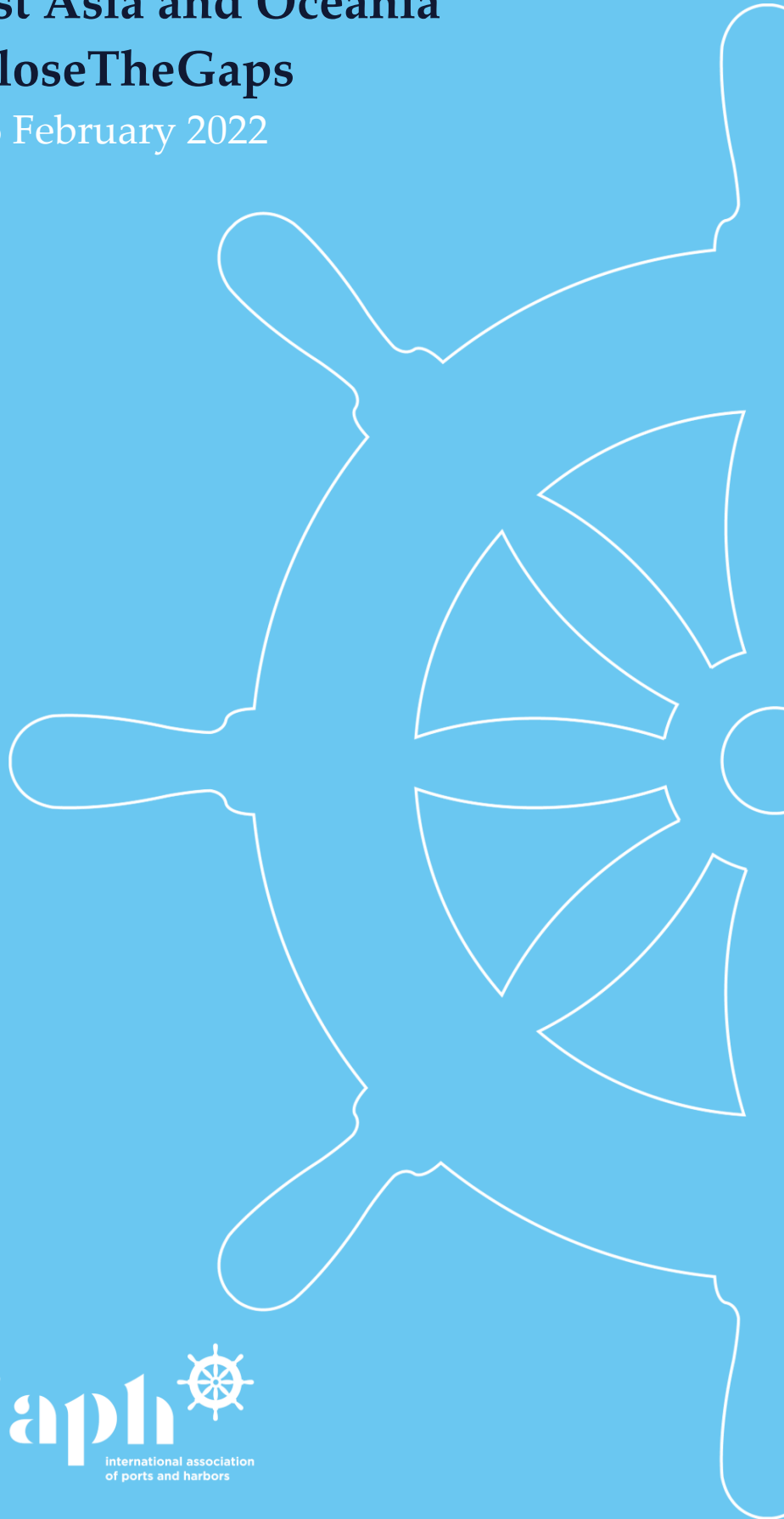


IAPH
South East Asia and Oceania
#CloseTheGaps
16 February 2022



IAPH South East Asia and Oceania #CloseTheGaps Session – 16 February 2022

EXECUTIVE SUMMARY

The enclosed provides a summary of proceedings from the IAPH South-East Asia and Oceania Regional Workshop examining port competitiveness and identifying gaps to address in ports and port-related infrastructure and governance that took place on February 16, 2022.

The purpose of this document is to provide succinct highlights of specific gaps as well as proposals and suggestions raised at the Workshop to deal with those gaps in port infrastructure.

A more detailed analysis of the transcript and recording will be fed into the main workshop sessions of the IAPH World Ports Conference 2022 which will deal globally with the six areas of interest analysed by a study that the University of Antwerp prepared for The World Bank in 2020¹, namely connectivity and accessibility, efficiency, digitalization, carbon emissions of shipping, shipping costs and regulatory environment.

The three main gaps identified for this region are efficiency, connectivity and accessibility and digitalization.

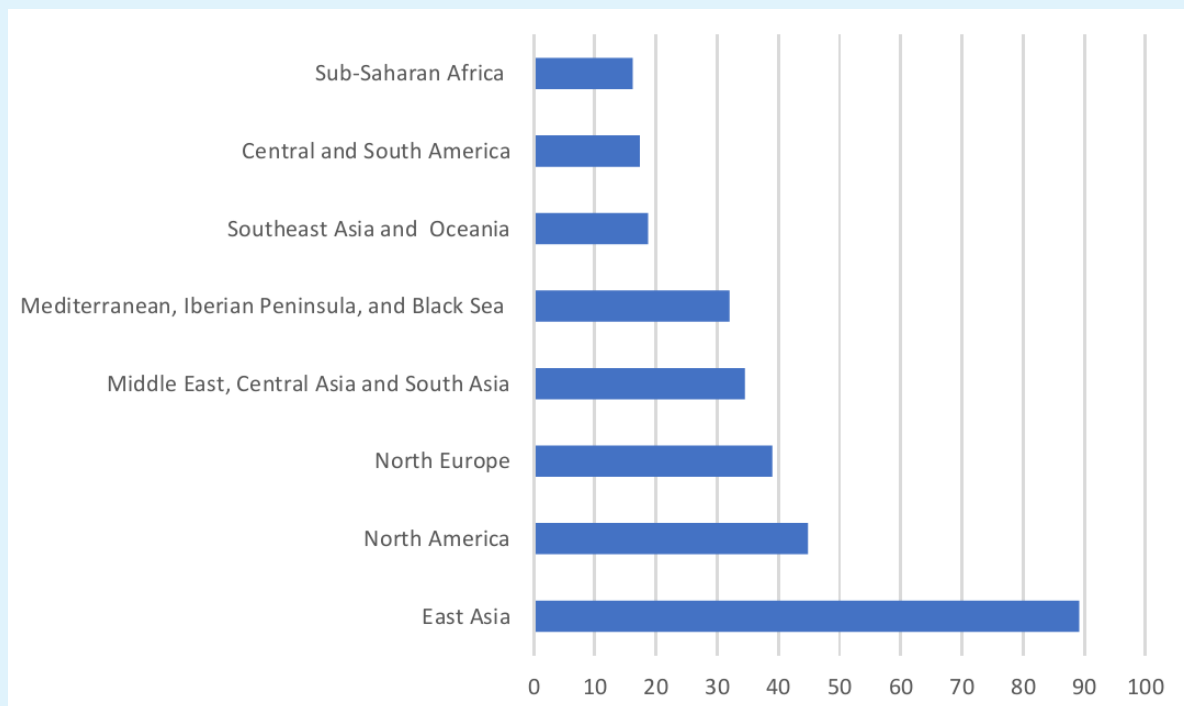
1.0. HIGH LEVEL OVERVIEW OF THE REGION IN TERMS OF PORT INFRASTRUCTURE GAPS

The first remark which was repeated throughout the workshop was the challenge posed in terms of considering this vast area as a single region itself, as South-East Asian, Australasian and South Pacific port infrastructure are confronted with vastly differing challenges in terms of the six identified areas. In fact it was pointed out that one gap ports have in infrastructure gaps in this region is one of perception. The risk of bundling up ports of varying size and characteristics was highlighted with a specific example. These included trying to mix the vast transshipment hubs in Singapore and Malaysia with much smaller South East Asian gateway ports, the 80 islands that make up the South Pacific each having one or several tiny

¹ Aronietis, R., Van Hassel, E. and Vanelslander, T. (2020), Maritime connectivity study for The World Bank: the state of developing country ports and maritime services: a global review.

ports, and the spread of only 8 million TEU per annum across 70 ports of varying size in one country have brought unintended consequences such as the spotlighting of the port sector as culprits of the supply chain crunch without referring to the wider picture involving multiple factors throughout the chain. This has brought with it media attention with negative perception and the threat of regulatory intervention which harms rather than helps resolve port interests in untangling the supply chain congestion suffered as a consequence of huge swings in demand and supply during the pandemic.

Country performance on Liner Shipping Connectivity Index, 2019



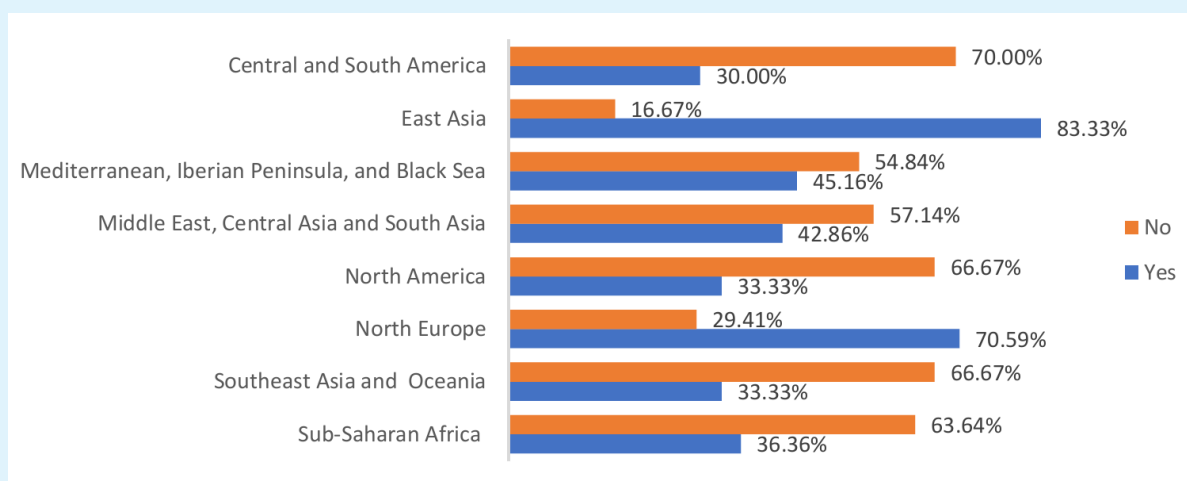
Source: Aronietis, R., van Hassel, E A and Vanelslander, T. (2020), based on UNCTAD data

It was noted that tonne-mile costs were comparatively high for the region given the shipping distances involved, which partially explains the relatively lower ranking of overall connectivity compared to other regions.

However it was also pointed out by port users that actual routings were comparable with Transpacific and North Europe-South America trades, and that with some notable exceptions, the reason why costs were relatively high were also due to efficiency issues.

The port users went on to describe the difficulties encountered at several ports where separate, paper-based documentation had to be cleared with relevant authorities first before dock labour could commence working the ship and port crane equipment could make the first lift. It was observed that in one country that the process of vessel clearance had to be duplicated during multiple port calls of the same vessel where it was felt that clearance procedure at the first one should suffice. By the same token it was also mentioned that vessels making weekly calls at the same port and country had to be repeated resulting in cumulative dwell time at berth.

The presence of port community systems (PCS)

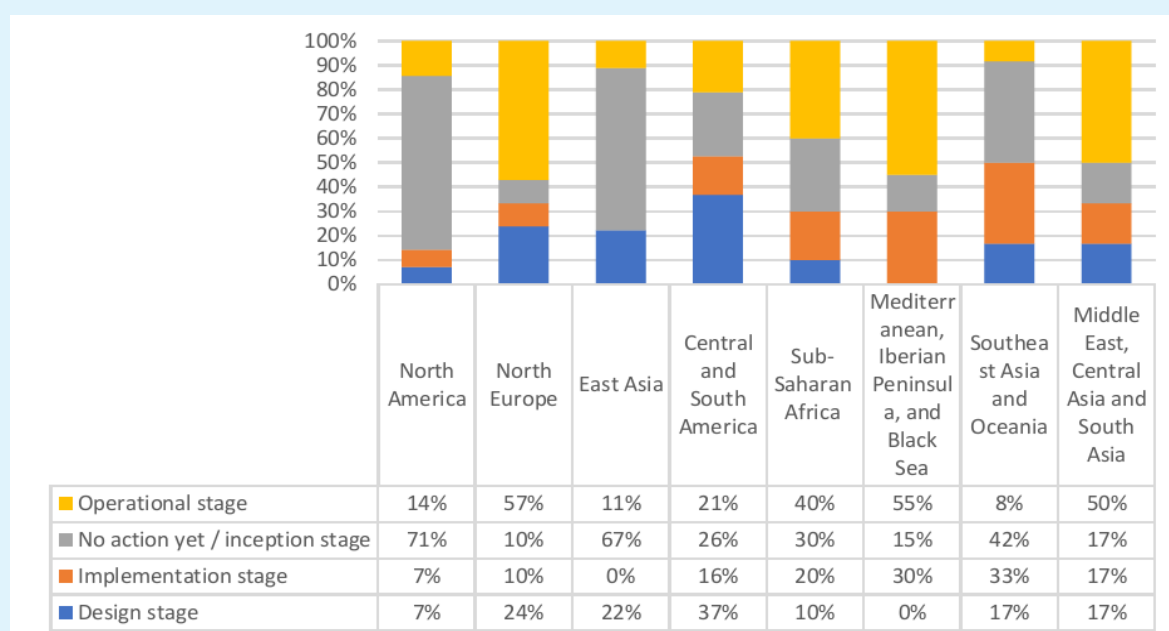


Source: Maritime Street database (2021)

This important efficiency gap in digitalization was put into the context of a wider governance issue experienced in this region (especially in South-East Asia) where paper-based systems still predominate despite the presence of some Port Community Systems. The Pre-Workshop research paper cited a relatively low level of adoption of Port Community Systems in this region compared to others (figure 1, above). It was commented that the

reluctance to replace these manual processes is partially founded in the concern about loss of employment, and also the likelihood that a digital system would more easily highlight mistakes or faults.

Status of implementing electronic data exchange at ports as require by the IMO FAL Convention



Source: International Association of Ports and Harbors (2020)

On digitalization, data from the pre-workshop research also cites the IAPH 2020 survey on how far ports globally have adopted FAL requirements on electronic data interchange between ship and shore. For the ports responding for this region, 42% of ports have either taken no action yet or only at the inception stage of implementing electronic data exchange.

While some Port Community Systems are used, it was felt that many were, by and large, one-directional, with port users having to input a lot of data while not receiving the data they need from the other stakeholders in order to process their vessel calls more efficiently. A simple example was cited of not having any information from a terminal on yard stack density. Port users also cited the complexity of having to deal with such a wide variety of

different port community systems and customs clearance procedures for each country in the region, where a lack of common standards for the structure and interchange of data also leads to inefficiencies.

An important statistic was shared that in the region, port authorities and customs were involved in up to 80% of all vessel call data transactions, so focus must be honed in on the cooperation and relationship between these two parties to improve efficiency.

On the subject of connectivity, port users commented on the difficulties encountered in the current situation with the impact of the COVID19 pandemic resulting in severe congestion caused by either blank sailings or in the aftermath of a lockdown of a major Chinese port which then results in a flotilla of cargo vessels heading to the next port of call. It was also cited that public sector investment was required in order to ready ports in the region to receive the latest generation of ultra large container vessels, otherwise connectivity to those ports will diminish. On hinterland connectivity, it was noted that despite some good examples of connectivity (e.g. rail links between Thailand and Laos, the effective use of barges between Indonesian Islands), generally the quality and state of road infrastructure was a challenge in many parts of the region. The absence of public investment in other intermodal alternatives to trucks has meant that in many countries, reducing carbon emissions in the supply chain will be a challenge.

An important point was raised about the significance of improving processes for the repatriation of seafarers. With a large proportion of the world's seafarers located in North, East and South-East Asia, the enormous difficulties for bringing these vital players in the maritime chain home to their families were amplified by a lack in consistency of approach between public authorities at different levels and ministries as well as at regional level. Only one larger port led the way by repatriating over 250,000 seafarers through its gateway during the pandemic and was one of the few globally to initiate vaccination programs for these key maritime workers.

On the issue of reductions in carbon emissions of vessels at the Workshop, concerns about onshore power and cold ironing were raised. Without effective investments in low or zero carbon sources of energy in specific regions (especially in South-East Asia and the Pacific Islands) and in the ports themselves as energy transition hubs, traditional coal or other carbon-based electricity generation sources for cold ironing would be more polluting than modern vessels operating under their own auxiliary engines.

Environmental concerns were the highest priority in terms of challenges faced by the South Pacific ports, given the frequency and intensity of extreme events including cyclones, earthquakes and tsunamis, changing strong wind patterns and flash flood storms. The sheer numbers of smaller ports and harbours (numbering in the hundreds) with minimal quayside protection along multiple archipelagos limits the possibilities of protecting and building any meaningful resilience at many locations. Any market-based measure that is introduced to use revenues from bunkers to invest in fast forwarding fuels of the future would need to take these infrastructure needs into account which have been caused by climate change. With such levies the increasing the costs of shipping to and from these locations make would trade even more difficult.

Governance was also mentioned as a major challenge in some parts of the region, where there is lax application of security regulations on ballast discharges, oil spills, old vessel dumping (including military hardware) and the subsequent impact on the environment.

The fact that ships do now spend less time alongside at these smaller island ports due to improved turnaround times with chandlers and other suppliers means improved efficiency but also results in significant losses in port revenue through dues, which in turn limits investment possibilities in upgrading infrastructure.

2.0. HIGH LEVEL OVERVIEW OF WORKSHOP POINTS RAISED TO #CLOSETHEGAPS

The role of digitalization as a catalyst for efficiency, connectivity, accessibility and ultimately potential for lower emissions occupied a large part of the conversation in all sessions of the workshop. It was emphasised that there should be distinction made between data and digitalization. Common standards (how data is structured consistently to permit easy one-to-many data exchanges) and clear data ownership (who controls and secures the data) is still absent in the region.

The work on standards being conducted at IHO, IMO and ISO levels was seen as vital as it was felt that interoperability between digital port ecosystem platforms in various regions in the world through the use of common data standards and Application Programming Interfaces was the way forward. Doing so securely was also seen as important with the citing

of various platforms such as Tradelens and CALISTA which share information neutrally between various players in the supply chain through blockchain, ensuring that the selective data shared neither compromises commercial interests nor good governance.

One participant cited a national freight and data hub being initiated by the public sector covering all modes of transportation, which should assist decision making on where investments need to be directed in order to resolve supply chain infrastructure problems. The aim and intention of the hub is to also resolve the aforementioned problem of one-directional information passing from port users to the authorities, ensuring key information such as timely notifications for truck drivers to pick up loads, cargo traceability for shippers and incident management.

Another proposal on the table included the increased visibility of container and container loads using digital seal tags, one of a series of technological innovations commented upon either to increase the visibility of the cargo, cargo handling equipment utilization or even the possibility of using technologies such as 5G to measure air and noise emissions.

What was also clearly stated was the need to invest in human capital to drive digitalization in the maritime and port sector. This could be achieved in several ways. First, given the recent incidents at major and smaller ports around the world including this region, awareness training at all levels in a port and port-related organization on cyber security risks and how to mitigate them. Secondly, the upskilling of port workers was seen as essential in order to prepare them for the next generation of terminals which are deploying semi- to fully- automated materials handling equipment. Third, the establishment in maritime tech hubs in ports for start-ups that not only receive financial support for their innovations, but which are also given the chance to pilot and then move beyond proof-of-concept stage for their solutions.

The aforementioned key role of port authorities and customs in terms of data and process ownership as enablers of improved efficiency cannot be underestimated. This magnifies the importance of the initiative taken by IAPH and the World Customs Organization to establish common grounds for a series of guidelines that can be followed in order to set higher standards of efficiency across stakeholders and geographies.

On the matter of improved governance, the practical support on the ground from international NGOs was cited as an example of dealing with some of the problems in the

region, especially in the most remote ones. However, a good regulatory environment was seen as essential in the progress towards the digitalization of the maritime transport chain in the region, to encourage all stakeholders to not only share, but digitalise their information for the benefit of others.

Finally the crucial point was made that in order to create the right environment for public and private partners to invest in long-term projects to close the gaps in port infrastructure, it was important to view the current supply chain challenges in their entirety and not just at port level. Efficiency at the port extends to its connectivity inland with properly functioning intermodal options, and efficiency and connectivity is inextricably linked to data transparency between stakeholders and the willingness to share the cake rather than taking their own piece of it.

3.0. NEXT STEPS

These identified gaps and potential solutions will now be discussed at the IAPH World Ports Conference in Vancouver between 16-18 May both in plenary sessions and at the IAPH Regional Meetings which will have this Executive Summary to set the agenda on how to put together a plan to #CloseTheGaps in port infrastructure.