



# MARITIME

## **JANUARY - FEBRUARY 2023**

PAKISTAN'S PREMIER MONTHLY MARITIME NEWS DIGEST



# Pakistan International Maritime Expo & Conference

INTERNATIONAL MARITIME CONFERENCE (IMC-23)

"Embracing Blue Economy - Challenges and opportunities for Developing Countries"

> **10<sup>TH</sup>- 12<sup>TH</sup> FEBRUARY** K A R A C H I EXPO CENTRE

Organizer: National Intitute of Maritime Affairs (NIMA) at Bahria University, Pakisatan

Volume: 04 Issue No. 01 (January - February 2023)



### **KARACHI SHIPYARD & ENGINEERING WORKS LTD**



# A Symbol of Excellence in Shipbailding!







Ship Building

Ship Repair



**Submarine Construction** 



Laboratory



**General Engineering** 



Shipyard Training School



**KARACHI SHIPYARD & ENGINEERING WORKS LIMITED** West Wharf, PN Dockyard Road, Karachi Tel: 99214045-64(20Lines) Fax: (92-21) 99214020, 99214030 twitter.com/dgmksew

pyoutube.com/Karachi Shipyard Official



MINISTRY OF DEFENCE PRODUCTION **GOVERNMENT OF PAKISTAN** 

Looking forward to welcome you at KS&EW stall No. B-10 in Hall 02

# TABLE OF CONTENTS



Irreparable Coastal Pollution and the Fate 33-34 of Fisheries Resources an Pakistan By Dr. Nazia Sher Exercise Aman – 2023: "Together for 35-37 Peace and Security" By Anoshka Johum Pakistan International Maritime Expo 38-39 & Conference 2023 By Hajra Mehmood Letter to the Editor 40 **Maritime Directory Books to Read Port Activity Tide Times for Port** MARITIME WATCH Pakistan's Premier English Language Monthly Maritime News Digest. Published by National Institute of Maritime Affairs (NIMA) Karachi. Subscriptions to Maritime Watch (12 printed issues) for one year are available for 1800Rs/, Drawn your check in favour of NCMPR Resource Fund. Allied Bank Limited, Youth Branch Stadium Road, Karachi. Branch Code:097 Account No:0010005881820333 IBAN:PK32ABPA0010005881820333 (for Online Transfer) Email: maritimewatch@bahria.edu.pk Circulation: SM Faheem(UDC) smfaheem.ncmpr@bahria.edu.pk WORK

> The significance of maritime domain is the economic development of the country and the potential of our maritime sector are not well understood in Pakistan. NIMA engages eminent and reowned researchers to extract concrete policy recommendations. It endeavors continously to create awareness through seminars, conferences, workshops, writing research papers and other maritime related activities challanges of 21st century for Pakistan.

### Disclaimer

NIMA maintains every effort towards accuracy of facts and figures. The Publisher is not liable for any errors or omissions. Relevant references/Sources have been mentioned.

© All information compiled and printed is copyright material. No part of Maritime Watch may be reprinted, reproduced or otherwise without permission of the publisher, National Institute of Maritime Affairs - Karachi

### Editorial



NIMA is once again gearing up to conduct the mega event of the International maritime conference (IMC), which is held biennially in tandem with Exercise Aman conducted by the Pakistan Navy. Both Ex Aman and the IMC have already gained significance and recognition both at regional as well as global levels and are eagerly looked upon by navies as well as intellectuals of the maritime domain for participation owing to their wide reach and impact. This time the Navy under the patronage of the government of Pakistan has taken another initiative in the form of organising first ever Pakistan International Maritime Expo and Conference (PIMEC), inviting the maritime industries and exhibitors from around the world to represent and display maritime/marine related equipment and technologies. The PIMEC, as the name suggests, will have two distinct components i.e. the expo and the conference.

The International Maritime Conference (IMC), which has been NIMA's brand name intellectual event since 2008, will form the conference part of PIMEC and will be the 10th conference since its inception. The event will be conducted over three days from 10-12 February 2023 at the Expo Centre Karachi, including various academic and technical sessions where experts and intellectuals from around the world will be participating as speakers and discussants.

The broad theme of this year's IMC is "Embracing Blue Economy – Challenges and Opportunities for Developing Countries". The highlight of the event will be the presence of large numbers of maritime experts from industry and academia both from the public and private sectors including senior naval dignitaries, eminent speakers and delegates (both national and international}. Renowned speakers and maritime experts will share their thoughts. The broad objectives of the PIMEC/IMC will be to provide opportunities to the maritime industry both in the public and private sectors to display products at one forum n interact directly with the international maritime industry; to establish joint ventures, transfer of technologies and research to promote impetus to Pakistan's Maritime and Defence industries, highlight Pakistan's potential for the blue economy and our efforts as a responsible regional maritime nation towards regional peace and stability.

Our all readers of the Maritime Watch are advised to please reach out to the NIMA Karachi office for ensuring their registration and participation in this mega event. We highly value our association, collaborations with all agencies of maritime sectors, and industrial/academia partners for all our endeavours and events and would not like to miss out on any of them in this effort at the international level. Our aim is to establish precise and appropriate place of the sea, the blue economy and all other important aspects of the maritime domain in the overall context of the national economy and national security, for which we always look for the support of our partners and associates. Our particular targets are the universities and other academic/research institutes without them no future planning and road maps would have any worth.

Cdre (Retd) Ali Abbas Chief Editor



### "Embracing Blue Economy – Challenges and Opportunities for Developing Countries"

The International Maritime Conference (IMC) is a mega event being undertaken by the National Institute of Maritime Affairs (NIMA) since 2007 biennially and it provides a platform to maritime stakeholders, academicians and policy makers to discuss ideas/ issues with internationally renowned scholars, practitioners and experts in maritime domain. Starting from first IMC in 2007, a total of nine conferences (IMCs) have been held so far and the current IMC being held as part of PIMEC is the 10th of the series. Pakistan International Maritime Expo & Conference (PIMEC) is a maiden initiative of Pakistan Navy being held from 10-12 February 2023 under the patronage of Ministry of Maritime Affairs to jump start development in Maritime Sector. PIMEC will encompass Maritime Expo and International Maritime Conference on Blue Economy and maritime potential. National Institute of Maritime Affairs (NIMA) is the lead organiser for the conduct of IMC part of PIMEC. The broad theme of this conference is "Embracing Blue Economy – Challenges and Opportunities for Developing Countries". The highlights of the event are presence of large number maritime experts from industry and academia both from public and private sectors, including senior naval dignitaries, eminent speakers and delegates (both National and International). Renowned speakers and maritime experts are sharing their thoughts on the aforesaid theme. The event also affords opportunity to Public & Private stakeholders to display products and develop business relationships.

The major objectives of the Conference are to:

- Analyse the changing dynamics of maritime security in the Region
- ▶ Share knowledge and perspectives on maritime affairs in the Region
- Explore measures that can lead to peaceful coexistence, prosperity and secure maritime environment in the Region
- ▶ Highlight the opportunities provided by oceans under Blue Economy
- Suggest solutions based on emerging technology and innovation

#### **Contact Details**

Invitees/ participants and interested organizations can contact NIMA on following email addresses for future information and coordination:

Email : imc2023@bahria.edu.pk

director.ncmpr@bahria.edu.pk director.k.nima@bahria.edu.pk

- **Tel** : +92 21 99240816
- **Fax** : +92 21 99240012

Information regarding IMC will also be available on website

URL : https://imc.bahria.edu.pk/ www.nimapak.org

### **Broad Programme of International Maritime Conference (IMC)**

DAY -1 - Friday, 10 February 2023						
OPENING CEREMONY						
Time	Activity					
0915-1015	Arrival / Registration of the Gues	ts				
1015	Guests to be seated					
1030	Chief Guest arrives					
1030-1120	Opening Ceremony Proceedings	pening Ceremony Proceedings				
1120- 1230						
Session-1						
Session Themes		Time	Activity			
<ul> <li>Evolving Geo-Strategic Environment - Impact on Security Calculus of IOR</li> </ul>		1430	Guests to be seated			
inipact on 3	ecunty Calculus of IOT	1445	Chief Guest arrives			
<ul> <li>Ocean Governance and Development of Blue</li> </ul>		1501-1740	Session proceedings			
Economy - 0	Challenges and Opportunities	1740	Refreshments / Closing of the Day 1			
	DAY – 2 - Satu		Jary 2023			
		ession-2				
	Session Themes	Time	Activity			
<ul> <li>Impact of Innovation on Sustainable Blue Economy</li> </ul>		0945	Guests to be seated			
Challenges to Marine Industries &		1000	Chief Guest arrives			
Contempore	ary Scientific Developments	1001-1310	Session proceedings			
		ession-3				
	Session Themes	Time	Activity			
	imate Change on the Marine	1400	Guests to be seated			
Environmen	t	1415	Chief Guest arrives			
<ul> <li>Ocean Bio -</li> </ul>	- Geo Sciences and Marine	1416-1720	Session proceedings			
Technologie	S	1720	Refreshments / Closing of the Day 2			
DAY – 3 – Sunday,12 February 2023						
Session-4						
	Session Themes	Time	Activity			
<ul> <li>Importance of Secure Oceans and Emerging Trends in Shipping &amp; Port Operations</li> </ul>		0845	Guests to be seated			
		0900	Chief Guest arrives			
		0901-1110	Session proceedings			
CLOSING CEREMONY						
Time	Activity					
1120		Guests to be seated				
1130	Chief Guest arrives					
1131-1230	1131-1230     Closing Ceremony Proceedings					

### **NIMA News**



Vice Admiral (Retd) Abdul Aleem HI (M) Relinquishes Charge of NIMA after the Completion of Three Years Tenure and Vice Admiral (Retd) Ahmed Saeed HI (M) Takes Charge as the new Director General



*November 1,* Vice Admiral (Retd) Abdul Aleem HI (M), after successfully completing his three-year tenure as Director General NIMA, handed over charge of NIMA to Vice Admiral (Retd) Ahmed Saeed HI (M). The Admiral was still in service when he joined NIMA. During his illustrious career as Director General, he has remarkable contributions and unparalleled achievements to his credit in the field of maritime research and promoting maritime interests of Pakistan. NIMA, being the sole maritime related think tank of Pakistan in public sector, is expected to provide policy level input to the Government and relevant stakeholders in the maritime sectors of Pakistan. NIMA's policy-level inputs during Admiral's tenure have been phenomenal primarily because of his extraordinary intellectual capabilities, insightfulness, and professional acumen. As DG NIMA, he actively spearheaded the efforts for reshaping the revised national maritime policy, the national maritime strategy, and the deep sea fishing licensing policy.

The Admiral had a special inclination towards research, which is the prime function of any think tank. He would always give personal inputs and provide necessary guidance in all the research reports produced by NIMA. During his tenure, NIMA had published 04 x Flagship research reports, which are:

- Firstly, An appraisal on the Shipping Sector of Pakistan.
- Ship Recycling in Pakistan: Prospects, Challenges and Way Forward.
- Developing Mari-culture in Pakistan.
- Maritime Tourism in Pakistan.

Besides this NIMA has also produced over 20 research reports, policy research papers and special project reports related to important maritime topics.

Admiral was also instrumental in successfully organizing the International Maritime Conference as part of AMAN Exercise 2021. NIMA also organized over 30 major events including seminars, conferences and workshop on international issues including issue of Kashmir, Russia-Ukraine Conflict, US/NATO withdrawal from Afghanistan and Maritime economy & its linkage with National Security. After the successful completion of International Maritime Conference in February 2021 NIMA had published a book titled "Development of Blue Economy Under a Secure and sustainable Environment."

Moreover, he signed several MOUs with the renowned organization including the Pakistan Ship Agents Association (PSAA), Pakistan Maritime Security Agency (PMSA), the International Relation Department of Karachi University, Pakistan National Shipping Corporation (PNSC), Bahria Foundation, Institute of Regional Studies (IRS), Islamabad, Sustainable Development Policy Institute (SDPI), Islamabad for bilateral enhancement of research collaboration in the field of the maritime sectors.

One of the Admiral's significant achievement was recognition of NIMA's role in geo-strategy, geo-economics,

03

### **NIMA News**



geo-politics, and maritime security of Indian Ocean and beyond. NHQ very graciously accepted Admiral's proposal for setting up of the Indian Ocean Study Centre with the mandate to look after the global and regional environment pertaining to the Indian Ocean Region and beyond. Another important initiative of Admiral was to conceive the idea of Indian Ocean Maritime Network (IOMN). This was in response to Indian hegemonic attitude specially in blocking Pakistan's membership of IORA. The need was felt to have a dedicated platform outside of the political influence of partner states to discuss and provide solutions to maritime challenges of 21st century based on cooperation, collaboration, and research. The idea of collaborating with 'Anybody-Everybody' for promotion and protection of maritime affairs enables NIMA to link with national & international think-tanks, universities, maritime experts.

Vice Admiral (Retd.) Ahmed Saeed HI (M), the new DG NIMA was commissioned in the GL (Ops) branch of the Pakistan Navy in August 1981. He is a submariner by profession and specialized in Underwater Warfare from France. The Admiral is a graduate of PNWC and NDU. He did his Command & Staff Course from China. In recognition of his meritorious service, he has been conferred with Hilal-e-Imtiaz (Military). He possesses rich naval experience of about 40 years and has full command on the issues related to the maritime sector.

### Vice Admiral (Retd) Ahmed Saeed HI (M), Director General National Institute of Maritime Affairs (NIMA) Called on Secretary National Security Division (NSD)



*November 29,* Vice Admiral (Retd) Ahmed Saeed HI(M), Director General National Institute of Maritime Affairs-NIMA called on Secretary National Security Division (NSD), Engr. Aamir Hasan in his office. Issues of National Security, Maritime Economy, and possible avenues of cooperation between NIMA and NSD came under discussion. In the end, souvenirs were exchanged.

### Pakistan, and Norwegian Need for Enhanced Bilateral Interactions to Crystalize the Way Forward



*December 1*, Ambassador of the Royal Norwegian Embassy at Islamabad, H.E., Mr. Per Albert Ilsaas along with Ms. Hellen (Deputy Secretary) called on DG NIMA Vice Admiral (Retd) Ahmed Saeed HI(M) on 01 Dec 22 at



NIMA HQ, Islamabad. At the onset, DG explained the role of NIMA in maritime policy research. Thereafter, while discussing maritime-related issues, H.E the ambassador specifically focused on the issues being faced by the Ship Breaking & Recycling Industry (SBRI) from the EU perspective. He emphasized that Pakistan must consider signing of Hong Kong Convention (HKC) to reap the benefits of SBRI i.e., get an increased number of ships from the EU. He also discussed the prospects of installing sea-based windmill energy along the Pakistani coast. Meeting concluded on a note, of the need for enhancing bilateral interactions to crystalize the way forward.

### **Roundtable Consortium for Indian Ocean Studies**



*December 1*, IRS organized a roundtable for the Indian Ocean Studies Consortium which is established with the National Institute of Maritime Affairs - NIMA to study different domains in the Indian Ocean Region. The topic of the roundtable was "Nuclearization of Indian Ocean: Impact on Region & Beyond", Dr. Masood Khattak(Assistant Prof.IIUI), Dr.Rubina Waseem (Assistant Prof.NDU) & Dr.Aqeel Akhtar(Analyst/SPD) participated as panelists and discussed various aspects of nuclearization of IOR, Indian Naval build-up, acquisition and presence of nuclear-powered submarines and overall strategic significance of IOR for Pakistan, region and beyond. Concluding thoughts were presented by Vice Admiral (Retd) Ahmed Saeed HI (M), DG NIMA.

### National Institute of Maritime Affairs (NIMA) and Türkiye Marine Research Foundation (Tüdav) Jointly Organized an Interactive Webinar



*December 5*, National Institute of Maritime Affairs (NIMA) and Türkiye Marine Research Foundation (Tüdav) jointly organized an Interactive Webinar on the theme of "Blue Economy and Sharing Experiences of Türkiye-Pakistan Maritime Sectors". During the webinar speakers from both countries emphasized the sustainable use of ocean resources and the development of ocean-based industries through green initiatives and focused on the current challenges of the maritime domain, such as climate change, overfishing, marine pollution, and loss of biodiversity.



### Vice Admiral (Retd) Ahmed Saeed HI (M) Welcomed a Delegation of the Maritime Security Workshop (MARSEW-5)



*December 9*, Vice Admiral (Retd) Ahmed Saeed HI(M) welcomed a delegation of Maritime Security Workshop (MARSEW-5), accompanied by Rear Admiral Javaid Iqbal HI(M), Commandant PNWC at NIMA Islamabad. On the occasion, a briefing on pertinent issues such as maritime economy, maritime security, and strategy was given by D-NIMA (I). In the end, the souvenirs were exchanged.

### NIMA Organized Two-Day International Maritime Symposium (IMS) on Importance of Geo-Economic Dimensions of IOR



*December 20,* National Institute of Maritime Affairs (NIMA), Islamabad organized two-day International Maritime Symposium (IMS), on the topic "Geo-economic Dimensions of Indian Ocean Region (IOR) – Opportunities for Region and Beyond" on 20 and 21 December 2022.Experts from home and abroad presented their views about the geo-economic importance of IOR. The focus of second day proceeding was on maritime security in the context of regional connectivity. Air Marshal Zahid Mahmood, Vice Chief of Air Staff was the chief guest. Whereas Vice Admiral Abdul Aleem(Retd)moderated the session discussion. Vice Admiral (Retd) Iftikhar Rao spoke about the Maritime Threats & Challenges in Regional Perspective. He talked about the Malacca Strait choke point and its importance to the world, especially to China. He also emphasized that Gwadar is a commercial portand its security is vital for economic dividends.Dr. Christian Beuger,of University of Copenhagen, talked about the Security of Sealines of Communications (SLOCs) and emphasized collaborative strategy in IOR to meet the non-conventional threats, particularly to SLOCs. He opined that Pakistan is in a position to take the lead in this regard. While delivering talk, Prof. Dr. Azhar Ahmed, of Bahria University, was of the view that Geo- Economics is an instrument to achieve objectives of Geo-Politics. He underscored that without political stability no country can progress.Air Marshal Zahid Mahmood highlighted the importance of maritime security and its linkage with national security. He emphasized on the need of

### **NIMA News**



developing operational strategies to meet the maritime security threats. Dr. Hassan Daud Butt, of Bahria University, spoke about the need of regional connectivity, both on land and over sea. Senator Mushahid Hussain Syed, key note speaker, while deliberating on the current global security scenario, opined that it is the most dangerous decade after World War II. World is witnessing historic changes; economic and global powers are emerging from East. He was of the view that next war is expected to be at sea and not on land, therefore, Pakistan needs to ensure fool proof maritime security.

The message of Prime Ministerof Pakistan was also read out during the session. While emphasizing the Maritime Security of Pakistan, PM opined that Pakistan is heavily dependent on its sea lines of communications because over 90% of Pakistan's trade and almost 100% energy imports are through sea. Therefore, any disruption in maritime trade has serious repercussions for the national security. The government is well aware of this imperative and is providing all out support to maritime security apparatus especially to Pakistan Navy.

Vice Admiral Faisal Rasool Lodhi, Vice Chief of the Naval Staff was the chief guest of the closing session. He emphasized that effective security is essential to protect the expanding maritime economic activities in Pakistan, region and beyond. Pakistan, therefore, needs proactive diplomacy, well considered economic policies and risk management as important ingredients to harness and sustain the pace of development and potential growth.

The symposium was well attended by maritime professionals, security experts, academia, think tanks and media personnel.

### Conference on 'Naval Developments in Indian Ocean Region- Its Effects in the Region & Beyond." Organized by (IOSC) NIMA



January 10, A Roundtable Conference on "Naval Developments in the Indian Ocean – Its Effects in the Region & Beyond" was organized by the Indian Ocean Study Centre of the National Institute of Maritime Affairs Islamabad in collaboration with the Institute of Regional Studies. Vice Admiral (Retd) Ahmed Saeed HI(M), DG NIMA welcomed all the worthy speakers & participants and highlighted the significance of the roundtable conference regarding the naval developments in the Indian Ocean Region. Dr. Adam Saud, Dean, Faculties of Humanities & Social Sciences, Bahria University, delivered an overview of the topic including a theoretical perspective. He said that the Indian Ocean is tur ning into a battleground of US and China competition, and India is being projected as a trusted friend of the West. Mr. Kamran Hashmi, Research Associate(NIMA) said that Indian Ocean Region is the future of world politics. At present, the Indian Ocean may be calm on the surface but, it is extremely turbulent, and the possibility of multiple conflicts between various stakeholders cannot be ruled out. The presence of foreign naval bases indicates the importance of the Indian Ocean. Ambassador (Retd) Masood Khalid covered the diplomatic aspect. According to him, China's goal is to enhance its military power to secure its Sea Lines of Communication. China is heavily dependent upon the Indian Ocean for its trade. President IRS Ambassador Nadeem Riaz while concluding the session briefed about

### **NIMA News**



the strategic significance of the Indian Ocean and emphasized peace & stability in the Indian Ocean are the keys to world prosperity. He believed that we should do multifaceted engagements with all while safeguarding our national interests through maintaining a fine balance.

### Mr. Muhammad Kamran Akhtar, Additional Secretary Ministry of Foreign Affairs (MoFA), called on DG NIMA



*January 26,* Mr. Muhammad Kamran Akhtar, Additional Secretary Ministry of Foreign Affairs (MoFA), called on DG NIMA on 26 Jan 23. During the visit, dignitaries were apprised about the objectives and functioning of NIMA; including a snapshot of emerging challenges in the Indian Ocean Region. Possibilities of bilateral engagements between MoFA and NIMA were deliberated. It was decided to closely collaborate on matters of maritime interests of Pakistan through an institutionalized mechanism.

### **Special Advisory Board Meeting of NIMA Held**



*February 3*, The 5th (Special) Advisory Board Meeting of National Institute of Maritime Affairs (NIMA) was held on 2 February 2023 at Bahria University, Islamabad & Karachi. Meeting was convened in the honour of former Director General Vice Admiral (Retd) Abdul Aleem HI(M), who had been at the helms of NIMA's affairs for three years from 1st of November 2019 to 1st of November 2022.Former CNS Admiral Mohammad Asif Sandila NI(M), Chairman NIMA Advisory Board chaired the meeting and mentioned that NIMA has now become a vibrant organization for which Admiral Aleem worked hard.

The incumbent Director General NIMA Vice Admiral (Retd) Ahmed Saeed HI(M) said that Admiral Aleem is a source of inspiration for all of us and we will continue to work with the same spirit to achieve the vision and mission of NIMA. Admiral Aleem thanked all and said that recognition of NIMA is important to influence the policies and processes related to National Maritime Affairs.

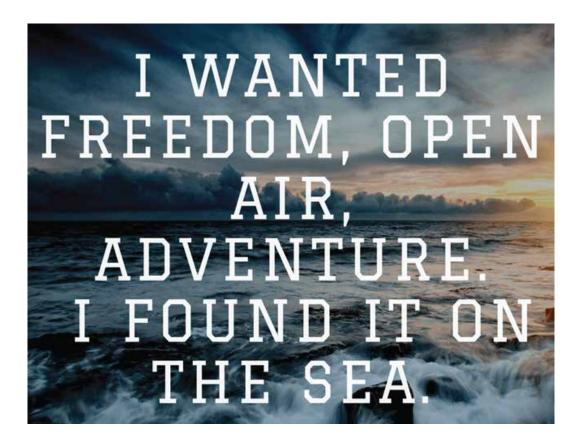
Earlier, Cdre (Retd) Bilal Abdul Nasir SI (M) highlighted that during his illustrious career as Director General,



Admiral Aleem made remarkable contributions and unparalleled achievements to his credit in promoting the maritime interests of Pakistan.

Vice Admiral (Retd) Asaf Humayun appreciated that NIMA is now a well-established think tank, and its researchers are producing world class research. Mr. Jawed Iqbal commended the contribution of Admiral Aleem and NIMA for safeguarding the Ship Recycling Industry.

Air Marshal (Retd) Farhat Abbas HI(M), Rear Admiral (Retd) Farrokh Ahmad HI(M), Commandant PN War College Rear Admiral Javed Iqbal HI(M), Additional Secretary-III Ministry of Defence Rear Admiral Faisal Amin HI(M), Rear Admiral Faisal Shah HI(M), Dr. Anjum Sarfraz, President IRS Ambassador Nadeem Riyaz, Dr. Masuma Hassan, Mr. Moazzam Khan and DG NIO Dr. Samina Kidwai also spoke on the occasion and appreciated the contributions of former DG NIMA.





Fisheries Department to Offer Subsidies on Shrimp Farming



December 7, The Punjab Fisheries Department (PFD) will extend subsidies to the farmers for promotion of profitable business of the shrimp farming by the productive usage of high-saline land/barren land."The Department will extend a subsidy of Rs 120,000 per acre to the farmers for a maximum of 7200 acres of land for construction of shrimp farms in the province and applications from the interested farmers will be invited soon. The Department will also extend a 75 percent subsidy on seed for the first year of such a farm and 50 per cent in the second year to attract the farmers to this specie which is sold at higher rates than fish in the domestic and export market". They said this scheme is part of a larger project under which a seed hatchery is being developed along the shore-side in the Lasbela area where shrimp seed will be produced and later it will be used for farming in different areas of the country. They said shrimp seed can only be produced in salt water while it can be grown into full shrimps in fresh water. They said the federal government had already conducted a pilot project successfully in this regard but for that seed and feed were imported from Thailand."Now the government is planning to produce seed within the country through the hatchery under construction in Balochistan," the sources added. However, they said the proposed subsidy on seed and feed calculated at the initial stage had doubled because of an upward surge in greenback prices so it was being recalculated.Earlier, the department had estimated extending a subsidy of Rs 400,000 per farm but initial recalculations were now tipping it at Rs 1,000,000. Director Admin &

Extension, Fisheries Department Punjab, Iftikhar Ahmad, on contact confirmed the project and said the hatchery being developed by the federal government would be operational and producing seed by June 2025 and in the meantime seed and feed could be imported from Thailand. (Credits:Business Recorder)

#### 5th Maritime Security Workshop Commences at Pakistan Navy War College Lahore



December 8, The fifth edition of the Maritime Security Workshop (MARSEW-5) commenced at Pakistan Navy War College Lahore. Commandant Pakistan Navy War College Rear Admiral Javed Iqbal inaugurated the ceremony. The Maritime Security Workshop is a national level forum being organized under auspices of Pakistan Navy having the theme 'Secure Seas, Prosperous Pakistan'. The Workshop aims at generating an understanding of dynamics of maritime security, creating awareness of blue economy and exploring untapped maritime potentials of Pakistan. The workshop brings together senators, parliamentarians, policy makers, bureaucrats, academia, entrepreneurs and media personalities for diverse and candid discussions on adoption of cohesive policy approaches towards Maritime Security and Blue Economy. Maritime Security Workshop will be held from 7-15 December, involving on-campus activities followed by visits to PN installations in Karachi, Coastal and Creeks Area and Naval Headquarters, Islamabad. During the welcome address, Commandant Pakistan Navy War College welcomed the participants and highlighted rundown of workshop activities including familiarization on maritime potential of Pakistan in context of policy formulation. Maritime Security Workshop is being held annually at Pakistan Navy War College since 2017. The workshop aids in cultivating integrated approach in developing the maritime sector and Blue Economy of Pakistan.



#### **PMSA, Customs Seize Narcotics Worth Billions**



December 8, In an Anti-smuggling drive against NARCO smugglers, PMSA & Customs jointly conducted three consecutive Counter Narcotics in the Arabian Sea in the past five days. During the operations, 15 smugglers were arrested and handed over to the Collectorate of Customs Enforcement, Karachi, along with their boats for investigation. During the operations, the smugglers tried to set their boats on fire and jumped into the sea to escape arrest; however, they all were arrested after a resistance that lasted a while. In the past three weeks, the PMSA arrested 21 smugglers and seized narcotics worth Rs 8 billion. The operations by the PMSA and Collectorate Customs Enforcement, Karachi, which resulted in the seizure of a huge cache of narcotics, prove that they are vigilant to prevent Pakistani waters from being used for any illegal activities.

#### Non-Issuance of Tenders Results in 'Illegal' Fishing



*December 22,* 'Illegal' fishing in different sections of the Indus in Rahim Yar Khan district continues due to non-issuance of tenders by the Punjab Fisheries Department

(PFD). According to sources in the PFD, the limits of the district starts from Paninad and ends at Machka near Guddo, a long strip of almost 178 kms. The tenders for fishing in four sections of the Indus, including Samakka in Liagatpur tehsil, Chachran Sharaif in Khanpur, Bangla Dilkusha in Rahim Yar Khan and Machka in Sadigabad tehsil, are issued after a bidding process. The fisheries department issues tenders for permission of fishing to contractors in August every year but the PFD banned fishing this year to save the rare species of fish in the Indus. But many people started fishing in these sections of the river despite ban. Sources say the department [in Rahim Yar Khan] earns almost Rs20 million revenue from contractors by issuing tenders but current year tenders have not been issued as a result locals continued with 'illegal' fishing. (Credits:Dawn)

# Indian Fishing Boat Poaching in Pak Economic Zone Apprehended by PMSA



*December 26*, PMSA Ship, during patrolling in the Eastern EEZ of Pakistan apprehended one Indian fishing boat with 6 crew, which was engaged in poaching well inside Pakistani EEZ. The boat was towed to Karachi for further legal proceedings for violation of PAK Law and UN Conventions on Law of the Sea

# Enhancing the Role of Small-Scale Fisheries in Pakistan's Blue Economy

*December 29,* The WWF Pakistan organized an event titled: 'Enhancing the Role of Small-scale Fisheries in the Blue Economy of Pakistan'. The event was attended by officials from the Marine Fisheries Department, Sindh Fisheries Department, representatives from the National Institute of Oceanography, Karachi Fish Harbour Authority, National Institute of Maritime Affairs, students from



Karachi University, and local community members. They stressed the need of making efforts to modernize small-scale fisheries and enhance the capacity of fishers to restore the depleting fish stocks and modify fishing methods. Speaking on the occasion, Muhammad Moazzam Khan, Technical Advisor, WWF-Pakistan said, "Blue economy' is an emerging growth and governance model which aims to combine environmental sustainability and economic value. We need to integrate small-scale fisheries into this model which promotes social equities and creates income generation opportunities for the fishers."He said that new fishing jetties, equipped with modern facilities, should be established. Favad Soomro, Head of Engro Foundation said, "Pakistan is blessed with enormous coastal and marine resources and the blue economy could foster the country's growth and significantly improve the lives of fishers."He said, "We need to explore the potential of our coastal ecosystem and strengthen fisheries development."Faisal Iftikhar, CEO, AquaHatch International said, "Due to pressure on marine and freshwater fisheries, we need to promote aquaculture as it can help improve food security and create new economic opportunities."

### Pakistan Navy Conducts Fleet Annual Efficiency Competition Parade upon Culmination of Operational Year Karachi

December 29, Pakistan Navy Fleet Annual Efficiency Competition Parade held at Karachi to mark culmination of rewarding and eventful operational year of Pakistan Navy Fleet units. Chief of the Naval Staff Admiral Muhammad Amjad Khan Niazi graced the occasion as Chief Guest. Upon arrival, the Chief Guest was received



by Commander Pakistan Fleet, Vice Admiral Ovais Ahmed Bilgrami and Guard of Honour was presented by a smartly turned out contingent of Pakistan Navy. Speaking on the occasion, Chief of the Naval Staff expressed complete satisfaction over operational readiness of Pakistan Navy Fleet and lauded the dedication and professionalism of officers and men for successful conduct of large number of naval exercises including bilateral and multilateral exercises in own and international waters contributing towards regional maritime security and protection of Pakistan maritime interests in the region and beyond. The Admiral commended PN Fleet efforts and contributions in achieving significant operational objectives and milestones and protection of Pakistan's Sea Lines of Communication. He highlighted Pakistan Navy endeavours to ensure seaward security of Exclusive Economic Zone (EEZ), Gwadar Port and maritime related projects of CPEC. Naval Chief reiterated that Pakistan Navy is fully cognizant of changing geopolitical realities in the region and stands resolute to defend country's sea frontiers. The Admiral also underscored that prevalent global and regional geostrategic environment demands Pakistan Navy to remain ever vigilant and battle to safeguard Pakistan maritime interests. Earlier, in his welcome address, Commander Pakistan Fleet Vice Admiral Ovais Ahmed Bilgrami highlighted PN Fleet achievements during the outgoing year making particular mention of the conduct of a number of Live Weapon Firings, participation in multilateral exercises, HADR missions, Overseas Deployments and Regional Maritime Security Patrols undertaken by Fleet units. Later, Chief of the Naval Staff gave away Efficiency Award shields to best performing units of various Squadrons of Pakistan Navy Fleet.



#### **KPT Exacerbate Security**



*December 30*, In the wake of recent terrorist activities in the country, KPT has sensitized various port users and operators to further enhance security of their premises as per SOPs. It is worth to mention that due to sensitivity of the port area, mock exercises / drills with various stakeholders are also conducted round the year at regular intervals, to practice how to respond to different security and safety incidents. Importance of Karachi Port being hub of national economic growth requires a synergetic response by all port users to thwart any such attempt by nefarious elements.

#### Pakistan Navy Seizes Huge Cache of Drugs at Sea



*December 30,* In a successful Intelligence Based Counter Narcotics Operations by Pakistan Navy at sea, Two boats carrying Narco were apprehended and a huge cache of narcotics which includes more than 1500 KGs of Hashish and 143 KGs of Crystal ICE were recovered from the apprehended boats. The value of narcotics in International market is estimated to be approx Rs 2 Billion (PKR). Successful operation by Pakistan Navy resulting in seizure of narcotics is a testament to the facts that despite the prevailing situation the criminals are active for their nefarious design and PN is more vigilant to counter them and remains committed in preventing use of Pakistani maritime zones for any unlawful act/ purpose. Pakistan Navy will continue to shoulder its national obligations and responsibility to establish lawful order at sea.

# Turkish Navy Ship Conducts Naval Drills with Pakistan Navy



December 30, Turkish Navy Ship TCG BURGAZADA visited Karachi port and participated in bilateral naval Exercise TURGUTREIS - VII. Earlier, the Turkish ship port called Karachi harbour and was welcomed by senior officers of Pakistan Navy alongwith officials of Turkiye Consulate. During stay at port, the Commanding Officer of Turkish Ship called on Commander Pakistan Fleet and matters of mutual interest & bilateral collaboration were discussed. In port activities, joint professional interactions including planning of bilateral exercise at sea, table top discussions on professional topics, sports & social events including wreath laying at Mausoleum of Quaid-e-Azam were conducted with an aim to strengthen mutual cooperation and integration between the two navies. On completion of port visit, PN & Turkish Naval ship participated in bilateral Exercise TURGUTREIS-VII and conducted joint patrolling in North Arabian Sea to further hone the professional skills and enhance interoperability. The exercise comprised of various naval operations including defence against Asymmetric Attacks, Visit Board Search & Seizure (VBSS), Air Defence Exercises and Joint Coordinated Patrol. The visit of Turkish Navy Ship to Pakistan is a manifestation of strong bilateral ties between two countries and the exercise is a testimony of PN resolve towards regional peace and maintenance of order at sea.



**Naval Chief Heads Command & Staff Conference** 



January 11, Command and Staff Conference of Pakistan Navy concluded at Naval Headquarters, Islamabad. The Conference was chaired by Chief of the Naval Staff, Admiral Muhammad Amjad Khan Niazi. During the conference, matters related to national security, geo strategic affairs, combat readiness and training of troops were discussed. Ongoing progress on PN projects including future plans were reviewed and way forward were deliberated. The conference assessed evolving maritime affairs in the region and beyond. The Naval Chief emphasized on maintaining perpetual combat readiness to effectively thwart any aggression against Pakistan. The Naval Chief lauded the initiatives undertaken towards capability development through acquisition of emerging technologies. The Admiral expressed full confidence over high state of operational preparedness of Pakistan Navy to meet all challenges while safeguarding the maritime frontiers of Pakistan.

# Pakistan and Iranian Navy Participated in Naval Exercise



*January 22,* Iranian Navy ships and submarine port called Karachi and participated in naval exercise with Pakistan Navy (PN). Upon arrival at Karachi port, PN officials

along with Iranian consulate Staff warmly welcomed the visiting flotilla and National Anthems tunes of both countries were played as mark of respect. The recent visit of Iranian Navy to Pakistan reaffirms joint efforts to promote regional stability and maritime security for protection of Sea Lines of Communication and Seafarers in the region. During stay at port, both navies held mutually rewarding professional interactions, exchange visits and table top discussions on matters of mutual interests. Upon culmination of visit, passage exercise between the two navies was conducted to enhance naval cooperation. The visit of Iranian navy ships to Pakistan is a manifestation of strong bilateral ties between two countries and resolve towards regional peace.

# Navy, PMSA and Custom Seize 1450 Kg of Drugs at Arabian Sea



January 24, Pakistan Navy, Pakistan Maritime Security Agency (PMSA) and Collectorate of Customs Enforcement seized 1450 Kg narcotics in a joint intelligence based counter narcotics operation in North Arabian Sea. During the successful joint operation, security forces apprehended largest amount of narco in-terms of quantity that included 586 Kg of Ice crystal and 864 Kg of heroin. The seized narco is valued approximately Rs 15 Billion in International market. The arrested smugglers and drug cache handed over to Custom authorities for legal proceedings. The successful joint anti-narcotics operation by Pakistan Navy, PMSA and Customs enforcement reaffirm resolve to deny illegal activities in maritime zones of Pakistan and to synergize efforts of Maritime Law Enforcement Agencies in ensuring security of our waters



Saudi Port Joins Maersk's Express Shipping Route in Further Boost for Kingdom's Logistics Plan



*December 12,* Riyadh: King Abdulaziz Port in Dammam is now part of container carrier giant Maersk's express shipping service in a move that will boost trade between the Arabian Gulf and the Indian Subcontinent.

The weekly service — known as Shaheen Express links the port to major regional hubs such as Dubai's Jebel Ali, India's Mundra and Pipavav aboard container ship BIG DOG, which has a carrying capacity of 1,740 twenty-foot equivalent units.

The announcement by the Saudi Ports Authority, also called Mawani, comes after several other shipping lanes chose Dammam as a port of call in 2022.

These included SeaLead Shipping's Far East to Middle East service, Emirates Shipping Line's Jebel Ali Bahrain Shuwaikh (JBS), and Gulf-India Express 2 by Aladin Express.

This is alongside the recent connection to Singapore and Shanghai ports on the Gulf China Service by Pacific International Lines.

King Abdulaziz Port was declared the fourteenth most efficient port in the World Bank's Container Port Performance Index for 2021, a historical achievement that stems from its state-of-the-art infrastructure, world-class operations, and record-breaking performance, according to the Saudi Press Agency.

In a sign of the growth of the facility, King Abdulaziz Port set a new container throughput record in June 2022, by handling 188,578 TEUs, surpassing the previous record of set in 2015.

The record-breaking performance of the port was attributed to the rise in export and import volumes, as the Kingdom moves in line with the National Transport and Logistics Strategy aimed at turning Saudi Arabia into a global logistics hub.

"The port's strategic location on the Arabian Gulf lends it a distinct status as a trade gateway to the Kingdom's eastern and central regions, which provides investors interested in setting up integrated logistics facilities that offer value-added services a competitive edge like no other," said Mawani in the statement when the figures were released in September.

Mawani is currently working on upgrading the 19 sq. km. port to make it capable of receiving giant vessels and handling up to 105 million tons annually. (Credits: Arab News)

**Bahri and Ajlan & Bros Agree to Create New Company to Expand Saudi Shipping Fleet** 



*December 13*, RIYADH: Shipping firm Bahri has signed an agreement with conglomerate Ajlan & Bros to explore creating a new company specializing in owning and operating a range of vessels.

The two firms signed a memorandum of understanding to begin discussions on the joint venture on Dec. 12 and have a timetable of six months to achieve progress.

Ajlan & Bros is one of the largest private sector conglomerates in the Middle East region, employing over 10,000 people in more than 15 countries, whereas Bahri is a joint venture between Saudi Aramco and the Public Investment Fund, operating a fleet of tankers and container ships that transport oil, petrochemicals, and other types of cargo.

Under the terms of the agreement, Bahri will act as the JV company's commercial and technical manager. This encompasses the management of the JV company's. (Credits: Arab News)



#### Oman Oil Marketing Company Launches Duqm Bunker Fuel Terminal



*December 20*, "Located in the Duqm Special Economic Zone (SEZAD), the OOMCO Marine bunker fuel terminal will supply the full range of bunker fuel to ships at the port and port anchorage, which promises to further position Oman as a world-class logistics and shipping hub," the company said.

The terminal will cater to increasing demand for high-quality and sustainable marine fuels, including the highest specification HSFO, VLSFO and LSMGO marine fuel compliant with International Organization for Standardization (ISO) 8217, as well as all low sulphur fuel-compliant marine fuels which meet the International Maritime Organization's (IMO) decarbonization targets.

"Inaugurating the OOMCO Marine bunker fuel terminal at the Port of Duqm further strengthens the position of Oman as a world-class logistics and shipping hub, which is aligned with the objectives laid out in Oman's Vision 2040," Hilal Al Kharusi, Chairman of OOMCO, said. "Our now fully operational terminal contributes to economic growth and diversification in Oman, while capitalizing on its strategic position near established global trade routes."

Duqm cannot challenge the geostrategic location of the international bunkering hub at Fujairah in the UAE but is better placed to service vessels heading from Colombo to Suez. Middle East-based feeder specialists told Seatrade last year that around half of the container line vessels serving the Far East to Europe call the Persian Gulf, while, according to the US-based Strauss Center, some 20 to 30 percent of the world's oil passes through the Strait of Hormuz every day.

In the past decade, Fujairah has come to be regarded as one of the world's top three bunkering ports. In March, S&P Global reported that it faced growing bunkering competition as the Saudis, Qatar, and Oman entered the fray with bunkering options of their own. "The competition will be welcome to shipowners who are facing increased costs in the region," it said.

"The OOMCO Marine fuel terminal and associated bunker business forms part of our long-term strategy as a company to facilitate the growth of multiple sectors in Oman including shipping, logistics and of course energy and their respective infrastructure," OOMCO CEO, Tarik Al Junaidi, said.

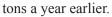
"For example, efficient shipping means access to raw materials needed for economic development and enables the manufacturing and export of goods and products, while of course considering that shipping incurs the lowest environmental footprint in the transport segment on a per-ton basis. As for logistics, this is a prime sector for Oman, and we are at the heart of this focus when it comes to providing ships bunker fuel supply at Duqm in the most cost effective and efficient way."

Vessels calling at Duqm can also take advantage of a range of other high-quality and diverse services at the port, including pilotage, freshwater supply, waste collection, tug services, crew change, de-slopping services, and ship handling, plus ship spares and dry dock services, OOMCO said. (Credits: SeaTrade Maritime)

# Saudi Ports Record 13% Rise in Volume of Cargo in 2022



*January 8*, RIYADH: Ports in Saudi Arabia recorded a rise of 13 percent in the volume of cargo handled in 2022, the Saudi Ports Authority said in a report on Sunday.The authority, also known as Mawani, said the volume of cargo reached 237 million tons compared to 210 million



The Kingdom's ports also recorded a 3.2 percent increase in containers handled to 10.36 million twenty-foot equivalent units in 2022, compared to 10.04 million TEUs in 2021. Outbound and inbound containers amounted to 4.83 million TEUs, a rise of 5 percent compared to 4.63 million TEUs in 2021.

Transshipment containers also rose by 2 percent to 5.52 million TEUs in 2022, compared to 5.41 million TEUs in 2021. Ports across the Kingdom also recorded a 9 percent increase in the import of livestock during 2022. (Credits: Arab News)

### Swiss Shipping Firm MSC Adds Jeddah Islamic Port to its India-West Med Route



*January 9*, RIYADH: The Saudi Ports Authority has announced that Geneva-based international liner operator Mediterranean Shipping Co. has added Jeddah Islamic Port to its new India-West Mediterranean route.

The ports authority, also known as Mawani, said this is a critical step towards boosting Saudi Arabia's liner connectivity as the new route is set to open new opportunities for importers and exporters to all parts of the region. The new service falls in line with the objectives of the National Strategy for Transport and Logistics Services by consolidating the Kingdom's position as a global logistics center and hub connecting three continents.

Industries between India and the Mediterranean such as clothing, automotive, and pharmaceutical are projected to benefit from the new direct communication between the two regions. (Credits: Arab News)

### AD Ports Group Signs Angola Development Deals AD Ports

January 20, AD Ports Group entered into a framework agreement with the Ministry of Transport of the Republic



of Angola and a Head of Terms Agreement with Angolan state-owned logistics and transportation company UNI-CARGAS. The agreement with the Ministry of Transport is to work together on the development of infrastructure and maritime services across Angola. Potential areas for joint investment include a Maritime Academy in Angola, logistics platforms, ferry and cabotage services and maritime passenger terminals. The development of Caio Deepwater Terminal at Cabinda Port, northwest Angola, will also be considered under the Ministry of Transport agreement.A joint venture will be established under the Head of Terms Agreement with UNICARGAS to manage the multipurpose terminal at the Port of Luanda. AD Ports will take a majority ownership stake in the JV, with an aim of modernizing the terminal along with managing and operating it. Luanda is Angola's busiest port, handling over 70% of imports and 80% of non-petroleum exports. (Credits: SeaTrade Maritime)

### Expected ships in Karachi Port

ETA by AIS	Туре	Vessel
Jan 8, 13:00	Container Ship	EVER URANUS
Jan 8, 17:00	Bulk Carrier	CL DAYANG HE
Jan 12, 01:00	Bulk Carrier	SEAPOWER I
Feb 7, 17:30	Bulk Carrier	NASCO GEM
Feb 8, 01:00	Bulk Carrier	GRACE



### Saudi Arabia, UAE Recognize Seafarer Certifications to Encourage Maritime Relations



*December 6*, RIYADH: Saudi Arabia and the UAE have reached an agreement for mutual recognition of maritime certificates issued in both countries.

A Memorandum of Understanding was signed at the International Maritime Organization's headquarters in London by Hessa Al Malek, adviser to the UAE's minister for maritime transport affairs, and Abdulrahman Matooq Al-Thonayan, deputy for maritime transport at the Transport General Authority in Saudi Arabia.

According to the MoU, both sides will recognize the education, training, medical fitness, and competency certificates of seafarers issued by maritime bodies and authorities.

It will also honor seafarers on board ships flying the other party's flag in line with international regulations and agreements.

"The MoU between MOEI (Ministry of Energy and Infrastructure) and Saudi Arabia's PTA will support integration between the two countries and facilitate procedures that ensure the safety and security of the maritime sector, as well as strengthen bilateral relations in the maritime field," said Al Malek.

According to the MoU, both sides will recognize the education, training, medical fitness, and competency certificates of seafarers issued by maritime bodies and authorities.

It will also honor seafarers on board ships flying the other party's flag in line with international regulations and agreements.

Al-Thonayan said: "At the Public Transport Authority, we work to develop the fleet of ships that carry the Saudi flag and enhance the capabilities of seafarers on board these ships in line with international safety, protection of the marine environment and maritime security standards issued by the IMO."

In addition to its regulatory role, the Public Transport Authority provides an efficient and high-quality transport environment using the latest technologies to enhance economic and social development and achieve Vision 2030.

Also present was Suhail Al Mazrouei, the UAE Minister of Energy and Infrastructure, and officials and maritime strategic partners from both sides.

"The leadership in both the UAE and the Kingdom of Saudi Arabia are keen to enhance strategic cooperation and economic, trade and development integration between the two countries," said Al Mazrouei. (Credits: Arab News)

#### **DP World, Puntland to Revamp Port of Bosaso**



*December 9,* DP World, and the Somalia's government of Puntland have signed a construction agreement for expansion and upgrade works at the Port of Bosaso.

The 12-month project will include the development of a 150-metre quay, as well as repairs to the current 215-metre quay.

Other infrastructure will include the development of a new 3000 square meter container yard, and a 4000 square meter container stripping yard.

The gate area to the port will also be upgraded to improve access control.

Works are slated to kick off in early 2023.

Upon completion, the port will be able to handle container vessels and attract more direct calls from feeder ships from Dubai and other regional hubs.

"The expansion and upgrade of the Port of Bosaso is key to Puntland's economic growth, which will benefit not just the people of the state, but also Somalia and the Horn of Africa," said Ahmed Yaasiin Saalah, Minister of Ports and Maritime Transport.

"It will ensure the region is further integrated into the global trade ecosystem, as a bigger, more efficient port with the ability to receive container vessels, will facilitate increased trade."

DP World recently opened the new warehouse Container Freight Station 2 (CFS 2) in the Jebel Ali Free Zone (Jafza).

The company aims to offer import/export movement throughout the Middle East and beyond. (Credits: Port Technology)

#### AD Ports to Develop Giant \$6bn Port in Sudan



*December 14,* Sudan signed on Tuesday an initial \$6bn deal led by United Arab Emirates' AD Ports Group and Invictus Investment to build a huge new Red Sea port and economic zone.

The Abu Amama port will be built north of the existing key hub of Port Sudan.

Under a new heads of terms agreement with the Sudanese government AD Ports and Invictus Investment now have the rights to develop and operate all new ports in the country.

AD Ports Group and Invictus Investment recently launched a dry bulk shipping service to serve as the carrier for Invictus' dry bulk trading business, which is a major transporter of commodities to and from the Sudanese market. (Credits: Splash247)

# PIL Adding Qatar Call to Middle East – China Service

*December*22, The GCS service which connects the Middle East and China will add a call at Hamad Port in Qatar to the existing calls to Jebel Ali in Dubai and



#### Dammam in Saudi Arabia.

The upgraded service will now also call Singapore on both east and westbound legs, rather than solely on the eastbound route as it does at present.

The average size of vessels deployed on the service will increase to seven ships of between 4,000 and 5,200 teu from 9 January 2023 departing from Shanghai.

Tonnie Lim, Chief Trade Officer, PIL, said, "We are enhancing our GCS service to broaden PIL's presence in Middle East, and to capitalize on the growth potential of the Middle East region. This is part of PIL's efforts to meet the needs of its customers worldwide for a more comprehensive coverage in Middle East.

"We also aim to further strengthen our linkages from Southeast Asia. With this dedicated service, PIL continues to drive its global connectivity through the key Asian gateway of Singapore to our extensive network coverage of Middle East. (Credits: SeaTrade Maritime)

#### MSC Completes Bolloré Africa Logistics Acquisition



December 22, the purchase price comprises a  $\in$ 5.1bn share sale, plus a  $\in$ 600m in current account repayments. The transaction was approved by all applicable regulatory authorities.

MSC reiterated that it will operate Bolloré Africa Logistics Group as an autonomous entity with its portfolio of diversified partners, under a new brand to be unveiled in 2023. Philippe Labonne will continue his longstanding role at the helm of the business as President of Bolloré Africa Logistics.

MSC intends to continue enhancing the continent's connectivity with the rest of the world and enable trade within Africa amid the implementation of the continental free trade (AfCFTA). Backed by MSC Group's financial strength and operational expertise, Bolloré Africa Logistics will be able to meet all its commitments to governments, particularly regarding port concessions.

"We are delighted to welcome more than 21,000 new colleagues to the MSC family through our acquisition of Bolloré Africa Logistics. I wish to thank the Bolloré family, and Cyrille in particular, for having conducted the transaction in a smooth and efficient way and I congratulate them for having created such a well-established business," said MSC Group President Diego Aponte.

"The deal will strengthen MSC's longstanding ties with Africa and will reinforce our commitment to the continent's economic growth, including investment in the ships, shipyards, container terminals, logistic solutions, storage facilities, road and rail networks that will support and enhance trade across the African continent and with the rest of the world."

The purchase of Bolloré Group followed significant moves in the logistics sector by competitor container lines, including AP Moller – Maersk, as carriers sought reinvest hefty profits made from box shipping over the last two years.

The Bolloré Group will maintain a significant presence in Africa, notably through Canal+, and will also continue to develop its activities on the continent in a number of sectors such as communications, entertainment, telecommunications, and publishing. (Credits: SeaTrade Maritime)

# Asyad Shipping Books Two LNG Newbuilds at Hyundai Samho

*December 23*, Oman's Asyad Shipping has booked a pair of liquefied natural gas (LNG) carriers at South Korea's Hyundai Samho Heavy Industries in a deal worth around \$501m.

The 174,000 cu m ships are expected to be delivered by June 2026, according to ship holding group Korea Shipbuilding & Offshore Engineering (KSOE).

Asyad Shipping operates a fleet of six LNG ships, of



which the largest, the 162,000-cu m Adam LNG, was built in 2014. The company said the addition of two new fifth-generation LNG carriers was part of expansion plans to bolster its energy logistics capabilities and meet growing global demand. (Credits: Splash247)

\$1.9bn Expansion Project Launched at Dammam's King Abdulaziz Port



January 10, RIYADH: The Saudi Ports Authority, also known as Mawani, on Tuesday, launched a project worth SR7 billion (\$1.9 billion) to upgrade and develop two container terminals at the King Abdulaziz Port in Dammam.The project has been awarded to the Saudi Global Ports on a build-operate-transfer basis. Mawani President Omar Hariri, SGP Chairman Abdullah Al-Zamil, and several senior officials attended the groundbreaking ceremony.The project seeks to take the national maritime regulator a step closer to realizing its Saudi Vision 2030-inspired roadmap centered around optimizing port operations and modernizing infrastructure to build a booming and sustainable ecosystem. It will also help the authority achieve the goals set by the National Transport and Logistics Strategy to position the Kingdom as a global logistics destination connecting three continents. (Credits: Arab News)

# AD Ports Group Signs Kazakhstan Caspian and Black Sea Agreements



*January 18,* AD Ports Group has signed a strategic partnership with Kazakh National Oil Company (KazMunayGas) and an MoU with the Kazakhstan Ministry of Industry & Infrastructural Development.

The KazMunayGas partnership will see the companies review collaboration opportunities, notably the development of a fleet of shallow-water vessels to support offshore operations in the Caspian Sea and the development of a tanker fleet to support Kazakh oil exports. The MoU with the Ministry of Industry & Infrastructural Development will enable collaboration on the developed of international trade corridors through Kazakhstan, extending to the potential development of port and logistics facilities. Training programmes via Abu Dhabi Maritime Academy and the establishment of a bulk cargo vessel fleet are also potential outcomes from the new agreements.Kazakhstan and central Asia have been identified as a key area for growth by AD Ports, which signed an offshore services JV agreement in December 2022 with KazMunayGas subsidiary Kazmortransflot.(Credits: SeaTrade Maritime)

### **\$1.9bn Expansion Project Launched at Dammam's King Abdulaziz Port**

*January 25*, CAIRO: Egypt's Suez Canal Authority announced on Wednesday an all-time annual revenue record, earning \$8 billion in transit fees in 2022.The income from the vital waterway is about 25 percent higher than the \$6.3 billion netted in 2021, following a series of toll hikes to help pad Egypt's siphoned foreign reserves.

The canal is a source of much-needed foreign currency



for Egypt, with global investors pulling billions out of the import-dependent economy during the current crisis triggered by Russia's invasion of Ukraine last year. Annual inflation hit 21.9 percent in December and the local currency has lost around half its value in less than a year in successive devaluations demanded as part of a \$3-billion loan agreement with the International Monetary Fund. (Credits: Arab News)

### Expected ships in Port Qasim

ETA by AIS	Type	Vessel
Jan 12, 01:00	Container Ship	ATHENIAN
Jan 12, 16:01	LNG Tanker	SEAPEAK GALICIA
Jan 12, 19:00	Chemical/Oil Products Tanker	SEA CRYSTAL
Jan 28, 07:00	Bulk Carrier	IFESTOS
Feb 8, 04:00	Bulk Carrier	VITUS BERING
Feb 8, 15:00	Chemical/Oil Products Tanker	MT AURELIA
Feb 12, 12:00	Bulk Carrier	SEAPOWER II



### Dubai Steps up Automation, Robotics in Aviation, Logistics Sectors



*December 6*, H.H. Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai, Chairman of Dubai Executive Council and Chairman of the Board of Trustees of the Dubai Future Foundation, witnessed the signing of three partnership agreements by Dubai Future Labs (DFL), an initiative of Dubai Future Foundation (DFF), with Emirates Airline, DP World, and dnata.

The trio of agreements aim to deploy advanced future technologies across aviation and logistics – two vital non-oil sectors for Dubai and the UAE.

These national partnerships aim to activate the Dubai Robotics and Automation Program that was launched last September to boost the development, testing and adoption of robotics and automation (R&A) and accelerate its deployment in key economic sectors.

The Program focuses on advancing research and development (R&D) in five main areas in the sector – Production and Manufacturing; Consumer Services and Tourism; Healthcare and Connected Mobility; and Logistics.

The Program aims to transform Dubai into one of the top 10 global cities for robotics and automation by adopting and developing robotics technologies, empowering national talent, and creating new solutions, products, and services to drive the sector's growth.

The agreements were signed in the presence of Mohammad bin Abdullah Al Gergawi, Minister of Cabinet Affairs; Omar bin Sultan Al Olama, Minister of State for Artificial Intelligence, Digital Economy, and Remote Work Applications and Deputy Managing Director of the Dubai Future Foundation; Sultan bin Sulayem, Chairman and CEO of DP World; Adel Ahmed Al Redha, Chief Operating Officer of Emirates Airline; Steve Allen. Group CEO of dnata Group; and Khalfan Belhoul, CEO of the Dubai Future Foundation. Omar Sultan Al Olama said: "These three partnerships will contribute to strengthening Dubai and the UAE's position as a living laboratory for advanced technologies and innovations. These agreements will further advance the leadership's vision to make our nation a global destination for partnerships, R&D, and innovation that can shape the future."

He added: "Deploying robotics, automation and future technologies in key sectors enhances economic diversification and raises Dubai's long-term competitiveness and attractiveness as a platform for launching and growing businesses and enabling international trade with cutting-edge logistical services."

Dubai Future Labs' Memorandum of Understanding (MoU) with DP World includes several phases and projects. The main project to be undertaken as part of the MoU is aimed at developing smart, autonomous electric vehicles (E-CAVs) for terminal operations that can serve as a more sustainable, reliable, efficient, and safer alternative.

The MoU also focuses on promoting R&D in built-for-purpose systems and commercializing it to increase the safety and efficiency of DP World's global operations, in addition to supporting the group's carbon reduction and sustainability objectives.

Under the MoU, Dubai Future Labs, will facilitate the research, testing and implementation of new technologies for logistics operations, and develop future technologies that incorporate artificial intelligence (AI), robotics, data analysis and blockchain.

The solutions planned to be developed include automated and smart systems for transporting, handling, and storing goods across port operations.

Sultan Ahmed bin Sulayem, Group Chairman and CEO of DP World said: "This MoU is of strategic importance to us and comes at a time when it is critical to enhance supply chain efficiencies. DP World and Dubai Future Foundation will explore the potential for achieving breakthroughs in various fields by integrating with smart government system and spurring development and innovation to transform the UAE into an advanced digital and smart economy. As a leading trade enabler, we are at the forefront of developing and adopting disruptive technologies. Our goal is to cement Dubai's position as a digitally advanced global trade hub. With our next-generation technologies and solutions including hyperloop and automated warehouse stacking as well as



initiatives like Dubai Trade, Cargoes, Separates and Digital Freight Alliance, we are indeed reshaping the future of trade and logistics. Keeping pace with the rapid evolution of technology, we are also exploring the deployment of metaverse solutions across our operations to solve real-world supply chain bottlenecks."

Bin Sulayem added: "Our teams are constantly conducting research and development to digitize manual and traditional methods in our logistics operations. One example is the Electrical Terminal Trucks project that enhances our existing assets by using advanced technologies to reduce supply chain disruptions and ensure efficient flow of trade around the world."

Under the MoU with Emirates Airline, Dubai Future Labs will facilitate various innovative pilot projects including a robot check-in agent that leverages facial recognition and interacts with passengers as well as a robot waiter serving in airport lounges. The introduction of these unique services will enhance customer satisfaction by making the passenger's airport experience more seamless.

Emirates is also redoubling efforts to overhaul its warehouse management system by deploying automated solutions. Working with DFL across R&D and R&A projects, Emirates will test and implement initiatives to increase the efficiency of internal processes and advance its sustainability and environmental goals.

The airline will work with DFL to develop autonomous baggage transport and autonomous pallets for cargo warehousing, helping to make operations safer, and more efficient and reliable.

Adel Al Redha, Emirates' Chief Operating Officer, said, "We are delighted to further expand our partnership with the Dubai Future Foundation to deploy innovative robotics solutions, and use advanced technologies and artificial intelligence across our business areas in Emirates Engineering, Dubai International Airport and ramp operations. This will give Emirates the opportunity to gain from DFF's pool of experts and programmers, who will work with practical use cases and knowledge from the airline to enhance day to day operations, improve efficiency, as well as deliver further seamless experiences to our customers."

DFF's Dubai Future Labs will work alongside dnata to research, develop and trial innovations to further improve safety, efficiency and sustainability across the company's ground handling and cargo operations at Dubai International (DXB) and Dubai World Central (DWC) airports.

According to the MoU signed between the two organiza-

tions, Dubai Future Labs will support dnata in automating and converting its fleet into electric ground support equipment (GSE) and deploying robots to maximize operational and environmental efficiency. The partnership will also support dnata in achieving its strategic objectives and reducing its carbon footprint by 50 percent by 2030.

Steve Allen, CEO of dnata Group, said: "Our partnership with Dubai Future Foundation will accelerate the deployment of cutting-edge technologies across our operations. It will help us further improve productivity and sustainability, and consistently deliver world-class services for our partners, including Dubai Airports and our airline customers. We will continue our investment and efforts to play our part in the next stage of development of Dubai as a leading global transport and cargo hub."

Khalfan Belhoul, confirmed that Dubai Future Labs, which was launched by His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President, Prime Minister and Ruler of Dubai, two years ago, provides an advanced open and applied R&D lab for testing technologies, and smart automation solutions for storage, handling, transportation and logistics services, designs for self-driving vehicles powered by zero-emission renewable energy, and other innovations that employ programming, machine learning, the Internet of things, robots, big data management and analysis. Driven by the vision of becoming the core engine of Dubai's innovation ecosystem, Dubai Future Labs runs state-of-the-art robotics and AI applied research projects that have the potential to have a global impact and raise Dubai's future readiness. Through its scientists, engineers and industry experts, Dubai Future Labs acts a consultant to the government, advising on technological challenges that various sectors could face in the future. (Credits: Maritime Gateway

### **Emirates Shipping Association to Serve as UAE Maritime Industry Focal Point**

*December 8*, The UAE government has relaunched the Emirates Shipping Association and at a launch event at the end of last month revealed a new identity and direction for the important body.

Formerly known as the UAE Shipping Association, the relaunch is timely, as top-level engagement is vital to setting the direction of the industry in the Middle East region.

The Association was officially reestablished in a ministerial decree by the Ministry of Community Development and has now become a full member of the International Chamber of





Shipping. The goal of the organization is to promote the Middle East region as one of the world's leading global maritime clusters.

Recently, plans for the Association were presented to current members as part of the renewed structure of the organization, including the goals and objectives for 2022-24, an ESA statement said.

During the recent ADIPEC event, ESA representatives, together with the International Chamber of Shipping and the Ministry of Energy and Infrastructure, discussed best practices in the global maritime sector which are designed to shape the future of the industry.

"Our objective is to be a central communication point between the industry and the authorities," Abdul kareem Al Masabi, ESA Chairman. "As the UAE continues to strengthen its position as one of the world's leading global maritime clusters, our vision is to add more value towards this growth. We take pride in the work being done by the Association locally and regionally to protect and promote the interests of our members on international platforms."

"The UAE is among the most influential countries in developing the maritime industry and has established its pioneering status among the leading maritime hubs globally," HE Hessa Al Malek, Advisor to the Minister for Maritime Transport Affairs of the UAE Ministry of Energy and Infrastructure (MOEI), said.

"The Association's mission is to bring together ship owners, industry suppliers and key decision-makers through strategic networking opportunities and closed-door leadership roundtables. Emirates Shipping Association aims to help its members promote, secure, and expand the global maritime industry."

With a number of specialized industry groups in the UAE, the ESA caters to all players across the maritime sector, bringing together vessel owners, port operators, bunker suppliers, and all other ecosystem partners to connect under a single maritime umbrella. "The UAE has long been a leader in the maritime sector and ICS looks forward to the re-establishment of the Emirates Shipping Association, working together in the run-up to COP28 and beyond on key issues in the shipping industry," said Guy Platten, Secretary General of the International Chamber of Shipping (ICS).

"The UAE has shown itself to be at the forefront of shipping's effort to decarbonize and recognizes the important role of shipping in the energy transition by becoming a founding member of the Clean Energy Marine Hubs Initiative. Now more than ever we know the importance of collaboration to achieve our collective goals through tackling pressing issues facing our industry and the world." (Credits: SeaTrade Maritime)

# **Suez Canal Authority Inks MoU with Maritime Anti-Corruption Network**



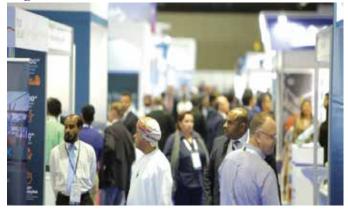
*December 19*, The Suez Canal is a blackspot for petty corruption involving vessels transiting the waterway and MACN has been building its engagement with SCA. The MoU aims to establish an official communication channel between the Authority and MACN.

Admiral Osama Rabie, Chairman of the Suez Canal Authority, stressed that the Authority spares no effort to work on the stability and sustainability of global supply chains to facilitate traffic in the Suez Canal amid a package of effective measures that guarantee transparency and impartiality, with the Authority's readiness to provide all capabilities and overcome all obstacles to activate cooperation with all partners and organizations working in the field of maritime transport.

Cecilia Müller Torbrand, CEO of the Maritime Anti-Corruption Network, thanked the Chairman of the Suez Canal Authority Admiral Osama Rabie, and the Authority's work team, stressing that the Suez Canal occupies a special place in the maritime community, highlighting the need for cooperation to promote effective and safe trade.(Credits: SeaTrade Maritime)



#### Seatrade Maritime Logistics Middle East Puts Digitalization in Focus



January 17, held under the patronage of the UAE Ministry of Energy and Infrastructure, Seatrade Maritime Logistics Middle East, the flagship event of the UAE Maritime Week, will put digitalization in the maritime industry under the spotlight. The conference and exhibition is scheduled to be held on 16-18 May, 2023, at the Dubai World Trade Centre. The event will bring together some of the leading tech-solution providers from all around the world to enlighten the attendees about the benefits of using modern tools, and how they can revolutionize the industry. It will serve as the ideal platform to find solutions for operational challenges, environmental issues, and ever-increasing functional costs. (Credits: Seatrade Maritime)

#### Fso Pargo Sails from Dubai to Brazil



*January 20,* Perenco Brazil has announced that the Floating Storage and Offloading vessel FSO Pargo has now left Dubai and is on its way to the Pargo Cluster in the Campos Basin offshore Brazil.

Once moored on location, the FSO will be central to the extension of Perenco Brazil's offshore performance.

FSO Pargo, a double-hull vessel built in 2004 which has a 750,000 barrels storage capacity, is expected to be on location in March, moored in April and operational in August 2023, following final licensing approval. The FSO conversion work began in September 2021 at DryDocks World, Dubai to extend its service lifetime by 20 years, adapting the vessel to the Brazilian standards and including modifications, such as the installation of an external turret mooring system, a helideck, a metering skid, an extra crane, a new offloading system and export line.Daily production from the Pargo Concession, which comprises the Pargo, Carapeba and Vermelho fields is now approximately 12,000 barrels of oil per day, an increase of almost 300% from the 2,800 barrels per day when Perenco Brazil took over the Pargo Cluster in October 2019.

Since that time, Perenco Brazil has focused on resuming operations, redeveloping the cluster, and continuing to deliver multiple important investment projects as part of the Pargo Cluster Development Plan. These projects will contribute to the company's continuing organic growth in Brazil and will enable the next production milestone of 15,000 barrels per day by the end of 2023.

"We are pleased to confirm the sail away of the FSO, which is a key part of Perenco Brazil's \$400M Pargo Development Plan. Perenco's deep technical expertise in the successful operation of mature fields has been clearly evident in the Pargo Cluster, where we have now completed three years of safe operations."In addition, we are making a positive impact, contributing to Brazil growth, by creating new direct and indirect jobs, increasing the state's revenues from taxes and royalties, boosting the services industry, and through our long-term community projects with their social and economic benefits," said Yves Postec, General Manager, Perenco Brazil.

Perenco Brazil holds a 100% stake in the Pargo Concession. The Pargo Development Plan was formally approved by the Brazilian authorities in early 2021, along with extending Perenco's rights on the concessions until 2040. (Credits: SeaTrade Maritime)



### Plans Unveiled for the World's Largest Wave Power Plant in Turkey



*December 12,* Swedish-Israeli developer Eco Wave Power has inked a deal with Oren Ordu Enerji in Turkey for the potential construction of the world's largest-ever wave power plant.

"This relationship will allow us to provide clean electricity from Turkish waves, for the very first time. With ambitious sustainability goals and regional proximity to our headquarters, Turkey is an interesting location to further implement and develop our innovative wave energy technology," remarked Inna Braverman, founder, and CEO of Eco Wave Power.

An up to 77 MW wave energy installation is planned for Ordu, Turkey, with an estimated investment of around \$150m.

Under the deal, Ordu Enerji will assign nine potentially suitable breakwaters to Eco Wave Power for a period of 25 years, while the latter will be responsible for constructing, and commissioning the power plant(s) and selling the electricity.

Subject to certain conditions, including receiving favorable results from feasibility studies and receiving applicable licenses and permits, Turkey's first grid-connected wave energy station would be built in stages, beginning with a 4 MW pilot station.

Mustafa Kemal Macit, president and CEO of Ordu Enerji, commented: "With the goal to build a self-sufficient grid, Ordu sees Eco Wave Power as an important asset to fully realising our potential for 100% clean energy. The entire municipality of Ordu is excited to fully realize the sea's potential and use its unlimited source of energy to power our electrical grid."

Eco Wave Power and Ordu Enerji's agreement is said to

reflect a renewed effort to bridge Turkish and Israeli relations, epitomized by a recent call between Israeli Prime Minister-designate Benjamin Netanyahu and Turkish President Recep Tayyip Erdogan who agreed to establish 'a new era of relations' between the two countries, discussing ways to significant strengthen economic and diplomatic ties.

"This is an important partnership that we hope further strengthens Turkey and Israel's ties," said Ayşe Mehlika Yıldız Ersen, Third Secretary of the Turkish Embassy in Tel Aviv. (Credits: Splash247)

**Recycling Sector Beset by Regulatory and Capacity Challenges** 



*December 14,* The IMO's imminent carbon efficiency regulations could generate a wave of ships heading for recycling yards in the months ahead, some analysts have suggested.

But others question whether there would be sufficient capacity to handle an influx of vessels if the flood gates open.

Although the IMO's carbon intensity indicator (CII) is due to enter force, together with the EEXI, in little more than two weeks' time, there are serious reservations about its make-up and its impact on a range of ship types. Feeder container ships, parcel tankers, LNG carriers are amongst the vessels for which, experts claim, the CII is really not fit for purpose. Could this be a catalyst for weeding out significant numbers of older ships?

Most markets remain broadly firm, however, and even weak sectors, including tankers and offshore vessels, have bounced back in recent weeks. So, the jury remains out on whether a wave of older vessels is likely to heading for recycling yards in 2023, or whether owners will attempt to wring the last dollar before CII regulations require some serious investment in fuel-saving measures further down the line. However, when owners decide the sell assets for recycling, they will find their options seriously limited, particularly if they operate from Europe or a country within the OECD. In terms of global recycling capacity, more than two thirds are located within the so-called Indian subcontinent – India, Bangladesh and Pakistan. But financial constraints imposed by central banks are limiting the scope for recycling yards in Bangladesh and Pakistan to buy tonnage and India remains at center stage for the moment.

The only other recycling nation, Turkey, is another option and at least has a number of yards approved under the EU Ship Recycling Regulation (EUSRR), a requirement for owners based in Europe. However, rates paid by Turkish recyclers are far lower than their subcontinent competitors. This is partly because no recycling yard on the Indian subcontinent is reckoned to have upgraded sufficiently to warrant approval under the EUSRR, even though a number of facilities in India, for example, have been validated by major classification societies as compliant with the IMO's Hong Kong Convention.

However, European owners have not only the EUSRR to think about; they must also bear the Basel Convention in mind. This regulation prevents the export of 'waste' from OECD nations to countries outside of the OECD, effectively taking all recycling facilities on the Indian subcontinent out of the equation.

In an attempt to remove this potential block for European owners, amongst others, earlier this year, the European Community Shipowner Association suggested that one way around the export of waste issue could be for ships heading for recycling yards only to be classed as waste whilst at sea on voyages outside of the EU. This pragmatic suggestion is not thought to have made progress so far. Meanwhile, prices paid for end-of-life ships have eased back from \$700-plus per light displacement long ton (ldt) on some deals earlier this year to levels in the low \$500s. according to latest estimates from GMS, the world's largest cash buyer of ships for recycling. The firm reckons that India has led the market in recent days, with typical prices paid for container ships around \$540/ldt, tankers \$530, and bulkers \$520. Although virtually no deals have been done in Pakistan or Bangladesh, GMS believes that prevailing prices in these locations are typically ten dollars and twenty dollars down respectively across all three ship types. (Credits: SeaTrade Maritime)

Shipping Will Overcome Challenges and Thrive in 2023: ICS



*December 21*, the shipping industry can overcome geopolitical challenges and thrive in 2023, said the Institute of Chartered Shipbrokers (ICS) Greek Branch at its 17th Annual Forum.

The recent event, 'Moving Forward with the World in Turmoil', was held at the Eugenides Foundation and was broadcasted live around the world.

Natalia Margioli - Komninou FICS, Managing Director of the ICS Greek Branch and Hellenic Management Centre - welcomed the Minister of Maritime Affairs & Insular Policy, Giannis Plakiotakis, the British Ambassador to Greece, Matthew Lodge and the Parliamentary Under-Secretary of State for Europe, Leo Docherty.

Margioli explained how this year's theme aimed to capture the many challenges facing stakeholders.

Advancing skills

She said: "Shipping companies have continued to advance the skills of their human resources, and this has contributed to the resilient character and progression demonstrated by Greek professionals. Continuous professional development and education is integral to navigating an increasingly complex world."

Nicolas A Tsavliris, FICS, Chairman of the ICS Greek Branch and Tsavliris Salvage Group said: "The shipping industry remains resilient, robust and adaptable. Historically, it always emerges stronger after challenging times and the ICS has an important role play in these unpredictable times."(Credits: Splash247)

# Israel to Implement 0.10 Pct Sulphur Cap in Ports

*January 5,* Vessels calling at Israeli ports will need to burn marine fuels with a 0.10% maximum Sulphur



content under new regulations taking effect in February 2023, the North Club informed. As informed, the Israeli government is enacting new regulations that will put in place measures similar to the EU directive for ships at berth. Accordingly, the limit for Sulphur in fuel oil used on board ships whilst in all Israeli ports and/or designated anchorage areas should be not more than 0.10% mass by mass (m/m). The new rules will enter force on 23 February 2023. Some of the key ports in Israel include the ports of Ashdod, Ashkelon, Hadera, Haifa, Jaffa and Tel Aviv. (Credits: Offshore Energy Biz)

# **P&O Maritime Vessel Exits Offshore Sector for UK Subsea Protection Role**



*January 20,* The UK government has acquired P&O Maritime Logistics' subsea construction vessel Topaz Tangaroa which will become the first of Britain's two ships dedicated to safeguarding underwater infrastructure such as cables and pipelines. The 2019-built ship, which

DP World's unit offloaded for a price tag of £65m (\$80.3m), has already arrived at Cammell Laird shipyard on Merseyside for conversion into a multi-role ocean surveillance (MROS) vessel. Military equipment will be installed, and the ship painted grey before it enters service this summer. The 98-m-long vessel will be operated by the Royal Fleet Auxiliary (RFA) crewed by around two dozen RFA sailors, while around 60 Royal Navy specialists will operate the undersea surveillance systems and other survey and warfare systems when embarked. (Credits: Splash247)

### **Registration Opens for Seatrade Maritime Logistics Middle East**



January 25, held under the patronage of the UAE Ministry of Energy and Infrastructure, Seatrade Maritime Logistics Middle East (SMLME), the leading maritime and logistics event in the region, announced the opening of registration for its 2023 edition. Taking place on 16-18 May 2023 at the Dubai World Trade Centre, this year's conference and exhibition aims to bring together industry leaders, experts, and decision-makers from across the region to share ideas aimed at driving innovation and progress in the sector. Prompted by recent fluctuations in the global supply chain due to unprecedented challenges, the event has expanded its scope to include maritime logistics as part of its focus, thus serving as a bridge between the two vital industries dedicated to maintaining the flow of trade around the world.(Credits: SeaTrade Maritime)



# 05 WAYS TECHNOLOGY WILL SHAPE THE MARITIME INDUSTRY IN 2023

#### By Heather Ervin

The maritime industry was hopeful of a return to "normal" in 2022. While there are signs the maritime supply chain—and particularly port congestion—is recovering from the low point of the pandemic, the industry as a whole has remained significantly impacted this year by unpredictable and sustained change. COVID-19's impact has waned across the globe, but conflict, climate concerns and the specter of a potentially historic recession in Western economies will continue to impact cargo movement in 2023. The volatility in the global economy will naturally create debate about whether the time is right to adopt new technologies and make proactive investments in maritime's digital transformation. However, the message is clear: it is only by embracing new solutions that the industry can navigate this volatility in a sustainable and profitable way.

In 2023, data and technology will be the key driver of a more proactive mode of management; a mode that will enable compliance with incoming regulations and drive safer, more efficient operations. Here are 5 ways we expect technology to shape the maritime industry in the next 12 months:

# • The need for ports to digitalize will accelerate as their importance grows as the interface between land and sea supply chains.

The role that ports play in the end-to-end supply chain will continue to garner attention beyond maritime, as the spotlight on delivery delays, emissions and people shortages continues into 2023. As the intermediary environment between land and sea supply chains, ports will have huge involvement and power to shape decisions on data and sustainability, as well as Just in Time arrivals and Green Shipping Corridors. This will drive a need to digitize ports, to help open up sharing real-time data across the supply chain and ensure vessels move through ports more efficiently. Technology will be used to break down silos and ensure the supply chain can communicate more efficiently, as all stakeholders are operating from the same data.

#### • Regulatory pressure will drive the uptake of new technologies more than anticipated

Decarbonization regulations are ramping up in maritime, starting with the CII and EEXI rules coming into effect in January. As such, the industry is recognizing the huge impact digitalization and data-driven insights can have on driving short-term emissions reductions and bolstering compliance efforts. Many in the industry are waiting for the real decarbonization silver bullet of zero emission fuels, but in the meantime, and especially in 2023, clean tech and voyage optimization will create an immediate, accessible pathway to not only compliance, but also tangibly reduced emissions. Amid regulatory pressure to decarbonize, digital technology will be the most immediate and effective way for the industry to start curbing emissions today, whilst we wait for the industry's longer-term solutions to be in a position to be rolled out.

#### • Companies will go on a hiring spree to bring a more innovative spirit to the maritime industry

We envisage more maritime companies will publicly commit to using tech such as AI to fast-track emissions reduction, especially through voyage optimization. However, there remains a shortage of detailed knowledge and skill sets within the industry to use these technologies effectively and reach the digitalization utopia we see becoming central to the future of maritime.

As such, we expect to see a shifting of job roles and hiring priorities in the industry. Companies will focus on

### World Media



bringing in talent from adjacent sectors, such as logistics and the wider supply chain, to access the data and IT and sustainability specialists that are necessary to increase the pace of change and deliver against ambitious commercial and net zero strategies.

# • Maritime's innovation process will reach a happy medium between digital twinning and physical testing.

In 2023, maritime will continue to realize the benefits of digital twinning to help make R&D more realistic by creating digital versions of existing vessels. This has the potential to allow organizations to use simulated, but still near real conditions, to test different scenarios without risk or safety compromises. This will become the first step of much of the industry's technological innovation process. It will be followed by physical trials on test vessels and in experience centers to speed up innovation, enabling organizations to fail fast and maximize time and cost efficiencies to bring new tech to market quicker.

# • VR and mixed reality training will become more widely adopted to cost-effectively fill maritime's skills chasm

Maritime currently faces an enormous skills shortage, with crew numbers continuing to decline. The number of incoming seafarers is also not rising fast enough, and action must be taken now for maritime to continue to function, especially in the digital age. Driven by this crisis, 2023 will see maritime fully embrace VR and mixed reality training methods, ushering in a new era of learning and development within the industry. Physical training can be expensive, time consuming, and if carried out onboard, also potentially high risk. Blending this with virtual training can provide a range of benefits. Learners can experience simulated versions of life at sea, operating in near-real conditions to see how they may operate in a range of different scenarios. Remote services will continue to increase, borne out of proven solutions such as cloud simulation and VR that increase accessibility and reduce the need for physical attendance. The popularity and implementation of these solutions first grew during the pandemic, and they enable crew to prioritize higher-value tasks and safeguard human resource.

*About the Author*: :Heather Ervin is Editor In Chief of Marine Log Magazine and an expert in writing and editing for trade magazines, blogging, feature, and technical writing

(Source: Marinelog)



### INTERNATIONAL MARITIME CONFERENCE (IMC) INCLUSIVE APPROACH TO ECONOMIC TRANSFORMATION

By Dr.Ambreen Afzal

NIMA is organizing the International Maritime Conference (IMC) on February 10 -12 which is the 10th conference of its series. The theme of this conference is "Embracing Blue Economy – Challenges and Opportunities for Developing Countries" which is an inclusive approach to economic transformation. Moreover, it is a great initiative of the Pakistan Navy for the pursuance and transformation of the economy of the country by organizing the Pakistan International Maritime Expo and Conference (PIMEC) under the patronage of MOMA.

The global blue economy is considered the key to prosperity because approximately 90% of world trade is done through oceans and waterways. Oceans are a precious gift to humanity. Globally both developed and developing countries interlinked their livelihood, jobs, and economic growth by embracing the blue economy. In addition, this economic growth is also associated with sustainable ocean resources and conserving the health of the ocean ecosystem.

Oceans are a crucial source of livelihood for 3 billion people, nearly 50% of the entire global population and it is a transformation tool of growth for developing countries due to their access to the oceans and shorelines allows them to develop and attracts foreign investment, ocean-related tourism industry grows an estimate US dollars 134 billion every year.

Maritime Industry is the inclusive industry for the future key development of Nations. Pakistan's maritime sector has enormous potential for economic magnification but needs favorable policy strategies and investment. The Exclusive Economic Zone (EEZ) of Pakistan is about 240,000 sq. km, with an additional continental shelf area of about 50,000 sq. km. Moreover, 90 percent of trade proceeds by sea so participation in the international supply chains depends on maritime connectivity, which is an essential determinant of export performance around the globe.

Pakistan and all other regional countries in the Western Indian Ocean Region can only acquire the benefits of maritime development while cooperating with each other rather than competing.

Global transformation of modernization promotes port terminal operations by implementing IT solutions, which help to increase efficiency in port terminal operations. Sectors like coastal tourism, aqua-culture development, marine biotechnology, deep-sea mining, off-shore energy, maritime research, and capacity building have great potential for cooperation, at regional level.

The blue economy is crucial for the livelihoods of our people and country. Investment in this sector is very important and public-private partnerships could play a remarkable role in the country's GDP. This three-day exhibition and conference will facilitate connecting with the maritime community, learning from leading experts, and engaging with opportunities that can stimulate exciting business growth.

It is a need of time to improve efficiency by investing in the infrastructure of the maritime industry and should reduce its carbon footprint by implementing innovative green technologies.

IMC will provide a platform to showcase inclusive maritime innovation, research and development, and the demonstration and deployment of new technologies perspectives and obtain non-partisan input for confronting the maritime challenges that are faced concerning the blue economy while identifying areas of

### **Opinion Article**



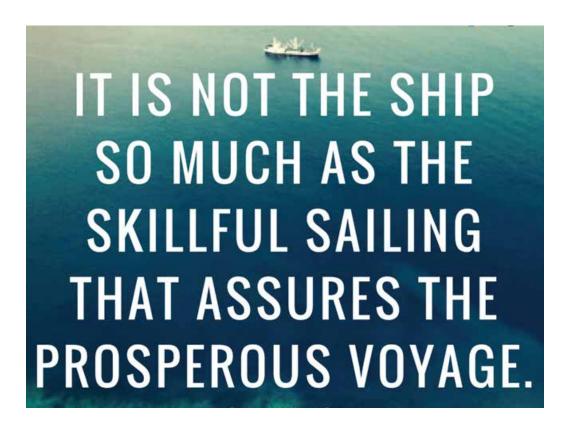
collaboration for achieving common goals of maritime prosperity and security in the region.

The presence of renowned academicians learned scholars and representatives of the maritime community in IMC-2023 will yield opportunities for greater collaboration and dissemination of ideas.

#### About the Author:



Dr.Ambreen is associated with the National Institute of Maritime Affairs (NIMA), Karachi.





#### IRREPARABLE COASTAL POLLUTION AND THE FATE OF FISHERIES RESOURCES IN PAKISTAN

By Dr. Nazia Sher



Fisheries as a subsector of agriculture contribute through export earnings, seatood supplies, and livelihood provided to the coastal residents. Fisheries play a vital role in the emerging economy by providing employment and account for around one percent of Gross domestic production (GDP). According to the Economic Survey of Pakistan FY2020-21, the fishing sector has a stake of 2.01 percent in agriculture significance accounts and 0.39 percent in GDP. The progress of fishing was 5.75% in FY2015, however, found to deteriorate past two years with the current FY2020-21(P) growth is stated to be 0.73% (Survey, 2020-21). Small-scale fisheries significantly contribute to the national economy through foreign exchange derived from international trade. Fishery exports represent 1.6% of the total exports of Pakistan. Fishery products are the most traded foods and feed commodities circumglobally. Worldwide seafood partaking has amplified at a rate almost twice that of annual world population growth (1.6 percent) for 3.1 percent annually from 1961 to 2017.

Global pelagic fish stocks are either collapsed or susceptible to pollution and overfishing. The situation in developing countries like Pakistan is beyond control. On the one hand, pollution is uncontrolled and fishing efforts have been soared for the last three decades resulted in pelagic and demersal fish stock much vulnerable. Fishing in Pakistan contributes less than one percent of the GDP, but plays an essential role in Pakistan's economic development by empowering a significant number of people residing in impoverished societies and backward regions of Balochistan and Sindh. The fishery sector faces hazardous encounters which must be set at the earliest to expand the fish production for the livelihood of the locals and export which boosts the economy of Pakistan. The main challenges are water pollution, an unhygienic environment, overfishing, the use of illegal nets practices, and, threats to mangroves faced by all local jetties. Illegal net practices remain the pressure for the deterioration of sustainable fishery and it need to be banned immediately. Fishing in closed season, especially shrimps are targeted in breeding season throughout the year must be regulated. If these stocks exploited with that similar rate, it will be the likelihood that the reproduction or aquaculture industry worth fully recovered and return the sustainability of the stocks. Currently, past and existing fishery trends may put Pakistan fishery in a grave dark. It became the most unsustainable resource with the fast growing population.

Pakistani coast comprises Sindh and Balochistan supports fishery in three categories mainly Inland, Marine, and fisheries through an aqua culture that comprises shrimps (30), Crabs (10), lobsters (5), and (70)



in demand species of fish mainly Sardines, Hilsa, Shark, Mackerel, Butterfish, Pomfret, Sole, Tuna, Sea Bream, Jew Fish, Cat Fish, and Eel. According to the latest investigation done by the Ministry of food and security, Inland and marine production have persisted stagnant for the past two decades. Aquaculture is the fastest growing food production sector gaining tremendous popularity among local investors of Punjab and Khyber Pakhtunkhwa (KPK) with aquaculture manifold from 12,000 tons to 159,000 tons in 2018 which is comparatively low to Asian and other countries. China attained the highest rank with a regular increase up to 47 million followed by India, Indonesia, Vietnam, and Bangladesh. Scientist around the world takes the initiative to study and steps to make it sustainable.

The aquaculture industry is now a worthy alternative and can take a decent place to recover the depleted stock that is a consequence of overharvesting. Aqua-culturist can only provide protein at high levels and recovery of wild stocks. Being a developing country, the lack of advanced technological applications, implementation of regulations, and commercial fishing practices showed a rapid impact on the natural growth of fish stocks. Stock resilience can only be made through advanced technology and adopting the catch quota total allowable catch (TAC) idea. The National Institute of Maritime Affairs (NIMA) is striving to take onboard key stakeholders to participate actively and exchange their recommendations for the onward appropriate management of fisheries resources. It is now unavoidable to maintain coastal zone management rather than degrade it more. Therefore, it is the sole obligation of the implanting agencies to take stringent action to curb industrial pollution and adopt catch quota ideas through scientific studies of fish stocks.

#### About the Author:



Dr. Nazia Sher completed her Post doctorate in China, and her area of expertise is fisheries biology and stock assessment now she is a part of NIMA and working on Fisheries related project.

#### **Cover Story**

The picture on the title page is the Quaid-e-Azam House, Recognised as one of the most famous museums in Karachi. It's a large mansion with an expansive lawn covering an area of 10,241 sq yds. It is also known as the Flagstaff House Museum of Jinnah. The building of this museum in Karachi was constructed in 1886 and was designed by Moses Somake, who was a renowned architect of the time. According to the available records, it was under the ownership of Mr. Sorab Kavasji Katrak, who was the then Mayor of Karachi, until Quaid-e-Azam Muhammad Ali Jinnah purchased it in the year 1943. This is one of the iconic buildings which figures out as historic places worth mentioning as part of coastal region tourism attractions.



#### EXERCISE AMAN – 2023: "TOGETHER FOR PEACE AND SECURITY"

By Anoshka Johum

The oceans are 'shared global commons' and the 'lifeline' of international trade. Oceans hold the key to the present and future economic development, prosperity, and foremost, security for all nations. It is estimated that more than three billion people worldwide, mainly in developing countries, depend on the ocean for their livelihood and well-being. However, in the era of globalization and increased non-traditional security challenges, the dynamics of international maritime security have changed. Today the security of the maritime sector is being undermined by unprecedented threats and challenges such as contested navigation routes, depletion of natural resources, piracy and armed robbery, terrorism, trafficking (human, drugs, arms, and nuclear materials), smuggling of migrants, illegal activities in the fisheries sector, and intentional and unlawful damage to the marine environment. All these issues represent acute challenges to global efforts in maintaining international peace and security. Furthermore, maritime disputes between several countries, climate change, and natural disasters also pose a great challenge while keeping the world's oceans accessible and safe for economic and developmental purposes.

With these growing challenges and changing threat dynamics of the maritime sector, the emphasis on maintaining strong naval power has increased manifold. Naval power plays a pivotal role in enhancing the influence of coastal states. Very often, the fact that naval power especially maintaining blue water navies might play an important part in conventional as well as non-conventional deterrence is either overlooked or ignored. Navies perform important and diverse tasks in peacetime and operations short of war. Therefore, many states are increasing their naval presence around the maritime economic hubs and strategically significant choke points to guard their economic, political, and strategic interests.

Geographically located at the cusp of the Arabian Sea, close to the Strait of Hormuz, Pakistan is fortunate to hold great geo-strategic significance in the Indian Ocean, which has been the hub of great economic and strategic activities for the past several decades. Indian Ocean region (IOR) is one of the most important and the busiest global trade route. Approximately 80% of global oil shipments and one-third of bulk cargo transit via the Sea Line of Communication in the Indian Ocean. It is home to more than 2.7 billion people. IOR is rich in natural resources & is very significant due to its geological, political, economic, and strategic features. Owing to the increased geostrategic significance of the Indian Ocean for not only littoral but non-littoral states, there is an upsurge in the number of countries maintaining their naval presence in the IOR.

The unprecedented increase in the levels of insecurity in the Indian Ocean region particularly around the Persian Gulf, West Africa, Strait of Malacca, and the Arabian Sea is concerning for many littoral states. As a result, there was a clear understanding that no one country could handle the magnitude of this current danger alone. To enhance security at sea, strong international cooperation was needed which would not only address these challenges but would also focus on eliminating their root causes such as poverty, a lack of alternative livelihoods, insecurity, and weak governance structures. The growing and interlinked maritime security threats called for a truly global and integrated response because making a coordinated maritime policy was a must. As a result, maritime states turned to the formation of marine alliances and the conduct of naval exercises to improve interoperability among world navies and mitigate maritime security challenges together.

Being a major stakeholder in the IOR, maintaining peace and security in the region is the foremost priority of Pakistan. In view, the Pakistan Navy is going to organize its Multi-national Naval "EXERCISE AMAN" in February 2023. The Exercise will be the 8th of the series and is expected to be attended by more than 50 countries from various parts of the world. With the slogan of "Together for Peace" AMAN Exercise, as the name indicates is primarily focused on maintaining peace and security in the Indian Ocean. Pakistan



Navy holds this mega event biennially to signify Pakistan's commitment to making seas safer for positive human activities while inviting regional and extra-regional navies. AMAN represents a 'bridge' that allows several countries to meet and operate through their naval forces with each other. AMAN is a manifestation of securitization through cooperation, which emphasizes collectivism rather than states competing for the maximization of their own security irrespective of others.

Since its inaugural session in 2007, the number of countries participating in AMAN Exercises steadily grew from 28 in the first year to 43 in 2021 and the figure is expected to hit 100 countries this year. AMAN Exercises had made their landmark in the Indian Ocean region as a symbol of sustainable peace and security. The rising trajectory of participation signals an acceptance of Pakistan's message of peace and security. The frequent conduct of AMAN Exercises demonstrates Pakistan's resolve to combat crimes and terrorism in the maritime domain and also showcases the professional excellence of the Pakistan Navy. AMAN Exercise validates Pakistan's commitment, will, and expertise to promote international cooperation in maritime affairs to promote peace, security, and prosperity in the region and beyond.

The "AMAN -2023" exercise aims to strengthen and developing military cooperation between the countries participating in the maneuvers in the interests of security and stability at sea, as well as sharing experience in countering the threats of maritime piracy in areas of heavy shipping and conducting search and rescue operations at sea.

The event will help participating countries explore new avenues of mutual interest, naval cooperation, regional maritime security, and bilateral collaboration. The objective of AMAN 2023 is to enhance interoperability between regional and other navies. It serves as a global platform for strengthening communication amongst participating naval fleets. In the Arabian Sea and the wider Indian Ocean, AMAN promotes a shared vision for enhancing maritime security. The exercise is designed to ensure unhindered and safe trade through the Indian Ocean region. The exercise aimed to consolidate the process of collaborative maritime security among countries across the globe; demonstrate joint resolve against the threats emanating from the maritime domain; enhance interoperability among the participating nations; and achieve a shared understanding of maritime security operations, counter-terrorism operations, and Humanitarian and Disaster Relief Operations (HADR).

To achieve these objectives, the exercise has been designed in such a way that it is divided into two phases; Harbor and Sea. In the harbor phase activities, such as Friendly Sports Matches, and International Cultural Displays, are being conducted. Whereas in the sea phase, International Fleet Review is carried out along with other various exercises to practice response against maritime security threats in a multinational environment. Moreover, Special Forces teams of the participating nations take part in the counter-piracy operations to develop Tactics, Techniques, and Procedures (TTPs) for combined action against asymmetric threats at sea.

Apart from ensuring peace and security, AMAN EXERCISE provides an opportunity to observe the varied cultures of participating countries, Exercise AMAN-2023 will promote regional cooperation and stability, greater interoperability, and a united resolve against terrorism and crimes in the maritime domain, Exercise AMAN is evidence of Pakistan's military multilateralism.

A large number of observers, foreign diplomats, personnel from the participating navies, and senior officials of the armed forces of Pakistan are expected to attend the event and witness the captivating demonstrations put on display.



AMAN Exercise is going to be conducted simultaneously with the maiden Pakistan International Maritime Expo and conference (PIMEC) planned in February 2023. PIMEC aims to showcase our country's maritime potential and explore new avenues for cooperation and the blue economy.

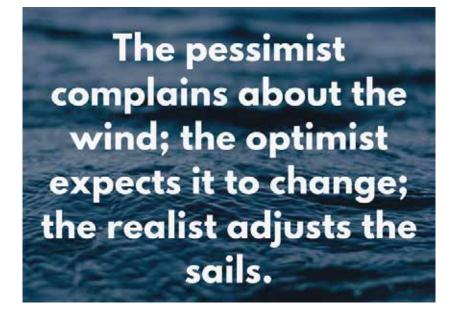
Pakistan has always been a responsible state, and its commitment to 'peaceful existence' and desire for regional stability is evident through its participation in various international peacekeeping missions, Combined Task Forces 150 and 151, various indigenous initiatives, and multilateral exercises like Regional Maritime Security Patrols (RMSP) and AMAN exercises.

Pakistan strongly favors collaboration as a tactical option when it comes to handling circumstances that endanger common human interests. According to its doctrine, the Pakistan Navy accepts the presence of a "cooperative continuum" that enables fleets to cooperate through regional and extra-regional coalitions and respond to both conventional and novel maritime threats. In search of maritime security, the Pakistan Navy is keen to operate through its own started and sustained multilateral agreements.

Based on the tenet of "proactive engagement," the Pakistan Navy views maritime outreach as a chance to establish and strengthen alliances that go beyond the conventional interest-based strategy. AMAN is a reflection of Pakistan's desire for engagement over alienation, ties over barriers, and cooperation over competitiveness rather than a response to any regional maritime infrastructure. Therefore, AMAN is appropriately referred to as an operational expression of Pakistan's foreign policy.

#### About the Author:

Anoshka Johum is Defense and Strategic Studies Scholar with an International Relations background. She is pursuing her Ph.D. from QAU. Her areas of interest are geopolitics, maritime security, and the blue economy.





#### PAKISTAN INTERNATIONAL MARITIME EXPO & CONFERENCE 2023 By Hajra Mehmood

The International Maritime Conference (IMC) is a mega event being undertaken by the National Institute of Maritime Affairs (NIMA) since 2007 biennially and it provides a platform to maritime stakeholders, academicians, and policymakers to discuss ideas/ issues with internationally renowned scholars, practitioners and experts in maritime domain. Starting from first IMC in 2007, a total of nine conferences (IMCs) have been held so far and the current IMC being held as part of PIMEC is the 10th of the series. Pakistan International Maritime Expo & Conference (PIMEC) is a maiden initiative of Pakistan Navy being held from 10-12 February 2023 under the patronage of Ministry of Maritime Affairs to jump start development in Maritime Sector. PIMEC will encompass Maritime Expo and International Maritime Conference on Blue Economy and maritime potential. National Institute of Maritime Affairs (NIMA) is the lead organiser for the conduct of IMC part of PIMEC. The broad theme of this conference is "Embracing Blue Economy - Challenges and Opportunities for Developing Countries". The highlights of the event are presence of large number maritime experts from industry and academia both from public and private sectors, including senior naval dignitaries, eminent speakers and delegates (both National and International). Renowned speakers and maritime experts are sharing their thoughts on the aforesaid theme. The event also affords opportunity to Public & Private stakeholders to display products and develop business relationships.

The major objectives of the Conference are to:

- Analyse the changing dynamics of maritime security in the Region
- Share knowledge and perspectives on maritime affairs in the Region
- Explore measures that can lead to peaceful coexistence, prosperity and secure maritime environment in the Region
- Highlight the opportunities provided by oceans under Blue Economy
- Suggest solutions based on emerging technology and innovations

A summary of these conferences are given below to highlight the event and its significance:

#### IMC 2021:

The 9th IMC conference from 13th-15th February 2021 was on the topic "Development of Blue Economy under a Secure and Sustainable Environment – A shared Future for Western Indian Ocean Region.

#### IMC 2019:

The three-day 8th International Maritime Conference 9th to 11th February 2019 organized on the theme of 'Global Geopolitics in Transition: Rethinking Maritime Dynamics in the Indian Ocean Region' concluded at Karachi.

Federal Minister for Defence, Pervez Khattak was the Chief Guest of the event. The Defense Minister expressed his confidence that the conference deliberations and its valuable recommendations will provide insight to maritime stakeholders for effective policy making.

#### IMC 2017:

The 7th conference from 11th to 13th February, 2017 showcased the theme 'Strategic Outlook In Indian Ocean Region 2030 And Beyond-Evolving Challenges And Strategies' which aimed to examine long term effects of these emerging factors on regional security in Indian Ocean while examining the



situation through the lens of political, economic and maritime security perspective for prevalence of peace, harmony and tranquility in Indian Ocean.

#### IMC 2015:

The 6th International Maritime Conference (IMC) on the topic "Maritime Economy, Environment, and Security Co-operation: Bringing the West Pacific and the Indian Ocean Closer" had begun from 14th to 16th February, 2015. The Federal Minister for Defence Khawaja Muhammad Asif inaugurated the Conference. Apart from national speakers, international scholars from Australia, Canada, China, India, Sri Lanka, Nigeria, USA and UN's FAO department attended the event.

#### IMC 2013:

The 5th International Maritime Conference (IMC 2013) was organized on 5th-7th March 2013, on the topic "Regional Maritime Security Dynamics, Imperatives and Inter-Dependencies" was organized. Turkish Chief of Naval Staff Admiral Bilgel graced the occasion as Chief Guest on closing day. The chief guest (CNS) distributed prizes among the students who won the essay and poster competition held along with the conference.

#### IMC 2011:

The 4th International Maritime Conference was on the topic "Maritime Security Management-Contemporary Challenges and need for global cooperation" from 8 to 9 March, 2011. Apart from local speakers, the conference's proceedings were enlivened by the presence of notable international scholars from countries like Canada, China, UK and USA. CNS was the chief guest at the closing session.

#### IMC 2009:

The 3rd International Maritime Conference (IMC 2009) was held in Karachi Campus from 5th-7th March, 2009. The topic for this conference was "Traditional and Non-traditional Threats, Force Posture and Extra Regional Interests; Implication for the Arabian Sea and the Gulf Littorals". There were 25 different presentations from speakers and scholars of international repute hailing from various continents and regions presenting diverse viewpoints on the topics of maritime security, economy & environment.

#### IMC 2008:

The 2nd International Maritime Conference (IMC 2008) was organized from 25 to 27 March 2008, on the topic of "Sustainable economic exploitation of ocean resource: Technological & educational needs and solutions" with theme in continuum of the first conference. This conference also focused on economy, security and environment in the maritime domain with view to delineate technological and educational needs and offer innovative solutions for sustainable exploitation of ocean resources.

#### IMC 2007:

The Centre organized the first ever International Maritime Conference (IMC 2007) from 4th to 6th March, 2007 in Pakistan on "Maritime Threats and Opportunities in the 21st Century". This conference was attended by renowned national & international scholars and public & private stakeholders. The, then, Prime Minister of Pakistan Mr. Shoukat Aziz and Dr. Ishrat-ul-Ibad Governor Sindh graced the occasion as Chief Guest.

#### About the Author:

The author is associated with the National Institute of Maritime Affairs (NIMA), Karachi.



#### **ENVIRONMENTAL ISSUES OF SEA IN PAKISTAN**



The global plan of the United Nation's 2030 Agenda for Sustainable Development points us to achieving a world that is in harmony with nature and more respectable to the environment. It has been observed that abrupt climate change is the biggest global concern that is adversely impacting the health of the planet and is one of the reasons behind many others. The world is going through serious environmental issues and every country is responsible to respond on them in its individual capacity likewise Pakistan is also facing environmental degradation challenges.

In Pakistan, the ocean required immediate action to cater to the challenges developed by human activities that include contamination in water through plastic bags, sewage water, and industrial chemicals. Introducing the nutrients and other toxic chemicals disturbs the natural blue-colored water at various tourist spots that are already limited in number. The outdated and inappropriate waste management system in Karachi makes a way to the sea for the discharge of waste generated from the industrial zone of the city. The marine resources swallow those metals and toxic elements that are ultimately eaten by humans and cause severe health issues which are impacting the economic conditions of fishing communities and the reputation of the fishing industry in Pakistan. As the ocean has no boundaries, the sea has gone through serious environmental changes disturbing the ecosystem of the ocean while increasing industrialization and urbanization. The increase in population and the desire to improve living standards have increased the demand for energy which is fulfilled by burning the fossils increasing the sulfur emissions that ultimately mix into the ocean through droplets from the environment layers.

Therefore, I request you highlight this issue through your reputable platform and arose public awareness. We must limit the burning of fuel by avoiding unwanted traveling. Second, if we are planning for any recreational activity, especially around the coast we must secure the litter before leaving the area we all have to come forward.

Your's sincerely Future Environmentalist

### **Maritime Directory**

#### **Axis Container**

Port Qasim Bin Qasim Town, Karachi, Mobile: +92 321 9355576

#### **UMA Container Depot**

Atlas honda street, Mehdi Hassan Rd, Mauripur, Karachi, Contact: +92 21 3259 5201

#### **Bay West Off-Dock Container Terminal**

32 Industrial Area, Adjacent Fishery Yard West Wharf, Karachi 74400 Contact: +92 21 3233 0030

#### **ICS Port Qasim Terminal**

Qasim Port Road, Port Bin Qasim, Karachi, Sindh Contact: +92 21 3474 0969

#### **Qasim Freight Station**

H- 1 North Western Industrial Zone Port Qasim, Bin Qasim Town, Karachi, Sindh 75600 Contact: +92 21 3472 0166

#### **Inter Ocean Container Services**

CP-1/28 A&B, South Western Industrial Zone, Port Qasim Authority, Karachi, Sindh Contact: +92 21 3474 0969

#### **Paklink Shipping Services**

Suit No. 803, 8th Floor, Business Plaza, Mumtaz Hassan Road, Karachi, 74000 - Pakistan. Contact: +92 21 3244 1333-6

#### **Modern Container Terminal**

Suite # 703, 7th Floor, Business Plaza, Mumtaz Hassan Road, Off. I.I. Chundrigar Road, Karachi – Paksitan. Contact: +92 21 111 672 000

#### Pak Shaheen Container Services Jungle Shah Empty Park

East Wharf, Keamari. Karachi Mobile: +92 21 3285 1800

#### Pak Shaheen Container Service Yard PQA

B-1 North West Industrial Zone Port Muhammed Bin Qasim. Karachi- Pakistan Contact: +92 21 3472 0220

#### **BOML Container Freight Station**

V.M. Plaza, 13 Dockyard Road, West Wharf, Karachi, Sindh 74000 Contact: +92 21 1111 11175

#### **Universal Yard**

Mauripur Rd, Keamari, Karachi, Sindh Contact: +92 345 8287 717

#### **Falcon Freight System B Yard**

SP-16/6, SWIZ, PQA, Port Qasim Bin Qasim Town, Karachi, Sindh Mobile: +92 300 2608 222

#### **BOML** Temperature Controlled Warehouse-1

Plot 1 & 2 Boat Building Yard Road, West Wharf Karachi, Sindh 74000 Contact: +92 21 3233 1004

#### Supreme Off Dock Custom Bond Warehouse

BBA/SP, 03, Port Qasim Authority, Karachi, Sindh Mobile: +92 300 8254 580

#### **Speedy Track Container Terminal**

Plot # Sp-06, Port Operation Area , Port Qasim Authority, Karachi Sindh Contact: +92 21 3539 3915





BEYOND THE BLUE ECONOMY CREATIVE INDUSTRIES AND SUSTAINABLE DEVELOPMENT IN SMALL ISLAND DEVELOPING STATES

Peter Rudge





🐑 Springer

# **BEYOND THE BLUE ECONOMY (ROUTLEDGE STUDIES IN SUSTAINABLE DEVELOPMENT) 1ST EDITION**

**ISBN-10:** 0367756897

**ISBN-13:** 978-0367756895

#### **Book Description**

This book argues for a broader approach to sustainable growth in Small Island Developing States (SIDS).

Small island states such as those in the Caribbean, Indian Ocean and South Pacific face significant and growing threats from climate change, increasing political and social volatility, and rapidly evolving global trends in technology and tourism. Based on ten years of research, this book looks beyond the Blue Economy of tourism and fisheries and provides a model of how creative industries, innovation networks, creative clusters and digital transformation can give SIDS the foundation for a strong sustainable future. The book provides not only insights into how these emerging digital-creative sectors can drive developing economies but also actionable tools for policy makers, entrepreneurs and academics to deliver increased performance on the United Nations Sustainable Development Goals and, ultimately, growth and sustainability.

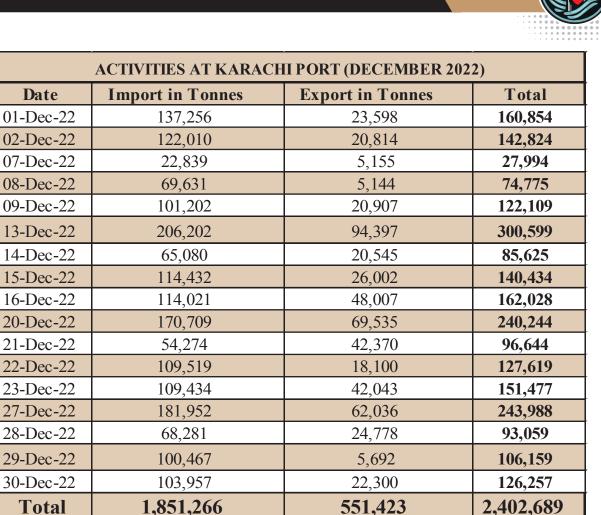
This book will be of great interest to scholars and practitioners of economic geography, sustainable development, development studies and the creative industries

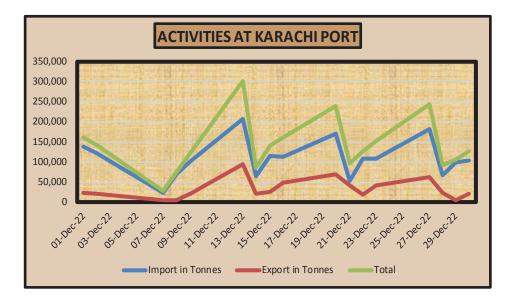
#### BLUE ECONOMY AND SMART SEA TRANSPORT SYSTEMS: MARITIME SECURITY (SPRINGER BRIEFS IN GEOGRAPHY) 1ST EDITION

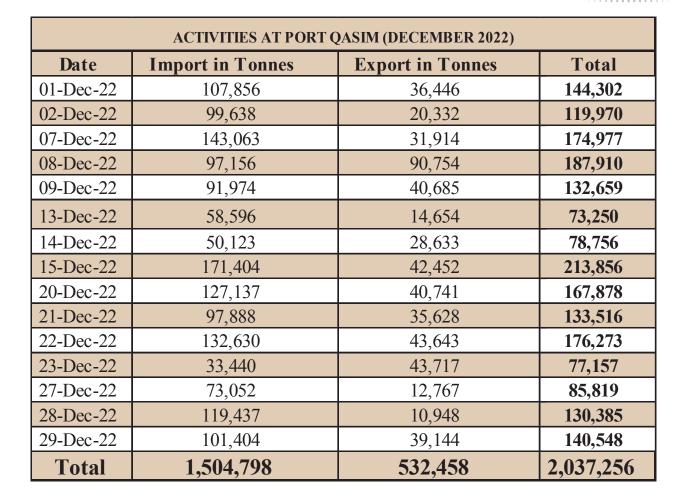
**ISBN-10:** 3031216334 **ISBN-13:** 978-3031216336

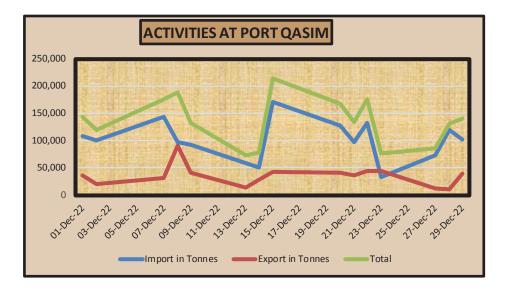
#### **Book Description**

Focusing on maritime security, this book discusses Blue Economy and Smart sea transport systems in the context of the Indian Ocean rim countries and the multifaceted challenges that they are likely to face while attempting to develop such systems. It introduces Blue Economy as a concept with an emphasis on lower costs, reduced waste, greater efficiency, and value addition in all services associated with the near and deep oceans, with the establishment of Smart sea transport systems as the adaptive response in a global trade system. It highlights the roles of maritime security in politics, economics, and environmental management issues that constitute the challenges of achieving such goals. In this regard, the authors approach the issues from the institutional perspective to examine ways in which relevant transport and supply chain stakeholders can collaborate to build secure, resilient global systems of maritime trade. This book will be of interest to anyone interested in marine policy and global supply chains, especially in maritime security, its impacts and risks on transport and supply chain infrastructures, and the related socioeconomic activities likely to be affected. Readers will gain insight into the effective ways to adapt to such risks and how to benefit from the generated opportunities on transport, supply chains, and the global economy. Also, it is an ideal companion to policymakers and practitioners who are eager to learn about the dynamics between maritime security and Blue Economy which, in turn, enhances the quality of strategic planning, policies, and practices in addressing these issues. Finally, it inspires researchers and postgraduate students to conduct innovative research on this topic.









44

# Tide Times for Port

	0	0	0	0	0	0	•	0	0	0	0	0	0	•	*			
0	0	•	0	÷	2	-			-	9	0	•	0	•	۰			
0	0	0	1				1						0	0	0	٠		
		1				6	Т	2									+	
					1		-	2		P			N			×.	٠	
		1						-		۸.		1	Ν					
	L	4	-	1	1	r			7		1		N					
	I				X-	Г				-		2	1					
	V				3								I					
	V	۱.				L.					₽						( e .	
	1	1	2	•		llı		2			•		/			7	٠	
				0	-			1	r		/					•		
0	0	•			_			-	_			•	0	0	0	٠		
0	0	0		÷	-	-	-			9	0	0	0	0	۰			
0				0	0	0	•	0	0	0	0	0	0	٠	٠			
*	0	•	0	0	0	0	0	0	0	0	0	0						
	٠		0	0	•	0	0	0	0	0	۰	٠						

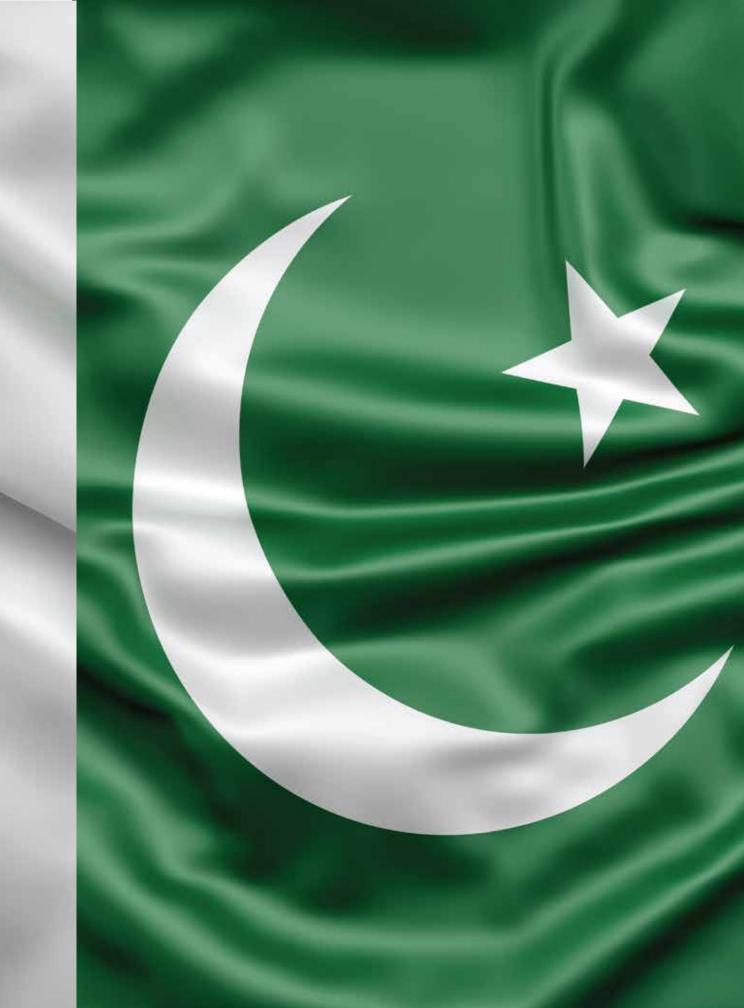
Date 15 December 2022 10 17 December 2022 10 17 December 2022 10 17 December 2022 10 17 December 2022 10 18 December 202 1	Lat: 24.46° N I Tides Low Tide High Tide Low Tide	Cong: 67.21° E           Time (PKT)           03:57 AM           09:32 AM           14:15 PM           21:55 PM           04:37 AM           10:24 AM           15:36 PM           22:03 PM           05:16 AM           11:23 AM           18:09 PM           23:21 PM           05:56 AM           12:22 AM           19:41 PM	Height (m) 3.01m 1.36m 2.32m 1.08m 2.96m 1.29m 2.16m 1.29m 2.93m 1.13m 2.20m 1.46m 2.92m 0.86m
15 December 2022	Low Tide High Tide Low Tide High Tide	03:57 AM 09:32 AM 14:15 PM 21:55 PM 04:37 AM 10:24 AM 15:36 PM 22:03 PM 05:16 AM 11:23 AM 18:09 PM 23:21 PM 05:56 AM 12:22 AM	3.01m 1.36m 2.32m 1.08m 2.96m 1.29m 2.16m 2.93m 1.13m 2.20m 1.46m 2.92m
16 December 2022	High Tide Low Tide High Tide	09:32 AM 14:15 PM 21:55 PM 04:37 AM 10:24 AM 15:36 PM 22:03 PM 05:16 AM 11:23 AM 18:09 PM 23:21 PM 05:56 AM 12:22 AM	1.36m           2.32m           1.08m           2.96m           1.29m           2.16m           1.29m           2.93m           1.13m           2.20m           1.46m           2.92m
17 December 2022	Low Tide High Tide Low Tide High Tide	14:15 PM 21:55 PM 04:37 AM 10:24 AM 15:36 PM 22:03 PM 05:16 AM 11:23 AM 18:09 PM 23:21 PM 05:56 AM 12:22 AM	2.32m 1.08m 2.96m 1.29m 2.16m 1.29m 2.93m 1.13m 2.20m 1.46m 2.92m
17 December 2022	High Tide Low Tide High Tide	21:55 PM 04:37 AM 10:24 AM 15:36 PM 22:03 PM 05:16 AM 11:23 AM 18:09 PM 23:21 PM 05:56 AM 12:22 AM	1.08m 2.96m 1.29m 2.16m 1.29m 2.93m 1.13m 2.20m 1.46m 2.92m
17 December 2022	Low Tide High Tide Low Tide High Tide Low Tide High Tide Low Tide High Tide Low Tide High Tide Low Tide High Tide High Tide	04:37 AM 10:24 AM 15:36 PM 22:03 PM 05:16 AM 11:23 AM 18:09 PM 23:21 PM 05:56 AM 12:22 AM	2.96m 1.29m 2.16m 1.29m 2.93m 1.13m 2.20m 1.46m 2.92m
17 December 2022	High Tide Low Tide High Tide Low Tide High Tide Low Tide High Tide Low Tide High Tide Low Tide High Tide High Tide	10:24 AM 15:36 PM 22:03 PM 05:16 AM 11:23 AM 18:09 PM 23:21 PM 05:56 AM 12:22 AM	1.29m 2.16m 1.29m 2.93m 1.13m 2.20m 1.46m 2.92m
	Low Tide High Tide Low Tide High Tide Low Tide High Tide Low Tide High Tide Low Tide High Tide	15:36 PM 22:03 PM 05:16 AM 11:23 AM 18:09 PM 23:21 PM 05:56 AM 12:22 AM	2.16m 1.29m 2.93m 1.13m 2.20m 1.46m 2.92m
	High Tide Low Tide High Tide Low Tide High Tide Low Tide High Tide Low Tide High Tide	22:03 PM 05:16 AM 11:23 AM 18:09 PM 23:21 PM 05:56 AM 12:22 AM	2.93m 1.13m 2.20m 1.46m 2.92m
	High Tide Low Tide High Tide Low Tide High Tide Low Tide High Tide	11:23 AM 18:09 PM 23:21 PM 05:56 AM 12:22 AM	1.13m 2.20m 1.46m 2.92m
18 December 2022	Low Tide High Tide Low Tide High Tide Low Tide High Tide	18:09 PM 23:21 PM 05:56 AM 12:22 AM	2.20m 1.46m 2.92m
18 December 2022	High Tide Low Tide High Tide Low Tide High Tide	23:21 PM 05:56 AM 12:22 AM	1.46m 2.92m
18 December 2022	Low Tide High Tide Low Tide High Tide	05:56 AM 12:22 AM	2.92m
18 December 2022	High Tide Low Tide High Tide	12:22 AM	
	Low Tide High Tide		0.86m
	High Tide	19:41 PM	
			2.44m
19 December 2022	Low Tide	00:36 AM	1.55m
	Eom mae	06:36 AM	2.94m
	High Tide	13:15 PM	0.52m
	Low Tide	20:52 PM	2.73m
20 December 2022	High Tide	01:42 AM	1.56m
	Low Tide	07:22 AM	2.97m
	High Tide	14:03 PM	0.16m
	Low Tide	21:58 PM	3.03m
21 December 2022	High Tide	02:42 AM	1.52m
	Low Tide	08:13 AM	3.02m
	High Tide	14:51 PM	-0.14m
	Low Tide	22:58 PM	3.31m
22 December 2022	High Tide	03:39 AM	1.44m
	Low Tide	09:08 AM	3.08m
	High Tide	15:38 PM	-0.37m
	Low Tide	23:52 PM	3.55m
23 December 2022	High Tide	04:34 AM	1.32m
	Low Tide	10:01 AM	3.15m
	High Tide	16:27 PM	-0.50m
24 December 2022	Low Tide	00:42 PM	3.73m
	High Tide	05:27 AM	1.17m
	Low Tide	10:52 AM	3.20m
25 D L 2022	High Tide	17:16 PM	-0.52m
25 December 2022	Low Tide	01:30AM	3.85m
	High Tide	06:17 AM	1.02m
	Low Tide	11:40 AM	3.20m
26 D	High Tide	18:06 PM	-0.44m
26 December 2022	Low Tide	02:14 AM	3.88m
	High Tide	07:51 AM	0.89m
	Low Tide	13:20 AM	3.11m
17 December 2022	High Tide	19:45 PM	-0.25m
27 December 2022	Low Tide	02:56 AM	3.84m
	High Tide Low Tide	07:51 AM	0.81m
		13:20 PM	2.93m
28 December 2022	High Tide	19:45 PM	0.05m
20 December 2022	Low Tide	03:36 AM	3.74m 0.79m
	High Tide	08:39 AM	
	Low Tide	14:27 PM	2.70m
29 December 2022	High Tide	20:34 PM	0.42m
	Low Tide	04:16 AM 09:30 AM	3.59m
	High Tide Low Tide	16:03 PM	0.81m 2.51m
		21:27 PM	
20 December 2022	High Tide		0.85m
30 December 2022	Low Tide	04:54 AM	3.42m
	High Tide	10:29 AM	0.83m
	Low Tide	17:39 PM	2.47m
21 December 2022	High Tide	22:29 PM	1.26m
31 December 2022	Low Tide	05:32 AM	3.24m
	High Tide	11:39 AM	0.78m
	Low Tide	19:02 PM	2.57m
	High Tide	23:45 PM	1.57m

Tide Times for Port Gwadar Lat: 25.07° N Long: 62.20° E							
Date	Tides	Time (PKT)	Height (m)				
15 December 2022	Low Tide	02:24 AM	2.34m				
	High Tide	08:35 AM	1.38m				
	Low Tide	13:03 PM	1.76m				
	High Tide	19:40 PM	0.75m				
16 December 2022	Low Tide	03:02 AM	2.32m				
	High Tide	09:42 AM	1.27m				
	Low Tide	14:21 PM	1.61m				
	High Tide	20:24 PM	0.94m				
17 December 2022	Low Tide	03:40 PM	2.31m				
	High Tide	10:51 AM	1.08m				
	Low Tide	16:14 PM	1.56m				
	High Tide	21:21 PM	1.15m				
18 December 2022	Low Tide	04:21 AM	2.30m				
	High Tide	11:50 AM	0.83m				
	Low Tide	18:05 PM	1.66m				
	High Tide	23:56 PM	1.35m				
19 December 2022	Low Tide	05:03 AM	2.30m				
	High Tide	12:39 PM	0.56m				
	Low Tide	19:27 PM	1.86m				
	High Tide	23:56 PM	1.50m				
20 December 2022	Low Tide	05:49 AM	2.30m				
	High Tide	13:24PM	0.30m				
21 Denne 1 - 2000	Low Tide	20:28 PM	2.09m				
21 December 2022	High Tide	01:15 AM	1.59m				
	Low Tide	06:39 AM	2.32m				
	High Tide	14:09 PM	0.05m				
22 December 2022	Low Tide	21:19 PM 02:24 AM	2.29m 1.62m				
ZZ December 2022	High Tide Low Tide	07:30 AM	2.35m				
	High Tide	14:54 PM	-0.14m				
	Low Tide	22:07 PM	2.45m				
23 December 2022	High Tide	03:25 AM	1.59m				
ES December 2022	Low Tide	08:24 AM	2.38m				
	High Tide	15:40 PM	-0.26m				
	Low Tide	22:52 PM	2.57m				
24 December 2022	High Tide	04:21 AM	1.53m				
	Low Tide	09:17AM	2.41m				
	High Tide	16:27 PM	-0.30m				
	Low Tide	23:37 PM	2.64m				
25 December 2022	High Tide	05:12 AM	1.45m				
	Low Tide	10:10 AM	2.40m				
	High Tide	17:15 PM	-0.24m				
26 December 2022	Low Tide	00:21 AM	2.66m				
	High Tide	06:04 AM	1.35m				
	Low Tide	11:04 AM	2.33m				
	High Tide	18:02 PM	-0.09m				
27 December 2022	Low Tide	01:03 AM	2.66m				
	High Tide	06:57 AM	1.24m				
	Low Tide	12:00 AM	2.20m				
	High Tide	18:48 PM	0.14m				
28 December 2022	Low Tide	01:44 AM	2.62m				
	High Tide	07:54 AM	1.14m				
	Low Tide	13:01 PM	2.02m				
0 December 2000	High Tide	19:34 PM	0.44m				
29 December 2022	Low Tide	02:24 AM	2.56m				
	High Tide	08:55 AM	1.03m				
	Low Tide	14:13 PM	1.82m				
O Docombox 2022	High Tide	20:19 PM	0.77m				
30 December 2022	Low Tide	03:02 AM	2.48m				
	High Tide	10:01 AM 15:44 PM	0.92m				
	Low Tide High Tide	21:06 PM	1.68m 1.10m				
31 December 2022	Low Tide	03:39 AM	2.38m				
SI DECEMBER 2022	High Tide	11:09 AM	0.79m				
	Low Tide	17:36 PM	1.66m				
	2011 1140	21:58 PM	1.39m				

# Tide Times for Port



Tide Times for Port Karachi Lat: 24°48' N Long: 66°58' E							
Date	Tide	Time (PKT)	Height (m)				
15 December 2022	Low Tide	02:58 AM	2.61m				
	High Tide	09:21 AM	1.45m				
	Low Tide	14:17 PM	2.02m				
	High Tide	20:38 PM	1.06m				
16 December 2022	Low Tide	03:37 AM	2.56m				
	High Tide	10:27 AM	1.38m				
	Low Tide	15:31 PM	1.90m				
17 December 2022	High Tide Low Tide	21:36 PM 04:21 AM	1.28m 2.53m				
	High Tide	11:35 AM	1.21m				
	Low Tide	17:49 PM	1.2111 1.91m				
	High Tide	22:58 PM	1.47m				
18 December 2022	Low Tide	05:09 AM	2.53m				
	High Tide	12:30 AM	0.95m				
	Low Tide	19:19 PM	2.11m				
19 December 2022	High Tide	00:15 AM	1.58m				
	Low Tide	06:01 AM	2.55m				
	High Tide	13:16 PM	0.65m				
20 December 2022	Low Tide High Tide	20:21 PM	2.36m				
20 December 2022	Low Tide	01:18 AM 06:52 AM	1.62m 2.59m				
	High Tide	14:00 PM	0.34m				
	Low Tide	21:11 PM	2.63m				
21 December 2022	High Tide	02:18 AM	1.61m				
	Low Tide	07:42 AM	2.65m				
	High Tide	14:42 PM	0.05m				
	Low Tide	21:55 PM	2.87m				
22 December 2022	High Tide	03:15 AM	1.56m				
	Low Tide	08:35 AM	2.70m				
	High Tide	15:26 PM	-0.17m				
23 December 2022	Low Tide High Tide	22:37 PM 04:10 AM	3.06m 1.47m				
	Low Tide	09:29 AM	2.75m				
	High Tide	16:12 PM	-0.30m				
	Low Tide	23:18 PM	3.19m				
24 December 2022	High Tide	05:01 AM	1.38m				
	Low Tide	10:23 PM	2.78m				
	High Tide	16:59 PM	-0.33m				
25 December 2022	Low Tide	00:00 AM	3.26m				
	High Tide	05:51 AM	1.28m				
	Low Tide	11:15 PM 17:46 PM	2.78m -0.24m				
26 December 2022	High Tide Low Tide	00:42 AM	-0.24m 3.27m				
	High Tide	06:39 AM	1.19m				
	Low Tide	12:08 AM	2.71m				
	High Tide	18:34 PM	-0.05m				
27 December 2022	Low Tide	01:24 AM	3.23m				
	High Tide	06:39 AM	1.19m				
	Low Tide	12:08 AM	2.71m				
	High Tide	18:34 PM	-0.05m				
27 December 2022	Low Tide	01:24 AM	3.23m				
	High Tide	07:29 AM	1.11m				
	Low Tide High Tide	13:00 PM 19:24 PM	2.58m 0.23m				
28 December 2022	Low Tide	02:09 AM	3.15m				
	High Tide	08:23 AM	1.06m				
	Low Tide	13:58 PM	2.40m				
	High Tide	20:15 PM	0.57m				
29 December 2022	Low Tide	02:54 AM	3.05m				
	High Tide	09:24 AM	0.99m				
	Low Tide	15:09 PM	2.21m				
	High Tide	21:12 PM	0.94m				
30 December 2022	Low Tide	03:41 AM	2.92m				
	High Tide	10:33 AM	0.91m				
	Low Tide High Tide	16:44 PM 22:19 PM	2.11m 1.28m				
31 December 2022	Low Tide	04:30 AM	2.78m				
	High Tide	11:42 AM	0.78m				
	Low Tide	18:29 PM	2.16m				
		23:32 PM	1.54m				



# NÎM

Pursuing Sustainable Maritime Development

Published by National Institute of Maritime Affairs (NIMA) Karachi Bahria University Karachi Campus, 13 National Stadium Road, Karachi