High Level Consultation on Circularity in the Marine Environment and Sustainable Ship Recycling in Pakistan

20th March 2025

Ecological Sustainability & Circular Economy Unit Sustainable Development Policy Institute (SDPI)

Table of Contents

1. Introduction 1

Dr. Abid Qaiyum Suleri, Executive Director, SDPI 2

Dr. Aneel Salman, Chair EconomicSecurity,IPRI 3

Mr. Jawed iqbal,CEO, Shaoib Shipping Agencies 5

Cdr. Anees Muhammad Khan, Senior Researcher and Author of HKC Book,NIMA 6

Real Admiral Salman Ilyas HI(M), Managing director, KS &EW 8

Cdre. Raheel Masood (Retd) Researcher and Author of HKC Book,NIMA 9

Mr. Abdul Sattar Khokhar, Senior Joint Secretaray,MOMA 10

Ms. Fasiha Safdar, Research Fellow, NIMA 12

Vice Admiral (Retd) Ahmed Saeed HI(M)-President, NIMA 13

Ms. Zainab Naeem – Head of Ecological Sustainability & Circular Economy, SDPI 14

3. Conclusion and Key Recommendations 15

Annex 01 – Concept Note & Agenda 15

Introduction

Pakistan is home to one of the largest shipbreaking industries in the world, primarily centered in Gadani, where ships from around the globe are dismantled for recycling. The country plays a significant role in the global maritime economy by providing steel and other recycled materials from decommissioned ships. However, Pakistan's shipbreaking industry, while economically valuable, poses serious environmental and social challenges. The practice often involves outdated and hazardous methods, leading to significant pollution of coastal waters and risks to worker safety.

The marine environment in Pakistan is also under increasing pressure from industrial waste, including pollution from the shipbreaking industry. Ship recycling is a crucial component of the maritime economy. Pakistan, along with India, Bangladesh, and Turkey, handles approximately 85% of the world's ship recycling activities, contributing significantly to the global steel industry. At the same time, the unsustainable practices often associated with shipbreaking, such as the widely criticized "beaching" method, result in environmental degradation and hazardous working conditions for laborers.

The transition to a circular economy (CE) in the marine and ship recycling industries offers an opportunity to address these challenges. A circular approach emphasizes resource efficiency, minimizing waste, and ensuring that materials are reused, recycled, or repurposed at the end of their life cycles. By adopting sustainable ship recycling practices, the industry can reduce environmental impacts, create new business opportunities, and support Pakistan's broader efforts to promote climate resilience and marine ecosystem protection.

On March 20th, 2025, the Sustainable Development Policy Institute (SDPI), in collaboration with National Institute of Maritime Affairs (NIMA) hosted a virtual consultation titled "High Level Consultation on Circularity in the Marine Environment and Sustainable Ship Recycling in Pakistan" Moderated by Ms. Zinab Naeem, Head of Ecological Sustainability & Circular Economy Unit Sustainable Development Policy Institute (SDPI) convened stakeholders from Think Tanks, Ship recycling and engineering works, Private sector to address the key barriers and opportunities within the ship recycling for circular economy and a huge number of attendees from different educational institutions . The objectives of the webinar were to explore how circular economy approaches can drive sustainability and climate resilience in Pakistan's marine environment and ship recycling sectors. By bringing together industry leaders, policymakers, researchers, and environmental professionals, the event will facilitate knowledge-sharing and strategic discussions on advancing circularity, protecting marine ecosystems, and promoting sustainable ship recycling practices.

Key Discussion Points & Speaker Insights

1. Dr. Abid Qaiyum Suleri, Executive Director, SDPI

Dr. Abid highlighted Pakistan's strategic role in the global recycling value chain, particularly through the Gadani shipbreaking industry. However, he emphasized that traditional shipbreaking practices pose significant environmental and labor challenges, such as chemical spills, oil leaks, and improper disposal of hazardous materials, all of which threaten coastal biodiversity and local communities. He noted the growing global shift towards sustainable maritime practices and the adoption of circular economy models, urging Pakistan to modernize its regulatory framework to align with international standards like the Hong Kong International Convention and the EU Ship Recycling Regulation. Dr. Abid underscored the economic and environmental potential of adopting circular economy principles in ship recycling. He explained that a circular approach not

only minimizes waste and reduces the industry's carbon footprint but also enhances resource efficiency and creates green jobs. He called for addressing regulatory gaps, strengthening enforcement of environmental and labor standards, and investing in modern infrastructure and clean technologies to meet global sustainability benchmarks. Moreover, Dr. Abid emphasized that sustainable ship recycling should be socially inclusive, ensuring that women and marginalized communities benefit from new economic opportunities.

2. Dr. Aneel Salman - Chair Economic Security, (IPRI)

Dr. Aneel Salman highlighted the crucial role of sustainability within the circular economy, particularly in ship recycling. He explained that ship recycling is essential as it extends the life cycles of materials, reduces the need for virgin resources, and contributes to resource efficiency. Globally, around 1,000 ships reach the end of their life each year, the ship composition is 75% to 85% of their materials comprising steel (High-Grade & Mild steel), non-ferrous metals like copper, hazardous waste: Asbestos, lead, mercury, PCBs, Bilge oil. South Asia (Bangladesh, India, Pakistan) handles 85% of global ship recycling due to lower costs & weak regulations. Pakistan recycling output fluctuates due to economic and regulatory conditions. This recycled steel meets a significant portion of domestic demand, making ship recycling a key component of the steel supply chain in countries like Pakistan. Beyond material recovery, ship recycling also offers employment opportunities for thousands of families and generates revenue through taxes and duties. Aneel also discussed the importance of adopting sustainable practices in ship recycling. He mentioned innovative methods such as water jet cutting, cryogenic cutting, pyrolysis, and the production of green steel, which not only recover materials but also help reduce carbon emissions. However, despite these advancements, the industry still faces significant challenges. Environmental and health concerns remain due to hazardous materials like asbestos and heavy metals, and regulatory loopholes make it difficult to ensure compliance. Weak enforcement of international regulations, including MARPOL, the Basel Convention, and the Hong Kong

Convention, allows shipowners to evade environmental responsibility by registering under flags of convenience. Additionally, the lack of infrastructure for sustainable recycling in countries like Pakistan, particularly at Gadani Shipbreaking Yard with its 132 breaking plots, presents technical deficiencies that hinder the adoption of sustainable practices. Aneel highlighted the potential of innovative technologies, such as smart ship recycling powered by artificial intelligence (AI) and digitization. AI-powered waste sorting systems, blockchain-based material passports, and digital tracking of ships throughout their life cycles are some of the latest innovations transforming the industry. These technologies can facilitate the implementation of new business models, including second-life steel and metal markets and advanced waste recycling solutions. To move toward sustainable ship recycling, Aneel recommended the adoption of material passports, further technological advancements, and stakeholder consultations to develop comprehensive strategies. He called for a reaffirmation of global leadership and commitment to addressing these challenges, emphasizing the need for urgent action to ensure sustainability in ship recycling.

3. Mr. Jawed Iqbal –CEO, Shoaib Shipping Agencies

He emphasized the shift towards marine and ship recycling as a significant economic and social opportunity. He outlined the core principles of the circular economy eliminate**,** circulate, and regenerate and how they apply to ship recycling. In the past, manual ship-breaking practices posed substantial environmental challenges. However, now, once ships reach the end of their life cycles, materials such as steel and metals are being effectively repurposed for other industries, reducing waste and supporting resource circulation. Jawed pointed out that this transition not only lowers the carbon footprint of the industry but also creates jobs and protects marine ecosystems. International conventions, such as those established by the International Maritime Organization (IMO), are crucial for ensuring safe and sustainable ship recycling. However, barriers to adopting sustainable practices include economic pressures to use cheaper, non-sustainable materials, a lack

of infrastructure, financial disincentives, and the complexity of modern ship structures and electronic systems. Regulatory forces are often weak, and enforcement is lacking, further hampered by knowledge gaps and cultural inertia in the industry. He stressed the need for training on circular transformations and emphasized that overcoming these challenges requires collaboration among stakeholders. Priority should be given to materials that are easier to recover, and there must be greater transparency and responsibility throughout the ship's life cycle from ship owners to ship manufacturers. Additionally, recycling yards must adopt safe practices to ensure sustainable outcomes. Jawed also urged that regulatory bodies harmonize their regulations to promote consistency, and the financial sector should offer incentives to support circular economy practices in green zones. Shipping companies are at a crossroads and must prioritize sustainability in ship recycling. He highlighted that a transformation in this sector is essential and requires a strong commitment from all stakeholders to reinvent ships and protect oceans..

4. Cdr. Anees Muhammad Khan – Author of HKC book and Senior Researcher, NIMA

He highlighted the "Circularity in the Ship Recycling Industry: Policy Gaps and Opportunities for Pakistan under HKC and EU SRR." He explained that circularity in ship recycling involves the recovery and reuse of materials, along with the safe disposal of hazardous waste, while ensuring environmental sustainability and maximizing economic value. Pakistan's ship recycling industry, particularly in Gadani, is one of the largest in the world, with 100 active shipbreaking plots. However, the industry faces significant challenges, including being part of the informal sector, high risks of explosions, and workers lacking proper safety measures and monitoring. He highlighted the importance of ship recycling in minimizing landfills and addressing environmental concerns. He pointed out that Pakistan signed the Hong Kong Convention (HKC) in 2023, which provides a framework for environmentally sound ship recycling. The HKC is considered the backbone of circularity in this sector. He also touched upon the European Union's Ship Recycling Regulation (EU SRR) and how Pakistan can improve its waste management and operational practices to enhance the steel and metal industries through improved systems. His recommendations included establishing regulations for the sector, conducting capacity-building

programs, providing personal protective equipment (PPE) for workers, and developing sustainable ship recycling systems (SSR). He mentioned that the government of Norway has earmarked $1.7 million for the implementation of the HKC in Pakistan. Additionally, the federal government has allocated 12 billion PKR in the Public Sector Development Program (PSDP) for the development of Gadani, and the Pakistan Ship Breakers Association (PSBA) is working with German consultancy firms to upgrade 12 yards. Anees emphasized that the revenue from ship recycling in Pakistan currently stands at around $2-3 billion annually, but with improved safety compliance and reduced hazardous waste by 40-50%, the country could increase shipbreaking volumes by 20-30%, creating an additional 5,000+ direct jobs and boosting the economy. He advocated for incorporating the HKC into the national maritime policy and aligning it with federal and provincial regulations. To improve the industry, he recommended upgrading yard layouts, providing worker training, developing a systematic inventory mechanism for managing hazardous waste, and investing in modern ship recycling yards equipped with green technologies. Furthermore, he stressed the need to implement strict regulatory frameworks for compliance and foster public-private partnerships to drive progress in the sector. Immediate policy reforms, infrastructure investments, and internal cooperation are essential for achieving these goals.

4. Rear Admiral Salman Ilyas HI(M), Managing Director of Karachi Shipyard & Engineering Works

Rear Admiral Salman Ilyas HI(M), Managing Director of Karachi Shipyard & Engineering Works (KS&EW), Highlighted the "Role of the Maritime Sector and Shipbuilding Industry in the Circular Economy." He emphasized the crucial contribution of Karachi Shipyard to ship manufacturing and capacity building in Pakistan's shipbuilding industry, which he described as a handicraft industry. He underscored that with proper focus on ship recycling and indigenous shipbuilding, the maritime sector could transform the nation's industrial capabilities. Pakistan currently has two ship design houses that are producing ships, but the materials used in ship manufacturing play a critical role in circularity. He highlighted the complexity of ship design, which makes it difficult to recycle materials after a ship's life span of 20 to 40 years. Ships are designed to be robust and difficult to dismantle. Not all materials used in ships can be fully recycled, though some, such as copper and

aluminum, can be melted and reused for shipbuilding. Salman Ilyas emphasized the importance of steel recycling in ship dismantling. However, he pointed out that Pakistan has not yet adopted glass-certified steel, which is a necessary standard in shipbuilding. The maritime industry in Pakistan needs to adopt this certification for better efficiency. Additionally, he noted that the shipbuilding process is not neat and clean, with challenges in managing oil extraction from ships. Proper disposal systems are in place, but strict enforcement of the Hong Kong Convention (HKC) is crucial to ensure responsible handling of hazardous materials. He stressed that human resources must play a more responsible role in keeping shipyards clean and minimizing waste. A best management system should be implemented to reduce the carbon footprint, and the use of Electric Vehicles (EVs) in transportation should be considered, despite the cost challenges. He also recommended adopting Industry 4.0 standards and water jet cutting for process efficiency. He identified key challenges, including the lack of policy implementation, low awareness, insufficient industry support, and the maritime sector not being a priority. He highlighted the potential benefits of the blue economy and advocated for policy formulation, especially in the shipping sector. He mentioned that Pakistan's shipping policy addresses some of these components, but there are serious issues that need attention.

5. Mr. Abdul Sattar Khokhar, Senior Joint Secretary at the Ministry of Maritime Affairs

Mr. Abdul Sattar Khokhar discussed the environmental advantages of ship recycling and its alignment with international conventions. He emphasized that ship recycling is a more environmentally friendly process compared to other disposal methods. Referring to the Basel Convention, which focuses on transboundary control of hazardous waste, he highlighted the gaps in international conventions related to hazardous materials and ship recycling, particularly the Hong Kong Convention (HKC). He pointed out that HKC ensures the safe construction and recycling of ships by maintaining an inventory of hazardous materials throughout a ship's life cycle. However, Khokhar acknowledged that fully adhering to these protocols is challenging, and achieving idealistic goals requires a detailed plan and proper monitoring. Facilities must comply with regulations to handle any adverse events during the recycling process. Pakistan is actively working on the implementation of the HKC, with collaboration between provincial and federal

governments. Additionally, he mentioned that the Pakistan Ship Breakers Association (PSBA) is investing its own resources to elevate the industry to international standards. This demonstrates a significant commitment from stakeholders to improve the ship recycling sector and ensure compliance with global environmental protocols.

6. Cdre. Raheel Masood (Retd) -Author of HKC Book and Senior Research, NIMA

Raheel Masood presented key insights into the global ship recycling industry and its capacity challenges. He mentioned that by 2024, the global merchant fleet will consist of 108,787 ships (totaling 1,597 Mn GT), with 12,464 oil tankers, 13,578 bulk carriers**,** 20,733 general cargo ships**,** 6,128 container carriers**,** and 55,883 ships of other types. The global ship recycling capacity for the coming decade is projected to be 12 Mn LDT per annum, with the capacity to handle 2.4% of the global fleet load by 2026. However, a capacity shortage of 1.7 Mn LDT may arise if recycling rates increase to 3% by 2028 and 3.25% by 2030**.** Raheel emphasized the importance of green ship recycling, ensuring compliance with international regulations for the proper disposal of ships at the end of their life. He explained the distinctions between ship demolition (systematic dismantling in docks**),** ship breaking (cutting ships for scrap metal with manual labor), and ship dismantling (systematic disassembly and removal of all components). He also highlighted the downstream industry's significance, which provides livelihoods to thousands and feeds over 30 downstream industries**.** Regarding global steel demand, he mentioned that from 2022 to 2032, steel consumption is expected to increase from 1.85 Bn MT (USD 1.568 Tn) in 2022 to 2.2 Bn MT (USD 2.471 Tn) by 2032. For Pakistan, the steel consumption in 2022 was 13.6 Mn tons (USD 11.5 Bn)**,** with local production averaging 8.42 Mn tons (USD 7.1 Bn)**.** The country's steel scrap import averaged 4.2 Mn tons (USD 3.5 Bn)**.** By 2032, Pakistan's steel demand is projected to reach 21.5 Mn tons (USD 18.2 Bn)**.** Additionally, hazardous waste recovery figures from 2014-2024 were provided: 42,500 tons incinerable waste**,** 34,013 tons' landfill waste, and 17,586 tons of oil based waste recovered.

7. Vice Admiral (Retd) Ahmed Saeed HI(M), President of NIMA

Vice Admiral (Retd) Ahmed Saeed HI(M), President of NIMA, emphasized the importance of identifying circularity in ship recycling and the financial setup that supports it. He highlighted that the job opportunities for women in this sector remain largely untapped and should be given attention. Listening to practitioners in the field is crucial, as there is often a disconnect between policymakers and those implementing ship recycling practices. While acknowledging the efforts of the Ministry of Maritime Affairs (MoMA), he pointed out that gaps still exist in the creation of financial incentives, such as tax policies, to promote sustainable ship recycling. These policy gaps need to be addressed through thorough gap analysis reports to ensure that the industry's needs are met. He also noted that working closely with the International Maritime Organization (IMO) is important, but there is often a difference between understanding regulations at a high level and the ground realities faced by ship recyclers. This disparity needs to be bridged to foster a more cohesive and effective approach to sustainable ship recycling.

8. Dr. Fasiha Safdar, Research Fellow, NIMA

The shipbuilding industry in Pakistan can contribute significantly to the circular economy by adopting key sustainable practices. These include designing ships for easy disassembly and reusability, using recycled materials like steel and aluminum to reduce raw material consumption, and implementing energy-efficient operations to lower carbon emissions. Eco-friendly materials and proper ship recycling facilities are vital to recover valuable resources like steel and copper when ships are decommissioned. Investing in sustainable fuels and technologies further reduces the industry's environmental footprint. By integrating these practices, the industry can achieve cost savings, regulatory compliance, and improved sustainability.

Conclusion and Key Recommendations

The webinar emphasized the pressing need to transform Pakistan's ship recycling sector into a structured, sustainable, and inclusive industry. By aligning policy reforms, financial incentives, and fostering collaboration among stakeholders, Pakistan can unlock the full potential of its ship recycling industry to drive its circular economy goals.

The consultation led to the following actionable recommendations to advance Pakistan's ship recycling ecosystem:

1. Upgrade infrastructure to meet the growing global demand and address future capacity shortages.
2. Ensure compliance with international standards such as the Hong Kong Convention to promote sustainable and environmentally sound recycling.
3. Offer tax reliefs and financial incentives to encourage the adoption of clean technologies and improve operational efficiency.
4. Strengthen regulatory enforcement to align with international best practices and ensure safe, compliant ship dismantling processes.
5. Support the development of downstream industries dependent on ship recycling, creating new jobs and enhancing economic opportunities.

6. Increase local steel production by recycling ship materials to reduce reliance on imports and meet domestic demand.
7. Establish effective waste management systems to handle hazardous materials, minimizing environmental and health risks.

Annexure A

"Consultative Webinar on Circularity in the Marine Environment and Sustainable Ship Recycling in Pakistan"

20th March 2025 | 11:00 AM to 1:00 PM | Online via Zoom

Background and Rationale

Pakistan is home to one of the largest shipbreaking industries in the world, primarily centered in Gadani, where ships from around the globe are dismantled for recycling. The country plays a significant role in the global maritime economy by providing steel and other recycled materials from decommissioned ships. However, Pakistan's shipbreaking industry, while economically valuable, poses serious environmental and social challenges. The practice often involves outdated and hazardous methods, leading to significant pollution of coastal waters and risks to worker safety.

The marine environment in Pakistan is also under increasing pressure from industrial waste, including pollution from the shipbreaking industry. Ship recycling is a crucial component of the maritime economy. Pakistan, along with India, Bangladesh, and Turkey, handles approximately 85% of the world's ship recycling activities, contributing significantly to the global steel industry[1]. At the same time, the unsustainable practices often associated with shipbreaking, such as the widely criticized "beaching" method, result in environmental degradation and hazardous working conditions for laborers[2].

The transition to a circular economy (CE) in the marine and ship recycling industries offers an opportunity to address these challenges. A circular approach emphasizes resource efficiency, minimizing waste, and ensuring that materials are reused, recycled, or repurposed at the end of their life cycles. By adopting sustainable ship recycling practices, the industry can reduce environmental impacts, create new business opportunities, and support Pakistan's broader efforts to promote climate resilience and marine ecosystem protection.

This webinar, organized by the Sustainable Development Policy Institute (SDPI), in collaboration with National Institute of Maritime Affairs (NIMA) aims to explore how circular economy approaches can drive sustainability and climate resilience in Pakistan's marine environment and ship recycling sectors. By bringing together industry leaders, policymakers, researchers, and environmental professionals, the event

[1] ElMenshawy, O. M., Ülkü, M. A., & Hsuan, J. (2024). Navigating Green Ship Recycling: A Systematic Review and Implications for Circularity and Sustainable Development. *Sustainability, 16*, 7407.

[2] Okumus, D., Andrews, E., & Gunbeyaz, S. A. (2024). Developing Circularity Metrics for the Maritime Industry: A Stakeholder Focused Study. *Ocean Engineering, 312*, 119158

will facilitate knowledge-sharing and strategic discussions on advancing circularity, protecting marine ecosystems, and promoting sustainable ship recycling practices.

Workshop Objectives

The webinar will:

- ✓ Discuss how the circular economy can be implemented in Pakistan's ship recycling industry to reduce environmental degradation and enhance resource recovery.
- ✓ Highlight the need for marine environment protection through sustainable management of maritime activities, including reducing marine pollution from shipbreaking and industrial waste.
- ✓ Evaluate how Pakistan can improve regulatory enforcement to ensure compliance with international environmental and labor standards.
- ✓ Encourage collaboration between industry stakeholders, policymakers, and international organizations to foster innovation in green ship recycling techniques and promote investment in sustainable infrastructure.
- ✓ Discuss how the shift towards sustainable ship recycling can create equitable opportunities, including gender-responsive climate finance mechanisms, ensuring women and marginalized communities benefit from climate action and green jobs in ship recycling.

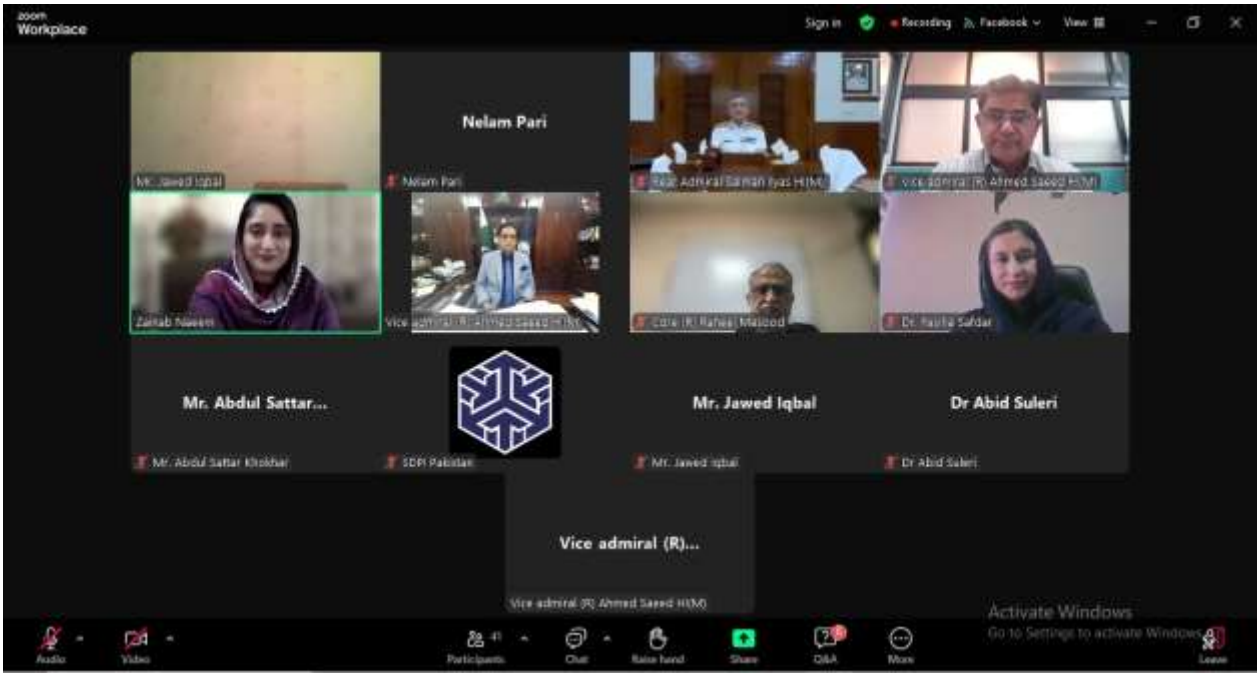
Agenda

Time	Session	Speaker(s)
11:00AM-11:10AM	**Opening Remarks**	**Dr. Abid Qaiyum Suleri,** Executive Director, SDPI
11:10 AM 11:40 AM	**Session 1: Circularity in Marine and Ship Recycling** - Overview of the circular economy in ship recycling. - Best practices and innovations. - Opportunities in Material Recovery -Environmental Challenges and Pollution Reduction -Barriers to Adoption & Stakeholder Collaboration	1. **Dr. Fasiha Safdar**, Research Fellow, NIMA *"Circularity in Marine Environment: Environmental Challenges and Pollution Reduction"* 2. **Dr. Aneel Salman** - Chair Economic Security, (IPRI) *"Overview of The Circular Economy in Ship Recycling Industry"* 3. **Mr. Jawed Iqbal** –CEO, Shoaib Shipping Agencies "Circularity in Ship Recycling Industry: Barriers to Adoption & Stakeholder Collaboration"
11:40 AM – 12:05 PM	**Session 2: Policy and Regulatory Frameworks** - International conventions (Hong Kong Convention). -European Union Ship Recycling Regulation (SRR) - Policy gaps and opportunities for Pakistan. -Enforcing Compliance & Improving Oversight	1. **Cdr. Anees Muhammad Khan** – Author of HKC book and Senior Researcher, NIMA *"Circularity in Ship Recycling Industry; Policy gaps and opportunities for Pakistan under HKC and EU SRR"* 2. **Rear Admiral Salman Ilyas HI(M)-** Managing Director, KS&EW *"Role of maritime sector/ship building industry in circular economy"*
12:05 PM – 12:30 PM	**Session: 3 Financing & Innovations in Sustainable Ship Recycling**	1. **Cdre. Raheel Masood (Retd)** -Author of HKC Book and Senior Research, NIMA

	- Climate Finance for Green Ship Recycling - Opportunities for innovation and investment in sustainable ship recycling technologies. -Technological Innovations for Sustainable Ship Dismantling	*"Opportunities and Challenges for Innovation and Investment in Sustainable ship recycling technologies for Pakistan"*
12:30 PM-12:40PM	**Remarks by Chief Guest**	**Mr. Abdul Sattar Khokhar,** Senior Joint Secretary, Ministry of Maritime Affairs, Islamabad
12:40PM-12:45PM	**Feedback/Comment from Attendees/Stakeholders**	**Moderated by Ms. Zainab Naeem**-Head of Ecological Sustainability & Circular Economy, SDPI **Ms. Fasiha Sadar**-Research Fellow, NIMA Industry experts, PSBA, KS&EW, KPT, PQA, PNSC, MMD, Sindh and Baluchistan EPAs
12:45 PM-12:50PM	**Closing Remarks**	**Vice Admiral (Retd) Ahmed Saeed HI(M)-**President, NIMA
12:50 PM-1:00PM	**Key Policy Takeaways for the National Circular Economy Policy**	**Ms. Zainab Naeem**-Head of Ecological Sustainability & Circular Economy, SDPI

Expected Outcomes

- Enhanced understanding of the benefits of circular economy principles in the marine environment and ship recycling sectors.
- Actionable policy recommendations for aligning Pakistan's ship recycling industry with international standards and circularity principles.
- Identification of potential opportunities for investment in green ship recycling technologies and partnerships with international organizations.
- Strategies for ensuring equitable access to climate finance and green jobs for women and marginalized communities in Pakistan's ship recycling industry.


zoom Workplace
Sign in
Recording
Facebook
View
Nelam Pari
Zainab Naeem
Mr. Abdul Sattar...
Mr. Jawed Iqbal
Dr Abid Suleri
Vice admiral (R)...
Activate Windows
Go to Settings to activate Windows.
Audio
Video
Participants
Chat
Raise hand
Share
Q&A
More
Leave