to build a new methodology based on dialogue in relations with manufacturers, shipowners, logisticians, elected officials, citizens, NGOs. In recent months, certain projects have provoked reactions of intolerance in France from associations and civil society. How to involve all stakeholders in future planning? What tools are available to ports to encourage the involvement of local residents and stakeholders? After the Port Development Council, consultation, public debate, port centers. What are the new models of project governance to be built in order to overcome mistrust and promote the emergence of sustainable projects? How to make these new approaches a success?

15h00 - 16h 30

Auditorium	Room Francis Poulenc
PIANC session – Port design tools	PIANC parallel session – Marinas
<ul> <li>Malamocco-Marghera Navigation Channel (Venice Lagoon); study of operational and structural solutions to achieve a sustainable navigation - Paolo Mengazzo, Italy</li> <li>L'extension du port de Port La Nouvelle, France</li> <li>Déploiement d'un smart grid portuaire bas carbone pour le terminal de la pointe des Grives - Jérôme Mercier, France</li> </ul>	- La transition numérique des ports de plaisance - Laurent Monsaingeon, France  - The innovative ejectors plan technology for sediment management in ports - Marco Pellegrini, Italy  - Sujets de présentations supplémentaires à confirmer
- Impact analysis of autonomous ship introduction in Mediterranean Ports – Francescalberto De Bari, Italy	
- Caractériser les actions météocéaniques sur des durées longues avec les Eurocodes – Jean-Bernard Kovarik, France	
- Prise en compte de la remontée eustatique du niveau moyen dans les analyses conjointes houle-niveau pour le dimensionnement des ouvrages portuaires - Franck Mazas, France	

#### 17h00 – 19h00 Visit of the port of Sète

The port of Sète-Frontignan is the second deep-water port on the French Mediterranean coast and the second most decentralised port in terms of overall trafic.

Take a tour and discover a dynamic multimodal port where sea, river and rail links meet.

Discover a port driven by the know-how of its port community and the responsiveness of its teams.

Come and visit its high-quality infrastructure, latest-generation tools and 10 specialised terminals spread over 5 basins, handling a wide range of goods including heavy goods vehicles, rolling freight, bulk solids, bulk liquids, agri-foodstuffs, containers and passengers.

Above all, discover a historic port resolutely turned towards the future, where energy transition and innovation come together!

19h30 – 20h00 Doors open for gala dinner

Location : Maison de la Mer (2 Quai Philippe Régy. 34200 Sète)

20h00 – 23h30 Gala dinner

Location : Maison de la Mer (2 Quai Philippe Régy, 34200 Sète)



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08h00 - 08h30

Welcome coffee

08h30 - 09h00

PIANC session – Keynote speech: Blue Growth-Port of Vigo - Carlos Botana, Spain

09h00 - 10h30

Auditorium	Room Francis Poulenc
PIANC session – Port design examples	PIANC parallel session – Innovations
	for quatainable and reciliant norta

- Estimation of temporal and seasonal variation of tidal flushing in Damietta port basin using two-dimensional hydrodynamic model - **H. Zaki, Egypt**
- Guidelines for the design of fender systems PIANC WG 211 Marco Gaal, The Netherlands
- Détermination des impacts environnementaux d'une rénovation d'écluse en vue d'une écoconception des ouvrages - **Tiffany Desbois, France**
- The application of early contractor involvement in Mediterranean marina projects - **Kenneth Willems, Belgium**
- Container ports planning-key factors to boost resilience **Rita Pombo, Portugal**
- Adaptation et modernisation du port militaire de Brest face à l'arrivée des nouveaux navires de la Marine nationale - Alexandre Lemaire, France

- for sustainable and resilient ports
- Blue Standards for nature-inclusive port infrastructure **Phil Leblanc, Spain**
- Construction of sustainable quay walls **Joao Martins, Luxemburg**
- Extreme events and importance of their identification: the study case of Salerno port- Margherita Cicciglione, Italy
- Modernisation et restauration innovantes des écluses limitant les interruptions de navigation : exemple de Méricourt- Franck Rangognio & Philippe Schalkwijk, France
- Adaptation au changement climatique du Port Atlantique La Rochelle – **Perrine Vermeersch, France**
- Quelles solutions face au changement climatique pour le port unique de l'île Maurice ? **Jean-François de Calonne, France**

10h30 - 11h00 Break

11h00 - 13h00

# Auditorium Salle Francis Poulenc PIANC session – Digital transition Urban integration and port logistics

- Création de jumeaux numériques d'infrastructures existantes et suivi d'ouvrages : état de l'art des techniques **Hélène Macher, France**
- Projet Giros des jumeaux numériques pour un développement durable de l'estuaire de la Gironde – Fabrice Klein, France
- Air quality monitoring system and smart environmental platform in the port of Balearic Islands – Jorge Martin Jimenez, Spain
- Proactive detection of pollution episodes with AI by exploiting in-situ data, satellite data and port activity
- Cristina Alburquerque Otero, Spain
- Application of machine learning techniques to assist design, construction and operation of port **Antonio Tomas, Spain**
- BIM methodology applied to maritime works
- Diogo Oliveira, Portugal
- Management of dredging activity in the harbor of Bari: monitoring activity and simulation modelling –
   Diana de Padova, Italy
- Wave radar for asset management **Mario Bernero**, **Italy**

- City-port integration under aspects by nautical tourism and
- urban development **Heiner Haas, Germany**
- Efficiency and flexibility in Italian port planning by means of the technical functional adaptation tool – Serena d'Amora & Andrea Ferrante, Italy
- Dredging and extension works of the port of Salerno **Vittoria Puzone, Italy**
- Evaluation of port facilities for transport operations of windmills components **Lourdes Pecharroman, Spain**
- Performance-based design of mooring/berthing dolphin structure considering geotechnical and structural constraints under offshore load conditions – **Vasileios Afentoulis, France**
- Système intelligent de prévention et de surveillance de la santé des structures portuaires en palplanches acier – Abir Gallala – Luxemburg
- Vibro-Replacement technique for the seabed of Salerno port Margherita Ciccaglione, Italy
- The behaviour of a moored ship in wind: the difference between a static and dynamic mooring analysis **Lutz Schweter, The Netherlands**



13h00 - 14h30

Lunch break

14h30 - 15h00

PIANC session – Keynote speech: Energy transition in Portuguese ports - Hugo Lopes, Portugal

15h00 - 16h00

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PIANC session –
Technical solutions adopted by some
Mediterranean ports

- Dallage du port de Constanza, une solution conçue pour durer - Chiara Minoretti, France

**Auditorium** 

- La transition écologique et énergétique des ports marocains (à confirmer)
- Aménagement du complexe industrialo-portuaire de Nador West Med- analyse des flux d'activité et transfert des marchandises - **Eugénia Poveda Santiago**, **Spain**
- Plus-value écologique des cuvettes rocheuses artificielles intégrées aux ouvrages maritimes : premiers retours d'expérience en Atlantique et Méditerranée -Fabrice Javel, France
- Analyse de l'effet de collision de navires sur les piles d'amarrage du poste B3 situées au port de Béthioua-Arzew - **Akli Nechache**, **Algérie**

### PIANC parallel session – Energy recovery and energy transition (15h15-16h15)

- Proposition d'une solution alternative de tablier à poutres précontraintes pour la conception d'un appontement minéralier du port de Jenjen, Jijel, Algérie - **Akli Nechache**, **Algérie** 

Salle Francis Poulenc

- Impact of GHG Regulations at Container
   Terminals on the Container Handling Equipment
   Market Moritz Neltner & Andreas Mohr,
   Germany
- The new U-oscillating water column breakwater of the commercial harbour of Salerno for the wave energy conversion Felice Arena, Italy
- Developing a wave prediction module for sustainable port operations and energy harvesting - Gabriel Diaz Hernandez, Spain

16h15 – 16h30 Summary / Conclusion of the 3 days