

GREEN PORTS WEBINAR SERIES #8

Coastal and Port Engineering: Building Lines of Defense

Thursday, 18 June 2026 | 2:00-3:00 PM GMT+8

Registration Link: https://adb-org.zoom.us/webinar/register/WN_nnLMswUpTQenswCPrHTp0w#/registration

Ports and coastal infrastructure are increasingly exposed to sea-level rise, stronger storms, and changing sediment regimes, placing pressure on traditional protection measures. This webinar, *Coastal and Port Engineering: Building Lines of Defense*, will explore how ports can strengthen resilience through nature-based, hybrid, and adaptive approaches that support operational continuity while delivering environmental benefits.

The session will highlight the importance of working with natural processes, including sediment transport, barrier systems, and coastal habitats, to enhance shoreline stability, reduce erosion, and improve resilience to extreme weather events. It will also examine the growing role of green and eco-engineered defenses, such as reef-inspired breakwaters, living shorelines, and hybrid gray-green infrastructure, that combine coastal protection with ecological functions.

Participants will gain insights into adaptive design strategies that allow coastal defenses to evolve in response to climate risks and changing operational needs. The webinar will also explore innovations in materials, construction approaches, and the beneficial reuse of dredged material for shoreline stabilization, habitat restoration, and coastal resilience.

Through practical examples and case studies, the session will demonstrate how ports can integrate climate adaptation, environmental stewardship, and infrastructure performance to build more resilient and sustainable coastal systems.

Opportunities and Value for Ports

Nature-based and hybrid solutions can improve asset reliability, reduce downtime from extreme events, and lower long-term maintenance costs. These approaches can also support regulatory compliance and align with growing investor and stakeholder expectations for sustainable infrastructure.

Beyond risk reduction, green coastal engineering solutions can enhance biodiversity, improve environmental outcomes, strengthen relationships with communities and regulators, and support access to sustainable finance. By integrating resilience and environmental performance into coastal infrastructure planning, ports can position themselves for long-term competitiveness and sustainable growth.

Session Objectives

By the end of this session, participants will:

- Understand the role of nature-based, hybrid, and adaptive coastal defenses in port resilience.
- Learn how coastal processes and ecosystems can contribute to shoreline protection and climate adaptation.
- Explore practical case studies and emerging innovations in coastal and port engineering.
- Identify opportunities to strengthen environmental performance while supporting operational and infrastructure resilience.

This webinar is the eighth in the Green Ports Webinar series, which highlights how leading ports are addressing environmental challenges and how these approaches can be adapted across Southeast Asia. It is organized by the ASEAN Catalytic Green Finance Facility (ACGF), which is managed by the ASEAN Power Grid and Special Funds Unit of ADB's Southeast Asia Regional Department. It is hosted by ADB's Southeast Asia Development Solutions (SEADS) platform and Development Asia.

ACGF is an ASEAN Infrastructure Fund initiative that supports governments in Southeast Asia to prepare and finance infrastructure projects that advance environmental sustainability and strengthen climate resilience. ACGF is owned by ASEAN governments and ADB.

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AGENDA

Time	Topic & Speaker
3 minutes	<p>Welcome and Brief Overview <i>Jackie Spiteri, SESG Managing Director and ADB Consultant</i></p>
	<p>Panel Presentations:</p>
15 minutes	<p>Living Shorelines for Coastal Protection <i>Rebecca Morris, Principal Marine Scientist, University of Melbourne</i></p> <p>The session will discuss the Australian guide to nature-based methods for reducing coastal hazard risks. The guide provides clearer direction for decision-makers on when soft, hybrid, or hard approach are most appropriate, and how they can be implemented.</p> <p>It explains how site conditions, coastal habitat suitability, hazard severity, and risks to built, social, and natural assets influence the success and appropriateness of nature-based methods.</p>
15 minutes	<p>World Bank 2025 Guidelines: Nature-Based Solutions for Ports <i>Niels van Kouwen, Maritime Consultant, Haskoning</i></p> <p>The talk will provide an overview of the World Bank’s 2025 guidelines on <i>Nature-Based Solutions for Ports</i>, which outline key principles, opportunities, and examples for applying nature-based solutions for port managers, governments, decision-makers, investors, and professionals. The talk will also walk through a ‘building line of defense’ example to demonstrate how the guidelines can be applied.</p>
15 minutes	<p>Lightning Point Living Shoreline <i>Mary Kate Brown, Assistant Coastal Programs Director, The Nature Conservancy</i></p> <p>The session will feature the Lightning Point Shoreline Restoration Project in Bayou La Batre, Alabama, a culturally important coastal area known as the Seafood Capital of Alabama and a key hub for the Gulf of Mexico seafood and fisheries industry.</p> <p>The case study will show how green and gray infrastructure can be combined to restore coastal habitats, protect public lands and recreational areas, and strengthen resilience against wave action, storm-induced erosion, and sea level rise. It will discuss the project’s use of offshore segmented breakwaters, tidal creeks, intertidal marsh habitat construction, and beneficial reuse of dredged material along a roughly two-kilometer shoreline.</p>
15 minutes	<p>Moderated Discussion</p>



	<i>Facilitated by Jackie Spiteri, ESG Managing Director and ADB Consultant</i>
2 minutes	Closing <i>Jackie Spiteri, ESG Managing Director and ADB Consultant</i>

Biographies

 <p>Dr. Rebecca Morris Principal Marine Scientist University of Melbourne</p>	<p>Dr. Rebecca Morris is a marine scientist at the University of Melbourne and is a lecturer in the School of Biosciences. She leads the Coastal and Estuarine Adaptation Lab, and is Theme Leader of Eco-engineering at the National Centre for Coasts and Climate.</p> <p>Her research focuses on nature-based solutions for the management of erosion and flooding along the coast. Dr. Morris was the lead author of the recently published Australian Living Shorelines for Coastal Protection guidelines and runs the active inventory of Australian Living Shoreline projects.</p> <p>She is one of Australia’s leading authorities in oyster reef implementation and overseeing projects across Australia. Dr. Morris holds a PhD in Marine Ecology and a BSc in Zoology and has authored 53 peer reviewed publications, the majority of which include ecological engineering, habitat restoration through living shorelines and climate change adaptation. Her extensive research includes mangroves, coral reefs and atolls, kelp, oysters and wetlands.</p>
 <p>Niels van Kouwen Maritime Consultant Haskoning</p>	<p>Neils is a maritime consultant and port planner, with a morphology background, who has been working on both green and smart ports over the past years.</p>
 <p>Mary Kate Brown Assistant Coastal Programs Director The Nature Conservancy</p>	<p>Mary Kate’s background consists of extensive experience working with a range of Federal, State and private entities across the Northern Gulf of America to help implement coastal restoration projects and to leverage additional watershed activities to promote estuarine health and enhance water quality across the landscape. Through her 20 years of projects and collaboration efforts, she has curated strong and healthy partnerships among municipalities, academia, firms and community organizations to promote innovative strategies using applied research to support successful restoration efforts, as well as long term monitoring to inform adaptive</p>

	<p>management. The most recent endeavour includes the award-winning Lightning Point Restoration Project in Bayou La Batre, Alabama, involving more than 20 diverse partners to implement one of the largest coastal restoration projects along the Gulf of America.</p>
<div data-bbox="342 373 524 646" data-label="Image"> </div> <div data-bbox="318 646 548 751" data-label="Caption"> <p>Jackie Spiteri Managing Director SESG</p> </div>	<p>Jackie Spiteri is an experienced sustainability professional with over 18 years in the maritime and infrastructure sectors. She is the Founder and Managing Director of SESG, a specialist advisory firm helping organisations navigate the evolving sustainability and reporting landscape through tailored strategies, implementation, and education.</p> <p>Jackie has served in leadership roles including Board Member of PIANC ANZ and Chair of Ports Australia’s Environment Planning and Sustainability Working Group. She is also an accredited Lead Auditor and the only Green Marine verifier in the Asia–Pacific region.</p> <p>Her career highlights include developing sustainability financing frameworks enabling over \$750 million in linked debt, contributing to the ASEAN Taxonomy V3 and ongoing work on V4, and leading the creation of KubeNest, an innovative sustainability software platform.</p>