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1 INTRODUCTION

Following on from the successful IAPH-WPSP *COVID-19 Barometer* published during the first year of the pandemic, we are pleased to present the inaugural report of **the World Ports Tracker,** an IAPH initiative that aims to track critical aspects of the evolution of the global port industry.

The scope of the World Ports Tracker is to provide ports with a timely understanding of the challenges that emerge *regionally* and *globally*. The tracker will rely on a combination of two sources: survey-based results and port performance data.

This report introduces this new data tool, elaborating on the non-survey part of the tracker exercise. These are quarterly container port statistics based on S&P Global Port Performance Program data. These statistics focus on four container port metrics, i.e., the number of vessel calls, the evolution of vessel size, the evolution of call size (number of TEUs handled per call), and port moves per hour, aggregated per region.

This report covers the period from Q1 of 2019 to Q4 of 2021, thus covering the last pre-pandemic year as well as COVID-19 years 2020 and 2021. The data analysis is based on an index-based evolution (Q1, 2019 = 100) in nine different port regions. The first section of the report presents the evolution of the respective indexes on a year-on-year basis per region - comparing the calls in Q4 2021 with those of the same quarter of the year before, thereby avoiding any seasonality bias. The second section discusses the trends per region, focusing on both the changes that happened in the most recent quarters of 2021 and the level of volatility that might have occurred in the three years under examination.

Starting in the pre-pandemic year 2019, covering the evolution during the pandemic and, most importantly, revealing the trends in the most recent period of all, the analysis captures temporal trends and the most recent trends, enabling container ports to better understand the prospects that are available and the challenges that they might need to address.

As mentioned earlier, the report only covers the non-survey part of the tracker exercise. The first survey data are expected to be collected after the IAPH World Ports Conference in May 2022, when the tracker will be officially launched. The World Ports Tracker results will feature in issues of the IAPH *Ports & Harbors* magazine and will be circulated to IAPH membership via more detailed and specialised reports.

2 SUMMARY OF TRENDS IN Q4 2021

The index-based evolution of the **vessel calls per region** reveals that in Q4 2021 and on a year-on-year basis, all nine regions faced a declining number of container vessel arrivals compared with the calls of Q4 2020. In three regions, i.e., Africa, Oceania, and Latin America, the number of calls declined by single-digit percentages. In all other parts of the world, container vessel calls were found to be fewer in Q4 2021 by double-digit percentages. The strongest declines are observed in North America and South-East Asia. In the former case, the number of calls in the last quarter of 2021 was a hefty 18% below the same quarter the year before. In North America, the drop in the number of vessel arrivals was even higher, i.e., 19.1%.

In 2021, the **share of containerships of > 8500 TEU capacity** calling in the Mediterranean increased by 3.9 percentage points. An increase of this share at a relatively minor scale was also recorded in Latin America (1.9%) and at a marginal 0.4 percentage point in Northern Europe. In all other world regions, the share of the biggest vessels declined. The decline in Oceania was modest. In South-East Asia and North-East Asia it was considerable, yet at a single-digit percentage. Compared with Q4 2020, in North America, Africa, and especially in Middle East & India (-18.5 percentage points), the share of containerships of more than 8500 TEU capacity that called in Q4 2021 fell by more than ten percentage points.

Against a backdrop of lower vessel call numbers in most regions and mixed trends in the share of larger vessels calling around the globe, there is a tendency toward bigger **call sizes** in quite a few regions. While, for example, the share of 8500 TEU+ vessels in Northern Europe remained fairly the same, the year-on-year 11.55% decline in vessel call numbers in Q4 2021 coincided with a 5.5% increase in average call size. In the last quarter of 2021, such major increases in the call sizes, i.e., at double-digit percentages compared to the same quarter of 2020, were also recorded in South-East Asia, North-East Asia, and Latin America. The increase in the call sizes was also considerable in the Middle East & India, and Mediterranean ports. Africa and Oceania are the regions where the call sizes over the last months of 2021 were not significantly different from the same months the year before.

The foundations of the observed increases in call sizes are apparent by examining the trends in the biggest call sizes, especially those of 6000 or more TEU. The number of these larger scale calls in Q4 2021 was higher than in Q4 2020 by a double-digit percentage in all world regions. The exception was North America, where the number of such calls decreased, as the number of calls between 4001-6000 TEU increased significantly, and the number of calls between 3001-4000 TEU increased considerably. In some port regions, including Africa, Latin America, the Mediterranean, and North-East Asia, the increase was noted in the case of both calls between 4001-6000 TEU and calls of 6000 or more TEU. In Northern Europe, the Middle East and India, and South-East Asia, the increase in the biggest call sizes was accompanied by a decrease of the call sizes in the 4001-6000 TEU range.

The regional data on **port moves per hour** demonstrate that most of the world's port regions had to accept a decline in Q4 2022 compared to the same quarter in 2021. With a massive 33% drop, North American ports, on average, saw the strongest deterioration in port moves per hour. Major trading blocks North-East Asia and North Europe recorded a 10-11% decline. Port capacity challenges, temporary terminal closures, and broader supply chain disruptions clearly had their impact on port performance, particularly on the major East-West trade lanes. While one might expect otherwise, the deployment of larger vessels and the higher call sizes did not go hand in hand with higher terminal

productivity in all regions. The Middle East and India is a somewhat unique case: significant decreases in vessel calls and in the share of 8500 TEU+ vessels coincided with a 14.4% increase in port moves per hour. African and Latin American ports did, on average, not witness any significant changes in moves per hour between Q4 2021 and Q4 2020.

Table 1. Summary of trends per region (index-based / Q4 2021 vs Q4 2020)

Evolution of: (index based / Q4 2021 vs Q4 2020)	Number of Vessel Calls	Share of Containerships of > 8500 TEU capacity	Call Size				Port Moves Per Hour
			Total	3,001-4,000 TEU	4,001-6,000 TEU	> 6,000 TEU	
Africa	Decrease	Major Decrease	Almost Stable	Major Decrease	Increase	Major Increase	Almost Stable
Latin America	Decrease	Almost Stable	Major Increase	Major Increase	Major Increase	Major Increase	Almost Stable
Mediterranean	Major Decrease	Increase	Increase	Major Increase	Increase	Major Increase	Decrease
Middle East & India	Major Decrease	Major Decrease	Increase	Major Increase	Major Decrease	Increase	Major Increase
North America	Major Decrease	Major Decrease	Major Increase	Increase	Major Increase	Decrease	Major Decrease
North East Asia	Major Decrease	Decrease	Major Increase	Almost Stable	Major Increase	Major Increase	Major Decrease
Northern Europe	Major Decrease	Almost Stable	Increase	Major Decrease	Decrease	Major Increase	Decrease
Oceania	Decrease	Almost Stable	Almost Stable	Major Decrease	Stable	*	Major Decrease
South East Asia	Major Decrease	Decrease	Major Increase	Major Decrease	Decrease	Major Increase	Decrease

* In Oceania the size of such calls is very small, thus the index is highly volatile by any occurring change.
Note: Major Decrease: Drop by 10% or more | Decrease: Drop between 2 to 10% | Almost Stable: Less than +/- 2%: | Stable: Zero change | Increase: Change between 2-10%. | Major Increase: Change over +10%.

Table 2. Evolution of indexes per region (year-on-year / Q4 2021 vs Q4 2020)

Evolution of (index based / Q4 2021 vs Q4 2020)	Number of Vessel Calls	Share of Containerships of > 8500 TEU capacity	Call Size				Port Moves Per Hour
			All Calls	3,001-4,000 TEU	4,001-6,000 TEU	> 6,000 TEU	
Africa	-2.3%	-14.9%	0.6%	-14.9%	5.6%	41.7%	1.8%
Latin America	-9.1%	1.9%	14.7%	28.3%	123.2%	600.0%	0.0%
Mediterranean	-11.5%	3.9%	5.5%	12.6%	4.9%	38.5%	-4.3%
Middle East & India	-14.3%	-18.5%	5.5%	12.8%	-18.7%	6.6%	14.4%
North America	-19.1%	-10.2%	14.7%	4.5%	16.7%	-8.2%	-33.2%
North East Asia	-15.8%	-6.1%	23.2%	0.4%	30.4%	120.8%	-11.2%
Northern Europe	-15.6%	0.4%	9.8%	-15.2%	-9.5%	29.3%	-9.6%
Oceania	-5.3%	-1.8%	1.5%	-21.1%	0% *	*	-12.2%
South East Asia	-1.0%	-5.7%	14.2%	-10.5%	-8.9%	67.2%	-7.2%

* In Oceania the size of such calls is very small, thus the index is highly volatile by any occurring change.

3 REGIONAL ANALYSES

3.1 Africa

The African container port system includes large gateway ports such as Durban, Cape Town, Apapa, Abidjan, Mombasa or Dar Es Salaam as well as a large array of small and medium-sized ports in the East, West and South of the continent. The large-scale transhipment hubs in Northern Africa (Tanger Med, Damietta and Port Said to name a few) are not considered here as they have been included in the Mediterranean region. During the fourth quarter of 2021, fewer containerships were calling in Africa than at the beginning of 2019 (Figure 1). The number of calls gradually decreased to reach its lowest point during Q2 2020, before fluctuating around index 90 throughout 2021. The share of 8500 TEU+ vessels in total vessel calls peaked at 10.1% in Q3 2020 while reaching a low of 5.7% two quarters later.

However, the average vessel visit in African ports is associated with more containers handled. Compared to Q1 2019 the average call sizes in African ports increased 13% by the end of 2021, while the number of containership calls stands at almost 10% lower. The growth in call sizes is particularly strong in the largest size calls, i.e., the 6000 TEU+ category and the 4000 to 6000 TEU range (Figure 2). Since Q3 2020 (index=50) the calls of the former category (6000 TEU or more) increased at an extraordinary scale (index Q4 2021= 425).

A negative change in the port moves per hour in African ports has been present over the last three years. During each quarter of the 2019-2021 period, this key performance indicator was lower than at the beginning of 2019. Especially since the pandemic outbreak (in Q1 2020, the index was 96.8) and until Q2 2021 port moves per hour in African ports were declining continuously. However, since then some adjustments were noted with the index standing in Q4 2021 at 81.6, slightly higher on a year-on-year basis.

Figure 1. Evolution of Number of Vessel Calls, Share of Containerships of > 8500 TEU capacity, Call Size, and Port Moves per Hour (Ports in Africa; index-based: Q1 2019 = 100)

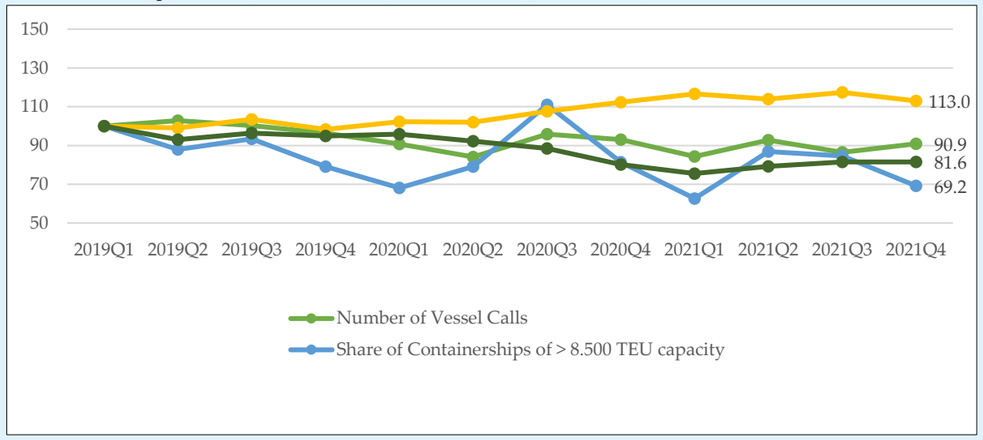
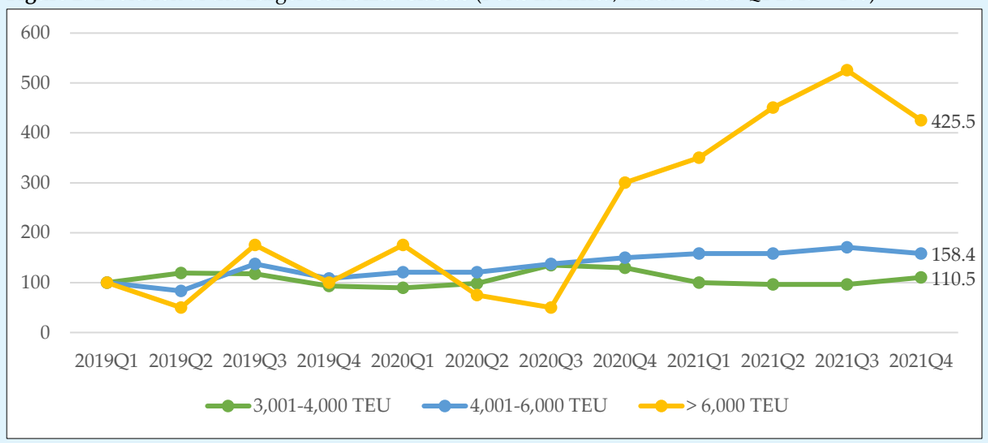


Figure 2. Evolution of the Larger Call Sizes Classes (Ports in Africa; index-based: Q1 2019 = 100)



3.2 Latin America

During the last two quarters of 2021, the number of containerships calls in Latin America remained stable. However, the total number of calls that occurred during each of these quarters was lower than the respective total in any quarter since 2019 (Figure 3). In Q1 2020 the number of calls in Latin America started to gradually decline. The return to the early 2019 levels in Q4 2020 proved to be temporary. In Q4 2021, the number of containership calls was lower on a year-on-year basis by 9.3%.

Latin American ports do not serve calls by the biggest containerships of the world (i.e., vessels over 20,000 TEU capacity), as such vessels are deployed in other regions of the globe. Yet, during the last two years the share of 8500 TEU+ vessels, as a percentage of the total container vessel calls in the ports of the region, increased. In Q4 2019 this index was 2.2 percentage points higher than at the beginning of the same year. In Q4 2020 the index was even higher ($Index_{Q4\ 2020}$= 113.2) before reaching its peak in the most recent period Q4 2021 ($Index_{Q4\ 2021}$= 115.6).

The observed increase in calling vessel capacity has been associated with an increased size of unitised cargoes handled per call. Since Q3 2020, during every quarter of the year, the average vessel call at Latin American ports was associated with more containers handled than the respective average that had occurred the quarter before. In the last quarter of 2021, the average call size in Latin American ports was 25.8% higher than in Q1 2019. The growth in call sizes is reflected in any group of size calls of 3000 or more, though further analysis indicates some different trends (Figure 4). In Q4 2021, calls of 3001-4000 TEU were over three times more than in the first quarter of 2019, though this increase was the outcome of an increase that occurred in 2020. Calls between 4001 and 6000 TEU were over eight times more. This time however the increase of the index is the outcome of trends that occurred in 2021 when calls of this size quadrupled (Figure 4). Most impressively though, it is the size of calls of 6000 TEU or more that increased seven-fold in 2021.

Despite these substantial changes in the frequency, size of vessels, and call sizes, Latin American ports managed to increase their productivity. This is reflected in the evolution of the average port moves per hour that were recorded in the region over the last three years (Figure 3). This average has been higher than in Q1 2019 in each quarter of 2019-2021. It should not however be ignored that on a year-on-year basis, the average port moves per hour in Q4 2021 in Latin America equals precisely the respective average of Q4 2020.

Figure 3. Evolution of Number of Vessel Calls, Share of Containerships of > 8500 TEU capacity, Call Size, and Port Moves per Hour (Ports in Latin America; index-based: Q1 2019 = 100)

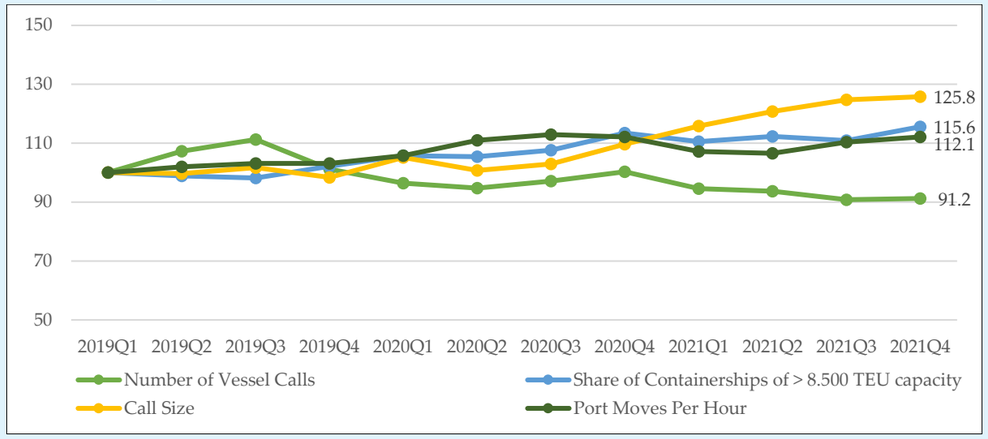
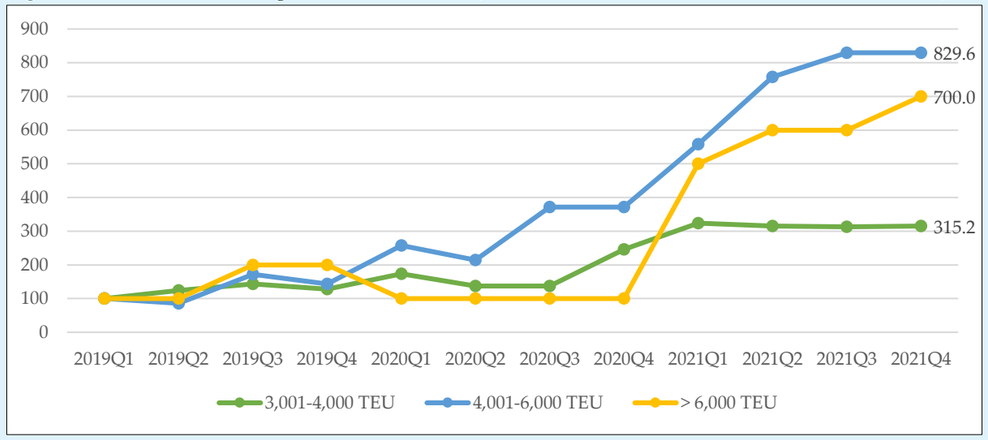


Figure 4. Evolution of the Larger Call Sizes Classes (Ports in Latin America; index-based: Q1 2019 = 100)



3.3 The Mediterranean Sea

Since the beginning of 2019 and until Q4 2021, the number of containerships calls in ports in the Mediterranean Sea remained almost stable, reaching its peak in Q4 2020. A year later, in Q4 2021, this number declined. On a year-on-year basis, this decline equalled approximately 12% (Figure 5). On the other hand, the percentage of the calls made in Med ports by containerships of 8500 TEU+ capacity in the final quarter of 2021 was 1.3 per cent higher than in early 2019. This share has been relatively stable, with a minor decrease of 5% occurring in 2019, but evaporating in early 2020. Among these vessels are included the biggest containerships of all, which are deployed in the main East-West

maritime services – with several ports in the region publicising calls of vessels of more than 20,000 TEU capacity.

The size of calls in Med ports also increased in 2021, with the index standing at its record level in the most recent period of all (Q4 2021). Since Q1 2020, the average vessel call at Med ports has been coupled with more containers in every quarter of the year than in Q1 2019. In the last quarter of 2021, the average call size was 5.5% higher than in the same quarter of the year before. The growth in call sizes is reflected in the increase of the calls in the 3001-4000 TEU category; in Q4 2021, the calls of this size were 25.9% higher than in Q1 2019 (Figure 6). Calls between 4001-6000 TEU increased even more, i.e., in both Q3 2021 and Q4 2021, such calls were more than double the number of calls in this category that had occurred in early 2019. The growth has been even more impressive in the number of the biggest calls, i.e., those of 6000 TEU or more. In Q4 2021, the number of this size of calls in the Mediterranean ports was nine times more than in Q1 2019.

Despite these changes or the disruptions in the maritime and other supply chains in the region following the outbreak of the covid-19 pandemic, Mediterranean ports have improved their productivity, as reflected in the evolution of the port moves per hour (Figure 5). Notably, this index has reached its peak in Q3 2020, as it started increasing in the first quarter of that year. In 2021 the growth was halted. On a year-on-year basis, the port moves per hour in Q4 2021 in the Mediterranean ports were 4.5% fewer than in Q4 2020. Yet, these moves were still 3.5% more than in Q1 2019.

Figure 5. Evolution of Number of Vessel Calls, Share of Containerships of > 8500 TEU capacity, Call Size, and Port Moves per Hour (Ports in the Mediterranean Sea; index-based: Q1 2019 = 100)

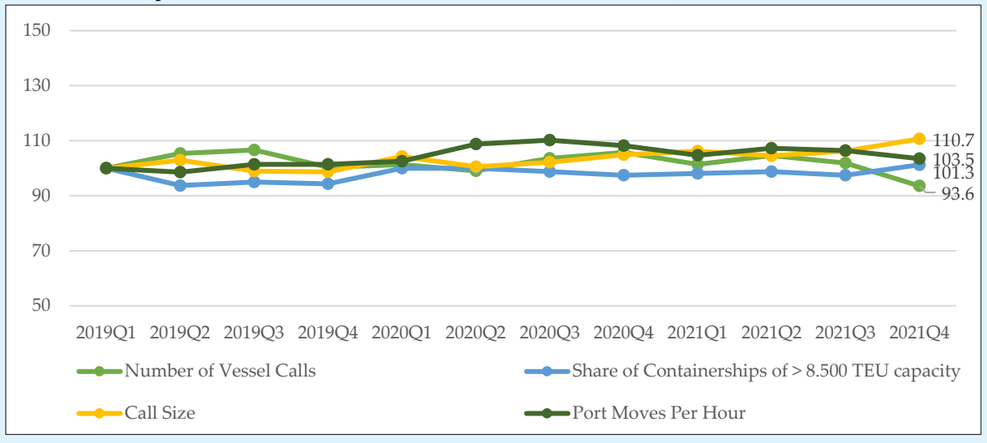
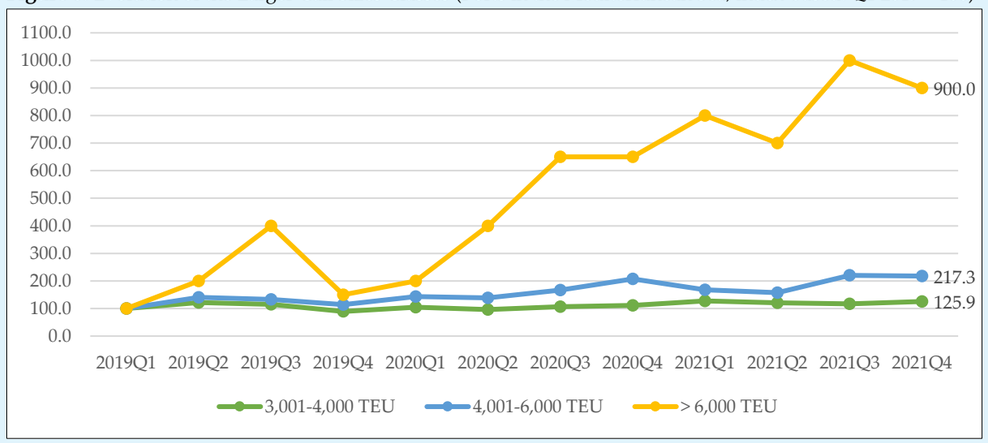


Figure 6. Evolution of the Larger Call Sizes Classes (Ports in the Mediterranean Sea; index-based: Q1 2019 = 100)



3.4 Middle East & India

The container port system of the Middle East and India spans a large number of Arab, Persian and Central Asian countries, as well as seaports in Pakistan, India, Sri Lanka and Bangladesh. The region is home to transhipment hubs such as Jeddah, Jebel Ali, Khorfakkan, Salalah and Colombo, as well as a large number of small, medium-sized and large gateway ports. The four indicators in Figure 7 hardly changed throughout 2019 and 2020, with the exception of some modest alterations in Q2 2020, when COVID-19 was officially declared a pandemic. The changes in 2021 are more noticeable. On the one hand, one can observe a gradual decline in the number of vessels calls and in the share of the larger container ships.

On the other hand, the call sizes and port moves per hour saw an upward trend. This combination is rather unique when compared to what occurred in other port regions. Actually, the Middle East and India is the only region in the world which managed to substantially increase the port moves per hour in 2021 compared to the base quarter Q1 2019 (+20%). Latin America comes in second with plus 12%. Obviously, these are relative figures showing the development path. These figures say nothing about container handling productivity in absolute figures compared to other regions. Therefore, it can be concluded that, in contrast to most other regions, COVID-19 and the associated supply chain crisis - on average - did not result in lower moves per hour figures in container ports located in the Middle East and India region.

Figure 7. Evolution of Number of Vessel Calls, Share of Containerships of > 8500 TEU capacity, Call Size, and Port Moves per Hour (Ports in the Middle East and Asia; index-based: Q1 2019 = 100)

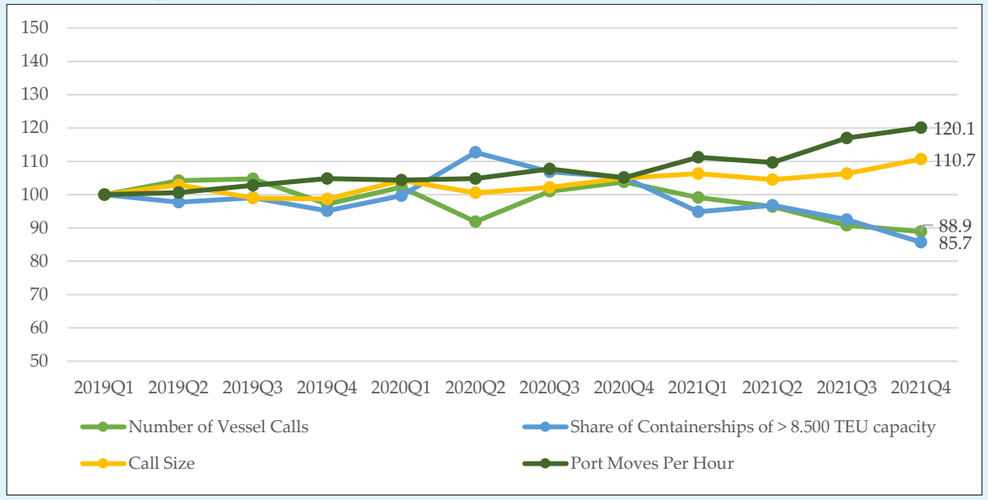
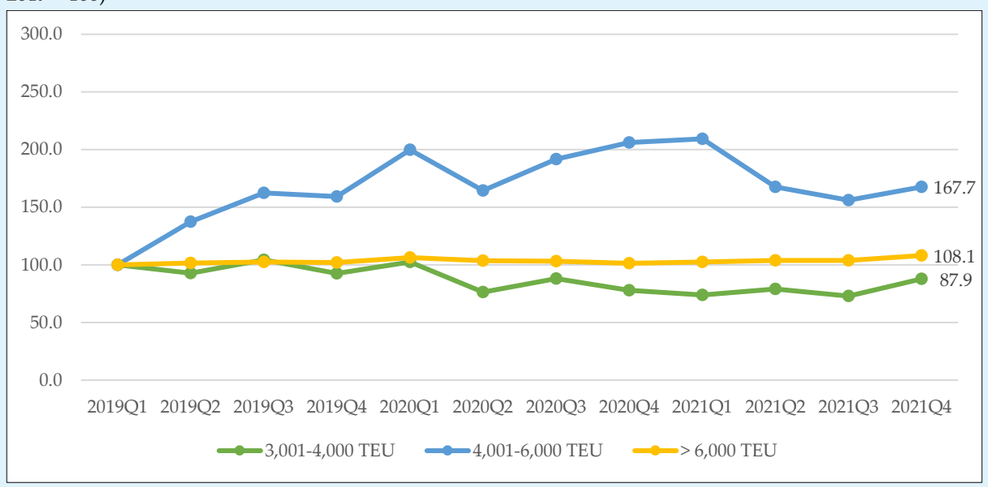


Figure 8. Evolution of the Larger Call Sizes Classes (Ports in the Middle East and Asia; index-based: Q1 2019 = 100)



3.5 North America

The North American container port system consists of gateway ports along the West Coast (from Prince Rupert in the north to the large complex of Los Angeles/Long Beach in the south), the East Coast (from Halifax to the southern tip of Florida) and the Gulf Coast. In the past three years, this port system has witnessed a combination of larger vessels and bigger call sizes with significant drops in vessel calls and port moves per hour (Figure 9), although each variable followed its own distinctive path. Vessel arrivals only started to decline in late 2019. In early 2020, the decline in container demand in relation to North America led to blanked sailings and idled vessels, particularly on the

trans-Pacific route. Since the summer of 2020, container throughput figures in most North American ports strongly recovered following the start of a period characterised by strong demand.

Growing terminal capacity issues at some of the continent's major gateway ports combined with the emergence of a global supply chain crisis not only prevented a rise in the number of vessel calls, but also triggered a sharp decline in the port moves per hour in late 2020 and the whole of 2021. At the same time, North American ports are welcoming more large container vessels in relative terms, although the share of 8500 TEU+ vessels seems to have reached its peak in late 2020. Call sizes have been rising since late 2019 with many ports announcing records in this field. The rise in call sizes in 2020 was largely attributable to the 6000 TEU+ category. Throughout 2021 there was a remarkable increase of call sizes in the 4000 to 6000 TEU range (Figure 10).

Figure 9. Evolution of Number of Vessel Calls, Share of Containerships of > 8500 TEU capacity, Call Size, and Port Moves per Hour (Ports in North America; index-based: Q1 2019 = 100)

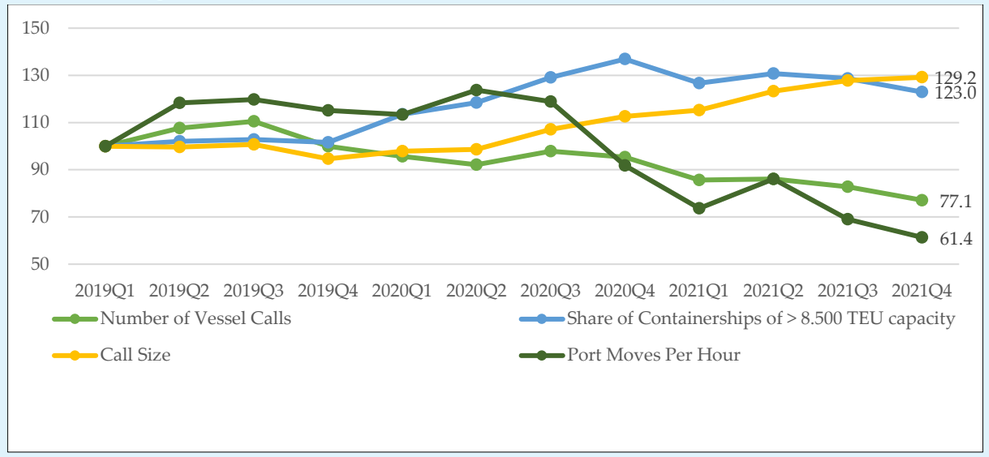
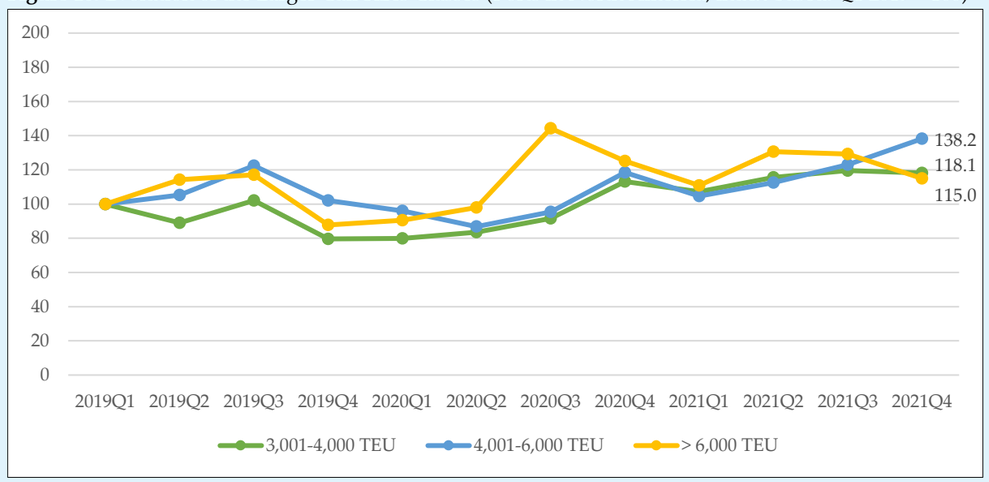


Figure 10. Evolution of the Larger Call Sizes Classes (Ports in North America; index-based: Q1 2019 = 100)



3.6 North-East Asia

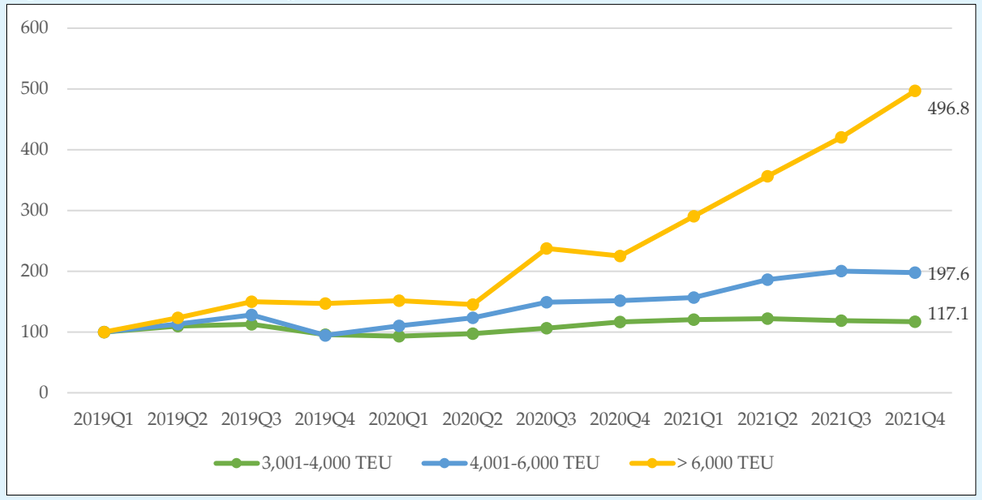
The North-East Asian container port system covers Japanese, South Korean, mainland Chinese and Taiwanese ports. While ports on mainland China serve a vast hinterland through long-distance inland transport corridors, the cargo generating effect of the coastal provinces still forms the backbone of the ports' container throughput. Japan, the Republic of Korea and Taiwan are island or quasi-island economies, implying a significant role in short-distance inland corridors, coastal shipping and sea-sea transhipment. North-East Asia is home to a number of major port clusters such as the Keihin ports in Tokyo Bay, the Haishin ports in Osaka Bay, the Pearl River Delta and the Yangtze River Delta.

The number of vessel calls in North-East Asian ports has dropped over a quarter since early 2019 (Figure 11). The call sizes have increased significantly (+46%) throughout the observed period. This evolution has been mainly caused by a fivefold increase in call sizes over 6000 TEU, and to a lesser extent also by the doubling of call sizes in the 4000-6000 range. The combination of fewer vessel calls and much larger call sizes has not been caused by a strong upscaling in vessel sizes. Indeed, the share of 8500 TEU+ vessels in Q4 2021 was only 13 percentage points higher than in early 2019, with a peak of +25% in mid-2020. In relative terms, the share of 8500 TEU+ ships in total vessel calls reached an elevated 39.1% in Q3 2020 compared to 31.3% in Q1 2019, the highest share of all port regions around the world. The percentage of 8500 TEU+ vessels is also high in North America (ranging between 24.4% and 31.9%), and North Europe (ranging between 25.9% and 30.1%). North Europe receives a lot more 15,000 TEU+ vessels than North America, but as the former region has a lot more intra-regional shortsea and feeder services (which North America is lacking), the share of 8500 TEU+ vessels is fairly similar to the North American situation.

At first glance, the port moves per hour in North-East Asia fluctuated only mildly throughout the analysed period. A closer investigation of the figures shows an initial 20% increase by mid-2020 followed by a gradual decline to below the 100-marker in Q3 2021. These observations point to some (moderate) impact on terminal productivity of the temporary terminal closures in mainland China in late 2020 and 2021 and congestion issues in quite a few major container ports.

Figure 11. Evolution of Number of Vessel Calls, Share of Containerships of > 8500 TEU capacity, Call Size, and Port Moves per Hour (Ports in North-East Asia; index-based: Q1 2019 = 100)

Figure 12. Evolution of the Larger Call Sizes Classes (Ports in North-East Asia; index-based: Q1 2019 = 100)



3.7 Northern Europe

As is the case in most other port regions, the North European port system does not consist of a homogenous set of ports. It features established large ports as well as a whole series of medium-sized to smaller ports each with specific characteristics in terms of hinterland markets served, and nautical conditions and location. The large container ports on the mainland such as Rotterdam, Antwerp-Bruges, Hamburg, Bremerhaven, Le Havre and Gdansk typically have a cargo mix combining large gateway flows with substantial sea-sea transhipment volumes in relation to the Baltic, UK/Ireland and the Med. Also the UK is home to some large container ports (e.g. Felixstowe, London Gateway, Southampton) as well as a large number of smaller container facilities. Figure 13 shows rather modest changes in the indicators considered. Still, some conclusions can be drawn.

First, there is a clear increase in the average call sizes. This is mainly caused by a significant rise in call sizes over 6000 TEU after the outbreak of COVID 19, i.e. from an index of 80 in late 2019 to 141 in Q4 2021 (Figure 14). Particularly for vessels in the 20,000 TEU+ class, a few North European container ports, such as Antwerp and Felixstowe, reported records of close to 25,000 TEU handled during a vessel call.

Second, the rise in call sizes since Q2 2020 went hand in hand with a gradual decline in the port moves per hour. This development seems to suggest that productivity in North European ports (primarily in the bigger load centres) has been negatively affected by poor schedule integrity of the vessels, longer container dwell times and overall terminal capacity shortages. However, the decrease in port moves per hour remained rather small when compared to the North American situation. All that time, the share of the larger container ships remained fairly the same in North Europe, fluctuating between 26 and 30% of all vessel calls.

Third, the number of vessel calls has gradually decreased since mid-2019. Thus, this implies we are looking at a combination of fewer vessel arrivals, a rather stable share of the larger container vessels in the total vessel arrivals, larger call sizes and lower moves per hour.

Figure 13. Evolution of Number of Vessel Calls, Share of Containerships of > 8500 TEU capacity, Call Size, and Port Moves per Hour ((Ports in Northern Europe; index-based: Q1 2019 = 100)

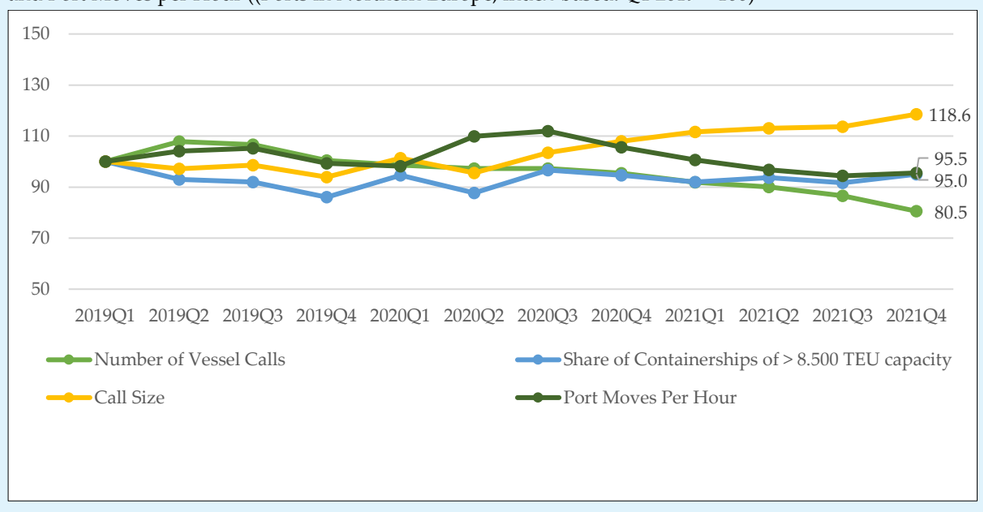
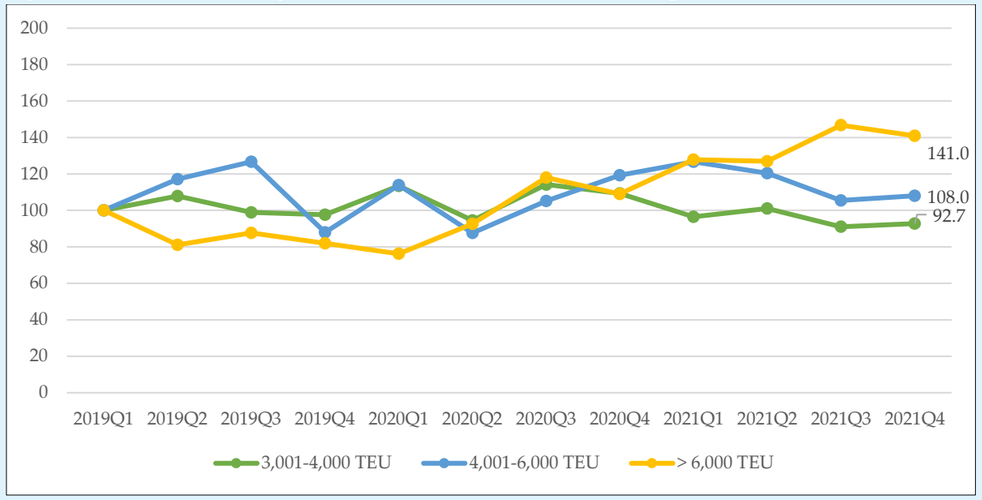


Figure 14. Evolution of the Larger Call Sizes Classes (Ports in Northern Europe; index-based: Q1 2019 = 100)



3.8 Oceania

The container port system in Oceania includes the ports in Australia (Sydney, Melbourne, Brisbane, Perth, etc.), New Zealand (Auckland, Wellington, etc.) and some smaller terminal facilities in tiny island economies. Figure 15 only includes three of the four indicators. The share of 8500 TEU+ vessels was not included given a significant increase from 0.7% (index 100) in Q1 2019 to about 11% in Q4 2021 (index value of 1557), showing that this ship class is finding its way to Oceania. The increasing share of larger ship sizes went hand in hand with a 33% increase in average call sizes and a 20% decrease in the number of vessel calls. However, the quayside terminal productivity did not grow with ship size. The port moves per hour fell significantly in Q4 2021 compared to early 2019. The observed downward trend started in Q3 2020 when global supply chain issues started to emerge.

Figure 15. Evolution of Number of Vessel Calls, Share of Containerships of > 8500 TEU capacity, Call Size, and Port Moves per Hour (Ports in Oceania; index-based: Q1 2019 = 100)

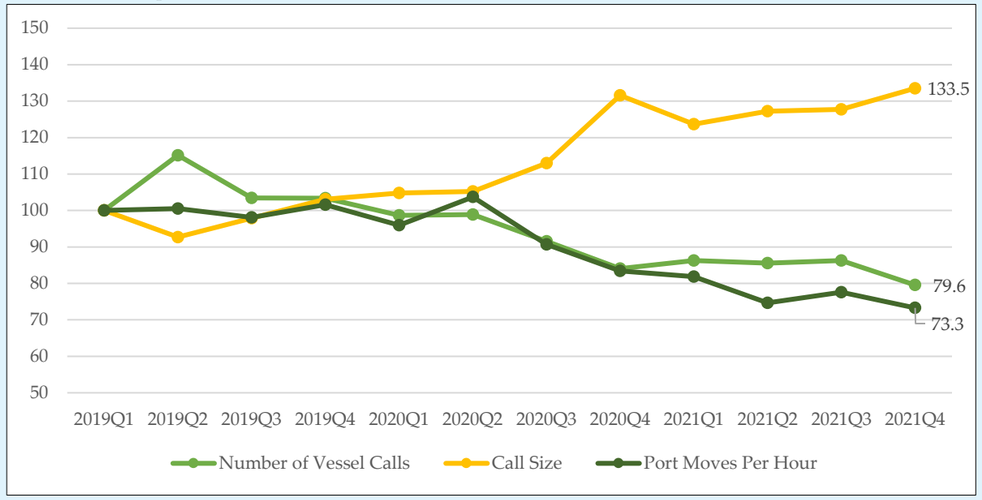
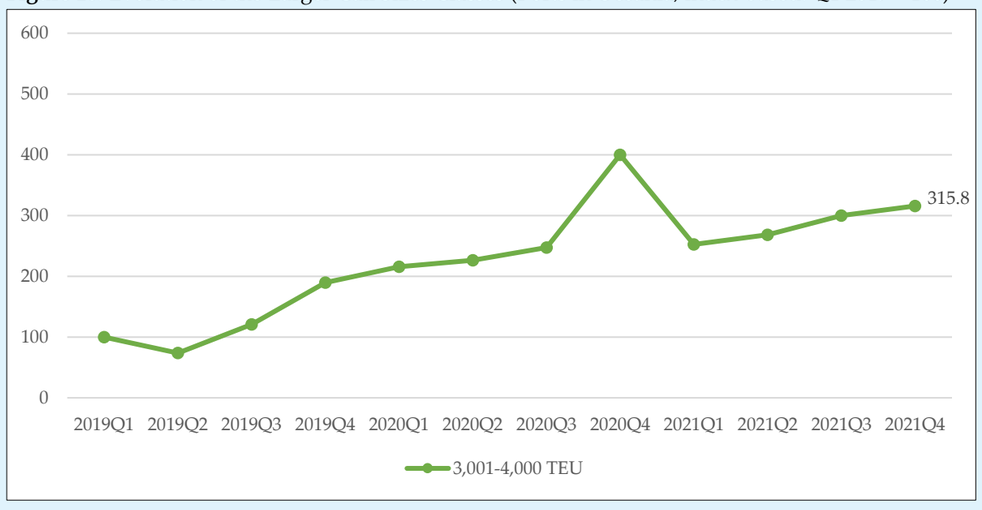


Figure 16. Evolution of the Larger Call Sizes Classes (Ports in Oceania; index-based: Q1 2019 = 100)



3.9 South-East Asia

The South-East Asian container port system stretches from major economies such as Indonesia, Thailand, Malaysia, Singapore, and the Philippines, to small island economies. Given the region's distinct geography, South-East Asia is home to some large transhipment hubs connecting intercontinental services to intra-regional container services as well as major gateway ports.

Throughout the period of observation, South-East Asia witnessed a significant decrease of 32% in the number of vessel calls. This drop was already initiated in late 2019 but further deepened during the COVID-19 years. As observed in many other regions, the call sizes saw a strong upward trend (+44%) with call sizes of more than 6000 TEU even growing by 61%. In early 2019, about 17% of vessels calling at the South-East Asian port system were larger than 8500 TEU. By late 2020, this share had risen to 22.9%, a 34 percentage point increase.

The port moves per hour went up in the early months of the pandemic (+17% between Q1 2019 and Q2 2020). However, the global supply chain crisis has pushed productivity figures down since late 2020. The year 2021 closed with a 5.5% decrease in port moves per hour compared to the first quarter of 2019.

Figure 17. Evolution of Number of Vessel Calls, Share of Containerships of > 8500 TEU capacity, Call Size, and Port Moves per Hour (Ports in South-East Asia; index-based: Q1 2019 = 100)

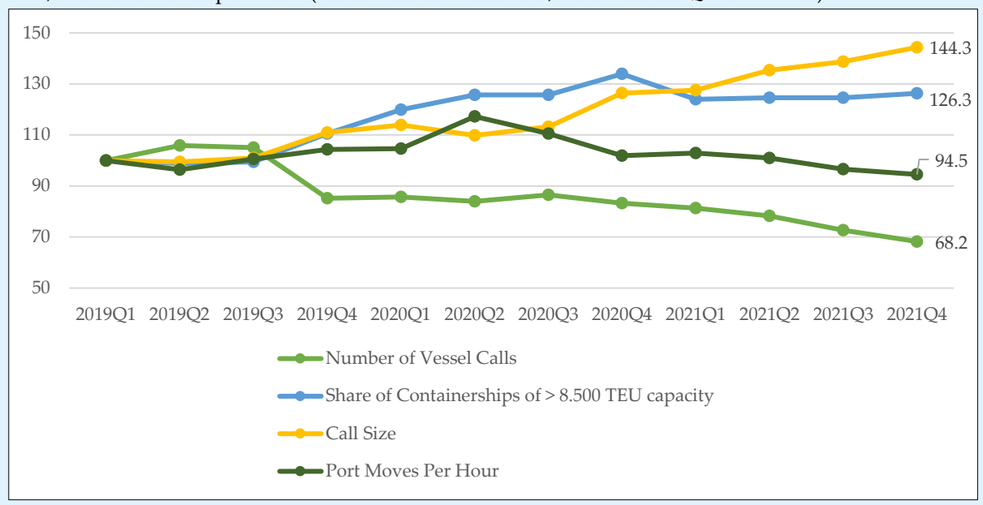
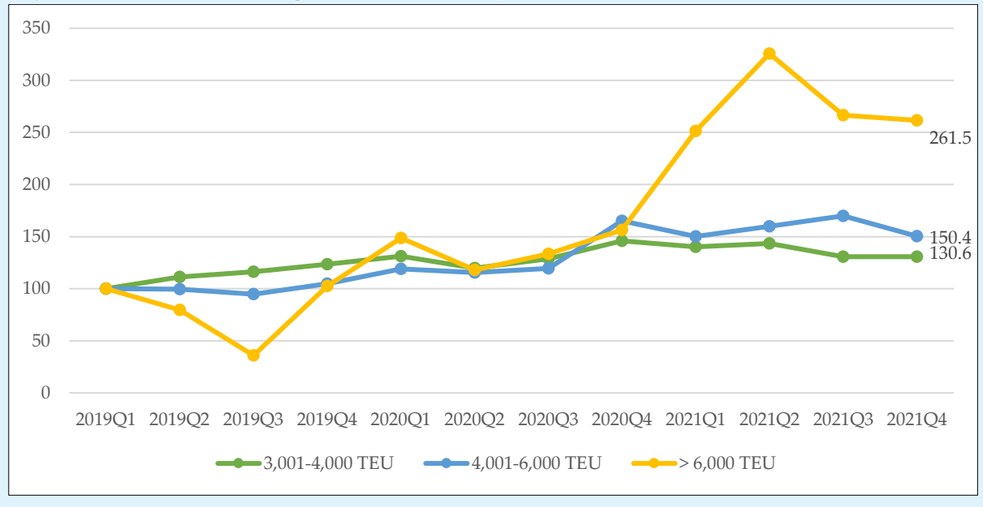


Figure 18. Evolution of the Larger Call Sizes Classes (Ports in South-East Asia; index-based: Q1 2019 = 100)



4 CONCLUSIONS

This report focused on the port performance data part of the tracker exercise through the analysis of quarterly container port statistics provided by the IHS Markit Port Performance Program. The regional analysis of four container port metrics, i.e., the number of vessel calls, the evolution of vessel size, the evolution of call size (number of TEUs handled per call), and port moves per hour, points to differences and similarities among the nine regions.

In a nutshell, the report revealed the changes that take place in world ports and the consequent challenges. On a year-on-year basis, in Q4 2021 the number of containership calls continued to decrease in all nine regions of the world; in half of them, this decrease was a major one. At the same time in five of the examined regions the share of these calls by containerships of 8500 TEU+ capacity also decreased, in three more the change was marginal, and only Mediterranean ports served a bigger share of big vessels. The changes in these two parameters are inextricably linked with an increase in the call size in all regions. This increase is particularly evident when focusing on the larger scale calls, i.e., over 6000 TEU.

At the end of 2021 world ports and terminals needed to organise their operations in order to serve more cargoes arriving by fewer, better loaded, but not necessarily bigger vessels. The evident challenge is to maintain their capacity to serve these calls at improved productivity levels. However, this has not been the case. The data reported and analysed reveal that in six regions, including South-East Asia, North-East Asia, North Europe, Mediterranean, North America and Oceania, ports moves per hour decreased, while in Africa and Latin America they remained stable and only ports in the Middle East and Indian ports improved the containerised cargo moves per hour.

In the first months of 2022, there are clear indications that the volatility of the above indicators will sustain. Lockdowns in major port-cities in China, including Shanghai, are linked with reported congestions in some other major ports around the globe, along with the expected surge in container volumes transported once China's rolling COVID-19 lockdowns are lifted. This means that further changes are ongoing – and will be timely reported in the second issue of the IAPH World Ports Tracker report.

The present report is part of the broader IAPH World Ports Tracker, a tool that will rely on a combination of two sources: survey-based results and port performance data. Via quarterly updates of these and additional metrics, the IAPH World Port Tracker will guide ports and stakeholders in their efforts to improve services and address emerging challenges.

The second part of the IAPH World Ports Tracker exercise, i.e. the planned survey, will track critical aspects of the evolution of the global port industry. It is also a key survey on understanding the challenges that ports are facing, either regionally and globally. Using structured answering options, the survey will consist of eight questions that will be sent out every four months (Questions 1 to 8). Some questions will be added once per year (Questions 9, 10 and 11):

1. How would you best describe the number of cargo vessel calls expected in your port, compared to the past quarter?
2. How would you best describe the current hinterland transport conditions in your port?
3. How would you describe the current capacity utilisation of warehouses/ distribution facilities compared to the situation during the past quarter?

4. In the next 12 months, do you expect the cargo throughput at your port to increase or decline?
5. How would you best describe the number of passenger ship calls expected in your port in the next quarter, compared to the same quarter last year?
6. What currently is the capacity (passengers) of the biggest cruise vessel calling at your port?
7. In the next 12 months, do you expect the number of vessel and passenger calls at your port to increase or decline?
8. What is the current staff availability at your port?
9. What is the situation for the majority of the investments that you had planned for 2021?
10. In the next 12 months, will a new terminal capacity extension or major upgrade become operational in your port in any of the following markets?
11. Do you plan any major change in the land use in your port in the next 12 months?

The results will be analyzed and displayed in an aggregated manner per region, and for the world as a whole. As with the IAPH-WPSP *COVID-19 Barometer*, all information obtained will be treated in a confidential manner and only aggregated data will be published. No reference will be made to individual ports.

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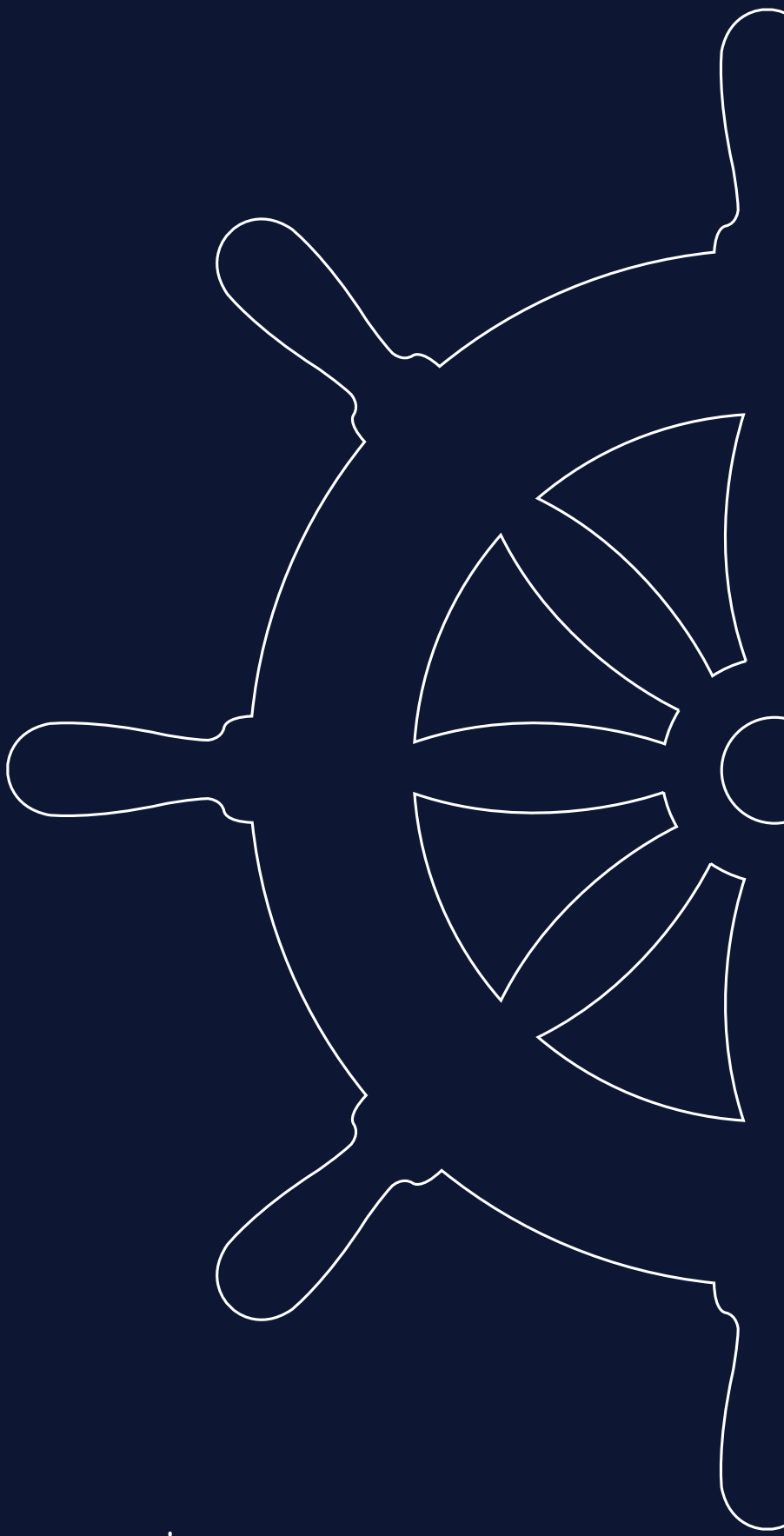

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