MTCC LATIN AMERICA
Maritime Technology Cooperation Centre

GMN | The Global MTCC Network
A global network for energy-efficient shipping

REPORT

1st NATIONAL WORKSHOP 2026 OF THE GMN II PROJECT FASE II

ADVANCING MARITIME DECARBONIZATION IN MEXICO:

Energy Efficiency, Technology, and Innovation for a Sustainable Transition

Marina
Secretaría de Marina

UMIP

Global Gateway

Funded by the European Union

INTERNATIONAL MARITIME ORGANIZATION

For more information, contact us at: mtcclatinamerica@umip.ac.pa / (507) 520 - 0330
www.mtcclatinamerica.com

First National Workshop 2026 in Mexico – Executive Summary

The Maritime Technology Cooperation Centre for Latin America **(MTCC-LA),** within the framework of the Global MTCC Network (GMN) Project Phase II, an initiative implemented by the International Maritime Organization **(IMO)** and funded by the European Union **(EU),** together with the International Maritime University of Panama (UMIP) and the Secretariat of the Navy of the United Mexican States **(SEMAR),** through the National Maritime Authority Unit **(UNAMAN)**, and with the support of Baja Ferries, organized the **1st National Workshop 2026 of the GMN II Project** entitled: **"Advancing Maritime Decarbonization in Mexico: Energy Efficiency, Technology and Innovation for a Sustainable Transition"**, held on **7–8 April 2026** in **La Paz, Baja California Sur, Mexico**.

The event brought together more than **119 participants**, both in person and virtually, including representatives from the Secretariat of the Navy (SEMAR), the National Maritime Authority Unit (UNAMAN), the National Port System Administrations (ASIPONAS), shipping companies, port operators, energy providers, financial institutions, universities, maritime academies, research centres, international organizations, non-governmental organizations, and other strategic stakeholders from Mexico's maritime and port sectors. The workshop was consolidated as a high-level national platform for technical and strategic dialogue on the maritime energy transition.

Workshop Objectives

The workshop was designed to:

- ✓ Promote the exchange of knowledge and experiences on the decarbonization of Mexico's maritime and port sectors.
- ✓ Facilitate dialogue on energy efficiency, alternative marine fuels, technological innovation, and digital solutions for the reduction of greenhouse gas (GHG) emissions.
- ✓ Strengthen the institutional and technical capacities of key stakeholders in the national maritime sector.
- ✓ Foster cooperation among government, industry, academia, and international organizations to accelerate the maritime energy transition.
- ✓ Promote gender equality and inclusive participation in maritime decarbonization initiatives.

Topics and Key Areas Addressed

During the workshop, technical presentations, panel discussions, and interactive sessions were conducted focusing on the following strategic areas:

- National maritime decarbonization strategies, challenges, and opportunities
- Technical energy-efficiency measures
- Sustainable alternative marine fuels
- Regional collaborative alliance in Latin America
- Technological solutions for maritime decarbonization
- The role of the banking sector in supporting maritime decarbonization
- Government – Industry – Academia cooperation
- Digitalization and emissions monitoring tools
- Promoting gender equality in maritime energy efficiency initiatives

Key Outcomes and Achievements of the National Workshop

The table below summarizes the key outcomes and achievements of the First National Workshop 2026 of the GMN Phase II Project in Mexico, highlighting the principal results achieved across the GMN II priority areas and their contribution to advancing maritime decarbonization in Mexico.

MTCC-LA – National Workshop 2026 Mexico Achievement Table

GMN II Result Area	Activity / Output	2026 Scope	Key Outcomes and Achievements
Capacity Building	First National Workshop 2026	119 participants from government, industry, academia and international organizations	Strengthened technical capacities and increased knowledge on maritime decarbonization while fostering a common understanding of the IMO 2023 GHG Strategy and national priorities.
National Cooperation	Participation of SEMAR, UNAMAN, ASIPONAS, industry, academia and international organizations	National multi-stakeholder representation	Strengthened inter-institutional cooperation and reinforced the commitment to advance collaboration towards the development of Mexico's maritime decarbonization roadmap to 2050.
Gender Equality	Roundtable on gender equality and the maritime energy transition	41.2% female participation	Promoted women's leadership and reinforced gender inclusion as an essential enabler of the maritime energy transition.
Technological Innovation	Launch of the AI-based GMN II Pilot Project	Pilot implementation with Baja Ferries	Demonstrated the practical application of artificial intelligence to improve energy efficiency and reduce GHG emissions, showcasing innovative digital solutions under the GMN Phase II Project.
Green Ports and Sustainability	Exchange of experiences and discussion of pilot projects	Participation of port authorities and operators	Helped identify priority actions for green port development, energy efficiency measures and operational improvements to support maritime decarbonization.
Alternative Fuels	National and international experiences	Public and private stakeholders	Increased understanding of opportunities, challenges and future pathways for adopting alternative marine fuels.
Sustainable Finance	Panel with financial institutions	Financial entities and cooperation organizations	Highlighted financing mechanisms and investment opportunities to accelerate green maritime projects.
Strategic Partnerships	Promotion of RIALA	Shipping companies and logistics stakeholders	Strengthened regional public-private collaboration and expanded stakeholder engagement to support maritime decarbonization initiatives.

National Participation and Stakeholder Engagement

The workshop brought together **119** participants, including maritime and government authorities, private sector representatives, academia, and international organizations. The sectoral distribution was as follows:

Sector	Number of Participants
Government and Maritime Authorities	24
Shipping and Logistics Industry	33
Ports and Port Authorities	18
Academia and Research Centres	13
Multilateral and Financial Organizations	6
Networks and NGOs (Gender and Sustainability)	25
Total	**119**

Participation consisted of **59% men and 41% women**, meeting the participation targets established in the **2026 Work Plan** and contributing to the implementation of the **GMN Phase II Gender Action Plan**.

The technical discussions held during the workshop helped identify national priorities for advancing Mexico's maritime energy transition, while promoting the exchange of experiences among government authorities, industry representatives, academia, and international organizations.

National Challenges

Participants identified several challenges that will need to be addressed in order to accelerate Mexico's maritime energy transition:

- **The need to strengthen regulatory and policy frameworks** related to alternative fuels and low-emission technologies.
- **Infrastructure limitations** for the production, storage, and supply of sustainable marine fuels.
- **The need to expand access to financing** for energy-efficiency and maritime decarbonization projects.
- **Strengthening technical capacities** to support the adoption of emerging technologies and digital tools.

❖ **Development of national coordination mechanisms** to ensure the effective integration of all relevant stakeholders across the maritime and port value chain.

❖ **Continued promotion of gender equality and inclusive participation** in decision-making processes within the maritime sector

Summary of Results and Actions Table

Session / Topic	Results and Conclusions	Next Steps	Responsible Parties and Partners	Timeline
1. Overview of Mexico Maritime and Port Sector	Progress on the Mexican Port Decarbonization Strategy (EDPM), strengthening of emissions inventories, and promotion of OPS solutions, electrification, and port energy efficiency.	Consolidate MRV tools, develop alternative fuel demand studies, and strengthen port electrification projects.	SEMAR, ASIPONAS, MTCC-LA, port sector stakeholders.	Q1–Q4 2026
2. Launch of the Technology Demonstration Pilot Project	Official launch of the technology pilot aboard Baja Ferries' *CABO STAR* ferry, incorporating digital systems and artificial intelligence for energy optimization and emissions reduction.	Progressive implementation of the pilot project, operational monitoring, and generation of technical evidence that can be replicated across the region.	MTCC-LA, Baja Ferries, UMIP, SEMAR, IMO, European Union.	Q2 2026 – Q2 2027
3. Decarbonization in Action – Regional Initiatives and Lessons Learned	Highlighted the importance of maritime education, digitalization, data analytics, and regional cooperation to strengthen technical capacities for maritime sustainability.	Develop green curricula, strengthen digital competencies, and promote regional academic and technical partnerships.	MTCC-LA, academic institutions, NHH, SEMAR.	Q2–Q4 2026
4. Use of Sustainable Alternative Marine Fuels	Opportunities and challenges associated with ammonia and LNG as alternative fuels for the maritime energy transition were analyzed.	Promote comparative studies, pilot projects, and infrastructure development for low-emission fuels.	MTCC-LA, SEMAR, CAMEINTRAM, private sector.	Q3 2026

Session / Topic	Results and Conclusions	Next Steps	Responsible Parties and Partners	Timeline
5. Regional Industry Alliance for Latin America (RIALA)	Emphasized the need to strengthen regional cooperation and mobilize financing for maritime decarbonization projects.	Submission of expressions of interest to join RIALA and exploration of regional financing mechanisms.	MTCC-LA, Baja Ferries, NexBridge, WWF, UMIP, private sector.	Q3–Q4 2026
6. Practical Workshop on Decarbonization Technology Solutions	Participants applied calculation tools and operational analysis methodologies to evaluate emissions reduction and energy-efficiency scenarios.	Deliver technical training on LCA and CII and establish multi-stakeholder technical cooperation platforms.	MTCC-LA, ROUSSEAUX SRL, SEMAR, CAMEINTRAM, maritime industry.	Q3 2026
7. Interactive Workshop – Roadmap for Developing a Decarbonization Strategy	Strengths, weaknesses, opportunities, and threats (SWOT) of Mexico's maritime and port sector were identified through a participatory exercise.	Use the results as input for future national maritime decarbonization strategies and pilot projects.	MTCC-LA, SEMAR, academia, private sector.	Q3–Q4 2026
8. Panel Discussion – Maritime Finance and Sustainability	Highlighted the role of climate finance and green financial instruments in accelerating maritime energy transition projects.	Strengthen capacities for structuring bankable projects and accessing international climate finance.	MTCC-LA, IDB, CAF, financial and maritime sectors.	Q4 2026
9. Roundtable – Gender Equality and Maritime Sustainability	Highlighted the need to strengthen women's participation in technical and leadership positions within the maritime and port sectors.	Promote training programmes, gender indicators, and inclusion mechanisms within maritime sustainability initiatives.	MTCC-LA, WISTA Mexico/WISTA Panama, SEMAR, academia.	Q2–Q3 2026

Next Steps

Following the outcomes of the 1st National Workshop 2026 of the GMN Phase II Project in Mexico, the following strategic lines of action have been identified to consolidate the progress achieved under the framework of the GMN II Project:

MTCC-LA Next Steps towards Table

Strategic Line	Next Steps	Expected Results
National Maritime Decarbonization Roadmap	Strengthen cooperation among SEMAR, UNAMAN, MTCC-LA, and key stakeholders to support the development of a national roadmap aligned with the IMO 2023 GHG Strategy and Mexico's climate objectives.	A national strategic framework to guide maritime decarbonization actions towards 2050 and strengthen institutional coordination.
Technological Innovation and Energy Efficiency	Implement and monitor pilot initiatives and technological solutions aimed at improving energy efficiency and reducing GHG emissions in ships and ports.	Generation of technical evidence, adoption of innovative technologies, and improved energy performance across the maritime sector.
Green Ports and Energy Transition	Promote port sustainability initiatives, including energy efficiency, electrification, digitalization, and the assessment of alternative fuels.	Identification and development of priority projects for the modernization and sustainability of Mexican ports.
Capacity Building and Knowledge Transfer	Continue developing workshops, training programmes, and technical exchange activities to strengthen national capacities in maritime decarbonization.	Enhanced technical and institutional capacities to support the energy transition of the maritime and port sectors.
Sustainable Finance and Industry Participation	Strengthening dialogue among the maritime industry, financial institutions, and development partners, while promoting the active participation of national stakeholders in RIALA.	Increased investment mobilization, development of bankable projects, and strengthened public-private collaboration.
Gender Equality and Multi-Stakeholder Cooperation	Continue promoting women's participation and strengthening partnerships among government, industry, academia, and international organizations.	Greater inclusion, stronger female leadership, and the consolidation of a national collaboration network to advance maritime decarbonization.

Conclusion

The **First National Workshop 2026 of the GMN Phase II Project in Mexico** represented an important milestone in strengthening the national dialogue on maritime decarbonization and the energy transition. The event brought together key stakeholders from government, industry, academia, financial institutions, and international organizations to exchange knowledge, identify challenges, and promote solutions aimed at reducing greenhouse gas (GHG) emissions within Mexico's maritime and port sectors.

The outcomes of the workshop demonstrated a strong institutional commitment to advancing the development of a national maritime decarbonization roadmap, strengthening public-private cooperation, and promoting the adoption of innovative technologies and sustainable fuels. Furthermore, the launch of the AI-driven GMN II Pilot Project represented a tangible achievement, showcasing the potential of digital solutions to enhance energy efficiency and support the achievement of the objectives set out in the IMO 2023 GHG Strategy**.**

The workshop reaffirmed the importance of continuing to strengthen national capacities, promote gender equality, and consolidate strategic partnerships to accelerate the transition towards a more efficient, competitive, and sustainable maritime sector in Mexico.